

New Hampshire State Board of Education
Department of Education
Hugh J. Gallen State Office Park
101 Pleasant Street
Concord NH 03301

Wednesday, June 13, 2018



AGENDA

- I. **CALL TO ORDER** - 9:00 AM
- II. **PLEDGE OF ALLEGIANCE**
- III. **PUBLIC COMMENT** (LIMITED TO 5 MINUTES, BOARD WILL ASK CLARIFYING QUESTIONS ONLY, OTHERWISE NO FEEDBACK PROVIDED)
- IV. **SPECIAL PRESENTATIONS** (TIMES ARE APPROXIMATE)
 - A. 9:15 AM - Introduction of United States Senate Youth Program Delegates – LORI KINCAID, Public Information Officer
 - B. 9:45 AM – Student/Grantham School Board – SB-FY-18-12-008
 - C. 10:15 AM – Computer Science Framework and Standards – DAVID BENEDETTO, State Director of STEM and Computer Science Education
 - D. 12:30 PM – Teacher/NHDOE – SB-FY-18-03-013
 - E. 1:30 PM – Student/Londonderry School Board – SB-FY-18-03-014
- V. **OPEN BOARD DISCUSSIONS**
- VI. **LEGISLATIVE ISSUES/RULES**
 - A. 1:00-1:30 PM - **PUBLIC HEARING** – Non-Public School Approval (Ed 403.03; Ed 405.01; Ed 407.01)
 - B. Conditional Approval Response – Special Education Aid (Ed 1128)
 - C. Final Proposal – Code of Conduct for Educators (Ed 501.01, Ed 501.02, Ed 502.01, Ed 510, Ed 511 and Ed 512)
 - D. Final Proposal - Professional Education Requirements (Ed 505.07 and Ed 610.02) - “Guiding Principles: The Code of Ethics for New Hampshire Educators”
 - E. Final Proposal - Basic Academic Skills (Ed 513.01) Amendment to Existing Rules in Response to HB 1498

- F. **Final Proposal - Mathematics Teacher; General Requirements (Ed 507.26); Middle Level (Ed 507.27); Upper Level (Ed 612.17); Mathematics – Middle Level (Ed 612.17) and Mathematics – Upper Level (Ed 612.18)**
- G. **Adopt – Definitions and Personnel Standards (Ed 1102.01(y),(z),(aa), Ed 1102.03 and Ed 1113.12)**
- H. **Withdrawal and Re-adoption - Alternative Education and Career and Technical Education (Ed 1300)**

VII. NEW BUSINESS and REPORTS

- A. **Gate City Charter School for the Arts charter renewal extension request**
- B. **Mountain Village Charter School charter renewal extension**
- C. **Mountain Village Charter School change in charter request**
- D. **Social Studies Advisory Panel Change of Mission**

VIII. OLD BUSINESS

IX. CONSENT AGENDA

- A. **Meeting Minutes of May 10, 2018**
- B. **Tuition Agreement between Landaff and Lisbon Regional School Districts**
- C. **Tuition Agreements between Haverhill Cooperative and Bath, Benton and Piermont School Districts**

X. TABLED ITEMS

XI. NONPUBLIC SESSION

XII. ADJOURNMENT – 2:00 PM

If accommodations are needed for communication access such as interpreters, please call (603) 271-3144 at least 5 business days before the scheduled event. We request 5 business days' notice so that we may coordinate interpreters' schedules. Although we will attempt to accommodate any requests made, we cannot guarantee the presence of the service. Thank you for your cooperation.

The 56th annual United States Senate Youth Program New Hampshire Delegates

- **Meera Kurup** attends Bishop Guertin High School and serves as the New Hampshire Technology Student Association treasurer and chapter president. She is a National Center for Women & Information Technology Program Leader in NH. She is also the founder of Code IT Girls in southern NH whose mission is to get more girls interested in coding and technology. She possess a diverse technology-oriented resume including numerous programs to prepare herself for career coupled with a variety of service oriented and leadership activities. She is a proven leader, an outstanding student and an individual who possesses tremendous technical and entrepreneurial experience. She plans to study business or science to prepare for some type of community service/senior living work.
- **Cameron "Cam" Magner** attends Timberlane Regional High School and serves as the president of the Student Council, president of Youth and Government, and the Model United Nations delegate director at Timberlane. Additionally he serves on the NH Association of Student Councils executive board. Cam is an excellent student and his ability to stay on top of his game academically and juggle his co-curricular interests and commitments is uncanny. He has a true passion for government and is focused on making a difference. He is full of ideas, well organized and eager to serve. He plans to study international relations in college.



New Hampshire Computer Science Standards

Rev. 2018

Key Supporting NH Organizations



Key Supporting National Organizations



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Acknowledgements

The 2018 NH K-12 Computer Science Standards is the result of the hard work of numerous individuals across the country and state. Work in NH has been informed and supported by many national-level associations, alliances and non-profit organizations, including the Computer Science Teachers Association ([CSTA](#)), Expanding Computing Education Pathways ([ECEP](#)) Alliance, [CSforAll](#) Coalition, and [Code.org](#).

Many important stakeholders, including numerous educators in NH, have participated in national-level leadership to advance K-12 Computer Science education. The development of the Standards, and the associated work of providing support to organizations who play a role in implementing the Standards, has been and will continue to be carried out by countless stakeholders across the state.

We would like to recognize the following organizations, who are providing leadership in advancing K-12 Computer Science in NH: The [CS4NH](#) Alliance, NH High Technology Council ([NHHTC](#)), NH Charitable Foundation ([NHCF](#)), University System of NH ([USNH](#)), Community College System of NH ([CCSNH](#)), NH Society for Technology in Education ([NHSTE](#)), and NH Computer Science Teachers Association ([NH-CSTA](#)).

To see individuals in the NH Computer Science Standards revision team, and CS4NH Alliance steering committee members, who contributed significantly to the development and review of these standards, please see the appendices.

Foreword

[Governor's Foreword?]

[Commissioner's Foreword]

Vision: Computer Science for All Students in New Hampshire

“Computer science and the technologies it enables now lie at the heart of our economy, our daily lives, and scientific enterprise. [...] To be a well-educated citizen as we move toward an ever-more computing-intensive world and to be prepared for the jobs of the 21st Century, students must have a deeper understanding of the fundamentals of computer science.” [ACM]

In order to be an informed, engaged, and productive citizen in our State and our Nation, it is imperative that students learn the fundamental skills and knowledge of computer science.

Computer science and computing technologies affect us socially, politically, and economically.

- Computer science is changing how we interact with our environment and with one another.
- Computer science is changing how we interact with our political leaders and institutions.
- Computer science is disrupting every industry, creating new industries, and driving new scientific and engineering breakthroughs.

The NH K-12 Computer Science Standards will guide educators as they seek to respond to these changes. They will specify clear learning objectives for students and will serve as a resource for local development and/or adoption of curriculum, instructional materials, and performance assessments.

The standards will help empower educators and students, in order to:

- “critically engage in public discussion on computer science topics;
- “develop as learners, users, and creators of computer science knowledge and artifacts;
- “better understand the role of computing in the world around them; and
- “learn, perform, and express themselves in other subjects and interests.” [K12CS]

About the Standards

Overview of Standards Development

Committee Formation: In August 2017, a rationale and plan was presented to the NH State Board of Education for the development of academic standards for Computer Science. An application for membership was widely distributed and a voluntary committee was formed. This committee was composed of various educator stakeholders, including: primary educators, secondary educators, K-12 administrators, and higher education faculty.

Background Research: After conducting background research, the committee unanimously elected to build our standards using the recently released [K-12 Computer Science Framework](#) and the Computer Science Teachers Association (CSTA) [K-12 Computer Science Standards](#) as primary sources. The initial development and review of these national-level documents involved many important stakeholders, including several in NH.

Draft One development: The committee determined the structure of the Standards and established subcommittees: Editorial, Primary Education, Secondary Education. This first draft of the standards, which included only organizational structure and primary source materials, was released for public review in October 2017.

Draft Two development: The subcommittees performed detailed reviews of source documents and other references, including a standard-by-standard review of the CSTA K-12 Computer Science Standards, and produced original content (Introduction, Background, Implementation Guidance, and Appendices) and recommendations to the full committee. The committee determined that the CSTA Standards are appropriate for NH's purposes and recommended to adopt them with minimal modification.

Draft Two public input: Draft 2 will be released publicly in May 2018. It will be distributed electronically with a feedback survey, and presented in a statewide listening tour. It will be reviewed by the CS4NH Advisory committee, the Pre-Engineering and Technology Advisory Council (PETAC), and by members of the NH State Board of Education. It will be reviewed by boards of several of NH's professional educator associations.

State Board approval: Barring any unforeseen setbacks, approval for NH's K-12 Computer Science Standards will be requested in Summer 2018.

Objectives for Standards

The following objectives were central to the standards development, and should also be considered when implementing the standards. Adapted from [K12CS].

- **Objective 1: Rigor**
 - Establish and articulate the appropriate level of rigor in computer science to prepare all students for success in college and careers.
- **Objective 2: Focus / Manageability**
 - Prioritize the concepts and skills that should be acquired by students. A sharpened focus helps ensure that the knowledge and skills students are expected to learn are important and manageable in any given grade or course.
- **Objective 3: Specificity / Clarity**
 - Specify what is computer science, and distinguish between computer science and other uses of computers in a K-12 setting.
 - Provide sufficient detail to convey the level of performance expected without being overly prescriptive.
- **Objective 4: Equity / Diversity / Accessibility**
 - Allow for engagement by all students and allow for flexibility in how students may demonstrate proficiency. The standards are based on the belief that all students, regardless of race, gender, socioeconomic class, or disability, when given appropriate support, can learn all of the concepts and practices described herein.
- **Objective 5: Coherence / Progression**
 - Organized as progressions that support student learning of content and practices over multiple grades.
 - Convey a unified vision of the discipline, establishing connections among the major areas of study and showing a meaningful progression of content across grade levels and grade spans.
- **Objective 6: Measurability**
 - Objective and measurable. Focus on the results, rather than the processes of teaching and learning.
- **Objective 7: Integration of Practices and Concepts**
 - Integrate the computer science practices with the concept statements. Students learn by doing.
- **Objective 8: Connections to Other Disciplines**
 - Make intentional connections between computer science and other disciplines, so that students can understand how computer science affects their world.
 - Promote more coherent education experiences for students.

Background Information

Computer Science Overview

“As the foundation for all computing, computer science is defined as “the study of computers and algorithmic processes, including their principles, their hardware and software designs, their applications, and their impact on society” [Tucker et. al., cited in K12CS]

<p>Computer Science (CS) includes five core concept areas:</p> <ul style="list-style-type: none"> • computing systems, • networks and the Internet, • data and analysis, • algorithms and programming, and • impacts of computing. 	<p>In addition, Computational Thinking (CT), includes core practices of:</p> <ul style="list-style-type: none"> • recognizing and defining computational problems • developing and using abstractions • creating computational artifacts • testing and refining computational artifacts
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Computer Science in Context

Information and communication technologies (ICT) in schools

Computer science should not be conflated with other aspects and uses of computer technology in schools, including:

- **“Computer literacy [i.e. Digital Literacy, ICT Literacy]** refers to the general use of computers and programs, such as productivity software. Previously mentioned examples include performing an Internet search and creating a digital presentation.
- **“Educational technology** applies computer literacy to school subjects. For example, students in an English class can use a web-based application to collaboratively create, edit, and store an essay online.
- **“Digital citizenship** refers to the appropriate and responsible use of technology, such as choosing an appropriate password and keeping it secure.
- **“Information technology** often overlaps with computer science but is mainly focused on industrial applications of computer science, such as installing and operating software rather than creating it. Information technology professionals often have a background in computer science.” [k12cs]

CS and STEM

"Because CS is an active and applied field of Science, Technology, Engineering and Math (STEM) learning that allows students to engage in hands-on, real-world interaction with key math, science, and engineering principles, it gives students opportunities to be creators - not just consumers - in the digital economy..." [CSforALL]

CS and Math

Computer science and computation are fundamentally mathematical. Computing is built on mathematical principles including formal logic. Computing can be used to perform arithmetic and logical operations. Combining these operations allow computing to be used in the diverse ways we see today.

CS and Science

Science includes the systematic study of the structure and behavior of the physical and natural world through observation and experiment, and a systematically organized body of knowledge on a particular subject. Computer science includes the study of computation and algorithmic processes, which don't necessarily need to be implemented in machinery. For example, physical, chemical, and biological processes can all be explored in terms of computation, without necessarily involving any human-built computing devices. Computer science is a systematic study, and computer scientists have compiled a vast body of knowledge in this area.

CS and Computer Modeling and Simulation

The term computational science refers to the use of computational tools and methods in science and engineering, such as modeling and simulation. Computer science informs the development of these tools. In practice, computational sciences involve both computer scientists and specialists in the other areas working together.

CS and Engineering

Engineering is concerned with the analysis, design, implementation, and use of engines, machines, structures, processes, etc. Engineered structures and processes can be physical (e.g., mechanical, chemical, biological, etc.), but they can also be virtual (e.g., computer software).

Computer scientists work out computer hardware, software, and network designs. Engineers turn those designs into working devices and systems. Engineers also often encounter unexpected results, which can then be taken into consideration by the scientists to inform developing theories.

See below for relationships between CS, Science, Engineering, and Math practices. (Image source [K12CS]).

RELATIONSHIPS BETWEEN COMPUTER SCIENCE, SCIENCE AND ENGINEERING, AND MATH PRACTICES



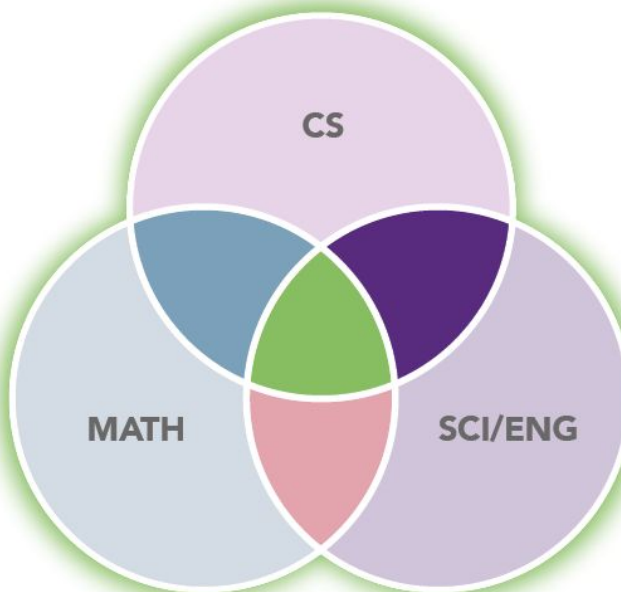
CS + Math

- **Develop and use abstractions**
M2. Reason abstractly and quantitatively
M7. Look for and make use of structure
M8. Look for and express regularity in repeated reasoning
CS4. Developing and Using Abstractions
- **Use tools when collaborating**
M5. Use appropriate tools strategically
CS2. Collaborating Around Computing
- **Communicate precisely**
M6. Attend to precision
CS7. Communicating About Computing



CS + Sci/Eng

- **Communicate with data**
S4. Analyze and interpret data
CS7. Communicating About Computing
- **Create artifacts**
S3. Plan and carry out investigations
S6. Construct explanations and design solutions
CS4. Developing and Using Abstractions
CS5. Creating Computational Artifacts
CS6. Testing and Refining Computational Artifacts



CS + Math + Sci/Eng

- **Model**
S2. Develop and use models
M4. Model with mathematics
CS4. Developing and Using Abstractions
CS6. Testing and Refining Computational Artifacts
- **Use computational thinking**
S5. Use mathematics and computational thinking
CS3. Recognizing and Defining Computational Problems
CS4. Developing and Using Abstractions
CS5. Creating Computational Artifacts
- **Define problems**
S1. Ask questions and define problems
M1. Make sense of problems and persevere in solving them
CS3. Recognizing and Defining Computational Problems
- **Communicate rationale**
S7. Engage in argument from evidence
S8. Obtain, evaluate, and communicate information
M3. Construct viable arguments and critique the reasoning of others
CS7. Communicating About Computing

* Computer science practices also overlap with practices in other domains, including English language arts. For example, CS1. *Fostering an Inclusive Computing Culture* and CS2. *Collaborating Around Computing* overlap with E7. *Come to understand other perspectives and cultures through reading, listening, and collaborations.*

CS and Career & Technical Education (CTE)

Computer science is sometimes also confused with Career & Technical Education (CTE) clusters and pathways. The ***Information Technology cluster in CTE*** includes the following pathways:

- Network Systems Pathway
- Information Support & Services Pathway
- Web & Digital Communications Pathway
- Programming & Software Development Pathway

While the above are examples of CS pathways, the K-12 CS concepts and practices expressed in this Standards are foundational skills and knowledge that are important for all students in order to be informed and productive citizens in the 21st century. They are applicable not just in the information technology occupations / pathways above, but also virtually every other cluster. Here are a few notable examples:

- ***Engineering / Manufacturing.*** Advanced manufacturing is distinguished by the use of technology such as robotics and automation, digital modeling and simulation, etc.
- ***Health science.*** One-third of all practitioners / technical occupations in healthcare are technical (technologists and technicians).
- ***Business management and finance.*** These sectors are being transformed by technology, notably the use of analytics - the systematic computational analysis of data or statistics.

Students who are interested in focusing on the design and development of computer hardware and software systems and networks are encouraged to consider CTE programs in Engineering and/or Information and Communication Technologies. Students who are interested in applying these technologies in other areas might consider other programs.

Program Implementation

Key Considerations

Leadership and Administration

Establish a STEM / Computer Science advisory board. This group could include teachers, administrators, school board members, parents, members of the business / industry community, and other community members. A well-composed group will be in a good position to make recommendations regarding STEM / Computer Science curriculum planning and implementation.

Establish implementation team(s). This is a group of educators within a school who will do the implementation work necessary to establish and strengthen robust K-12 computer science programs. A teacher or administrator can't go it alone - it requires vertical integration.

Educator certification. At the primary level, schools should seek to employ a technology integration specialist and/or a computer science educator. At the secondary level, schools should seek to employ at least one certified Computer Science teacher.

Course classification. Courses that are clearly computer science, as specified in these standards, should be classified as such in Educator Information Systems (EIS). Computer science should be recognized as a content area and reflected in your department names.

Curriculum and Professional Learning

Seek out standards-aligned resources and take advantage of professional development.

Teachers in the early grades are tasked with helping their students develop in a great breadth of disciplines and may be unfamiliar or uncomfortable with CS and/or technology in general. In secondary grades, schools might want to “convert” an educator from one subject area to CS. Utilizing comprehensive curriculum aligned with the CS standards and participating in professional development can help address these challenges.

(See also Appendix: Teaching & Learning Resources)

Incorporate and/or integrate CS into your current schedule and curricula. While you may want to make schedule changes to accommodate expanded CS offerings, this may not be necessary. We distinguish incorporation and integration as follows:

- **Incorporate** - add or strengthen dedicated CS content in time that is already a part of the schedule, such as Technology / Engineering education, or Library / Media education.
- **Integrate** - integrate CS content into the teaching and learning of content in other related areas, especially in STEM, but also in the Arts, Humanities and other areas.

Instruction and Assessment

Use inquiry and make meaningful experiences with your students. Give students space to pursue CS projects that are related to their personal interests. Help students learn how to learn. Connect CS content to social and cultural contexts and what's happening in their community. These practices can help students be empowered in their learning, and develop critical-thinking and creativity.

Use project-based and problem-based learning. CS naturally lends itself to project-based and problem-based learning. Project-based learning allows students to take time to develop and refine a product. Problem-based learning begins by identifying a specific problem to solve and designing and implementing solutions. Recognize the importance of both process and product.

Help students develop communication and collaboration skills. Students should collaborate via group projects. Communication and collaboration skills should be explicitly developed - don't expect them to "just know." Students should develop technical communication and presentation skills. Encourage students to reflect upon what they've learned and created.

Don't be overly dependent on technology. Many fundamental CS concepts can be explored without even using a computer (e.g. CS Unplugged). Even in programming, algorithms can and should be worked out on paper or whiteboards using flowcharts and pseudocode. Don't be too dependent on online resources and tools - have a backup plan in case there are network problems.

Use a variety of assessment methods. Use continuous formative assessment to gather data that you can use to adapt and personalize your student's learning experience. Let students demonstrate their knowledge in a variety of ways to they can show their strengths. For example, portfolios, presentations, connect with inquiry / PBL (above). Encourage peer-to-peer feedback. Stress that CS is an iterative process and they can learn from their mistakes to improve their work. When CS is integrated in the school curriculum, students can use CS to demonstrate their knowledge in other subject areas (e.g. by creating an app).

Extended Learning Opportunities

Provide unstructured time for students to explore CS. Giving students unstructured time with programming tools will promote creativity and establish confidence in applying their CS knowledge. Facilitators do not need to be CS experts, but they should be aware of resources and tools that students can use to learn.

Sign up for expos and competitions. These programs can greatly help students develop presentation, collaboration skills, and more. They also allow students to interact with peers at other schools.

Work with your community. Encourage your students to get entrepreneurial. They can find clients in the community and work with them to design and develop a solution to a real problem. Find community members who want to give back and give them an opportunity to work with your students.

Program Progressions / Pathways

A strong K-12 CS district or school offers students time dedicated specifically to CS education, organized in a coherent progression, and also integrates CS with other areas.

(See also Appendix: Teaching & Learning Resources)

Primary (approx. K-6)

As we prepare our youngest learners for the demands of tomorrow, we need to acknowledge the role that computer science can play in their acquisition of 21st century skills. When elementary students are required to engage in computational thinking and solve real-world problems using technology, they are honing their ability to think critically, be creative, collaborate, and communicate. These skills, along with basic technological and digital literacy, are increasingly desired by their future teachers and employers.

Teaching computer science at the elementary level provides a solid foundation for students to build upon prior knowledge and experience real-world application of technology skills. However, establishing a pathway for achieving computer science standards can be a challenge due to barriers like scheduling and staffing. In contrast to middle and high schools, where computer science can be taught as a standalone course, elementary schools are more likely to require a flexible approach when it comes to implementing a computer science curriculum in grades K through 5.

Incorporate and/or integrate CS.

- Scenario A: Incorporate CS units as part of a library or technology “special” or “related arts” class.
- Scenario B: Integrate CS to design lessons that support both content area curriculum and CS concepts.

Utilize play-based learning in early childhood education

Children develop social and emotional skills through playful interactions with peers and adults, and research continually shows these interactions can have significant impacts on children’s learning and development. These strong affective, behavioral, and cognitive competencies provide the foundation for successful learning and development.



"Powerful Ideas" in Early Childhood CS Education

1. Social and emotional learning.
2. Patterns
3. Problem-solving
4. Representation
5. Sequencing

For more information, please visit "Computer Science in Early Childhood Education."
[K12CS]

Secondary (approx. 7-12)

First secondary-level courses in CS should take a big-picture view of computer science, addressing each of the core content areas and practices. As students advance, they should have opportunities to explore in depth more specific areas of CS.

The recommendations below are intended as a menu of options that schools can explore and implement in an appropriate timeline. They are intended to be organized in a logical implementation order, but schools will consider their own needs and capacity.

Ensure students have exposure to CS each year of middle-school. It is recommended that students are enrolled in at least 1 computer science course, or a technology / engineering course that strongly incorporates computer science, per academic year.

Some typical configurations include:

- Scenario A: Year-long course, ~45 min., once per week.
- Scenario B: Semester course, ~90 min., once per week.
- Scenario C: Trimester course, ~60 min., once per week.

In an ideal situation, students will have daily exposure to CS and Engineering throughout each year of middle-school.

Ensure all HS students take at least one CS course. We recommend that all students take a ½ credit CS course in high school to fulfill their Information & Communication Technologies requirement for graduation. This course should address each of the strands of the standards and relate CS to real-world applications.

Develop a Core CS Progression. Students with little prior exposure to computer science should take a ½ credit introductory course, as described above. Students with more experience may be able to begin HS at a higher level.

CS Progression Overview

- Introductory CS - described above.
- Intermediate CS - also addresses each of the core content areas. May include more mathematical / technical components.

Develop CS electives. Elective courses allow students to explore specific domains of computer science in greater depth. Implementation teams should consider what prerequisites may be appropriate for elective courses in CS - we don't necessarily recommend requiring the above progression before taking electives.

(See also Appendices: Examples of CS Electives for HS)

Integrate CS and develop interdisciplinary courses. We recommend that CS educators work with educators in other content areas, and professionals in other fields, to develop interdisciplinary and career connections. Integration and interdisciplinary programs of studies blur the boundaries between the disciplines.

- **Integration** refers to the inclusion of content from one content area into a course that is primarily addresses content in another area.
- **Interdisciplinary courses** combine content from one or more subject areas. Such courses should allow students to apply credit earned to either (or any) of the applicable subjects.

(See also Appendices: Interdisciplinary & Career Connections)

Leverage Career & Technical Education (CTE) programs. As previously stated, all industries are impacted by computing technology. Students will find foundational computer science knowledge and skills to be useful in a number of CTE specialty areas, including, but not limited to:

- Information and Communication Technologies
- Engineering and Manufacturing
- Health Science
- Business Management and Finance

(See also Appendices: Interdisciplinary & Career Connections.)

Appendices

Appendix A: Writers, Reviewers, & References

Standards Revision Team

The following members participated in development team meetings and/or subcommittee work.

Tammy Andrew	CS Teacher	Milford Academy
Radim Bartos	CS Professor	University of New Hampshire
Heather Drolet	Tech Integrator	Christa McAuliffe School
Karen Locke	Tech Integrator, Code.org trainer	Hopkinton
Joanna Marcotte	CS Teacher	Founders Academy
Lisa Marcou	Computer Engineering Teacher	Concord Regional Technical Center
Norm Messa	CS Teacher	Seacoast School of Technology
Laura Nickerson	Director, STEM Teachers Collaborative	UNH Leitzel Center
Rajesh Prasad	CS Professor	St. Anselms College
Nancy Rose	Director of Library / Media Tech.	Merrimack School District
Mihaela Sabin	CS Professor	UNH Manchester
Zhizhang Shen	CS Professor	Plymouth State University
Alfred Thompson	CS Teacher	Bishop Guertin
Scott Valcourt	Director of Strategic Technology	University of New Hampshire
Natalya Vinogradova	Director of NH Impact Center	Plymouth State University

CS4NH Alliance advisory Committee

The following are the members of the CS4NH Alliance advisory committee.

David Benedetto	Director of STEM Education	NH Department of Education
Judy Burrows	Director of Student Aid	NH Charitable Foundation
William Church	Director	White Mountain Science, Inc.
Matt Cookson	Executive Director	NH High Technology Council
Rosabel Deloge	CS4NH Alliance Manager	Independent
Beth Doiron	Director of DOE and College	Community College System of NH

	Access Programs	
Heather Drolet	Technology Integration Specialist, Founder, NH Kids Code	Christa McAuliffe School NH Kids Code
Lori Langlois	Director	North Country Education Services
Laura Nickerson	Director, STEM Teachers Collaborative	University of NH, Leitzel Center
Mihaela Sabin	Computer Science Professor, Chair of Department of Engineering and Applied Sciences	University of NH, Manchester
Terry Wolf	Vice Chair, Education Committee	NH House of Representatives

Key References

NH DOE Planning Documents	<ul style="list-style-type: none"> • NH CS Standards Plan • NH CS State Plan
National Framework and Standards	<ul style="list-style-type: none"> • 2017 CSTA K-12 Standards. • K-12 CS Framework. • ISTE Standards for Students.
CS Education Data	<ul style="list-style-type: none"> • State-of-the-States Landscape Report on CS Education • Google-Gallup CS Polls
Computing Occupation Data	<ul style="list-style-type: none"> • US Bureau of Labor Statistics. STEM Occupations: Past, Present, and Future. • Change the Equation. The Hidden Half.

Glossary

- Please refer to <https://k12cs.org/glossary/>

Works cited

- [ACM]. Association of Computing Machinery, Computer Science Teachers Association (2010). *Running on Empty: The Failure to Teach Computer Science in the Digital Age.*
- [K12CS]. K-12 CS Coalition (2016). *K-12 Computer Science Framework.*
- [CSforALL]. US Department of Education. Office of Innovation and Improvement. Computer Science for All Proposal. Retrieved from LINK. [\[Link to innovation.ed.gov\]](https://innovation.ed.gov/)

Appendix B: Useful Resources and Examples

Teaching and Learning Resources

The resources provided here are examples and are not formally endorsed by the NH Department of Education. Educators are strongly encouraged to discover and evaluate resources regularly. (See also: [CS4NH Resource List](#).)

Primary

Resources include but are not limited to: [Code.org CS Fundamentals](#), [Project Lead the Way](#), [Kodable](#), [ScratchEd](#), [Tynker](#), [CSFirst with Google](#), [CodeMonkey](#), and [Khan Academy](#).

Secondary / Middle-Lower High School (approx 7-10 grade range)

Examples of curriculum that are appropriate for the 7-10 grade range:

- [Exploring Computer Science \(ECS\)](#)
- [Harvey Mudd MyCS](#)
- [Code.org CS Discoveries \(CSD\)](#)

Secondary / High School

- [Computer Science Principles](#) (intermediate level - can be AP or non-AP)
- [AP Computer Science A](#) (elective - algorithms & programming)

Secondary / Interdisciplinary

- [Bootstrap Algebra](#)
- [Bootstrap Data Science](#)
- [Bootstrap Computational Physics](#)

CS Electives for HS

Computing Systems / Networks & the Internet (See also: Career & Technical Education)	<ul style="list-style-type: none"> • Digital Electronics • Physical Computing • Cybersecurity
Algorithms & Programming (See also: Mathematics)	<ul style="list-style-type: none"> • Computer Programming • Data Structures • Object-Oriented Programming
Data & Analysis (See also: Mathematics)	<ul style="list-style-type: none"> • Data Science

Impacts of Computing (See also: Social Studies, Business, Career & Technical Education)	<ul style="list-style-type: none"> • Computing Career Exploration • Computer Science / Entrepreneurship • Development and Social Impacts of Information & Communication Technologies • Emerging Trends in Technology
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Connections to Other Disciplines and Careers

Mathematics	
Arithmetic & Logic	<ul style="list-style-type: none"> • Recognizing patterns • Using number systems and representations • Arithmetic and logical operations • Developing algorithms • Developing abstractions
Algebra	<ul style="list-style-type: none"> • Variables, expressions, and statements • Functions
Geometry	<ul style="list-style-type: none"> • Using and creating computer programs to create geometric patterns and shapes
Data & Statistics	<ul style="list-style-type: none"> • Representing phenomena numerically and digitally • Using and creating computer simulations • Using and creating computer programs to process, analyze, and visualize data.

Sciences & Engineering	
Earth & Space Sciences	<ul style="list-style-type: none"> • Geographic information systems (GIS) • Agriculture and natural resource management
Physical Sciences	<ul style="list-style-type: none"> • Mechanics and robotics
Life Sciences	<ul style="list-style-type: none"> • Modeling and simulation - biological systems • Bioinformatics • Biomimicry
Engineering, Technology, & Applications of Science	<ul style="list-style-type: none"> • Electrical and computer engineering • Software engineering • Computational design and modeling for engineering

Visual Arts, Media Arts & Design	
Media Arts & Interactive arts (See also: Career & Technical Education)	<ul style="list-style-type: none"> • Audio/video production • Artbotics • Video games
Visual Arts & Design	<ul style="list-style-type: none"> • Computational design

Humanities & Social Sciences	
English Language Arts & World Languages	<ul style="list-style-type: none"> • Formal vs. natural languages • Syntax and semantics • Natural language processing • Computer translation
Social Studies	<ul style="list-style-type: none"> • Development and impact of information & communication technologies • Data and analytics in social sciences
Fine Arts & Performing Arts	<ul style="list-style-type: none"> • Computing for creative expression • Technology design / engineering for performing arts • Data and analytics for sports
Health & Wellness	<ul style="list-style-type: none"> • Technology use and impact on physical and mental health and wellness • Measuring and using biometrics. • Kinesiology and robotics

Career & Technical Education (CTE)	
CTE Clusters	Examples of Computing
STE(A)M: <ul style="list-style-type: none"> • Agriculture, Food & Natural Resources • Architecture & Construction • Arts, A/V Technology & Communications • Information Technology • Health Science • Manufacturing • Science, Technology, Engineering & Mathematics 	<ul style="list-style-type: none"> • Geographic Information Systems (GIS) • Healthcare analytics • Automated manufacturing / robotics
Business: <ul style="list-style-type: none"> • Business Management & Administration • Finance • Hospitality & Tourism • Marketing • Transportation, Distribution & Logistics 	<ul style="list-style-type: none"> • Business analytics for marketing, logistics, etc. • Financial modeling and automation
Human Services: <ul style="list-style-type: none"> • Education & Training • Government & Public Administration • Human Services • Law, Public Safety, Corrections & Security 	<ul style="list-style-type: none"> • Educational technology • Social media • Cybersecurity, digital forensics

Part 2: Standards

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Preface

Connections to Computer Science Teachers Association (CSTA) Standards and K-12 CS Framework.

NH's Computer Science Standards are aligned with the [CSTA K-12 Computer Science Standards](#) and [K-12 CS Framework](#).

Third-party resources that are aligned with these national standards are also aligned with NH's standards.

Ages and grades

The age ranges and grade bands given below are approximate. Student learning should be personalized so that each student is gaining skills and knowledge in a developmentally appropriate manner.

Core K-12 Standards	Level 1A	Ages 5-7	Grades K-2	Play-based learning
	Level 1B	Ages 8-11	Grades 3-5	Primarily blocks-based programming tools
	Level 2	Ages 11-14	Grades 6-8	Transition to text-based programming tools
	Level 3A	Ages 14-16	Grades 9-10	Meets CS-Engineering graduation requirement
Electives	Level 3B	Ages 16-18	Grades 11-12	High school electives for students who wish to pursue study of computer science beyond the core for all students.

Concepts and practices

Within each age / grade band, the standards are organized by concepts, and reference the practices.

Concepts	Practices	
1. Computing Systems 2. Networks and the Internet 3. Data and Analysis 4. Algorithms and Programming 5. Impacts of Computing	1. Fostering an Inclusive Computing Culture 2. Collaborating Around Computing 3. Recognizing and Defining Computational Problems	4. Developing and Using Abstractions 5. Creating Computational Artifacts 6. Testing and Refining Computational Artifacts 7. Communicating About Computing

Level 1A Standards

Computing Systems

1A-CS-01	<p>Select and operate appropriate software to perform a variety of tasks, and recognize that users have different needs and preferences for the technology they use.</p> <p><i>People use computing devices to perform a variety of tasks accurately and quickly. Students should be able to select the appropriate app/program to use for tasks they are required to complete. For example, if students are asked to draw a picture, they should be able to open and use a drawing app/program to complete this task, or if they are asked to create a presentation, they should be able to open and use presentation software. In addition, with teacher guidance, students should compare and discuss preferences for software with the same primary functionality. Students could compare different web browsers or word processing, presentation, or drawing programs.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.1</p>
1A-CS-02	<p>Use appropriate terminology in identifying and describing the function of common physical components of computing systems (hardware).</p> <p><i>A computing system is composed of hardware and software. Hardware consists of physical components. Students should be able to identify and describe the function of external hardware, such as desktop computers, laptop computers, tablet devices, monitors, keyboards, mice, and printers.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

1A-CS-03

Describe basic hardware and software problems using accurate terminology.

Problems with computing systems have different causes. Students at this level do not need to understand those causes, but they should be able to communicate a problem with accurate terminology (e.g., when an app or program is not working as expected, a device will not turn on, the sound does not work, etc.). Ideally, students would be able to use simple troubleshooting strategies, including turning a device off and on to reboot it, closing and reopening an app, turning on speakers, or plugging in headphones. These are, however, not specified in the standard, because these problems may not occur.

Practice(s): Testing and Refining Computational Artifacts, Communicating About Computing: 6.2, 7.2

Networks & the Internet

1A-NI-04

Explain what passwords are and why we use them, and use strong passwords to protect devices and information from unauthorized access.

Learning to protect one's device or information from unwanted use by others is an essential first step in learning about cybersecurity. Students are not required to use multiple strong passwords. They should appropriately use and protect the passwords they are required to use.

Practice(s): Communicating About Computing: 7.3

Data & Analysis

1A-DA-05

Store, copy, search, retrieve, modify, and delete information using a computing device and define the information stored as data.

All information stored and processed by a computing device is referred to as data. Data can be images, text documents, audio files, software programs or apps, video files, etc. As students use software to complete tasks on a computing device, they will be manipulating data.

Practice(s): Developing and Using Abstractions: 4.2

1A-DA-06

Collect and present the same data in various visual formats.

The collection and use of data about the world around them is a routine part of life and influences how people live. Students could collect data on the weather, such as sunny days versus rainy days, the temperature at the beginning of the school day and end of the school day, or the inches of rain over the course of a storm. Students could count the number of pieces of each color of candy in a bag of candy, such as Skittles or M&Ms. Students could create surveys of things that interest them, such as favorite foods, pets, or TV shows, and collect answers to their surveys from their peers and others. The data collected could then be organized into two or more visualizations, such as a bar graph, pie chart, or pictograph.

Practice(s): Communicating About Computing, Developing and Using Abstractions: 7.1, 4.4

1A-DA-07	<p>Identify and describe patterns in data visualizations, such as charts or graphs, to make predictions.</p> <p><i>Data can be used to make inferences or predictions about the world. Students could analyze a graph or pie chart of the colors in a bag of candy or the averages for colors in multiple bags of candy, identify the patterns for which colors are most and least represented, and then make a prediction as to which colors will have most and least in a new bag of candy. Students could analyze graphs of temperatures taken at the beginning of the school day and end of the school day, identify the patterns of when temperatures rise and fall, and predict if they think the temperature will rise or fall at a particular time of the day, based on the pattern observed.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
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Algorithms & Programming

1A-AP-08	<p>Model daily processes by creating and following algorithms (sets of step-by-step instructions) to complete tasks.</p> <p><i>Composition is the combination of smaller tasks into more complex tasks. Students could create and follow algorithms for making simple foods, brushing their teeth, getting ready for school, participating in clean-up time.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
1A-AP-09	<p>Model the way programs store and manipulate data by using numbers or other symbols to represent information.</p> <p><i>Information in the real world can be represented in computer programs. Students could use thumbs up/down as representations of yes/no, use arrows when writing algorithms to represent direction, or encode and decode words using numbers, pictographs, or other symbols to represent letters or words.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
1A-AP-10	<p>Develop programs with sequences and simple loops, to express ideas or address a problem.</p> <p><i>Programming is used as a tool to create products that reflect a wide range of interests. Control structures specify the order in which instructions are executed within a program. Sequences are the order of instructions in a program. For example, if dialogue is not sequenced correctly when programming a simple animated story, the story will not make sense. If the commands to program a robot are not in the correct order, the robot will not complete the task desired. Loops allow for the repetition of a sequence of code multiple times. For example, in a program to show the life cycle of a butterfly, a loop could be combined with move commands to allow continual but controlled movement of the character.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
1A-AP-11	<p>Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.</p> <p><i>Decomposition is the act of breaking down tasks into simpler tasks. Students could break down the steps needed to make a peanut butter and jelly sandwich, to brush their teeth, to draw a shape, to move a character across the screen, or to solve a level of a coding app.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.2</p>

1A-AP-12	<p>Develop plans that describe a program’s sequence of events, goals, and expected outcomes.</p> <p><i>Creating a plan for what a program will do clarifies the steps that will be needed to create a program and can be used to check if a program is correct. Students could create a planning document, such as a story map, a storyboard, or a sequential graphic organizer, to illustrate what their program will do. Students at this stage may complete the planning process with help from their teachers.</i></p> <p>Practice(s): Creating Computational Artifacts, Communicating About Computing: 5.1, 7.2</p>
1A-AP-13	<p>Give attribution when using the ideas and creations of others while developing programs.</p> <p><i>Using computers comes with a level of responsibility. Students should credit artifacts that were created by others, such as pictures, music, and code. Credit could be given orally, if presenting their work to the class, or in writing or orally, if sharing work on a class blog or website. Proper attribution at this stage does not require a formal citation, such as in a bibliography or works cited document.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>
1A-AP-14	<p>Debug (identify and fix) errors in an algorithm or program that includes sequences and simple loops.</p> <p><i>Algorithms or programs may not always work correctly. Students should be able to use various strategies, such as changing the sequence of the steps, following the algorithm in a step-by-step manner, or trial and error to fix problems in algorithms and programs.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.2</p>
1A-AP-15	<p>Using correct terminology, describe steps taken and choices made during the iterative process of program development.</p> <p><i>At this stage, students should be able to talk or write about the goals and expected outcomes of the programs they create and the choices that they made when creating programs. This could be done using coding journals, discussions with a teacher, class presentations, or blogs.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
<h2>Impacts of Computing</h2>	
1A-IC-16	<p>Compare how people live and work before and after the implementation or adoption of new computing technology.</p> <p><i>Computing technology has positively and negatively changed the way people live and work. In the past, if students wanted to read about a topic, they needed access to a library to find a book about it. Today, students can view and read information on the Internet about a topic or they can download e-books about it directly to a device. Such information may be available in more than one language and could be read to a student, allowing for great accessibility.</i></p> <p>Practice(s): Communicating About Computing: 7</p>

1A-IC-17	<p>Work respectfully and responsibly with others online.</p> <p><i>Online communication facilitates positive interactions, such as sharing ideas with many people, but the public and anonymous nature of online communication also allows intimidating and inappropriate behavior in the form of cyberbullying. Students could share their work on blogs or in other collaborative spaces online, taking care to avoid sharing information that is inappropriate or that could personally identify them to others. Students could provide feedback to others on their work in a kind and respectful manner and could tell an adult if others are sharing things they should not share or are treating others in an unkind or disrespectful manner on online collaborative spaces.</i></p> <p>Practice(s): Collaborating Around Computing: 2.1</p>
1A-IC-18	<p>Keep login information private, and log off of devices appropriately.</p> <p><i>People use computing technology in ways that can help or hurt themselves or others. Harmful behaviors, such as sharing private information and leaving public devices logged in should be recognized and avoided.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>

Level 1B Standards

Computing Systems

1B-CS-01	<p>Describe how internal and external parts of computing devices function to form a system.</p> <p><i>Computing devices often depend on other devices or components. For example, a robot depends on a physically attached light sensor to detect changes in brightness, whereas the light sensor depends on the robot for power. Keyboard input or a mouse click could cause an action to happen or information to be displayed on a screen; this could only happen because the computer has a processor to evaluate what is happening externally and produce corresponding responses. Students should describe how devices and components interact using correct terminology.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
1B-CS-02	<p>Model how computer hardware and software work together as a system to accomplish tasks.</p> <p><i>In order for a person to accomplish tasks with a computer, both hardware and software are needed. At this stage, a model should only include the basic elements of a computer system, such as input, output, processor, sensors, and storage. Students could draw a model on paper or in a drawing program, program an animation to demonstrate it, or demonstrate it by acting this out in some way.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>

1B-CS-03	<p>Determine potential solutions to solve simple hardware and software problems using common troubleshooting strategies.</p> <p><i>Although computing systems may vary, common troubleshooting strategies can be used on all of them. Students should be able to identify solutions to problems such as the device not responding, no power, no network, app crashing, no sound, or password entry not working. Should errors occur at school, the goal would be that students would use various strategies, such as rebooting the device, checking for power, checking network availability, closing and reopening an app, making sure speakers are turned on or headphones are plugged in, and making sure that the caps lock key is not on, to solve these problems, when possible.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.2</p>
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Networks & the Internet

1B-NI-04	<p>Model how information is broken down into smaller pieces, transmitted as packets through multiple devices over networks and the Internet, and reassembled at the destination.</p> <p><i>Information is sent and received over physical or wireless paths. It is broken down into smaller pieces called packets, which are sent independently and reassembled at the destination. Students should demonstrate their understanding of this flow of information by, for instance, drawing a model of the way packets are transmitted, programming an animation to show how packets are transmitted, or demonstrating this through an unplugged activity which has them act it out in some way.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
1B-NI-05	<p>Discuss real-world cybersecurity problems and how personal information can be protected.</p> <p><i>Just as we protect our personal property offline, we also need to protect our devices and the information stored on them. Information can be protected using various security measures. These measures can be physical and/or digital. Students could discuss or use a journaling or blogging activity to explain, orally or in writing, about topics that relate to personal cybersecurity issues. Discussion topics could be based on current events related to cybersecurity or topics that are applicable to students, such as the necessity of backing up data to guard against loss, how to create strong passwords and the importance of not sharing passwords, or why we should install and keep anti-virus software updated to protect data and systems.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.1</p>

Data & Analysis

1B-DA-06	<p>Organize and present collected data visually to highlight relationships and support a claim.</p> <p><i>Raw data has little meaning on its own. Data is often sorted or grouped to provide additional clarity. Organizing data can make interpreting and communicating it to others easier. Data points can be clustered by a number of commonalities. The same data could be manipulated in different ways to emphasize particular aspects or parts of the data set. For example, a data set of sports teams could be sorted by wins,</i></p>
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	<p>points scored, or points allowed, and a data set of weather information could be sorted by high temperatures, low temperatures, or precipitation.</p> <p>Practice(s): Communicating About Computing: 7.1</p>
1B-DA-07	<p>Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea.</p> <p><i>The accuracy of data analysis is related to how realistically data is represented. Inferences or predictions based on data are less likely to be accurate if the data is not sufficient or if the data is incorrect in some way. Students should be able to refer to data when communicating an idea. For example, in order to explore the relationship between speed, time, and distance, students could operate a robot at uniform speed, and at increasing time intervals to predict how far the robot travels at that speed. In order to make an accurate prediction, one or two attempts of differing times would not be enough. The robot may also collect temperature data from a sensor, but that data would not be relevant for the task. Students must also make accurate measurements of the distance the robot travels in order to develop a valid prediction. Students could record the temperature at noon each day as a basis to show that temperatures are higher in certain months of the year. If temperatures are not recorded on non-school days or are recorded incorrectly or at different times of the day, the data would be incomplete and the ideas being communicated could be inaccurate. Students may also record the day of the week on which the data was collected, but this would have no relevance to whether temperatures are higher or lower. In order to have sufficient and accurate data on which to communicate the idea, students might want to use data provided by a governmental weather agency.</i></p> <p>Practice(s): Communicating About Computing: 7.1</p>

Algorithms & Programming

1B-AP-08	<p>Compare and refine multiple algorithms for the same task and determine which is the most appropriate.</p> <p><i>Different algorithms can achieve the same result, though sometimes one algorithm might be most appropriate for a specific situation. Students should be able to look at different ways to solve the same task and decide which would be the best solution. For example, students could use a map and plan multiple algorithms to get from one point to another. They could look at routes suggested by mapping software and change the route to something that would be better, based on which route is shortest or fastest or would avoid a problem. Students might compare algorithms that describe how to get ready for school. Another example might be to write different algorithms to draw a regular polygon and determine which algorithm would be the easiest to modify or repurpose to draw a different polygon.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts, Recognizing and Defining Computational Problems: 6.3, 3.3</p>
1B-AP-09	<p>Create programs that use variables to store and modify data.</p> <p><i>Variables are used to store and modify data. At this level, understanding how to use variables is sufficient. For example, students may use mathematical operations to add to the score of a game or subtract from the number of lives available in a game. The use of a variable as a countdown timer is another example.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>

1B-AP-10	<p>Create programs that include sequences, events, loops, and conditionals.</p> <p><i>Control structures specify the order (sequence) in which instructions are executed within a program and can be combined to support the creation of more complex programs. Events allow portions of a program to run based on a specific action. For example, students could write a program to explain the water cycle and when a specific component is clicked (event), the program would show information about that part of the water cycle. Conditionals allow for the execution of a portion of code in a program when a certain condition is true. For example, students could write a math game that asks multiplication fact questions and then uses a conditional to check whether or not the answer that was entered is correct. Loops allow for the repetition of a sequence of code multiple times. For example, in a program that produces an animation about a famous historical character, students could use a loop to have the character walk across the screen as they introduce themselves.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
1B-AP-11	<p>Decompose (break down) problems into smaller, manageable subproblems to facilitate the program development process.</p> <p><i>Decomposition is the act of breaking down tasks into simpler tasks. For example, students could create an animation by separating a story into different scenes. For each scene, they would select a background, place characters, and program actions.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.2</p>
1B-AP-12	<p>Modify, remix, or incorporate portions of an existing program into one's own work, to develop something new or add more advanced features.</p> <p><i>Programs can be broken down into smaller parts, which can be incorporated into new or existing programs. For example, students could modify prewritten code from a single-player game to create a two-player game with slightly different rules, remix and add another scene to an animated story, use code to make a ball bounce from another program in a new basketball game, or modify an image created by another student.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.3</p>
1B-AP-13	<p>Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences.</p> <p><i>Planning is an important part of the iterative process of program development. Students outline key features, time and resource constraints, and user expectations. Students should document the plan as, for example, a storyboard, flowchart, pseudocode, or story map.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture, Creating Computational Artifacts: 1.1, 5.1</p>

1B-AP-14	<p>Observe intellectual property rights and give appropriate attribution when creating or remixing programs.</p> <p><i>Intellectual property rights can vary by country but copyright laws give the creator of a work a set of rights that prevents others from copying the work and using it in ways that they may not like. Students should identify instances of remixing, when ideas are borrowed and iterated upon, and credit the original creator. Students should also consider common licenses that place limitations or restrictions on the use of computational artifacts, such as images and music downloaded from the Internet. At this stage, attribution should be written in the format required by the teacher and should always be included on any programs shared online.</i></p> <p>Practice(s): Creating Computational Artifacts, Communicating About Computing: 5.2, 7.3</p>
1B-AP-15	<p>Test and debug (identify and fix errors) a program or algorithm to ensure it runs as intended.</p> <p><i>As students develop programs they should continuously test those programs to see that they do what was expected and fix (debug), any errors. Students should also be able to successfully debug simple errors in programs created by others.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.1, 6.2</p>
1B-AP-16	<p>Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development.</p> <p><i>Collaborative computing is the process of performing a computational task by working in pairs or on teams. Because it involves asking for the contributions and feedback of others, effective collaboration can lead to better outcomes than working independently. Students should take turns in different roles during program development, such as note taker, facilitator, program tester, or “driver” of the computer.</i></p> <p>Practice(s): Collaborating Around Computing: 2.2</p>
1B-AP-17	<p>Describe choices made during program development using code comments, presentations, and demonstrations.</p> <p><i>People communicate about their code to help others understand and use their programs. Another purpose of communicating one's design choices is to show an understanding of one's work. These explanations could manifest themselves as in-line code comments for collaborators and assessors, or as part of a summative presentation, such as a code walk-through or coding journal.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

Impacts of Computing

1B-IC-18	<p>Discuss computing technologies that have changed the world, and express how those technologies influence, and are influenced by, cultural practices.</p> <p><i>New computing technology is created and existing technologies are modified for many reasons, including to increase their benefits, decrease their risks, and meet societal needs. Students, with guidance from their teacher, should discuss topics that relate to the history of technology and the changes in the world due to technology. Topics could be based on current news content, such as robotics, wireless Internet, mobile computing devices, GPS systems, wearable computing, or how social media has influenced social and political changes.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.1</p>
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1B-IC-19	<p>Brainstorm ways to improve the accessibility and usability of technology products for the diverse needs and wants of users.</p> <p><i>The development and modification of computing technology are driven by people’s needs and wants and can affect groups differently. Anticipating the needs and wants of diverse end users requires students to purposefully consider potential perspectives of users with different backgrounds, ability levels, points of view, and disabilities. For example, students may consider using both speech and text when they wish to convey information in a game. They may also wish to vary the types of programs they create, knowing that not everyone shares their own tastes.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.2</p>
1B-IC-20	<p>Seek diverse perspectives for the purpose of improving computational artifacts.</p> <p><i>Computing provides the possibility for collaboration and sharing of ideas and allows the benefit of diverse perspectives. For example, students could seek feedback from other groups in their class or students at another grade level. Or, with guidance from their teacher, they could use video conferencing tools or other online collaborative spaces, such as blogs, wikis, forums, or website comments, to gather feedback from individuals and groups about programming projects.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.1</p>
1B-IC-21	<p>Use public domain or creative commons media, and refrain from copying or using material created by others without permission.</p> <p><i>Ethical complications arise from the opportunities provided by computing. The ease of sending and receiving copies of media on the Internet, such as video, photos, and music, creates the opportunity for unauthorized use, such as online piracy, and disregard of copyrights. Students should consider the licenses on computational artifacts that they wish to use. For example, the license on a downloaded image or audio file may have restrictions that prohibit modification, require attribution, or prohibit use entirely.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>

Level 2 Standards

Computing Systems

2-CS-01	<p>Recommend improvements to the design of computing devices, based on an analysis of how users interact with the devices.</p> <p><i>The study of human–computer interaction (HCI) can improve the design of devices, including both hardware and software. Students should make recommendations for existing devices (e.g., a laptop, phone, or tablet) or design their own components or interface (e.g., create their own controllers). Teachers can guide students to consider usability through several lenses, including accessibility, ergonomics, and learnability. For example, assistive devices provide capabilities such as scanning written information and converting it to speech.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.3</p>
2-CS-02	<p>Design projects that combine hardware and software components to collect and exchange data.</p> <p><i>Collecting and exchanging data involves input, output, storage, and processing. When possible, students should select the hardware and software components for their project designs by considering factors such as functionality, cost, size, speed, accessibility, and aesthetics. For example, components for a mobile app could include accelerometer, GPS, and speech recognition. The choice of a device that connects wirelessly through a Bluetooth connection versus a physical USB connection involves a tradeoff between mobility and the need for an additional power source for the wireless device.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.1</p>
2-CS-03	<p>Systematically identify and fix problems with computing devices and their components.</p> <p><i>Since a computing device may interact with interconnected devices within a system, problems may not be due to the specific computing device itself but to devices connected to it. Just as pilots use checklists to troubleshoot problems with aircraft systems, students should use a similar, structured process to troubleshoot problems with computing systems and ensure that potential solutions are not overlooked. Examples of troubleshooting strategies include following a troubleshooting flow diagram, making changes to software to see if hardware will work, checking connections and settings, and swapping in working components.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.2</p>

Networks & the Internet

2-NI-04	<p>Model the role of protocols in transmitting data across networks and the Internet.</p> <p><i>Protocols are rules that define how messages between computers are sent. They determine how quickly and securely information is transmitted across networks and the Internet, as well as how to handle errors in transmission. Students should model how data is sent using protocols to choose the fastest path, to deal with missing information, and to deliver sensitive data securely. For example, students could devise a plan for resending lost information or for interpreting a picture that has missing pieces. The priority at this grade level is understanding the purpose of protocols and how they enable secure and errorless communication. Knowledge of the details of how specific protocols work is not expected.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
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2-NI-05	<p>Explain how physical and digital security measures protect electronic information.</p> <p><i>Information that is stored online is vulnerable to unwanted access. Examples of physical security measures to protect data include keeping passwords hidden, locking doors, making backup copies on external storage devices, and erasing a storage device before it is reused. Examples of digital security measures include secure router admin passwords, firewalls that limit access to private networks, and the use of a protocol such as HTTPS to ensure secure data transmission.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
2-NI-06	<p>Apply multiple methods of encryption to model the secure transmission of information.</p> <p><i>Encryption can be as simple as letter substitution or as complicated as modern methods used to secure networks and the Internet. Students should encode and decode messages using a variety of encryption methods, and they should understand the different levels of complexity used to hide or secure information. For example, students could secure messages using methods such as Caesar cyphers or steganography (i.e., hiding messages inside a picture or other data). They can also model more complicated methods, such as public key encryption, through unplugged activities.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
<h2>Data & Analysis</h2>	
2-DA-07	<p>Represent data using multiple encoding schemes.</p> <p><i>Data representations occur at multiple levels of abstraction, from the physical storage of bits to the arrangement of information into organized formats (e.g., tables). Students should represent the same data in multiple ways. For example, students could represent the same color using binary, RGB values, hex codes (low-level representations), as well as forms understandable by people, including words, symbols, and digital displays of the color (high-level representations).</i></p> <p>Practice(s): Developing and Using Abstractions: 4</p>
2-DA-08	<p>Collect data using computational tools and transform the data to make it more useful and reliable.</p> <p><i>As students continue to build on their ability to organize and present data visually to support a claim, they will need to understand when and how to transform data for this purpose. Students should transform data to remove errors, highlight or expose relationships, and/or make it easier for computers to process. The cleaning of data is an important transformation for ensuring consistent format and reducing noise and errors (e.g., removing irrelevant responses in a survey). An example of a transformation that highlights a relationship is representing males and females as percentages of a whole instead of as individual counts.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.3</p>

2-DA-09	<p>Refine computational models based on the data they have generated.</p> <p><i>A model may be a programmed simulation of events or a representation of how various data is related. In order to refine a model, students need to consider which data points are relevant, how data points relate to each other, and if the data is accurate. For example, students may make a prediction about how far a ball will travel based on a table of data related to the height and angle of a track. The students could then test and refine their model by comparing predicted versus actual results and considering whether other factors are relevant (e.g., size and mass of the ball). Additionally, students could refine game mechanics based on test outcomes in order to make the game more balanced or fair.</i></p> <p>Practice(s): Creating Computational Artifacts, Developing and Using Abstractions: 5.3, 4.4</p>
<h2>Algorithms & Programming</h2>	
2-AP-10	<p>Use flowcharts and/or pseudocode to address complex problems as algorithms.</p> <p><i>Complex problems are problems that would be difficult for students to solve computationally. Students should use pseudocode and/or flowcharts to organize and sequence an algorithm that addresses a complex problem, even though they may not actually program the solutions. For example, students might express an algorithm that produces a recommendation for purchasing sneakers based on inputs such as size, colors, brand, comfort, and cost. Testing the algorithm with a wide range of inputs and users allows students to refine their recommendation algorithm and to identify other inputs they may have initially excluded.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4, 4.1</p>
2-AP-11	<p>Create clearly named variables that represent different data types and perform operations on their values.</p> <p><i>A variable is like a container with a name, in which the contents may change, but the name (identifier) does not. When planning and developing programs, students should decide when and how to declare and name new variables. Students should use naming conventions to improve program readability. Examples of operations include adding points to the score, combining user input with words to make a sentence, changing the size of a picture, or adding a name to a list of people.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.1, 5.2</p>
2-AP-12	<p>Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.</p> <p><i>Control structures can be combined in many ways. Nested loops are loops placed within loops. Compound conditionals combine two or more conditions in a logical relationship (e.g., using AND, OR, and NOT), and nesting conditionals within one another allows the result of one conditional to lead to another. For example, when programming an interactive story, students could use a compound conditional within a loop to unlock a door only if a character has a key AND is touching the door.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.1, 5.2</p>

2-AP-13	<p>Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs.</p> <p><i>Students should break down problems into subproblems, which can be further broken down to smaller parts. Decomposition facilitates aspects of program development by allowing students to focus on one piece at a time (e.g., getting input from the user, processing the data, and displaying the result to the user). Decomposition also enables different students to work on different parts at the same time. For example, animations can be decomposed into multiple scenes, which can be developed independently.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.2</p>
2-AP-14	<p>Create procedures with parameters to organize code and make it easier to reuse.</p> <p><i>Students should create procedures and/or functions that are used multiple times within a program to repeat groups of instructions. These procedures can be generalized by defining parameters that create different outputs for a wide range of inputs. For example, a procedure to draw a circle involves many instructions, but all of them can be invoked with one instruction, such as “drawCircle.” By adding a radius parameter, the user can easily draw circles of different sizes.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1, 4.3</p>
2-AP-15	<p>Seek and incorporate feedback from team members and users to refine a solution that meets user needs.</p> <p><i>Development teams that employ user-centered design create solutions (e.g., programs and devices) that can have a large societal impact, such as an app that allows people with speech difficulties to translate hard-to-understand pronunciation into understandable language. Students should begin to seek diverse perspectives throughout the design process to improve their computational artifacts. Considerations of the end-user may include usability, accessibility, age-appropriate content, respectful language, user perspective, pronoun use, color contrast, and ease of use.</i></p> <p>Practice(s): Collaborating Around Computing, Fostering an Inclusive Computing Culture: 2.3, 1.1</p>
2-AP-16	<p>Incorporate existing code, media, and libraries into original programs, and give attribution.</p> <p><i>Building on the work of others enables students to produce more interesting and powerful creations. Students should use portions of code, algorithms, and/or digital media in their own programs and websites. At this level, they may also import libraries and connect to web application program interfaces (APIs). For example, when creating a side-scrolling game, students may incorporate portions of code that create a realistic jump movement from another person's game, and they may also import Creative Commons-licensed images to use in the background. Students should give attribution to the original creators to acknowledge their contributions.</i></p> <p>Practice(s): Developing and Using Abstractions, Creating Computational Artifacts, Communicating About Computing: 4.2, 5.2, 7.3</p>
2-AP-17	<p>Systematically test and refine programs using a range of test cases.</p> <p><i>Use cases and test cases are created and analyzed to better meet the needs of users and to evaluate whether programs function as intended. At this level, testing should become a deliberate process that is more iterative, systematic, and proactive than at lower levels. Students should begin to test programs by considering potential errors, such as what will happen if a user enters invalid input (e.g., negative numbers and 0 instead of positive numbers).</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.1</p>

2-AP-18	<p>Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts.</p> <p><i>Collaboration is a common and crucial practice in programming development. Often, many individuals and groups work on the interdependent parts of a project together. Students should assume pre-defined roles within their teams and manage the project workflow using structured timelines. With teacher guidance, they will begin to create collective goals, expectations, and equitable workloads. For example, students may divide the design stage of a game into planning the storyboard, flowchart, and different parts of the game mechanics. They can then distribute tasks and roles among members of the team and assign deadlines.</i></p> <p>Practice(s): Collaborating Around Computing: 2.2</p>
2-AP-19	<p>Document programs in order to make them easier to follow, test, and debug.</p> <p><i>Documentation allows creators and others to more easily use and understand a program. Students should provide documentation for end users that explains their artifacts and how they function. For example, students could provide a project overview and clear user instructions. They should also incorporate comments in their product and communicate their process using design documents, flowcharts, and presentations.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
<h2>Impacts of Computing</h2>	
2-IC-20	<p>Compare tradeoffs associated with computing technologies that affect people's everyday activities and career options.</p> <p><i>Advancements in computer technology are neither wholly positive nor negative. However, the ways that people use computing technologies have tradeoffs. Students should consider current events related to broad ideas, including privacy, communication, and automation. For example, driverless cars can increase convenience and reduce accidents, but they are also susceptible to hacking. The emerging industry will reduce the number of taxi and shared-ride drivers, but will create more software engineering and cybersecurity jobs.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
2-IC-21	<p>Discuss issues of bias and accessibility in the design of existing technologies.</p> <p><i>Students should test and discuss the usability of various technology tools (e.g., apps, games, and devices) with the teacher's guidance. For example, facial recognition software that works better for lighter skin tones was likely developed with a homogeneous testing group and could be improved by sampling a more diverse population. When discussing accessibility, students may notice that allowing a user to change font sizes and colors will not only make an interface usable for people with low vision but also benefits users in various situations, such as in bright daylight or a dark room.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.2</p>

2-IC-22	<p>Collaborate with many contributors through strategies such as crowdsourcing or surveys when creating a computational artifact.</p> <p><i>Crowdsourcing is gathering services, ideas, or content from a large group of people, especially from the online community. It can be done at the local level (e.g., classroom or school) or global level (e.g., age-appropriate online communities, like Scratch and Minecraft). For example, a group of students could combine animations to create a digital community mosaic. They could also solicit feedback from many people through use of online communities and electronic surveys.</i></p> <p>Practice(s): Collaborating Around Computing, Creating Computational Artifacts: 2.4, 5.2</p>
2-IC-23	<p>Describe tradeoffs between allowing information to be public and keeping information private and secure.</p> <p><i>Sharing information online can help establish, maintain, and strengthen connections between people. For example, it allows artists and designers to display their talents and reach a broad audience. However, security attacks often start with personal information that is publicly available online. Social engineering is based on tricking people into revealing sensitive information and can be thwarted by being wary of attacks, such as phishing and spoofing.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

Level 3A Standards

Computing Systems

3A-CS-01	<p>Explain how abstractions hide the underlying implementation details of computing systems embedded in everyday objects.</p> <p><i>Computing devices are often integrated with other systems, including biological, mechanical, and social systems. A medical device can be embedded inside a person to monitor and regulate his or her health, a hearing aid (a type of assistive device) can filter out certain frequencies and magnify others, a monitoring device installed in a motor vehicle can track a person's driving patterns and habits, and a facial recognition device can be integrated into a security system to identify a person. The creation of integrated or embedded systems is not an expectation at this level. Students might select an embedded device such as a car stereo, identify the types of data (radio station presets, volume level) and procedures (increase volume, store/recall saved station, mute) it includes, and explain how the implementation details are hidden from the user.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
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3A-CS-02	<p>Compare levels of abstraction and interactions between application software, system software, and hardware layers.</p> <p><i>At its most basic level, a computer is composed of physical hardware and electrical impulses. Multiple layers of software are built upon the hardware and interact with the layers above and below them to reduce complexity. System software manages a computing device's resources so that software can interact with hardware. For example, text editing software interacts with the operating system to receive input from the keyboard, convert the input to bits for storage, and interpret the bits as readable text to display on the monitor. System software is used on many different types of devices, such as smart TVs, assistive devices, virtual components, cloud components, and drones. For example, students may explore the progression from voltage to binary signal to logic gates to adders and so on. Knowledge of specific, advanced terms for computer architecture, such as BIOS, kernel, or bus, is not expected at this level.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
3A-CS-03	<p>Develop guidelines that convey systematic troubleshooting strategies that others can use to identify and fix errors.</p> <p><i>Troubleshooting complex problems involves the use of multiple sources when researching, evaluating, and implementing potential solutions. Troubleshooting also relies on experience, such as when people recognize that a problem is similar to one they have seen before or adapt solutions that have worked in the past. Examples of complex troubleshooting strategies include resolving connectivity problems, adjusting system configurations and settings, ensuring hardware and software compatibility, and transferring data from one device to another. Students could create a flow chart, a job aid for a help desk employee, or an expert system.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.2</p>
<h2>Networks & the Internet</h2>	
3A-NI-04	<p>Evaluate the scalability and reliability of networks, by describing the relationship between routers, switches, servers, topology, and addressing.</p> <p><i>Each device is assigned an address that uniquely identifies it on the network. Routers function by comparing IP addresses to determine the pathways packets should take to reach their destination. Switches function by comparing MAC addresses to determine which computers or network segments will receive frames. Students could use online network simulators to experiment with these factors.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
3A-NI-05	<p>Give examples to illustrate how sensitive data can be affected by malware and other attacks.</p> <p><i>Network security depends on a combination of hardware, software, and practices that control access to data and systems. The needs of users and the sensitivity of data determine the level of security implemented. Potential security problems, such as denial-of-service attacks, ransomware, viruses, worms, spyware, and phishing, present threats to sensitive data. Students might reflect on case studies or current events in which governments or organizations experienced data leaks or data loss as a result of these types of attacks.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

3A-NI-06	<p>Recommend security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.</p> <p><i>Security measures may include physical security tokens, two-factor authentication, and biometric verification. Potential security problems, such as denial-of-service attacks, ransomware, viruses, worms, spyware, and phishing, exemplify why sensitive data should be securely stored and transmitted. The timely and reliable access to data and information services by authorized users, referred to as availability, is ensured through adequate bandwidth, backups, and other measures. Students should systematically evaluate the feasibility of using computational tools to solve given problems or subproblems, such as through a cost-benefit analysis. Eventually, students should include more factors in their evaluations, such as how efficiency affects feasibility or whether a proposed approach raises ethical concerns.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.3</p>
3A-NI-07	<p>Compare various security measures, considering tradeoffs between the usability and security of a computing system.</p> <p><i>Security measures may include physical security tokens, two-factor authentication, and biometric verification, but choosing security measures involves tradeoffs between the usability and security of the system. The needs of users and the sensitivity of data determine the level of security implemented. Students might discuss computer security policies in place at the local level that present a tradeoff between usability and security, such as a web filter that prevents access to many educational sites but keeps the campus network safe.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.3</p>
3A-NI-08	<p>Explain tradeoffs when selecting and implementing cybersecurity recommendations.</p> <p><i>Network security depends on a combination of hardware, software, and practices that control access to data and systems. The needs of users and the sensitivity of data determine the level of security implemented. Every security measure involves tradeoffs between the accessibility and security of the system. Students should be able to describe, justify, and document choices they make using terminology appropriate for the intended audience and purpose. Students could debate issues from the perspective of diverse audiences, including individuals, corporations, privacy advocates, security experts, and government.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
<h2>Data & Analysis</h2>	
3A-DA-09	<p>Translate between different bit representations of real-world phenomena, such as characters, numbers, and images.</p> <p><i>For example, convert hexadecimal color codes to decimal percentages, ASCII/Unicode representation, and logic gates.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>

3A-DA-10	<p>Evaluate the tradeoffs in how data elements are organized and where data is stored.</p> <p><i>People make choices about how data elements are organized and where data is stored. These choices affect cost, speed, reliability, accessibility, privacy, and integrity. Students should evaluate whether a chosen solution is most appropriate for a particular problem. Students might consider the cost, speed, reliability, accessibility, privacy, and integrity tradeoffs between storing photo data on a mobile device versus in the cloud.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.3</p>
3A-DA-11	<p>Create interactive data visualizations using software tools to help others better understand real-world phenomena.</p> <p><i>People transform, generalize, simplify, and present large data sets in different ways to influence how other people interpret and understand the underlying information. Examples include visualization, aggregation, rearrangement, and application of mathematical operations. People use software tools or programming to create powerful, interactive data visualizations and perform a range of mathematical operations to transform and analyze data. Students should model phenomena as systems, with rules governing the interactions within the system and evaluate these models against real-world observations. For example, flocking behaviors, queueing, or life cycles. Google Fusion Tables can provide access to data visualization online.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>
3A-DA-12	<p>Create computational models that represent the relationships among different elements of data collected from a phenomenon or process.</p> <p><i>Computational models make predictions about processes or phenomenon based on selected data and features. The amount, quality, and diversity of data and the features chosen can affect the quality of a model and ability to understand a system. Predictions or inferences are tested to validate models. Students should model phenomena as systems, with rules governing the interactions within the system. Students should analyze and evaluate these models against real-world observations. For example, students might create a simple producer–consumer ecosystem model using a programming tool. Eventually, they could progress to creating more complex and realistic interactions between species, such as predation, competition, or symbiosis, and evaluate the model based on data gathered from nature.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>

Algorithms & Programming

3A-AP-13	<p>Create prototypes that use algorithms to solve computational problems by leveraging prior student knowledge and personal interests.</p> <p><i>A prototype is a computational artifact that demonstrates the core functionality of a product or process. Prototypes are useful for getting early feedback in the design process, and can yield insight into the feasibility of a product. The process of developing computational artifacts embraces both creative expression and the exploration of ideas to create prototypes and solve computational problems. Students create artifacts that are personally relevant or beneficial to their community and beyond. Students should develop artifacts in response to a task or a computational problem that demonstrate the performance, reusability, and ease of implementation of an algorithm.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
3A-AP-14	<p>Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.</p> <p><i>Students should be able to identify common features in multiple segments of code and substitute a single segment that uses lists (arrays) to account for the differences.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
3A-AP-15	<p>Justify the selection of specific control structures when tradeoffs involve implementation, readability, and program performance, and explain the benefits and drawbacks of choices made.</p> <p><i>Implementation includes the choice of programming language, which affects the time and effort required to create a program. Readability refers to how clear the program is to other programmers and can be improved through documentation. The discussion of performance is limited to a theoretical understanding of execution time and storage requirements; a quantitative analysis is not expected. Control structures at this level may include conditional statements, loops, event handlers, and recursion. For example, students might compare the readability and program performance of iterative and recursive implementations of procedures that calculate the Fibonacci sequence.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 5.2</p>
3A-AP-16	<p>Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.</p> <p><i>In this context, relevant computational artifacts include programs, mobile apps, or web apps. Events can be user-initiated, such as a button press, or system-initiated, such as a timer firing. At previous levels, students have learned to create and call procedures. Here, students design procedures that are called by events. Students might create a mobile app that updates a list of nearby points of interest when the device detects that its location has been changed.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>

3A-AP-17	<p>Decompose problems into smaller components through systematic analysis, using constructs such as procedures, modules, and/or objects.</p> <p><i>At this level, students should decompose complex problems into manageable subproblems that could potentially be solved with programs or procedures that already exist. For example, students could create an app to solve a community problem by connecting to an online database through an application programming interface (API).</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.2</p>
3A-AP-18	<p>Create artifacts by using procedures within a program, combinations of data and procedures, or independent but interrelated programs.</p> <p><i>Computational artifacts can be created by combining and modifying existing artifacts or by developing new artifacts. Examples of computational artifacts include programs, simulations, visualizations, digital animations, robotic systems, and apps. Complex programs are designed as systems of interacting modules, each with a specific role, coordinating for a common overall purpose. Modules allow for better management of complex tasks. The focus at this level is understanding a program as a system with relationships between modules. The choice of implementation, such as programming language or paradigm, may vary. Students could incorporate computer vision libraries to increase the capabilities of a robot or leverage open-source JavaScript libraries to expand the functionality of a web application.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
3A-AP-19	<p>Systematically design and develop programs for broad audiences by incorporating feedback from users.</p> <p><i>Examples of programs could include games, utilities, and mobile applications. Students at lower levels collect feedback and revise programs. At this level, students should do so through a systematic process that includes feedback from broad audiences. Students might create a user satisfaction survey and brainstorm distribution methods that could yield feedback from a diverse audience, documenting the process they took to incorporate selected feedback in product revisions.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.1</p>
3A-AP-20	<p>Evaluate licenses that limit or restrict use of computational artifacts when using resources such as libraries.</p> <p><i>Examples of software licenses include copyright, freeware, and the many open-source licensing schemes. At previous levels, students adhered to licensing schemes. At this level, they should consider licensing implications for their own work, especially when incorporating libraries and other resources. Students might consider two software libraries that address a similar need, justifying their choice based on the library that has the least restrictive license.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>

3A-AP-21	<p>Evaluate and refine computational artifacts to make them more usable and accessible.</p> <p><i>Testing and refinement is the deliberate and iterative process of improving a computational artifact. This process includes debugging (identifying and fixing errors) and comparing actual outcomes to intended outcomes. Students should respond to the changing needs and expectations of end users and improve the performance, reliability, usability, and accessibility of artifacts. For example, students could incorporate feedback from a variety of end users to help guide the size and placement of menus and buttons in a user interface.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.3</p>
3A-AP-22	<p>Design and develop computational artifacts working in team roles using collaborative tools.</p> <p><i>Collaborative tools could be as complex as source code version control system or as simple as a collaborative word processor. Team roles in pair programming are driver and navigator but could be more specialized in larger teams. As programs grow more complex, the choice of resources that aid program development becomes increasingly important and should be made by the students. Students might work as a team to develop a mobile application that addresses a problem relevant to the school or community, selecting appropriate tools to establish and manage the project timeline; design, share, and revise graphical user interface elements; and track planned, in-progress, and completed components.</i></p> <p>Practice(s): Collaborating Around Computing: 2.4</p>
3A-AP-23	<p>Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.</p> <p><i>Complex programs are designed as systems of interacting modules, each with a specific role, coordinating for a common overall purpose. These modules can be procedures within a program; combinations of data and procedures; or independent, but interrelated, programs. The development of complex programs is aided by resources such as libraries and tools to edit and manage parts of the program.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
<h2>Impacts of Computing</h2>	
3A-IC-24	<p>Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.</p> <p><i>Computing may improve, harm, or maintain practices. Equity deficits, such as minimal exposure to computing, access to education, and training opportunities, are related to larger, systemic problems in society. Students should be able to evaluate the accessibility of a product to a broad group of end users, such as people who lack access to broadband or who have various disabilities. Students should also begin to identify potential bias during the design process to maximize accessibility in product design.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.2</p>

3A-IC-25	<p>Test and refine computational artifacts to reduce bias and equity deficits.</p> <p><i>Biases could include incorrect assumptions developers have made about their user base. Equity deficits include minimal exposure to computing, access to education, and training opportunities. Students should begin to identify potential bias during the design process to maximize accessibility in product design and become aware of professionally accepted accessibility standards to evaluate computational artifacts for accessibility.</i></p> <p>Practice(s): Fostering an Inclusive Computing Culture: 1.2</p>
3A-IC-26	<p>Demonstrate ways a given algorithm applies to problems across disciplines.</p> <p><i>Computation can share features with disciplines such as art and music by algorithmically translating human intention into an artifact. Students should be able to identify real-world problems that span multiple disciplines, such as increasing bike safety with new helmet technology, and that can be solved computationally.</i></p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.1</p>
3A-IC-27	<p>Use tools and methods for collaboration on a project to increase connectivity of people in different cultures and career fields.</p> <p><i>Many aspects of society, especially careers, have been affected by the degree of communication afforded by computing. The increased connectivity between people in different cultures and in different career fields has changed the nature and content of many careers. Students should explore different collaborative tools and methods used to solicit input from team members, classmates, and others, such as participation in online forums or local communities. For example, students could compare ways different social media tools could help a team become more cohesive.</i></p> <p>Practice(s): Collaborating Around Computing: 2.4</p>
3A-IC-28	<p>Explain the beneficial and harmful effects that intellectual property laws can have on innovation.</p> <p><i>Laws govern many aspects of computing, such as privacy, data, property, information, and identity. These laws can have beneficial and harmful effects, such as expediting or delaying advancements in computing and protecting or infringing upon people's rights. International differences in laws and ethics have implications for computing. For examples, laws that mandate the blocking of some file-sharing websites may reduce online piracy but can restrict the right to access information. Firewalls can be used to block harmful viruses and malware but can also be used for media censorship. Students should be aware of intellectual property laws and be able to explain how they are used to protect the interests of innovators and how patent trolls abuse the laws for financial gain.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>

3A-IC-29	<p>Explain the privacy concerns related to the collection and generation of data through automated processes that may not be evident to users.</p> <p><i>Data can be collected and aggregated across millions of people, even when they are not actively engaging with or physically near the data collection devices. This automated and nonevident collection can raise privacy concerns, such as social media sites mining an account even when the user is not online. Other examples include surveillance video used in a store to track customers for security or information about purchase habits or the monitoring of road traffic to change signals in real time to improve road efficiency without drivers being aware. Methods and devices for collecting data can differ by the amount of storage required, level of detail collected, and sampling rates.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
3A-IC-30	<p>Evaluate the social and economic implications of privacy in the context of safety, law, or ethics.</p> <p><i>Laws govern many aspects of computing, such as privacy, data, property, information, and identity. International differences in laws and ethics have implications for computing. Students might review case studies or current events which present an ethical dilemma when an individual's right to privacy is at odds with the safety, security, or wellbeing of a community.</i></p> <p>Practice(s): Communicating About Computing: 7.3</p>

Level 3B Standards

Computing Systems

3B-CS-01	<p>Categorize the roles of operating system software.</p> <p><i>Examples of roles could include memory management, data storage/retrieval, processes management, and access control.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
3B-CS-02	<p>Illustrate ways computing systems implement logic, input, and output through hardware components.</p> <p><i>Examples of components could include logic gates and IO pins.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

Networks & the Internet

3B-NI-03	<p>Describe the issues that impact network functionality (e.g., bandwidth, load, delay, topology).</p> <p><i>Recommend use of free online network simulators to explore how these issues impact network functionality.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
3B-NI-04	<p>Compare ways software developers protect devices and information from unauthorized access.</p> <p><i>Examples of security concerns to consider: encryption and authentication strategies, secure coding, and safeguarding keys.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

Data & Analysis

3B-DA-05	<p>Use data analysis tools and techniques to identify patterns in data representing complex systems.</p> <p><i>For example, identify trends in a dataset representing social media interactions, movie reviews, or shopping patterns.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
3B-DA-06	<p>Select data collection tools and techniques to generate data sets that support a claim or communicate information.</p> <p>Practice(s): Communicating About Computing: 7.2</p>
3B-DA-07	<p>Evaluate the ability of models and simulations to test and support the refinement of hypotheses.</p> <p>Practice(s): Developing and Using Abstractions: 4.4</p>

Algorithms & Programming

3B-AP-08	<p>Describe how artificial intelligence drives many software and physical systems.</p> <p><i>Examples include digital ad delivery, self-driving cars, and credit card fraud detection.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
3B-AP-09	<p>Implement an artificial intelligence algorithm to play a game against a human opponent or solve a problem.</p> <p><i>Games do not have to be complex. Simple guessing games, Tic-Tac-Toe, or simple robot commands will be sufficient.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.3</p>

3B-AP-10	<p>Use and adapt classic algorithms to solve computational problems.</p> <p><i>Examples could include sorting and searching.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.2</p>
3B-AP-11	<p>Evaluate algorithms in terms of their efficiency, correctness, and clarity.</p> <p><i>Examples could include sorting and searching.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.2</p>
3B-AP-12	<p>Compare and contrast fundamental data structures and their uses.</p> <p><i>Examples could include strings, lists, arrays, stacks, and queues.</i></p> <p>Practice(s): Developing and Using Abstractions: 4.2</p>
3B-AP-13	<p>Illustrate the flow of execution of a recursive algorithm.</p> <p>Practice(s): Recognizing and Defining Computational Problems: 3.2</p>
3B-AP-14	<p>Construct solutions to problems using student-created components, such as procedures, modules and/or objects.</p> <p><i>Object-oriented programming is optional at this level. Problems can be assigned or student-selected.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
3B-AP-15	<p>Analyze a large-scale computational problem and identify generalizable patterns that can be applied to a solution.</p> <p><i>As students encounter complex, real-world problems that span multiple disciplines or social systems, they should decompose complex problems into manageable subproblems that could potentially be solved with programs or procedures that already exist. For example, students could create an app to solve a community problem by connecting to an online database through an application programming interface (API).</i></p> <p>Practice(s): Developing and Using Abstractions: 4.1</p>
3B-AP-16	<p>Demonstrate code reuse by creating programming solutions using libraries and APIs.</p> <p><i>Libraries and APIs can be student-created or common graphics libraries or maps APIs, for example.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.3</p>
3B-AP-17	<p>Plan and develop programs for broad audiences using a software life cycle process.</p> <p><i>Processes could include agile, spiral, or waterfall.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.1</p>

3B-AP-18	<p>Explain security issues that might lead to compromised computer programs.</p> <p><i>For example, common issues include lack of bounds checking, poor input validation, and circular references.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>
3B-AP-19	<p>Develop programs for multiple computing platforms.</p> <p><i>Example platforms could include: computer desktop, web, or mobile.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.2</p>
3B-AP-20	<p>Use version control systems, integrated development environments (IDEs), and collaborative tools and practices (code documentation) in a group software project.</p> <p><i>Group software projects can be assigned or student-selected.</i></p> <p>Practice(s): Collaborating Around Computing: 2.4</p>
3B-AP-21	<p>Develop and use a series of test cases to verify that a program performs according to its design specifications.</p> <p><i>At this level, students are expected to select their own test cases.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.1</p>
3B-AP-22	<p>Modify an existing program to add additional functionality and discuss intended and unintended implications (e.g., breaking other functionality).</p> <p><i>For instance, changes made to a method or function signature could break invocations of that method elsewhere in a system.</i></p> <p>Practice(s): Creating Computational Artifacts: 5.3</p>
3B-AP-23	<p>Evaluate key qualities of a program through a process such as a code review.</p> <p><i>Examples of qualities could include correctness, usability, readability, efficiency, portability and scalability.</i></p> <p>Practice(s): Testing and Refining Computational Artifacts: 6.3</p>
3B-AP-24	<p>Compare multiple programming languages and discuss how their features make them suitable for solving different types of problems.</p> <p><i>Examples of features include blocks versus text, indentation versus curly braces, and high-level versus low-level.</i></p> <p>Practice(s): Communicating About Computing: 7.2</p>

Impacts of Computing

3B-IC-25	Evaluate computational artifacts to maximize their beneficial effects and minimize harmful effects on society. Practice(s): Testing and Refining Computational Artifacts, Fostering an Inclusive Computing Culture: 6.1, 1.2
3B-IC-26	Evaluate the impact of equity, access, and influence on the distribution of computing resources in a global society. Practice(s): Fostering an Inclusive Computing Culture: 1.2
3B-IC-27	Predict how computational innovations that have revolutionized aspects of our culture might evolve. <i>Areas to consider might include education, healthcare, art/entertainment, and energy.</i> Practice(s): Communicating About Computing: 7.2
3B-IC-28	Debate laws and regulations that impact the development and use of software. Practice(s): Recognizing and Defining Computational Problems, Communicating About Computing: 3.3, 7.3

Computer Science Education in NH

Policy Outreach Tour







[Click this link to RSVP Now!](#)

Discussion topics:

- Computer Science Educator Certification
- NH Computer Science Standards Draft 2
- NH HB 1674 - Adds Computer Science to Adequate Public Education

More information:

- Please visit <https://www.education.nh.gov/instruction/computer-science/>
- Draft 2 of the NH CS standards will be posted here with an online feedback form as soon as possible, and no later than Monday, May 28.

All meetings are approx. 6-7 PM		
Tuesday, May 29 Lakes	Plymouth State University Frost Commons, Robert Frost House Plymouth, NH	
Wednesday, May 30 Seacoast	University of New Hampshire Room N108, Parsons Hall, 23 Academic Way, Durham, NH	
Thursday, May 31 Central	University of New Hampshire Room 325, 88 Commercial Street Manchester, NH	
Monday, June 4 North	North Country Education Services 300 Gorham Hill Rd. Gorham, NH	
Wednesday, June 6 West	Keene State College Room 101, Putnam Science Center Keene, NH	
Thursday, June 7 Central	NH Department of Education Commissioner's Conference Room, 15 Concord, NH	

CS Education in NH

Policy Outreach Tour

<https://goo.gl/XMCPsF>

Outline

- Introduction
- Computer Science Educator Certification
- Computer Science Academic Standards
- CS Education Laws (HB 1674) & Policies (NH ED 306 Rules)
- Procedures & Timelines
- Questions & Comments

Introduction

3

Computer science is everywhere

- Personal, social, economic impacts
- Driving scientific and engineering breakthroughs
- JOBS in nearly every industry

References:

- US DOL, [BLS. STEM Occupations: Past, Present, Future](#)
- [Change the Equation: The Hidden Half](#)
- [Burning Glass: Computer Science Skills in the Job Market](#)

4

Schools need to catch up

- Low participation in CS (e.g. AP Computer Science)
- Low % female participation

But...

- CS is booming (K-12 and Post-Secondary)

References:

- [Code.org CS State-Level Data | NH](#)
- [Google-Gallup CS Education Polls](#)

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State-level policy makes a difference

- Key policy areas:
 - Educator certification, preparation, and professional learning
 - Curriculum, instruction, assessment
- Some things good policy can help with:
 - Establishing CS as a Core K-12 Subject Area.
 - Getting Reliable Data and Using it to Make Improvements
 - Growing the Pool of CS Teachers

With good policy, we can leverage state and federal funds to help advance K-12 Computer Science.

Ref: [State of the States: CS Education Policy Report](#)

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CS Educator Certification

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Background & adoption Process

- NH used to have "Computer Technology Educator"
- This was changed to "Technology Integrator".
 - Since the Tech Integrator is not a classroom teacher, this left a void in policy
- PSB recommended creation of new credential
- Subcommittee...
 - Aligned with latest Praxis exam for Secondary Computer Science Education
- Adopted...

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Comparison with other areas

<https://www.education.nh.gov/instruction/computer-science/>

- **Education Technology Integrator** works with students and teachers to integrate digital literacy and educational technology into other content areas.
- **Comprehensive Technology Educator** facilitates learning of engineering design and development process and knowledge of different types of technologies. This includes (but is not limited to) Industrial Arts.
- **Computer Science Educator** facilitates learning of theoretical and applied aspects of computing and information technology, including (but not limited to) computer programming (i.e. coding).
- See also:
 - http://www.gencourt.state.nh.us/rules/state_agencies/ed500.html

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Who teaches what?

Computer science educator	Comprehensive business educator
Teaches concepts of computing and computers, including: <ul style="list-style-type: none">• Computing systems• Networks & the internet• Algorithms & programming• Data & analysis• Impacts of computing	Teaches business computer applications, including: <ul style="list-style-type: none">• Productivity software *• Web-based communication / collaboration software *
Science or comprehensive technology (engineering) teacher	Arts educator
Teaches computational science & engineering, including: <ul style="list-style-type: none">• Modeling & simulation• Drafting & CAD software• GIS software	Teaches design and media arts, including: <ul style="list-style-type: none">• Graphic design• Web design• Multimedia production

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Key points

- Educators teaching computer science as a **major assignment** (50% or more of teaching load) should be certified in computer science.
- Educators with both classroom **educator and integrator** responsibilities should hold the endorsement that reflects the majority of their responsibilities.
- Administrators should correctly identify CS courses in information systems.
- Administrators should make efforts to employ, especially at the secondary level, a minimum of one certified CS educator, or upskill and certify a current employee.

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CS Academic Standards

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Background and Development

- National precedent:
 - Since 2014, a number of states have adopted K-12 Computer Science Standards (currently 18)
- NH status
 - NH has CTE program standards in the Information Technology cluster.
 - But we need CS standards covering elementary, middle, and high school
- Process
 - Presentations to NH SBOE
 - Subcommittee formation
 - Draft development

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References and Source Materials

Background research / reference and source materials

- [K12 CS Framework](#)
- [CSTA Standards](#)
- [State-level standards](#)
 - Link from <https://advocacy.code.org/>

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Organization / contents

Part 1: Context and Guidance

- Acknowledgments / Foreword / Vision
- About the Standards
- Background Information
 - Computer Science Overview
 - Computer Science in Context
- Program Implementation
 - Key Considerations
 - Program Progressions / Pathways

Part 2: Standards

- Core standards
 - (approx. gr. K-10)
- Standards for HS electives
 - (approx. gr. 11-12)

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CS Standards / Resources Walk-Through

<https://www.education.nh.gov/instruction/computer-science/>

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Computer Science Education Laws & Policies HB 1674, NH ED 306

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HB 1674

<https://legiscan.com/NH/text/HB1674/id/1656822> -

I. [...] the specific criteria and substantive educational program that deliver the opportunity for an adequate education shall be defined and identified as the school approval standards in the following areas:

[...]

(i) ~~[Technology education, and information and communication technologies]~~ **Engineering and technologies.**

(j) Computer science and digital literacy.

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NH ED 306

The RSA's relative to adequate public education are implemented in the ED 306 rules: http://www.gencourt.state.nh.us/rules/state_agencies/ed300.html

PART Ed 306 MINIMUM STANDARDS FOR PUBLIC SCHOOL APPROVAL

306.26: Kindergarten Through Grade 8

306.27: High School

306.42: Information and Communication Technologies Program

306.47: Technology and Engineering Program

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Potential revisions

PART Ed 306 MINIMUM STANDARDS FOR PUBLIC SCHOOL APPROVAL

306.42: ~~Information and Communication Technologies~~ **Digital Literacy** Program

Integrated in K-12

~~1/2 credit for HS program~~

306.47: Technology and Engineering Program

E.g. Biotech, Energy, and Production Technologies

Focus on Engineering Design & Development

Integrated with Sciences in ES / MS

~~4 credits~~ **2 1/2 credits for HS program****

NEW Computer Science Program

Integrated in ES / MS

2 credits for HS program**

**** Interdisciplinary courses (e.g. robotics) may satisfy either one program requirement OR another.**

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Potential revisions

306.27(y) HS ICT Graduation Requirement

½ Credit ~~Information and Communications Technologies~~ Technology

Students can use engineering / technology OR computer science course to fulfill. This must be a course or demonstrated proficiency of course content.

- Does not qualify:
 - portfolio / use of education technology in other courses.
 - courses in productivity software (e.g. MS Office) - this is a Business course.
 - courses in multimedia production (e.g. Adobe Photoshop) - this is an Arts course
- CAN
 - use interdisciplinary courses to satisfy either one requirement OR another. Interdisciplinary courses must address core competencies for the content area(s).

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Procedures & Timelines

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Procedures / Timelines

- If / when signed into law, HB 1674 will take effect 60 days after passage.
- The Department of Education will determine appropriate timelines:
 - for revising the ED 306 Rules.
 - for Local Education Agencies to implement the revised rules.
- The NH CS Standards and ED 306 Rules revisions will go before the NH State Board of Education to request recommendation for adoption.
 - Please check the agenda regularly to find out when this will occur.
- The ED 306 rules will be reviewed by [JLCAR](#).

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Thank You

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More information

Information / updates will be posted to this page:

- <https://www.education.nh.gov/instruction/computer-science/>

You can also fill out this form to receive updates:

- <https://goo.gl/forms/ejGoc8AorWycmZqA3>

For more information:

- <https://www.education.nh.gov/instruction/computer-science/>
- David.Benedetto@doe.nh.gov

SPECIAL NOTICE FOR A SECOND RULEMAKING HEARING

Notice Number	2018-74	Rule Number	Ed 403.03; Ed 405.01; Ed 407.01
---------------	----------------	-------------	--

1. Agency Name & Address: State Board of Education c/o NH Department of Education 101 Pleasant Street Concord, NH 03301	2. RSA Authority: RSA 186:11, XXIX 3. Federal Authority: _____ 4. Type of Action: Adoption _____ Amendment _____ Repeal _____ Readoption _____ Readoption w/amendment X
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5. Short Title: **Non-public School Approval**

6. To provide reasonable opportunity for public comment pursuant to RSA 541-A:11, I(a), a second rulemaking hearing has been scheduled for these proposed rules for which notice appeared in the Rulemaking Register on **April 19, 2018** under Notice Number **2018-74**. The first public hearing was scheduled for May 10, 2018. The second public hearing has been scheduled for:

Date and Time: **June 13, 2018 at 1:00 p.m.**

Place: **NH Department of Education, State Board Room
101 Pleasant Street, Concord, NH 03301**

7. New deadline for submission of materials in writing or, if practicable for the agency, in the electronic format specified: **June 29, 2018**

☒ Fax

☒ E-mail

☐ Other format (specify):

8. Contact person for copies and questions including requests to accommodate persons with disabilities:

Name: **Diana Fenton**

Title: **Attorney**

Address: **Department of Education
101 Pleasant Street
Concord, NH 03301**

Phone #: **(603) 271-3189**

Fax#: **(603) 271-4134**

E-mail: **Diana.fenton@doe.nh.gov**

TTY/TDD Access: Relay NH 1-800-735-2964 or dial 711 (in NH)

Readopt with amendment Ed 403.03, effective 6-15-13 (Doc. #10360), to read as follows:

Ed 403.03 Annual Reports.

(a) Each nonpublic school shall ~~file~~ **complete** a Form A3N as described in this section with statistics as of the last day of school of the year of filing. The form shall be ~~filed with the department~~ **completed online at <https://my.doe.nh.gov/myNHDOE/Login/Login.aspx>** by July 15 of each year. ~~to the following address:~~

~~New Hampshire Department of Education
Division of Program Support, Bureau of Data Management
101 Pleasant Street
Concord NH 03301-3860~~

(b) On Form A3N the nonpublic school shall provide the following information for each nonpublic school:

- (1) The name of the nonpublic school, if not provided on the form by the department;
- (2) The name, telephone number, and e-mail address of the contact person;
- ~~(3) The administrator's signature;~~
- ~~(43)~~ The number of students by grade registered during the year;
- ~~(54)~~ Student progress table by grade;
- ~~(65)~~ The total number of high school graduates by gender; and
- ~~(76)~~ The number of dropouts from grades 9-12.

(c) Each nonpublic school shall file a Form A12C as described in this section with statistics as of October 1 of the reporting year. The form shall be ~~filed with the department~~ **completed online at <https://my.doe.nh.gov/myNHDOE/Login/Login.aspx>** by October 15 of each year. ~~to the following address:~~

~~New Hampshire Department of Education
Division of Program Support, Bureau of Data Management
101 Pleasant Street
Concord NH 03301-3860~~

(d) On Form A12C the nonpublic school shall provide the following information for each nonpublic school:

- (1) The name of the nonpublic school;
- (2) The name and telephone number of the contact person;
- ~~(3) The administrator's signature;~~
- ~~(43)~~ The telephone number and fax number of the school;
- ~~(54)~~ The e-mail address and website address of the school, if applicable; and

(65) The number of students enrolled on October 1 by grade divided into male and female.

(e) The nonpublic school shall provide the number of full time equivalent (FTE) positions for the following staff categories divided into male and female:

- (1) Preschool teachers;
- (2) Kindergarten teachers;
- (3) Regular education classroom teachers;
- (4) Special education classroom teachers;
- (5) Regular instructional aides; and
- (6) Special education aides.

Readopt with amendment Ed 405.01, effective 6-15-13 (Doc. #10360), to read as follows:

Ed 405.01 Identification of Recognized Agencies for Program Approval.

(a) ~~The New England Association of Schools and Colleges (NEASC) shall be the recognized accrediting agency.~~

~~—(b) Other~~ Accrediting agencies that want to be considered for recognition shall be identified in one of the following ways:

- (1) An accrediting agency may directly request recognition;
- (2) A school seeking program approval may request recognition of an accrediting agency; or
- (3) A member of the NSAC may request recognition of an accrediting agency.

(eb) Applicants seeking approval from the state board as an agency recognized by the department for program approval shall:

- (1) Make application for recognition to the state department with a letter of intent and the following:
 - a. A brief history of the agency;
 - b. A statement as to the scope of operations, indicating whether it is a regional, national or state agency;
 - c. A definition of the purpose, character and scope of its activities as described in its charter or by-laws and written standards for accreditation or recognition;
 - d. The agency's organization including its governance and administrative structures, a description of its ownership and control and type of legal organization, including but not limited to tax-exempt or proprietary;
 - e. Financial information including its fee structure, current operating statement and most recent independent certified opinion audit;

f. A description of procedures used in the evaluation of schools by the agency including documentation that a school shall be required to provide, ~~whether there is~~ **which shall include** a visit to verify the written documentation, and who participates in school visitations;

g. Definitions of levels of recognition or accreditation status and written procedures for providing due process in granting, denying, continuing or revoking accredited or recognized status; and

h. Frequency of evaluation of schools for continued accreditation or recognition; and

(2) Submit documentation of the agency's accreditation by a recognized accrediting agency.

(~~dc~~) Agencies seeking program approval shall have a process for reviewing nonpublic school programs which, at a minimum, evaluates the adequacy for ensuring the well-being of students enrolled based on the following criteria:

(1) School mission statement and educational philosophy;

(2) Governance;

(3) School facilities;

(4) School health and safety programs;

(5) Curriculum;

(6) Staff qualifications;

(7) Admissions process;

(8) Graduation requirements high schools only;

(9) Process for assessing student performance;

(10) Financial management;

(11) Student support services;

(12) Co-curricular activities;

(13) Parent involvement;

(14) School and community relations; and

(15) Residential life if applicable.

(~~ed~~) The NSAC shall review applications for program approval. If the NSAC finds that the application meets the requirements of Ed 405.01(b) and Ed 405.01(c) it shall recommend the agency to the state board for recognition.

(~~fe~~) The state board shall review the NSAC recommendation and take one of the following actions:

- (1) Upon finding that the application meets the requirements of Ed 405.01(b) and Ed 405.01(c) the state board shall identify the applicant as a recognized agency for program approval;
 - (2) Disapprove the application if, in the opinion of a majority of state board members one or more of the following conditions exist:
 - a. Additional information has been received which indicates that the applicant is not eligible to be a recognized agency for program approval;
 - b. The information submitted by the applicant as required in Ed 405.01(b) **and Ed 405.01(c)** is determined by the state board to be incomplete, inaccurate, or false;
 - c. The NSAC misapplied a statute or administrative rule in making its recommendation; or
 - d. The NSAC did not follow proper procedures in reviewing the application.
- (~~g~~f) The department shall publish the list of recognized agencies for program approval at least annually.
- (~~h~~g) An agency may at any time submit written notification to the department that it does not wish to be recognized. Upon receipt of such a request the department shall remove the agency's name from the list of recognized agencies and shall notify all schools that have previously been granted program approval through accreditation by the withdrawing agency.
- (~~i~~h) Program approval status for any school previously accredited by an agency whose name has been withdrawn from the list of recognized accrediting agencies shall remain in effect until the date of expiration of the most recent approval by the state board.
- (~~j~~i) The NSAC shall review those agencies previously recognized for program approval every 10 years and make one of the following approval recommendations to the state board:
- (1) Full approval for a period of 10 years, if the NSAC finds that the agency meets the requirements of **Ed 405.01(b) and Ed 405.01(c)**;
 - (2) Conditional approval for a period of 2 to 3 years when deficiencies are found that are not serious enough to warrant non-approval, but are serious enough to warrant attention and review; or
 - (3) Non-approval.
- (~~k~~j) Previously recognized agencies shall be reviewed by the NSAC prior to the expiration of the most recent approval when information becomes known to the NSAC which indicates:
- (1) The agency may no longer be meeting the requirements of Ed 405.01(c); or
 - (2) The agency has acted in an unfair or unlawful manner in conducting accreditations.

- (~~h~~) Agencies that have been recognized for program approval may request to be removed from the list of recognized agencies.

PART Ed 407 RETENTION OF STUDENT RECORDS

Ed 407.01 Student Records.

- (a) Each non-public school shall permanently maintain individual student records that include:
- (1) Pupil registers as required by RSA 189:27-a that include the following information:
 - a. Name;
 - b. Sex;
 - c. Date of birth;
 - d. Place of birth;
 - e. Town of legal residence; and
 - f. Parent/guardian contact information;
 - (2) Transcripts of academic performance; and
 - (3) Record of award of high school diploma including the date of award.
- (b) In the event of a school closing or termination of operations, the school shall notify the department where student records shall be maintained permanently, or the school shall deposit these records with the department or a location approved by the department.
- (c) Records shall be maintained in a format determined by the school. ~~A hard copy of pupil registers shall be maintained as required by RSA 189:27-b.~~

STATE OF NEW HAMPSHIRE



OFFICE OF LEGISLATIVE SERVICES

STATE HOUSE
107 NORTH MAIN STREET, ROOM 109
CONCORD, NEW HAMPSHIRE 03301-4951

May 18, 2018

Board of Education
101 Pleasant Street
Concord, NH 03301

Re: Conditional Approval of Final Proposal 2018-23

Dear Board Members:

At its meeting on May 18, 2018, the Joint Legislative Committee on Administrative Rules (Committee) voted, pursuant to RSA 541-A:13, V(a), to conditionally approve Final Proposal 2018-23 of the Board of Education (Board) containing Ed 1128 relative to special education aid. The Committee's approval was conditioned on amending Final Proposal 2018-23 as specified in the Board's conditional approval request, dated May 17, 2018. A copy of the conditional approval request, as annotated by Committee staff, is enclosed for your information.

Pursuant to RSA 541-A:13, V(a), you are required to submit a written explanation detailing how the rules have been amended in accordance with the conditional approval within 7 days of the date of the next regularly scheduled meeting of the Board, which is June 13, 2018. In this instance, the 7th day following the next regularly scheduled meeting of the Board falls on June 20, 2018. The explanation shall include a letter and a text of the entire final proposed rule, annotated to show the amendments.

The explanation shall be reviewed by the Office of Legislative Services to determine whether the rules have been amended in accordance with the conditional approval and RSA 541-A:13, V(a). If it is determined that the rules have not been amended in accordance with the conditional approval and RSA 541-A:13, V(a), the conditional approval will be deemed a Committee vote to make a preliminary objection as of the date of the conditional approval, and you must respond to the preliminary objection as specified in RSA 541-A:13, V(a).

Please be advised that you may not adopt the rules until the Office of Legislative Services sends written confirmation that your amendments are in accordance with the conditional approval and RSA 541-A:13, V(a).

Board of Education
May 18, 2018
Page 2

If you have any questions concerning the provisions in RSA 541-A relative to conditional approvals, objections, responses, or adoptions, please call Scott Eaton at 271-3680.

Very truly yours,

A handwritten signature in black ink, appearing to read "Michael Morrell", written over a horizontal line.

Michael Morrell
Sr. Committee Attorney

Enc.

cc: Diana Fenton, Esq., Attorney, DOE

MAY 17 2018

Conditional Approval Request—Annotated May 17, 2018—Page 1

8-6
CONDITIONAL APPROVAL

REQUEST

MM
5-17-18

Readopt with amendment Ed 1128, effective 3-24-17 (Doc #12141), to read as follows:

PART Ed 1128 SPECIAL EDUCATION AID

2018-23

consent

Ed 1128.01 Definitions.

(a) "Special education aid" means financial assistance for special education costs distributed under RSA 186-C:18, III to a responsible school district.

(b) "Contributed funds" means funds contributed to defray the cost of a special education and by any party or agency other than the LEA.

(c) "Direct costs" means those costs which can be identified specifically with the provision of special education and related services, as included in a child's IEP.

(d) "Emergency assistance" means funds appropriated for special education costs as provided in 186-C:18, III.

(e) "Indirect costs" means those costs which have been incurred for common or joint objectives and which cannot be identified with the provision of special education and related services as included in a particular child's IEP.

(f) "Responsible school district" means a school district which is responsible for a child with a disability for whom the costs of special education exceed the formula established by RSA 186-C:18, III.

Ed 1128.02 Reimbursement. A responsible school district shall be reimbursed for special education aid if the requirements of this section are met:

(a) The special education costs for which the district is seeking payment shall exceed the statutory threshold established by RSA 186-C:18, III;

(b) Each child with a disability for whom the responsible district is seeking special education aid reimbursement shall be:

(1) Enrolled in an approved special education program that:

a. Provides FAPE; and

b. Meets the requirements established in:

1. Ed 1128.02;
2. Ed 1128.03;
3. Ed 1128.05; or
4. Ed 1117; or

(2) In a placement for which a hearing officer, pursuant to Ed 1123, orders the responsible school district to reimburse parents in accordance with 34 CFR 300.148;

(c) The responsible school district shall report evaluation, placement, and eligible cost data for a child with a disability for special education aid in accordance with Ed 1128.07; and

(d) The information entered into NHSEIS under Ed 1128.04 shall be ~~[verified]~~ *certified* on the “Superintendent’s Verification of SPECIAL EDUCATION AID” form completed, signed and dated by an individual authorized to make application for special education aid on behalf of the responsible school district. *The form shall certify the following information: “During the Fiscal Year, the total expenses entered above were incurred by the school district for services provided to the Special Education students who were eligible for Special Education Aid. The cost to the district for fulfilling each student’s Individual Education Program (IEP) during Fiscal Year has exceeded 3-1/3 times state average tuition. The district is only requesting reimbursement for costs paid by local funds. No reimbursement is being requested for personnel or services paid by IDEA federal funds. Detailed accounting will be maintained by the school district and will include the invoices, as well as checks and payment vouchers on which the payments were made.”* The ~~[verification]~~ *certification* form shall be submitted to the department no later than 4:30 p.m. on August 15 or, if August 15 falls on a weekend, no later than 4:30 p.m. on the next business day.

Ed 1128.03 Limitations on Reimbursement. A responsible school district shall:

(a) Be eligible for reimbursement only for those direct costs which are included in the IEP of a child with a disability, and which qualify as special education and related services; and

(b) Not be reimbursed for:

- (1) Costs which exceed rates established by Ed 1129 for tuition, instruction, room and board, and related services; or
- (2) Indirect costs.

Ed 1128.04 Application for Special Education Aid. To apply for the special education aid, a responsible school district shall:

(a) Enter the following program information into the NHSEIS database system *for the current reporting year*:

- (1) Instructional costs;
- (2) Room and board costs;
- (3) Tuition costs;
- (4) Costs for related services, for which the department has approved a rate under Ed 1129, including:
 - a. Counseling, both individual and group;
 - b. Occupational therapy, both individual and group;
 - c. Physical therapy, both individual and group; and
 - d. Speech pathology, both individual and group;
- (5) Costs for related services for which the department had not approved a rate under Ed 1129, provided such services are included in the IEP of the child with a disability;
- (6) Transportation costs;
- (7) Exceptional costs, including diagnostic costs for services defined under Ed 1107; and

- (8) Any contributed funds; and
- (b) Send supporting documentation to the department for:
 - (1) Transportation costs under (a)(6) above in excess of \$5,000;
 - (2) Exceptional costs under (a)(7);
 - (3) Instruction, room and board, and tuition costs from out-of-state facilities, if applicable;
 - (4) Instructional costs from public programs; and
 - (5) All related services when no rate is set.

Ed 1128.05 Calculation of Cost of Special Education. The cost of special education for a particular child with a disability shall equal the costs entered into NHSEIS under Ed 1128.04(a)(1) – (7), less contributed funds entered into NHSEIS under Ed 1128.04(a)(8).

Ed 1128.06 Emergency Assistance.

- (a) Emergency assistance shall be available pursuant to RSA 186-C 18, III.
- (b) When a responsible school district applies for emergency assistance, it shall:
 - (1) Enter information into NHSEIS as provided in Ed 1128.04(a); and
 - (2) Supply supporting documentation as provided in Ed 1128.04(b).
- (c) An application for emergency assistance for the school year in progress shall be submitted to the department by a responsible school district no later than 4:30 p.m. on the first Friday of May.
- (d) On applications for emergency assistance, a responsible school district shall document that:
 - (1) The district could not have anticipated the need of this child with a disability for a comprehensive special educational program;
 - (2) The district is experiencing a financial crisis and could not, through line item budget transfers or other financial management techniques, appropriate the funds necessary to provide this child with a disability with FAPE; and
 - (3) There are no other sources of financial support available to assist the district with the funding of this placement.
- (e) If a responsible school district receives emergency assistance funds for certain children with a disability, it shall not receive special education for these same children.

Ed 1128.07 Proration. Pursuant to RSA 186-C:18, IX, when a child with a disability transfers from one responsible school district to another during the school year, the following shall apply to the proration of special education aid and emergency assistance among responsible districts:

- (a) Each district shall be reimbursed for only each school day on which the child was a resident of the district; and
- (b) Each district shall file separate application forms.

Ed 1128.08 State Aid For In-District Programs.

(a) For the purposes of this section, “supplemental costs” means the difference between the district’s average per pupil cost and the cost of education for the child with a disability.

(b) A liable school district shall be reimbursed for the development or maintenance of an in-district special education program, under this paragraph, if the following requirements are met:

(1) The costs for which the district is seeking reimbursement shall establish or support a school district-based program for a child with disabilities who was in an out-of-district placement in the previous school year as required in RSA 186-C:18, XI;

(2) The in-district program shall be approved pursuant to the provisions of Ed 1126.02;

(3) The child for whom the district is seeking reimbursement shall have been placed in the in-district program pursuant to the provisions of Ed 1111.02;

(4) The child for whom the district shall be seeking reimbursement *shall be* [is] receiving a FAPE;

(5) The liable school district shall report eligible cost data for a child with a disability pursuant to Ed 1128.04, (a), (1) through (5) and in accordance with Ed 1128.07, if applicable;

(6) The information entered into NHSEIS under Ed 1128.04 shall be [verified]*certified* on the “Superintendent’s Verification of SPECIAL EDUCATION AID” form signed and dated by an individual authorized to make application for state aid on behalf of the liable school district;

(7) The verification form shall be submitted to the department no later than 4:30 p.m. on August 15 or, if August 15 falls on a weekend, no later than 4:30 p.m. on the next business day; and

(8) Payment to the school district, under this paragraph, shall be on or before January 1.

(c) Limitations on reimbursement shall be as follows:

(1) A liable school district shall be eligible for reimbursement under this paragraph only for children with disabilities whose placement has changed from an out-of-district placement to an in-district program developed or maintained by the responsible school district, and only for:

a. The direct costs that are included in the IEP in accordance with (b) (5) above; and

b. The direct costs that qualify as special education and related services, that allow the student with disabilities to be educated in the local school district program;

(2) A liable school district shall not be reimbursed for:

a. Costs which exceed rates established by Ed 1129 for tuition, instruction, and related services;

b. Indirect costs; or

c. Contributed funds;

- (3) The reimbursement amount the school district shall receive shall be the greater of:
- a. The supplemental costs incurred by the school district to educate the child in the in-district program; or
 - b. The amount the school district received for the child in the last year of the out-of-district program, prior to placing the student in the in-district program, under this paragraph; and

(4) The reimbursement under (c) (3) above shall be made for 3 years, as follows:

- a. Reimbursement under (c) (3) a. above the supplemental amount for all 3 years; or
- b. Reimbursement under (c) (3) b. above:
 1. In year one, 70 percent of the total amount in (c) (3) b. above;
 2. In year 2, 50 percent of the total amount in (c) (3) b. above; and,
 3. In year 3, 30 percent of the total amount in (c) (3) above.

(d) Funds distributed under RSA 186-C:18, XI shall be:

- (1) Made in accordance with the provisions of (b) above;
- (2) Prorated in accordance with RSA 186-C:18, III (a), if insufficient funds are appropriated; and
- (3) Used to assist school districts in meeting special education aid costs in their special education programs to the extent that they are not used to fund the program set out in RSA 186-C:18, XI.

RULE	STATUTE
Ed 1128.01-1128.07	RSA 186-C:18
Ed 1128.08	RSA 186-C:18, XI(b)

Readopt with amendment Ed 1128, effective 3-24-17 (Doc #12141), to read as follows:

PART Ed 1128 SPECIAL EDUCATION AID

Ed 1128.01 Definitions.

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(c) “Direct costs” means those costs which can be identified specifically with the provision of special education and related services, as included in a child’s IEP.

(d) “Emergency assistance” means funds appropriated for special education costs as provided in 186-C:18, III.

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(c) Limitations on reimbursement shall be as follows:

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- a. The supplemental costs incurred by the school district to educate the child in the in-district program; or
 - b. The amount the school district received for the child in the last year of the out-of-district program, prior to placing the student in the in-district program, under this paragraph; and
- (4) The reimbursement under (c) (3) above shall be made for 3 years, as follows:
- a. Reimbursement under (c) (3) a. above the supplemental amount for all 3 years; or
 - b. Reimbursement under (c) (3) b. above:
 1. In year one, 70 percent of the total amount in (c) (3) b. above;
 2. In year 2, 50 percent of the total amount in (c) (3) b. above; and,
 3. In year 3, 30 percent of the total amount in (c) (3) above.
- (d) Funds distributed under RSA 186-C:18, XI shall be:
- (1) Made in accordance with the provisions of (b) above;
 - (2) Prorated in accordance with RSA 186-C:18, III (a), if insufficient funds are appropriated; and
 - (3) Used to assist school districts in meeting special education aid costs in their special education programs to the extent that they are not used to fund the program set out in RSA 186-C:18, XI.

RULE	STATUTE
Ed 1128.01-1128.07	RSA 186-C:18
Ed 1128.08	RSA 186-C:18, XI(b)

Readopt with amendment Ed 501.01, effective 3-27-14 (Doc #10558), to read as follows:

Ed 501.01 Purpose. The rules of this part implement the statutory responsibilities of the New Hampshire board of education to:

- (a) Develop and administer credential standards for educational personnel;
- (b) Develop continuing professional education requirements and prerequisites for the renewal or reinstatement of credential holders;
- (c) Develop and administer a code of ethics for all credential holders and to inform members of the public of the ~~ethical and professional~~ **code of ethics and code of** conduct ~~to~~ applicable to credential holders;
- (d) Define ~~unethical~~ **unprofessional** conduct which justifies disciplinary sanction against an ~~educator~~ **credential holder**; and
- (e) Provide oversight of adjudicatory proceedings required for discipline of credential holders while providing such with fair hearing practices and rights of appeal.

Readopt with amendment Ed 501.02, effective 3-27-14 (Doc #10558), to read as follows:

Ed 501.02 Definitions. Except where the context makes another meaning manifest, the following words have the meanings indicated when used in this chapter:

- (a) "Administrator" means the administrator of the bureau of credentialing.
- (b) *"Authorization" means a document issued by the department giving permission for a person to serve in the role of a licensed educator prior to completing the licensure endorsement requirements for that role, or for a temporary period of time established by the document.*
- (~~b~~c) "Board" means the state board of education created by RSA 21-N:10.
- (~~e~~d) "Bureau" means the bureau of credentialing, division of program support, department of education.
- (~~e~~) "Certificate" means the ~~actual form of approval when a credential is granted~~ **document issued when a credential holder meets full licensure requirements.**
- (~~e~~f) "Commissioner" means the commissioner, department of education.
- (g) "Credential" means ~~the approved certification of an educator~~ **any authorization or license issued by the bureau including, but not limited to, beginning educator license (BEL), experienced educator license (EEL), in process of licensure authorization (IPLA), emergency authorization, statement of eligibility (SOE), paraeducator I & II, school nurse and master teacher license (MTL).**
- (h) *"Credential holder" means any individual who holds a credential, as defined in Ed 501.02(g).*

~~(gi)~~ "Denial" ~~is~~ **means** the refusal to grant an initial certification **credential** to an applicant for a credential.

~~(hj)~~ "Department" means the New Hampshire department of education.

~~(ik)~~ "Director" means the director, division of program support.

~~(jl)~~ "Division" means the division of program support.

~~(km)~~ "Educator" means any individual who holds certification issued by the state board pursuant to RSA 189:39. Administrators, specialists, and teachers are included within the definition of this term **employed in a classroom instruction role for which the DOE issues a credential, whether they hold the credential or not.**

(n) "Emergency authorization" means the authorization issued by the bureau to a school district or school administrative unit to employ a non-credentialed educator to fill a vacancy as outlined in Ed 504.04.

~~(lo)~~ "Endorsement" means the specific subject area for which the credential is issued.

~~(mp)~~ "Intern license **authorization**" means the authorization granted to applicants pursuant to Ed 505.03(e), Ed 505.04, and Ed 505.05 to perform educational services while the plans are being implemented.

(q) "License" means the document issued when a credential holder meets full licensure requirements.

(r) "Licensure" means the official recognition by the board that an individual has met minimum requirements and is approved to practice in their endorsement area(s).

~~(ns)~~ "Mentor" means a person who:

(1) Is appointed to provide assistance to an applicant for certification pursuant to Ed 505.04 or Ed 505.05; and

(2) Meets at least one of the following qualifications:

a. Is a ~~certified educator~~ **credential holder** with 3 years of experience as an educator in the area of endorsement; or

b. Has experience equivalent to the experience requirement under a. above such as, but not limited to, involvement in a collegiate teacher preparation program.

~~(o)~~ "Permission to employ" means the authorization issued by the bureau to a school district or school administrative unit to employ a non-credentialed educator to fill a temporary vacancy.

~~(pt)~~ "Professional Conduct" means a set of established professional norms and behaviors which extend beyond the workplace.

(qu) “Reprimand” is a ~~formal admonishment~~ *note to file* of a credentialed ~~educator~~ *holder* as defined in Ed 501.02(kh), for his or her conduct, *which does not rise to the level of* ~~but is not~~ a suspension or revocation of a ~~teaching~~ credential, *which may be used in the event of a subsequent investigation*.

(rv) “Revocation” means the department has permanently ~~taken a teaching~~ *rescinded a* credential ~~away from an educator~~ *credential holder*.

(sw) “Statement of eligibility” means a ~~certificate~~ *credential* issued by the department of education that indicates that an individual has successfully met the entry requirements of:

- (1) Alternative 4 certification; or
- (2) Alternative 5 certification;

(tx) “Suspension” means the department has ~~taken a teaching~~ *rescinded a* credential ~~away from an educator~~ *credential holder* for a specified period of time;

(uy) “Student” means an individual who is enrolled or participating in any class or program from preschool through grade-12, *or any “adult student” as specified in Ed 1102.01(f)(1)*, at any school or education institution ~~and includes individuals through nine months after graduation~~ *except as otherwise noted in these rules*.

Readopt with amendment Ed 502.01, effective 3-27-14 (Doc. #10558), to read as follows:

PART Ed 502 PUBLIC INFORMATION

Ed 502.01 Confidentiality of Educator *Credential Holder* Certification Records.

(a) Pursuant to RSA 91-A:5, V the following limited credential status information shall be available to the general public, upon written or verbal request:

- (1) The name of the ~~educator~~ *credential holder*;
- (2) The individual's current credential status, including type of credential, expiration date of credential, and all endorsements;
- (3) The individual's suspension, if applicable, including effective dates of each suspension period, reason for the suspension, and revocation, if applicable; and
- (4) The school, if known or stated, where the ~~educator~~ *credential holder* is currently employed.

(b) The provisions of this section shall not require the release of information related to:

- (1) Informal or formal investigations; or

(2) Board or hearing officer records from adjudicatory proceedings involving the ~~educator~~ **credential holder** when such adjudicatory proceeding is not open to the public in accordance with Ed 200.

(c) The complete record of a credential holder shall be released by the division upon written request to the following:

(1) A party in an adjudicatory proceeding when:

- a. The credential holder is a party to the proceeding; and
- b. The credential holder's ~~certification~~ **credential** record is relevant to the proceeding;

(2) A law enforcement agency when the agency is conducting a criminal investigation of the credential holder;

(3) A certifying agency of another jurisdiction for:

- a. Purposes of ~~certification~~ of **credentialing** the credential holder in the other jurisdiction; or
- b. An investigation of the credential holder by the other jurisdiction, when:
 1. The credential holder was the subject of a formal investigation under Ed 510I; or
 2. Disciplinary action was taken against the credential holder by the ~~state board of education~~ under Ed 510.03I;

(4) Board investigators or prosecutors; or

(5) Persons to whom the credential holder has given a release.

(d) ~~As standard operating procedure, the~~ The bureau shall report to all of the following entities any discipline ordered against a credential holder:

(1) ~~Any suspension or revocation to Each~~ **the credential holder's current** superintendent of school in N.H. ~~and The National Association of State Directors of Teacher Education and Certification (NASDTEC) educator identification clearing house; and~~

(2) ~~Each state department of education~~ **Any reprimand to the credential holder's current superintendent of school in N.H.;**

(3) ~~Each department of education for the territories of the United States; and~~

(4) ~~The National Association of State Directors of Teacher Education and Certification Educator Identification Clearing House.~~

(e) The department shall maintain a list of all credential holders whose credential has been revoked or who are under suspension, and such list shall be published on the department's website.

Adopt Ed 510.01 – 510.04, cited and to read as follows:

PART Ed 510 ~~PRINCIPLES OF PROFESSIONAL~~ **CODE OF CONDUCT**

Ed 510.01 Principle 1—Responsibility to the Education Profession and Educational Professionals.

~~(a)~~ In fulfilling this principle of the code of conduct, ~~the following provisions apply to a credential holder~~ ***exemplifies honesty and integrity in the course of professional practice. Unprofessional conduct includes, but is not limited to:***

~~(1a) An educator shall not d~~***Discrimination on the basis of sex, race, age, creed, color, marital status, national origin, or disability against a fellow professional as specified in RSA 354-A:1;***

~~(2b) An educator shall~~ ***Failure to*** self-report, within 25 business days, if he or she has been arrested for any violation of offenses enumerated in RSA 189:13-a, V;

~~(3c) An educator shall not f~~***Falsifying, his or her fraudulently altering, or deliberately misrepresenting*** professional qualifications, ***including, but not limited to, degrees, academic awards, and related employment history, when applying for a credential;***

~~(4d) An educator shall not be in possession of alcohol or controlled drugs, or under the influence of alcohol or controlled drugs, in the presence of students while students are in their care either on or off school grounds~~ ***Unlawful possession of a drug; and***

~~(e) Possessing, using, or being under the influence of alcohol or drugs, not prescribed for the educator's use~~ ***of the credential holder when on school premises or at a school sponsored activity where students are present or may reasonably be expected to be present;***

~~(f) Failure to notify the state, at the time of application for credential, of past criminal convictions, or of revocations or suspensions of a credential or license by New Hampshire or any other jurisdiction;~~

~~(g) Falsifying, or deliberately misrepresenting, information submitted to the department in the course of an official inquiry, investigation, or both.~~

~~(5) An educator has shall have a duty to report as outlined in Ed 510.05.~~

Ed 510.02 Principle 2—Responsibility to Students.

~~(a)~~ In fulfilling this principle of the code of conduct, ~~the following provisions apply to a credential holder~~ ***shall maintain a professional relationship with all students, both inside and outside the educational setting, and make reasonable efforts to protect students from conditions which are harmful to their health and safety. Unprofessional conduct includes, but is not limited to:***

~~(1a) An educator shall not d~~**Discriminate**~~ion on the basis of sex, race, age, creed, color, marital status, national origin, or disability against a student as specified in RSA 354-A:1;~~

~~(2b) An educator shall not engage in a dereliction of duty which shall constitute an abandonment of students in his or her care, either on or off school grounds~~ **Failure to provide appropriate supervision of students at school or school-sponsored activities or the failure to ensure the safety and well-being of students;**

~~(3c) An educator shall not provide~~ **Furnishing** ~~alcohol or controlled~~ **illegal or unauthorized** ~~drugs to any students, facilitate the use of~~ **or allowing or encouraging a student to consume** ~~alcohol or controlled~~ **illegal or unauthorized** ~~drugs for students, or knowingly allow students to use alcohol or controlled drugs while the educator is on or off duty;~~

~~(4d) An educator shall not solicit a student, as defined in Ed 501.02(u), to engage in a sexual relationship, sexual activity or both~~ **Committing any of the following acts to any minor, or any student or prior student up to 10 months after the student's graduation, departure, or departure in cases as specified in Ed 1102.01(f)(1), including, but not limited to:**

(1) Abuse, including, but not limited to physical and emotional abuse;

(2) Cruelty or any act of endangerment;

(3) Any sexual act with or from any student; and

(4) Harassment as defined by state or federal law or regulations;

(e) Soliciting, encouraging or participating in a romantic or sexual relationship, whether written, verbal, or physical, with a student the credential holder knows or should know is a student or prior student up to 10 months after the student's graduation, departure, or departure in cases as specified in Ed 1102.01(f)(1); and

~~(5f) An educator shall not e~~**Engaging** ~~in a sexual relationship, sexual activity or both with a student, or prior student up to 10 months after the student's graduation, departure, or departure in cases as specified in Ed 1102.01(f)(1); and~~ ~~as defined in Ed 502.01(u).~~

(g) Soliciting a student, or a former student up to 10 months after the student's graduation, departure, or departure in cases as specified in Ed 1102.01(f)(1), to engage in any illegal activity via electronic media.

Ed 510.03 Principle 3—Responsibility to the School Community.

~~(a) In fulfilling this principle of the code of conduct, the following provisions apply to a credential holder~~ **models effective relationships and communicates responsibly among members of the school community, while maintaining appropriate professional boundaries. Unprofessional conduct includes, but is not limited to:**

~~(1a) An educator shall not make an unjust or prejudicial distinction on the basis of sex, race, age, creed, color, marital status, national origin, or disability~~ **Discrimination** ~~against a parent~~

or guardian of a student or other member of the community who is on the school property *as specified in RSA 354-A:1*;

(2) ~~An educator shall not~~ *Accepting or soliciting* gratuities, gifts, or favors ~~that might impair or appear to impair professional judgment~~ *for personal use or gain where there may be an actual or appearance of a conflict of interest. Gifts of a de minimis amount shall not be deemed a conflict of interest*;

(3) ~~An educator shall not~~ *Misuse* of funds intended for use ~~in or~~ by the school, to include funds which are collected from parents and students; and

(4) ~~An educator shall not~~ *Intentionally altering* or *misrepresenting* student assessments, *assessment* results, or official school records.

Ed 510.04 Principle 4—Responsible and Ethical Use of Technology.

(a) In fulfilling this principle of the code of conduct, ~~the following provisions apply to a credential holder~~ *considers the impact of consuming, creating, distributing and communicating information through the use of any and all types of technology. Unprofessional conduct includes, but is not limited to:*

(1) ~~An educator shall not solicit a student, as defined in Ed 501(t), to engage in any illegal activity via electronic media;~~

(2a) ~~An educator shall not~~ *Engage* in harassment, stalking, or bullying *in any activities as outlined in Ed 510.02(d), Ed 510.02(e), Ed 510.02(f), or Ed 510.02(g) via electronic media with a student, or former student up to 10 months after the student's graduation, departure, or departure as specified in Ed 1102.01(f)(1); and*

(3b) ~~An educator shall not~~ *Engage* in inappropriate communication *with a student, or former student up to 10 months after the student's graduation, departure, or departure as specified in Ed 1102.01(f)(1) via electronic media. For the purposes of this section, inappropriate communication shall be determined by considering:*

(1) ~~The~~ *intent, timing, subject matter, and amount of communication; and*

(2) ~~Is~~ *defined to include, but not be limited to whether:*

a. ~~Whether~~ *The communication made was covert in nature;*

b. ~~Whether~~ *The communication could reasonably be interpreted as solicitous, sexually explicit, or romantic in nature; and*

c. ~~Whether~~ *The communication involved discussion(s) of the physical or sexual attractiveness or the sexual activities or fantasies of either the educator credential holder or the student.*

Readopt with amendment and renumber Ed 510.01, effective 2-23-12 (Doc #10089), as Ed 510.05 to read as follows:

Ed 510.045 Duty to Report.

(a) Each principal ~~has~~**shall have** a duty to report to the superintendent of the school district or SAU where the principal is employed, **chief executive officer of a chartered public school or public academy, or headmaster of a nonpublic school**, if the principal has been notified of, or is personally aware that ~~an educator~~**credential holder** has violated any of the rules of professional conduct as enumerated in Ed ~~510.01–04~~**510**, which occurred on or off duty.

(~~a~~**b**) The superintendent, chief executive officer of a chartered public school or public academy, or headmaster of a nonpublic school, shall report any of the following to the office of credentialing:

~~(1) Any confirmed violation of the principles of professional~~**code of conduct as enumerated in Ed 510.01–04 by an educator, as defined in Ed 501.02(k), which occurred on or off duty;**

~~(2) When a superintendent has knowledge that an educator, as defined by~~**in Ed 501.02(kn)**, has been arrested and charged with an offense enumerated in RSA 189:13-a, V; and

~~(3) Misconduct or unprofessional~~**Violation of the code of conduct as outlined in Ed 510.01 through ED 510.04 by an educator****credential holder**, as defined by Ed 501.02(k), which occurred on or off duty, where the nature or circumstances of the educator's conduct would:

—~~a. Potentially place a student(s), as defined in Ed 501.02(t), in physical or emotional jeopardy;~~

—~~b. So detract from the educator's professional standing as to render the educator unfit for continued certification; or~~

—~~c. Create an inability for the educator to carry out his or her assigned duties.~~

(c) ~~Educators having~~**Credential holders who have** reason to suspect that ~~another educator a student~~ has **been, or is being**, abused or neglected ~~a student~~ shall report the same to:

~~(1) His or her immediate supervisor, superintendent, or both, who shall report the same to~~

~~(1) The department of health and human services, pursuant to RSA 169-C:29; and~~

~~(2) The office of credentialing.~~

(d) **Should the office of credentialing investigator have reason to suspect any violation of the code of conduct enumerated in Ed 510.01 through Ed 510.04 was known by a credential holder and not reported,** ~~the office of credentialing~~**investigator** shall undertake an investigation, as enumerated in Ed ~~510.061~~, if an educator, principal, superintendent, chief executive officer, or headmaster fails to ~~make a report as~~**against that credential holder as** required by Ed 510.05(a), (b), or (c).

(e) The office of credentialing shall undertake an investigation, as enumerated in Ed ~~510.061~~, in response to a report made pursuant to Ed 510.05(a), (b), (c), or (d) above.

Adopt Ed 511.01, cited and to read as follows:

PART Ed 511 INVESTIGATIONS AND DISCIPLINARY PROCEEDINGS

Ed 511.01 Investigations.

- (a) Investigations shall be handled by the department and shall be conducted by the office of credentialing ~~investigator or designee~~.
- (b) An investigation shall be undertaken ~~if~~ by the office of credentialing ~~investigator or designee~~ ~~deems it necessary to examine~~ if acts of possible misconduct by an ~~educator~~ **credential holder** have come to the attention of the department either through direct reporting or other means;
- (c) Investigations **into allegations of unprofessional conduct, as outlined in Ed 510.01 to Ed 510.04**, shall not constitute a disciplinary hearing and shall not constitute an ~~allegation~~ **finding** of misconduct against an ~~educator~~ **credential holder**;
- (d) ~~Educators~~ **Credential holders** shall be notified in writing, via certified mail, that an investigation has been opened and the nature of the investigation and the status of the ~~educator~~ **credential holder's** credential pending the investigation;
- (e) The department shall **make every attempt to** interview all people, ~~to include~~ **including** the ~~educator~~ **credential holder**, who might have information which might be relevant to the investigation;
- (f) Investigations, including those based upon allegations in a complaint, shall be conducted on an ex parte basis;
- (g) The department shall **make every attempt to** obtain any and all documentation which might be relevant to the investigation;
- (h) Once the investigation is complete, the following procedures shall apply:
 - (1) The department shall create a report which documents the results of the investigation;
 - (2) The ~~educator~~ **credential holder** shall be notified in writing of any **proposed** discipline ~~as set forth below~~ and the specific grounds upon which the discipline is based **in accordance with RSA 541-A:30 as follows**; ~~or~~:
 - a. Suspension;**
 - b. Revocation; or**
 - c. Reprimand**
 - (3) If no disciplinary sanction is ~~imposed~~ **proposed**, the department shall notify the ~~educator~~ **credential holder** in writing that the investigation is closed;
- (i) Investigatory reports and all information gathered during the course of ~~the~~ **an** investigations shall be confidential, with the following exceptions:

(1) The report shall be made available to the parties in any adjudicatory proceedings resulting therefrom; and

(2) If further disciplinary proceedings are to be conducted as a result of the investigation, the department shall provide information gathered in the disciplinary investigation to the following:

- a. A law enforcement agency when the agency is conducting a criminal investigation of the ~~educator~~ **credential holder**;
- b. A certifying agency of another jurisdiction for:
 1. Purposes of certification of the ~~educator~~ **credential holder** in the other jurisdiction; or
 2. An investigation of the ~~educator~~ **credential holder** by the other jurisdiction when:
 - (i) The ~~educator~~ **credential holder** was the subject of a formal investigation under Ed 510I; or
 - (ii) Disciplinary action was taken against the ~~educator~~ **credential holder** by the state board of education pursuant to Ed 510I;
- c. Other states' licensing board investigators or prosecutors; and
- d. Expert witnesses or assistants retained by a prosecutor or investigator in the same related disciplinary matters.

Readopt with amendment and renumber Ed 510.03, effective 2-23-12 (Doc #10089), as Ed 511.02 to read as follows:

Ed 511.02 ~~Disciplinary Sanctions~~ **Voluntary Suspension or Revocation.**

(a) If the department determines that an ~~educator~~ **credential holder**, as defined by Ed 501.02(k), ~~has committed misconduct~~ **violated the code of conduct as outlined in Ed 510.01 through Ed 510.04, and the credential holder agrees to the disciplinary finding, the credential holder may agree to a voluntary suspension or revocation.** ~~department shall impose one of the following disciplinary sanctions, as determined to be appropriate by the department under the circumstances of each case:~~

- ~~(1) Suspension;~~
- ~~(2) Revocation; or~~
- ~~(3) Reprimand.~~

(b) All ~~state disciplinary action~~ **voluntary suspensions or revocations** shall be documented in writing, and **shall** set out the terms of the discipline. The ~~educator~~ **credential holder** shall receive a copy of the discipline in writing and a copy shall be placed in the ~~educator~~ **credential holder's** electronic

credentialing file at the department once it is signed by all required parties, to include the ~~educator~~ **credential holder**.

(c) Any ~~educator~~ **credential holder** whose credential is revoked *or who voluntarily agrees to a revocation* shall be prohibited from applying or reapplying for any other ~~teaching~~ credential in New Hampshire; ~~and~~

~~(d) The department shall maintain a list of all educators who have been revoked or who are under suspension, and such list shall be published on the department's website.~~

Readopt with amendment and renumber Ed 510.02, effective 2-23-12 (Doc #10089), as Ed 511.03 to read as follows:

Ed 511.03 Disciplinary Hearings.

(a) *If a credential holder does not agree with the disciplinary finding as a result of an investigation as outlined in Ed 511.01, a credential holder may request an* ~~Adjudicatory proceedings/disciplinary hearings~~ *which shall be commenced pursuant to Ed 200 after the following:*

(1) Completion of an informal or formal investigation; *and*

(2) Filing of a written report and recommendation *pursuant to Ed 511.01(h); and*

~~(3) A determination by the director that a disciplinary action before the board is required in accordance with the provisions of Ed 200.~~

(b) The provisions of Ed 200 shall apply to all disciplinary hearings *and shall commence not more than 15 days after the disciplinary finding.*

Readopt with amendment and renumber Ed 510.04, effective 2-23-12 (Doc #10089), as Ed 511.04 to read as follows:

Ed 511.04 Status of a Credential Pending Completion of Disciplinary Proceeding.

(a) When the department receives information indicating that an ~~educator~~ **credential holder** has been arrested for one of the offenses enumerated in RSA 189:13-a, V, the credential holder's ~~teaching~~ credential and any and all endorsements shall be immediately suspended ~~pending an investigation by the department~~ *pursuant to RSA 541-A:30, III.*

(b) The department shall notify the ~~educator~~ **credential holder** and the employing school district that the ~~educator~~ **credential holder**'s credential has been suspended pending an investigation by the department.

(c) ~~The educator shall have a right to request an adjudicative proceeding to commence not later than 15 working days after the suspension of the credential.~~ *In accordance with RSA 541-A:30, unless waived, an adjudicatory hearing shall commence within 10 working days after the suspension of the credential.* Such hearings shall be governed by the process set forth in Ed 200. A request for an adjudicative proceeding ~~must~~ *shall* be made in writing.

Repeal Ed 510.05, effective 2-23-12 (Doc #10089), as follows:

~~Ed 510.05 Voluntary Surrender of a Credential.~~

~~———— (a) If a certified educator offers to surrender his/her credential voluntarily, the bureau shall automatically revoke the credential.~~

~~———— (b) A statement indicating the educator's request to surrender his/her credential voluntarily and the reason surrounding the circumstances of the request shall be made a part of the educator's certification record with the bureau.~~

~~———— (c) The rules of confidentiality of Ed 502 shall apply to the maintenance and release of information concerning voluntary surrender of a teaching credential.~~

Readopt with amendment and renumber Ed 511.03, effective 2-23-12 (Doc #10089), as Ed 511.05 to read as follows:

Ed 511.05 Grounds for Reinstatement After Suspension.

(a) A certificate or endorsement which has been suspended shall be reinstated for one of the following reasons:

(1) The period of the suspension has passed and any and all terms and conditions regarding possible reinstatement have been satisfied; and

(2) An ~~educator~~ **credential holder** whose credential has been ~~revoked~~ **suspended** demonstrates by clear and convincing evidence that he/or she has corrected the deficiencies or conduct which led to the original suspension.

(b) Upon reinstatement, the department may issue a certificate or endorsement which is limited in time, level, or scope or subject to other terms as the department deems necessary ***to include a reinstatement fee. If the certificate or endorsement is so limited, then the credential holder may appeal that decision using the process outlined in Ed 200.***

Change the Part heading and renumber Part Ed 511 as Part Ed 512 to read as follows:

PART Ed 512 DENIAL OF CERTIFICATION

Readopt with amendment and renumber Ed 508.07, effective 6-15-13 (Doc. #10362) as Ed 512.01, and renumber the existing Ed 512 and Ed 513 as Ed 513 and Ed 514, so that Ed 512.01 reads as follows:

Ed 512.01 Denial of ~~Initial Application~~ **Credential.**

(a) ***For the purposes of this section, a credential means a credential as defined in Ed to include adding an endorsement, renewing a credential and reinstating a license from suspension.***

(b) ***A credential application shall be denied by the board based on the following grounds:***

(1) Failure to meet the conditions for issuance of the license, endorsement, renewal, or reinstatement;

(2) The applicant has been charged pending disposition for, or convicted of any violation or attempted violation of any of the crimes enumerated in RSA 189:13-a, or has been convicted of any felony in any other state, territory or country;

(4) The applicant is under investigation for, under suspension for, or has been revoked for a violation of the principles of professional conduct enumerated in Ed 510.01 through Ed 510.04; or

(5) The applicant is under investigation, under suspension, or has been revoked in any other state, jurisdiction, territory or country.

~~(a) An application for a New Hampshire credential shall be denied if the applicant has been charged pending disposition for, or convicted of, any violation or attempted violation of any of the crimes enumerated in RSA 189:13-a, or has been convicted of any felony in any other state, territory or country.~~

~~(b) An application for a New Hampshire credential shall be denied if there is documentary evidence in the form of a statement bearing the signature of the superintendent, in the case of a public school, or of the chief administrative officer, in the case of a nonpublic school, and after an investigation by the bureau establishes that the applicant has engaged in the following:~~

~~(1) Sexual misconduct within the educational setting;~~

~~(2) Noncompliance with the professional development requirement of Ed 512; or~~

~~(3) Any act or combination of acts which when considered together would be contrary to the principles of professional conduct as outlined in Ed 510, including but not limited to:~~

~~a. The applicant or someone acting on behalf of the applicant has submitted false information to the bureau in connection with the application; or~~

~~b. The applicant has been disciplined by another licensing body, provided that the ethical requirements of the licensing body are equivalent with the principles of professional conduct as outlined in Ed 510.~~

(c) An applicant aggrieved by the decision of the bureau to deny an application may file a petition for reconsideration along with supporting documentation to the director within 20 days after receipt of the denial decision. If the petition for reconsideration is denied, the applicant may appeal the director's decision pursuant to RSA 21-N:11, III, and Ed 200.

Repeal Ed 511.01, effective 2-23-12 (Doc. #10089), to read as follows:

~~Ed 512.02~~**511.01 Grounds For Denial of Endorsement, Renewal, or Reinstatement.**

~~(a) A license for educator certification or an endorsement, or renewal or reinstatement shall be denied by the board based on the following grounds:~~

- ~~(1) Failure to meet the conditions for issuance of the certificate or endorsement or renewal or reinstatement;~~
- ~~(2) If the applicant has been charged pending disposition for, or convicted of any violation or attempted violation of any of the crimes enumerated in RSA 189:13-a, or has been convicted of any felony in any other state, territory or country;~~
- ~~————— (3) Incompetence;~~
- ~~(4) If the applicant is under investigation for, under suspension for, or has been revoked for a violation of the principles of professional conduct enumerated in Ed 510.01 through Ed 510.04;
or~~
- ~~(5) Falsification or misrepresentation of information provided in connection with an application for licensure for certified personnel or endorsement, renewal or reinstatement.~~

Repeal Ed 511.02 – 511.06, effective 2-23-12 (Doc. #10089), as follows:

Ed 511.02 Grounds for Suspension or Revocation of Educator's Certification.

- ~~————— (a) A certificate for an educator or an endorsement shall be suspended or revoked based on the following grounds:~~
 - ~~(1) Incompetence;~~
 - ~~(2) Conviction of a felony:~~
 - ~~a. That would potentially place a student or students in physical or emotional jeopardy;~~
 - ~~b. When the board determines that either the nature or circumstances of the crime, or the moral turpitude associated with the crime render the individual unfit for continued certification; and~~
 - ~~c. When the underlying behavior or circumstances of the offense render the educator unfit for continued certification based on the educator's inability to perform assigned duties;~~
 - ~~(3) Misconduct or unprofessional conduct, on or off duty:~~
 - ~~a. That would potentially place a student or students in physical or emotional jeopardy;~~
 - ~~b. Where the nature or circumstances of the conduct so detract from the educator's professional standing as to render the educator unfit for continued certification based on the educator's inability to perform assigned duties; and~~
 - ~~c. Where there is a nexus between the off duty misconduct or unprofessional conduct of the educator and the educator's ability to carry out assigned duties;~~

~~(4) Falsification or misrepresentation of information provided in connection with an application for certification or endorsement or renewal or reinstatement discovered subsequent to issuance of the certificate;~~

~~(5) If the individual is a superintendent, assignment of duties by the superintendent to an individual who does not hold the appropriate certificate or endorsement for the duties assigned, except as otherwise provided in RSA 189:39 b;~~

~~(6) If the individual is a principal, to report to the superintendent any allegations or conduct by an educator for which there is credible evidence of a potential professional conduct violation that might constitute ground for suspension or revocation of an educator's certificate or endorsement; or~~

~~(7) If the individual is a superintendent, failure to report to the director or designee any allegations or conduct by an educator for which there is credible evidence of a professional conduct violation that might constitute grounds for suspension or revocation of an educator's certificate or endorsement.~~

~~—— Ed 511.04 Effects of Certificate Surrender.~~

~~—— (a) A licensee may surrender the license at any time.~~

~~—— (b) Surrender or nonrenewal of a certificate shall not preclude the board from investigating or completing a disciplinary proceeding based upon the licensee's conduct while the certificate was still in effect. Such investigations and proceedings shall be handled in the same manner as other disciplinary investigations and proceedings.~~

~~—— (c) An educator who surrenders a certificate shall have no right or privilege in New Hampshire. An educator who reapplies for a certificate in New Hampshire after surrender shall meet all the requirements in effect for new applicants as set forth in statute or rules at that time.~~

~~—— (d) An educator who surrenders a license as part of a settlement of pending misconduct allegations shall make a written settlement offer to the board before the close of the record in a disciplinary hearing.~~

~~—— (e) Any settlement agreement reached under (d), above, shall include the following concessions:~~

~~(1) That certificate surrender has occurred in settlement of pending disciplinary allegations;~~

~~(2) That the facts or conduct upon which the surrender is based is not contested; and~~

~~(3) That the pending allegations shall be issues to be resolved in any future application the educator submits in New Hampshire.~~

~~—— Ed 511.05 Investigations.~~

~~—— (a) The department shall conduct such investigations as it deems necessary to examine acts of possible misconduct that come to its attention through complaints or other means.~~

~~—— (b) The director or designee shall appoint a member of the department, or other knowledgeable persons to conduct the investigation.~~

~~—— (c) The director or designee shall provide the following information to the person conducting the investigation:~~

~~(1) The statutory or regulatory authority for the investigation;~~

~~(2) Any statutes or rules believed to have been, or about to be, violated;~~

~~(3) The identity of the persons, or class of persons, that are subject of the investigation;~~

~~(4) The general nature of the conduct being investigated; and~~

~~(5) The date upon which the investigating officer shall report his or her findings and recommendations to the board.~~

~~—— (d) Investigations shall not constitute a disciplinary hearing and shall not constitute an allegation of misconduct against a licensee.~~

~~—— (e) When an investigation occurs, an investigator designated by the director or designee shall contact such persons and examine such records and other documents as are reasonably necessary to make a recommendation as to whether further board action should be taken on the allegations in question.~~

~~—— (f) Investigations, including those based upon allegations in a complaint shall be conducted on an ex parte basis.~~

~~—— (g) Once the investigator completes the investigation, the following procedures shall apply:~~

~~(1) The investigator shall file a written report with the director or designee including:~~

~~—— a. A recommendation for action by the board; and~~

~~—— b. The specific grounds listed in Ed 511.02 upon which the recommendation is based;~~

~~(2) The director or designee shall review the investigator's report and recommendation based on a review of the case in relation to the grounds listed in Ed 511.02 to:~~

~~a. Confirm, deny, or amend the investigator's recommendation and report; and~~

~~b. Provide a written recommendation and report;~~

~~(3) If the director determines that disciplinary proceedings are warranted, the director shall notify the educator, and initiate a disciplinary hearing before the board under the procedures established in Ed 200; and~~

~~(4) The board shall not be consulted regarding the director's decision to hold a disciplinary hearing.~~

~~—— (h) Investigatory reports and all information gathered by an investigator shall be confidential, with the following exceptions:~~

~~(1) The investigator's report shall be made available to the parties in any adjudicatory proceeding resulting therefrom;~~

~~(2) If further disciplinary proceedings are to be conducted as a result of the investigation, the board shall provide information gathered in disciplinary investigations to:~~

~~a. A law enforcement agency when the agency is conducting a criminal investigation of the credential holder;~~

~~b. A certifying agency of another jurisdiction for:~~

~~1. Purposes of certification of the credential holder in the other jurisdiction; or~~

~~2. An investigation of the credential holder by the other jurisdiction, when:~~

~~(i) The credential holder was the subject of a formal investigation under Ed 510; or~~

~~(ii) Disciplinary action was taken against the credential holder by the state board of education under Ed 510.03;~~

~~c. Board investigators or prosecutors; and~~

~~d. Expert witnesses or assistants retained by board prosecutor or investigators in the same or related disciplinary matters; and~~

~~(3) Whether or not further disciplinary proceedings are to be conducted as a result of the investigation, the board shall provide information gathered in disciplinary investigations to persons to whom the licensee has given a release.~~

~~—— (i) The educator shall be notified promptly of the nature of any allegations that result in an investigation pursuant to (e) above.~~

~~—— (j) If further disciplinary proceedings are to be conducted as a result of an investigation, the licensee shall be given the opportunity to respond, in writing, to the investigator prior to the initiation of disciplinary proceedings.~~

~~—— Ed 511.06 Due Process for Denial of Licensure for an Educator or Endorsement or Renewal or Reinstatement.~~

~~—— (a) If, after written application for certification, the department concludes that an applicant should be denied a license or endorsement or renewal or reinstatement the department shall notify the applicant in writing of the grounds for the denial.~~

~~— (b) The department shall provide an applicant with a description of the procedures for appeal of a denial of a license for an educator or endorsement and shall explain that the applicant may appeal the denial to the board in accordance with the procedures established in Ed 200.~~

~~— (c) An applicant shall file an appeal in writing within 10 days of receipt of the denial in order for an appeal to be accepted by the board.~~

APPENDIX I

RULE	STATUTE
Ed 501	RSA 186:8, II; RSA 189:39
Ed 502	RSA 186:11, X(a)
Ed 510	RSA 186:11, X(a)
Ed 511	RSA 186:11, X(a); RSA 189:14-a, (b) and (c)
Ed 512	RSA 186:11, X(a)

Dear Members of the New Hampshire State Board of Education,

RE: Written Testimony on the Proposed Edits to the Code of Ethics and Code of Conduct for New Hampshire Educators

Submitted By: The Commissioner's Task Force on Ethics

Date: June 1, 2018

On May 19, 2018 the Commissioner's Task Force on Ethics met to discuss the proposed edits to the Code of Conduct for New Hampshire Educators and the investigatory process of educator misconduct. This letter communicates the task force's response to the proposed edits detailed during the meeting of the State Board on May 10, 2018. The Task Force appreciates the time and sense of purpose the State Board brings in their examination and discussion of the proposed Code of Conduct and Code of Ethics. Further, the group is grateful for the opportunity to provide additional written testimony before the State Board engages in a vote at their June meeting.

Overall, the Task Force believes the proposed edits further advance the work that has occurred on ethics and conduct for NH educators. At the Task Force's May 18th meeting, the group focused their attention on conduct, Ed 501-Ed 512. All of the proposed revisions during the May Board meeting rest within this section of administrative rules. Amanda Phelps, from the Office of Policy at the NHDOE attended the meeting to offer deeper context on the proposed changes and to work with the group in hearing and making additional edits as proposed by the Task Force. The NHDOE has integrated all changes but one into the proposed Code of Conduct and Investigatory administrative rules. The single revision not applied rests on page 9, **Ed 511.01 (d)** under the overall heading of **Investigations**.

Overwhelmingly, the Task Force asserts that BOTH the educator and superintendent shall be notified of an investigation that has been opened, the nature of the investigation, and the status of the educator's credential. Failure to include notification of the superintendent creates significant liability for both the district and more so, the state. The Task Force requests that the State Board make this one edit to the proposed investigatory process outlined in Ed 511.01. With this change the Task Force supports the adoption of the Code Conduct by the State Board during their June meeting.

The Task Force also supports the adoption of the Code of Ethics. The group contends this document should be adopted as currently published. No edits have been proposed since November 2017. Like the Code of Conduct, the group strongly favors the adoption of ethics into administrative rule. If the Code of Ethics is not included in rule, the requirement for educator preparation programs to provide direct instruction on ethics to all future educators enrolled in NH institutions will be overlooked. Learning about and role-playing ethical dilemmas is a necessary component of preparation.

While the Task Force supports the adoption of both codes, the group wishes to offer further feedback as the board brings their work to completion.

- The Task Force overwhelmingly supports the publication and implementation of both the state's code of conduct and code of ethics.
- The Task Force had direct involvement in the development and revision of both codes. Both codes represent the ideas, dialogue and work of the group.

- The Task Force did not develop the investigatory process detailed in 510.05 through 512.02. This was not a charge of the group; however, the task force did provide input on the process.
- As both codes move through the adoption process and take effect, the task force underscores the following considerations:
 - The NHDOE should be charged with developing technical assistance /user's guide customized for a variety of stakeholder groups – district leaders, school boards, school level leaders, educators, parents and educator preparation programs.
 - An orientation, training and support should also be customized for the State Board of Education as the board will play a critical role in the investigatory process detailed in the proposed rules.
 - The NHDOE should develop a training module and acknowledgement of understanding within the Educator Information System (EIS). Each time an educator certifies, they should be required to engage in this training and acknowledge an understanding of both the Code of Ethics and Code of Conduct.
 - After 12 months of implementation, the NHDOE in collaboration with the field and State Board of Education, should revisit the rules, particularly those dealing with investigations to assess what is working and what is not. Such an evaluation could lead to proposed changes in the process of implementation and enforcement. The Task Force sees this task as critical in harnessing support from the field and offering a degree of transparency to all stakeholders.

The work of the Task Force has been highly productive and transformative for all members and stakeholder groups. The conversations surrounding ethics and conduct have been powerful and purposeful, aimed at elevating the profession and providing the necessary safeguards for students and educators alike. As the State Board moves this work forward the Task Force wishes to reiterate the following concerns. These concerns should not delay adoption but should be important discussion points for the State Board and NHDOE in an ongoing fashion.

- What is the process if a complaint is lodged against a Superintendent? The proposed rules do not appear to account for such circumstance.
- The proposed rules appear to support or allow for multiple investigations. On a single complaint, investigations could occur at the local, state, and criminal levels. What guidance should be offered concerning multiple investigations? What happens if the said investigations yield different outcomes?
- Within the investigatory process three different types of discipline are described. Those include: written reprimand, suspension, and revocation. While the definitions are clear on what these measures yield the process for determining the type of discipline assigned is unclear. Who decides the type of discipline outcome attached to types of misconduct? How is this determination made? What safeguards are in place for ensuring equity and fairness in the application of discipline across misconduct cases and types?

It has been a pleasure to engage in this work. As a Task Force we look forward to implementation and hope there will be room to make necessary adjustments along the way.

[Respectfully Submitted,](#)

[The Commissioner's Task Force on Ethics](#)

Commissioner's Task Force on Educator Ethics

Membership

[Adam Marcoux \(NH AFT\)](#)

[Barrett Christina \(NHSBA\)](#)

[Carl Ladd \(NHSAA\)](#)

[Dean Cascadden \(NHSAA\), 2017](#)

[Diana Fenton \(NHDOE\)](#)

[Dianna Terrell \(PSB\), 2016](#)

[Doug Ley \(NH AFT\)](#)

[Frank Hoell \(CTE\), 2017](#)

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[KimberlyYarlott \(PSB\)](#)

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[Lorrain Tacconi-Moore \(NHSAA\)](#)

[Michael Perez \(NHASP\)](#)

[Nancy Morse \(NEA NH\)](#)

[Nicole Heimarck \(NHDOE, Task Force Facilitator\)](#)

[Phil Littlefield \(NHSAA\)](#)

[Suzanne Canali \(CTE\)](#)

[Virginia Clifford \(NHDOE,\) 2016](#)

Readopt with amendment, Ed 505.07 effective 12-17-11 (Doc #10046), to read as follows

Ed 505.07 Professional Education Requirements; Alternatives 3, 4, and 5.

In addition to the requirements in Ed 505.03 for Alternative 3, Ed 505.04 for Alternative 4, and Ed 505.05 for Alternative 5, an applicant for a credential under Alternative 3, 4, or 5 who is not already credentialed shall demonstrate evidence of the following:

(a) In the area of the learner and learning:

(1) Learner development, as demonstrated by:

- a. An understanding of how learners develop, recognizing that patterns of learning and development vary individually within and across the personal, physical, social, and academic dimensions; and
- b. The ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner;

(2) Learning differences, as demonstrated by:

- a. An understanding of individual differences and diverse cultures and communities;
- b. Ensuring inclusive learning environments that allow each learner to reach his or her full potential; and
- c. The ability to employ universal design principles and assistive technology; and

(3) Learning environment, as demonstrated by:

- a. Working with learners to create and access learning environments that support self-directed individual and collaborative learning, based on each learner's interests and passions; and
- b. Use of learning environments not limited to the classroom, but extended into the larger community as well as virtual experiences;

(b) In the area of content:

(1) Content knowledge, as demonstrated by:

- a. An understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s); and
- b. An ability to create learning experiences that make the discipline(s) accessible and meaningful for learners; and

(2) Innovative applications of content, as demonstrated by an understanding of how to connect concepts and use differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues;

(c) In the area of learning facilitation practice:

(1) Use of assessment, as demonstrated by an understanding and ability to use multiple methods of assessment to:

- a. Engage learners in their own growth;
- b. Document learner progress;
- c. Provide learner feedback; and
- d. Inform the educator's ongoing planning and instructional practices;

(2) Planning for learning facilitation, as demonstrated by an ability, as an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals; and

(3) Learning facilitation strategies, as demonstrated by:

- a. An understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines; and
- b. An ability to build skills in accessing, applying, and communicating information; and

(d) In the area of professional responsibility:

(1) Reflection and continuous growth, as demonstrated by:

- a. Being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community; and
- b. Ability to adapt practice to meet the needs of each learner; and

(2) Collaboration, as demonstrated by collaborating, as a member of the larger learning community, with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.

(e) In the area of professional ethics as demonstrated by:

(1) Adherence to ethical principles and professional norms of the profession as outlined in the Commissioner's Task Force for Educator Ethics "Guiding Principles:

The Code of Ethics for New Hampshire Educators”, February 2018 as referenced in appendix II; and

(2) Adherence to the principles of professional conduct as outlined in Ed 510.01 through Ed 510.04.

Readopt with amendment, Ed 610.02 effective 12-17-11 (Doc #10046), to read as follows:

Ed 610.02 Professional Education Requirements. To promote the learning of all students, each professional educator preparation program shall require each graduate of the program to demonstrate evidence of the following: *the requirements detailed in Ed 505.07(a)-(e).*

~~(a) In the area of the learner and learning:~~

~~(1) Learner development, as demonstrated by:~~

- ~~a. An understanding of how learners develop, recognizing that patterns of learning and development vary individually within and across the personal, physical, social, and academic dimensions; and~~
- ~~b. The ability to facilitate developmentally appropriate and challenging learning experiences based on the unique needs of each learner;~~

~~(2) Learning differences, as demonstrated by:~~

- ~~a. An understanding of individual differences and diverse cultures and communities;~~
- ~~b. Ensuring inclusive learning environments that allow each learner to reach his or her full potential; and~~
- ~~c. The ability to employ universal design principles and assistive technology; and~~

~~(3) Learning environment, as demonstrated by:~~

- ~~a. Working with learners to create and access learning environments that support self-directed individual and collaborative learning, based on each learner’s interests and passions; and~~
- ~~b. Use of learning environments not limited to the classroom, but extended into the larger community as well as virtual experiences;~~

~~(b) In the area of content:~~

~~(1) Content knowledge, as demonstrated by:~~

- ~~a. An understanding of the central concepts, tools of inquiry, and structure of his or her discipline(s); and~~

~~b. An ability to create learning experiences that make the discipline(s) accessible and meaningful for learners; and~~

~~(2) Innovative applications of content, as demonstrated by an understanding of how to connect concepts and use differing perspectives to engage learners in critical and creative thinking and collaborative problem-solving related to authentic local and global issues;~~

~~(c) In the area of learning facilitation practice:~~

~~(1) Use of assessment, as demonstrated by an understanding and ability to use multiple methods of assessment to:~~

~~a. Engage learners in their own growth;~~

~~b. Document learner progress;~~

~~c. Provide learner feedback; and~~

~~d. Inform the educator's ongoing planning and instructional practices;~~

~~(2) Planning for learning facilitation, as demonstrated by an ability, as an active member of a learning community, to draw upon knowledge of content area standards, cross-disciplinary skills, learners, the community, and pedagogy to plan learning experiences that support every learner in meeting rigorous learning goals; and~~

~~(3) Learning facilitation strategies, as demonstrated by:~~

~~a. An understanding and use of a variety of strategies and tools to encourage learners to develop deep understanding of content areas and their connections to other disciplines; and~~

~~b. An ability to build skills in accessing, applying, and communicating information; and~~

~~(d) In the area of professional responsibility:~~

~~(1) Reflection and continuous growth, as demonstrated by:~~

~~a. Being a reflective practitioner and using evidence to continually evaluate his or her practice, particularly the effects of choices and actions on students, families, and other professionals in the learning community; and~~

~~b. Ability to adapt practice to meet the needs of each learner; and~~

~~(2) Collaboration, as demonstrated by:~~

~~a. Collaborating, as a member of the larger learning community, with learners, families, colleagues, other professionals, and community members to leverage resources that contribute to student growth and development, learning, and well-being.~~

APPENDIX II

Rule	Title	Obtain At
Ed 505.07(e)(1)	Guiding Principles: The Code of Ethics for New Hampshire Educators, February 2018	www.education.nh.gov

Guiding Principles: The Code of Ethics for New Hampshire Educators

Statement of Purpose

A New Hampshire educator is entrusted by the state and the public with a responsibility to teach New Hampshire's children the skills and model the values that will make each child a knowledgeable, capable, and engaged member of a democratic society. The educator accepts the responsibility to practice within the educational profession according to the highest ethical standards and aspires to continuously and consistently make decisions which are, first and foremost, within the best interests of the student.

This "Code of Ethics for New Hampshire Educators" is created as a set of guiding principles which articulate the responsibilities common to all members of the education profession. The Code of Ethics is designed to provide guidance to educators in the decision making process involving their interactions with students, the school community, colleagues, parents, and the public. The principles set forth in the Code of Ethics for New Hampshire Educators should be interpreted with reference to the context of the classroom, the learning community, and the educational profession.

This Code of Ethics for Educators is created upon the recognition that teaching is a profession. As such, there is an acknowledgement within the educational field that The Code of Ethics for New Hampshire Educators is applicable to all aspects of an educator's life.

The Code of Ethics for educators establishes guidance for all school personnel and is not intended to be a basis for civil liability nor is it designed to be a basis for employment action. The Code of Ethics for New Hampshire Educators establishes guidance for educators.

Definitions

The term “student” as used in The Code of Ethics for New Hampshire Educators means an individual who is enrolled or participating in any class or program from preschool through grade-12 at any school or education institution. “Student” includes individuals through nine months after graduation.

Principle I—Responsibility and Commitment to the Student

An educator holds a position which is imbued with public trust. As such, one of the educator’s obligations is to ensure that each student is treated with dignity and respect. An educator also establishes and maintains appropriate verbal, physical, emotional and social boundaries with every student.

In fulfillment of this principle, the educator:

- Interacts with students within appropriate settings;
- Communicates with students in a clear, respectful, and culturally sensitive manner;
- Considers the potential implications and possible perception of accepting a gift from a student and considers the potential implications and possible perception of giving a gift to a student;
- Considers the ramifications and possible perceptions of entering into an adult relationship of any kind with a former student, including but not limited to, any potential harm to the former student, public perception, and the possible impact on the professional educator’s career;
- Recognizes and respects confidential information acquired in the course of employment regarding individual student safety, education, health, and personal information of students and their families.

Principle II—Responsibility and Commitment to the Education Profession and Colleagues

The educator is committed to a high level of professional ethics at all times. As such, the educator is expected to uphold and adhere to laws, regulations, policies, and procedures which are relevant to the educational profession regardless of personal viewpoints. There is also a recognition that the decisions and actions that the educator makes, whether inside or outside of the school and classroom, may be reflective of ones’ professional judgment.

In addition to holding oneself accountable to a high level of professional ethics, the educator encourages colleagues to meet the same high standards and to engage in discussions with appropriate colleagues on ethical matters.

In fulfillment of this principle, the educator:

- Values honesty and established commitments;

- Respects intellectual property and ownership rights when using or sharing materials such as lesson plans, research and assessment, curricula, syllabi, or gradebooks;
- Recognizes the possible impact and ramifications upon a colleague's professional reputation when speaking about a colleague in public and private communications;
- Communicates with colleagues in a clear, respectful, and culturally sensitive manner;
- Considers the ramifications of accepting or offering any gratuity, gift or favor which would influence or appear to influence ones' professional decisions; and
- Considers the ramifications of using institutional or professional privileges for personal or partisan advantage

Principle III—Responsibility and Commitment to the School Community

The educator models effective relationships and communicates responsibly among members of the school community, while maintaining appropriate professional boundaries. The educator acts in the best interests of all students by advocating for equitable educational opportunities and endeavoring to present facts with fidelity to the content and without distortion, bias or personal prejudice.

In fulfillment of this principle, the educator:

- Communicates with parents and guardians in a respectful manner which represents students' best interests;
- Has an awareness and respect of the confidential nature of material received and communicated from a variety of audiences.
- Commits to equality, equity, and inclusion of colleagues, staff, students, parents or guardians and other members of the school community;
- Respects diversity amongst colleagues, staff, students, parents or guardians, and other members of the school community;
- Considers and recognizes the potential ramifications of having a personal relationship with colleagues, staff, students, parents, or guardians and other members of the school community in consideration of the role and the perception of the educator within the classroom and the community; and
- Recognizes that the professional educator often serves multiple roles within the school, as such must consider that the varied relationships have the potential to impair ones' objectivity.

Principle IV - Responsible and ethical use of technology as it relates to students, schools, and other educational professionals

The educator considers the impact of consuming, creating, distributing and communicating information through the use of any and all types of technology.

In fulfillment of this principle, the professional educator:

- Utilizes social media responsibly, transparently and primarily for the purpose of teaching and learning;
- Considers the ramifications and public perception of using social media;
- Exercises prudence to establish and maintain appropriate professional boundaries of time and place in all electronic communications with students.

Commissioner's Task Force on Educator Ethics

Membership

Adam Marcoux (NH AFT)

Barrett Christina (NHSBA)

Carl Ladd (NHSAA)

Dean Cascadden (NHSAA), 2017

Diana Fenton (NHDOE)

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Gail Adams-Davis (NHASP)

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Michael Perez (NHASP)

Nancy Morse (NEA NH)

Nicole Heimarck (NHDOE)

Phil Littlefield (NHSAA)

Suzanne Canali (CTE)

Virginia Clifford (NHDOE,) 2016

Readopt with amendment Ed 513.01, effective 9-11-14 (Doc. #10667), to read as follows:

Ed 513.01 Basic Academic Skills and Subject Area Assessment.

(a) Except as described in paragraph (b), each candidate seeking initial teacher certification under one of the alternatives listed in Ed 505 shall pass a nationally recognized test of academic proficiency required by paragraph (d).

(b) A candidate for initial certification in a career and technical education (*CTE*) specialty area under Ed 505.04 or Ed 505.05 may substitute the following in lieu of a nationally recognized test of academic proficiency required by paragraph (d):

(1) Three years of full time experience in the area for which certification is sought;

(2) Current industry-recognized credential approved by the department in a published list of accepted credentials and appropriate to the CTE area in which certification is sought; and

~~(3) A written report from the superintendent/head of school documenting the candidate's success in applying the basic academic skills in reading, writing, and mathematics as described in paragraph (d) in their practice of teaching and a rating of effective or higher for at least two years under the local educator evaluation system.~~

(c) Each candidate seeking teacher certification in any one of the major areas of concentration in which the state board has established a passing score shall pass a subject assessment test.

(d) The test used for the purposes of the basic academic skills assessment under (a) shall be a basic competency test, such as, but not limited to, the Praxis Core Academic Skills for Educators administered by Educational Testing Service, intended to measure the test taker's basic academic skills in the areas of reading, writing, and mathematics. In the area of reading, such a test shall measure reading comprehension and require the test taker to analyze content in a reading selection. In the area of writing, such a test shall measure ability to use grammar and language effectively and to communicate effectively in writing. In the area of mathematics, such a test shall measure a test taker's understanding of key mathematical concepts and ability for problem-solving, reasoning, and estimating.

(e) The test used for the purposes of the subject assessment under (b) shall be a basic subject assessment test, such as, but not limited to, the subject area assessments administered by Educational Testing Service or Pearson Education, intended to measure the test taker's knowledge of the specific subject area of concentration in which the test taker seeks certification for a beginning teacher.

(f) The board shall assign the following qualifying scores following validation studies conducted in accordance with Ed 513.02, after considering recommendations of the validation studies and qualifying scores set by other states:

(1) Qualifying scores on each of the 3 Praxis Core Academic Skills for Educators assessments, namely, reading, writing, and mathematics;

(2) Performance at or above the fiftieth percentile on a nationally recognized test in the areas of reading, writing, and mathematics such as, but not limited to, the SAT, GRE, or ACT; or

(3) Qualifying scores on each of the subject assessments in ~~(b)~~ (c).

(g) Candidates shall be responsible for the actual cost of all assessments.

(h) A candidate may take a basic academic skills assessment or the subject area assessment as often as they are administered until the candidate passes the assessment.

RULE	STATUTE
Ed 513.01	RSA 21-N:9, II(s)

MAR 22 2018

APPENDIX II-C

CRM 5/7

RULEMAKING NOTICE FORM

NOTE: ADDITIONAL NOTICE

See page one of the instructions regarding additional notice.

Notice Number 2018-52 Rule Number Ed 513.01

<p>1. Agency Name & Address:</p> <p>State Board of Education c/o Department of Education 101 Pleasant Street Concord, NH 03301</p>	<p>2. RSA Authority: <u>RSA 21-N:9,II(s)</u></p> <p>3. Federal Authority: _____</p> <p>4. Type of Action:</p> <table><tr><td>Adoption</td><td>_____</td><td><u>Consent</u></td></tr><tr><td>Amendment</td><td>_____</td><td><u>Edit</u></td></tr><tr><td>Repeal</td><td>_____</td><td></td></tr><tr><td>Readoption</td><td>_____</td><td></td></tr><tr><td>Readoption w/amendment</td><td><u>X</u></td><td></td></tr></table>	Adoption	_____	<u>Consent</u>	Amendment	_____	<u>Edit</u>	Repeal	_____		Readoption	_____		Readoption w/amendment	<u>X</u>	
Adoption	_____	<u>Consent</u>														
Amendment	_____	<u>Edit</u>														
Repeal	_____															
Readoption	_____															
Readoption w/amendment	<u>X</u>															

5. Short Title: Basic Academic Skills and Subject Area Assessment

6. (a) Summary of what the rule says and of any proposed amendments:

This proposal readopts with amendment Ed 513.01 on the basic academic skills and subject area assessment for initial teacher certification under one of the alternatives in Ed 505. The amendment addresses the testing requirements for candidates seeking initial teacher certification in a career and technical education specialty area under Alternative 4 in Ed 505.04 or Alternative 5 in Ed 505.05. Ed 513.01(a) is amended to point to an exception in the new Ed 513.01(b). The new Ed 513.01(b) provides the requirements for an alternative to a passing grade on the required content knowledge exam.

6. (b) Brief description of the groups affected:

This amendment affects the credentialing office of the Department of Education, career and technical education specialty area certification applicants, career and technical education students and career and technical education administration.

6. (c) Specific section or sections of state statute or federal statute or regulation which the rule is intended to implement:

RULE	STATUTE
Ed 513.01	RSA 21-N:9, II(s)

APPENDIX II-C (Continued)

RULEMAKING NOTICE FORM - Page 2

7. Contact person for copies and questions including requests to accommodate persons with disabilities:

Name: **Amanda Phelps**

Title: **Administrative Rules
Coordinator**

Address: **Department of Education
101 Pleasant Street
Concord, NH 03301**

Phone #: **(603) 271-2408**

Fax#: **(603) 271-4134**

E-mail: **amanda.phelps@doe.nh.gov**

TTY/TDD Access: Relay NH 1-800-735-2964
or dial 711 (in NH)

8. Deadline for submission of materials in writing or, if practicable for the agency, in the electronic format specified: **May 15, 2018**

☒ Fax

☒ E-mail

☐ Other format (specify):

9. Public hearing scheduled for:

Date and Time: **May 10, 2018 at 12:00 p.m.**

Place: **State Board Room, 101 Pleasant Street, Concord, NH 03301**

10. Fiscal Impact Statement (Prepared by Legislative Budget Assistant)

FIS # 18:059, dated March 22, 2018

11. Statement Relative to Part I, Article 28-a of the N.H. Constitution:

Relative to Part I. Article 28-a of the N.H. Constitution, there are no added costs for this proposal to the state. This proposal amends requirements for the testing requirement of the credentialing process. The credentialing procedures are self-funded activities of the NH Department of Education from the credentialing fee revenues, therefore this proposal does not violate Part I. Article 28-a.

Fiscal Impact Statement for State Board of Education rules governing Basic Academic Skills and Subject Area Assessment. [Ed 513.01]

1. Comparison of the costs of the proposed rule(s) to the existing rule(s):

There is no difference in cost when comparing the proposed rule to the existing rule.

2. Cite the Federal mandate. Identify the impact on state funds:

No federal mandate, no impact on state funds.

3. Cost and benefits of the proposed rule(s):

A. To State general or State special funds:

None.

B. To State citizens and political subdivisions:

None.

C. To independently owned businesses:

None

Readopt with amendment Ed 513.01, effective 9-11-14 (Doc. #10667), to read as follows:

Ed 513.01 Basic Academic Skills and Subject Area Assessment.

Edit: comma

(a) *Except as described in paragraph (b)* Each candidate seeking initial teacher certification under one of the alternatives listed in Ed 505 shall pass a nationally recognized test of academic proficiency required by paragraph (ed).

Edit: Insert "(CTE)"

(b) *A candidate for initial certification in a career and technical education specialty area under Ed 505.04 or Ed 505.05 may substitute the following in lieu of a nationally recognized test of academic proficiency required by paragraph (d):*

(1) *Three years of full time experience in the area for which certification is sought;*

(2) *Current industry-recognized credential approved by the department in a published list of accepted credentials and appropriate to the CTE area in which certification is sought; and*

Edit: "or"

(3) *A written report from the superintendent/head of school documenting the candidate's success in applying the basic academic skills in reading, writing, and mathematics as described in paragraph (d) in their practice of teaching and a rating of effective or higher for at least two years under the local educator evaluation system.*

Edit: "2"

(bc) Each candidate seeking teacher certification in any one of the major areas of concentration in which the state board has established a passing score shall pass a subject assessment test.

(ed) The test used for the purposes of the basic academic skills assessment under (a) shall be a basic competency test, such as, but not limited to, the Praxis Core Academic Skills for Educators administered by Educational Testing Service, intended to measure the test taker's basic academic skills in the areas of reading, writing, and mathematics. In the area of reading, such a test shall measure reading comprehension and require the test taker to analyze content in a reading selection. In the area of writing, such a test shall measure ability to use grammar and language effectively and to communicate effectively in writing. In the area of mathematics, such a test shall measure a test taker's understanding of key mathematical concepts and ability for problem-solving, reasoning, and estimating.

(de) The test used for the purposes of the subject assessment under (b) shall be a basic subject assessment test, such as, but not limited to, the subject area assessments administered by Educational Testing Service or Pearson Education, intended to measure the test taker's knowledge of the specific subject area of concentration in which the test taker seeks certification for a beginning teacher.

(ef) The board shall assign the following qualifying scores following validation studies conducted in accordance with Ed 513.02, after considering recommendations of the validation studies and qualifying scores set by other states:

(1) Qualifying scores on each of the 3 Praxis Core Academic Skills for Educators assessments, namely, reading, writing, and mathematics;

(2) Performance at or above the fiftieth percentile on a nationally recognized test in the areas of reading, writing and mathematics such as, but not limited to, the SAT, GRE, or ACT; or

(3) Qualifying scores on each of the subject assessments in (b).

Edit: comma

Edit: "(c)"

(fg) Candidates shall be responsible for the actual cost of all assessments.

(gh) A candidate may take a basic academic skills assessment or the subject area assessment as often as they are administered until the candidate passes the assessment.

RULE	STATUTE
Ed 513.01	RSA 21-N:9, II(s)

Readopt with amendment Ed 507.25, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 507.25 Mathematics Teacher; General Requirements.

(a) To be certified as a-mathematics teacher, the candidate shall:

- (1) Have at least a bachelor's degree;
- (2) Obtain certification through one of the alternatives in Ed 505.01 – Ed 505.05; ~~having also met the requirements of (c) below and either Ed 507.26, Ed 507.27, or both.~~
- (3) *Meet the requirements of (c) below; and***
- (4) *Meet the requirements of either Ed 507.26, Ed 507.27, or both.***

(b) For candidates seeking certification through an alternative 3, 4 or 5 pathway, the department of education shall assess the skills, competencies, and knowledge of candidates for certification as mathematics teachers by reviewing evidence, such as, but not limited to, college course work, documented professional experience, letters of recommendation, professional development hours or ***continuing education units*** (CEU's) and artifacts of professional practice.

(c) A candidate for certification as a mathematics teacher shall have skills, competencies, and knowledge in the following areas:

- (1) In the area of knowledge of pedagogy, the candidate shall have the ability to:
 - a. Plan and conduct units and lessons, appropriate for the grade range, ***and*** which:
 1. Enable students to construct new concepts through active participation in mathematical modeling, investigations, and problem- solving;
 2. Include multiple explanations and representations, including, but not limited to informal and formal arguments or proofs;
 3. Incorporate literacy strategies that assist students in reading and understanding mathematics;
 4. Provide opportunities for students to use written, oral, and other creative expressions to demonstrate their understanding of mathematical concepts to a variety of audiences;
 5. Emphasize connections within and between mathematics and other disciplines;
 6. Select and use instructional tools, including, but not limited to, manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies such as graphing tools and interactive geometry software, computer algebra systems, and statistical packages;; ~~and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.~~

7. Make sound decisions about when such instructional tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools;

78. Model and develop the following 8 standards of mathematical practices:

- (i) Make sense of problems and persevere in solving them;
- (ii) Reason abstractly and quantitatively;
- (iii) Construct viable arguments and critique the reasoning of others;
- (iv) Model with mathematics;
- (v) Use appropriate tools strategically;
- (vi) Attend to precision;
- (vii) Look for and make use of structure; and
- (viii) Look for an express regularity in repeated reasoning; ~~and~~

b. Apply an understanding of learning theories and equitable teaching practices to the teaching of mathematics appropriate for students within the grade range which articulate:

- 1. Why conceptual knowledge of mathematics is needed in conjunction with the teaching of procedures or algorithms; and
- 2. Foundations of pedagogical knowledge, effective and equitable mathematics teaching practices, and positive and productive dispositions toward teaching mathematics to support students' sense making, understanding, and reasoning;
and

c. Plan and conduct a variety of assessments and evaluations appropriate for the grade range that:

- 1. Diagnose students' preconceptions, misconceptions, and understandings of mathematics and continuously monitor students' understandings; and
- 2. Evaluate procedural and conceptual understanding, and interpret students' mathematical processes and communication skills.

(2) In the area of knowledge of mathematical processes and habits of mind, the candidate shall have the ability to:

- a. Use problem-solving to investigate and understand increasingly complex mathematical content, including, but not limited to, the ability to:

1. Apply and adapt a problem-solving process using a variety of heuristics or strategies to solve problems that arise in mathematics and other contexts;
 2. Use problem-solving to develop one's own mathematical knowledge;
 3. Reflect upon one's own and others' solutions and the problem-solving process; and
 4. Refine problem-solving strategies, as needed;
- b. Use mathematical reasoning and proof, including, but not limited to, the ability to:
1. Develop and evaluate mathematical conjectures;
 2. Construct and evaluate proofs and logical arguments to verify conjectures;
 3. Select and use various types of reasoning and methods of proof; and
 4. Demonstrate the capacity to articulate an understanding of how reasoning and proof are integral components of mathematics;
- c. Communicate an understanding of mathematics, including, but not limited to, the ability to:
1. Demonstrate the capacity to communicate clearly about mathematics and mathematics education in both written and oral forms using accurate and appropriate mathematical language and notation;
 2. Interpret and explain mathematical ideas acquired through reading mathematics in professional publications; and
 3. Analyze and assess the mathematical thinking and strategies of others;
- d. Create and use representations, including, but not limited to, the ability to:
1. Illustrate learning progression from concrete to abstract representations;
 2. Articulate how the use of formal language and notation increases in importance as mathematical concepts are developed in the mathematics curriculum;
 3. Select, apply, and translate among mathematical representations to investigate mathematical concepts and solve mathematical problems; and
 4. Develop and use models to explain mathematical concepts;
- e. Recognize, explore, and develop mathematical connections, both within mathematics and across disciplines, including, but not limited to, the ability to:
1. Provide examples of how mathematics is practiced in various fields; and
 2. Build mathematical understanding by showing how ideas build on one another across grade levels to form a coherent discipline; **and**

f. Develop additional habits of the mind related to mathematics, including, but not limited to, the ability to:

1. Learn mathematics independently;
2. Exhibit a curiosity for mathematics;
3. Recognize that learning from mistakes is an essential component when working mathematically;
4. Recognize the power and value of estimation and mental computation when working mathematically;
5. Understand the value and power of strategic use of technology when solving mathematical problems;
6. Recognize that mathematics is the language of science and nature; and
7. Recognize that mathematics is a tool for quantitative reasoning;

(3) In the area of knowledge of the learner, including developmental and environmental characteristics appropriate for the grade range, the candidate shall have the ability to:

- a. Demonstrate appropriate strategies for supporting students to:
 1. Move from concrete to abstract representations of mathematical concepts; and
 2. Connect conceptual and procedural knowledge;
- b. Communicate understanding of mathematics anxiety, including signs of it, issues related to it, and supporting students to respond to and overcome it;
- c. Recognize that attitudes about mathematics can change across a lifespan and therefore teachers need to address the affective domain; and
- d. Demonstrate knowledge of how exceptional students learn mathematics and strategies to use with exceptional students;

(4) In the area of number and operations, the candidate shall have the ability to:

- a. Demonstrate a capacity to use models to explore and explain relationships, including magnitude, among fractions, decimals, percents, ratios, and proportions;
- b. Apply, explain, and justify concepts in number and number theory;
- c. Demonstrate computational proficiency and fluency, including the use of a variety of algorithms, estimation strategies, and mental mathematics techniques to judge the reasonableness of answers or approximate solutions;
- d. Demonstrate knowledge of concepts and applications of limits and infinity;

- e. Demonstrate a capacity to apply the concepts of proportional reasoning;
- f. Demonstrate a capacity to make sense of large and small numbers and use scientific notation in mathematical and scientific modeling;
- g. Demonstrate a capacity to use physical materials and models to explore and explain the operations and properties of real and complex numbers with extensions to matrices and vectors; and
- h. Demonstrate a capacity to apply the concepts of exponents, including integer and rational, through modeling and applications;

(5) In the area of geometry and measurement, the candidate shall have the ability to:

- a. Build and manipulate representations of 2-and 3-dimensional objects and perceive an object from different perspectives;
- b. Analyze properties of and relationships among geometric shapes and structures;
- c. Apply transformations with connections to congruency and similarity;
- d. Demonstrate knowledge of non-Euclidean geometries;
- e. Connect the ideas of algebra and geometry through the use of coordinate geometry, graphing, vectors, and motion geometry;
- f. Recognize measurement attributes and their effect on the choice of appropriate tools and units;
- g. Apply strategies, techniques, tools, and formulas to determine measurements and their application in a variety of contexts;
- h. Employ estimation as a way of understanding measurement processes and units;
- i. Complete error analysis through determination of the reliability of numbers obtained from measurement;
- j. Understand and apply measurement conversion strategies;
- k. Apply geometric ideas and tools relating to the Pythagorean theorem, similar triangles, and trigonometry to solve problems;
- l. Use constructions, models, and dynamic geometric software to explore geometric relationships;
- m. Derive and explain formulas found in Euclidean geometry; and
- n. Construct proofs using the axioms of Euclidean and non-Euclidean geometries;

(6) In the area of functions and algebra, the candidate shall have the ability to:

- a. Model and analyze change and rates of change in various contexts;
- b. Use mathematical models to understand, represent, and communicate quantitative relationships, including, but not limited to equality, equations, inequalities, and proportional relationships;
- c. Explore, analyze, and generalize a wide variety of patterns and functions using multiple representations including, but not limited to, tables, graphs, written word, and symbolic rules;
- d. Represent information and solve problems using matrices;
- e. Use graphing utilities and other technological tools to represent, explain, and explore algebraic ideas including functions, equations, and expressions;
- f. Generalize patterns and functions using recursive and explicit representations;
- g. Articulate the meaning of functions and their inverse relationships, both formally and informally, with the use of concrete materials and graphing utilities; **and**
- h. Understand and compare the properties of classes of functions and their inverses, including exponential, polynomial, rational, step, absolute value, root, logarithmic, and periodic, including trigonometric; ~~and~~

(7) In the area of data, statistics, and probability, the candidate shall have the ability to:

- a. Design investigations, collect data, display data in a variety of ways, and interpret data representations including bivariate data, conditional probability and geometric probability;
- b. Use appropriate methods to estimate population characteristics, test conjectured relationships among variables, and analyze data;
- c. Use appropriate statistical methods and technology to analyze data and describe shape, spread, and center;
- d. Use both descriptive and inferential statistics to analyze data, make predictions, test hypotheses, and make decisions;
- e. Apply probability concepts in identifying odds, fair games, mathematical expectation, and invalid conclusions;
- f. Judge the validity of a statistical argument, including evaluating the sample from which the statistics were developed and identify misuses of statistics;
- g. Determine and compare experimental, theoretical, and conditional probabilities; and

h. Use statistical models to explore the connections between statistics and probability including correlation, regression, and analysis of variance;

(8) In the area of calculus, the candidate shall have the ability to:

a. Use mathematical modeling and the concepts of calculus to represent and solve problems from real-world contexts;

b. Use technology to explore and represent fundamental concepts of calculus; and

d. Understand and describe the connection of calculus to middle and high school mathematics topics; ~~and~~

(9) In the area of discrete mathematics, the candidate shall have the ability to:

a. Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations; and

b. Use technology to solve problems involving the use of discrete structures; and

(10) In the area of history of mathematics, demonstrate a knowledge of the historical development of numbers and number systems, measurement and measurement systems, geometry, including non-euclidean geometry, algebra, probability and statistics, calculus, and discrete mathematics.

Adopt Ed 507.26 to read as follows:

Ed 507.26 Mathematics Teacher – Middle Level.

(a) To be certified as a middle level mathematics teacher, the candidate shall:

(1) Obtain certification ~~through one of the alternatives in Ed 505.01–Ed 505.05 having also met the requirements Ed 507.25 and (c) below, to teach upper level elementary mathematics through algebra I or integrated I-~~ ***through one of the alternatives in Ed 505.01-Ed 505.05;***
and

(2) Meet the requirements of Ed 507.25 and Ed 507.26(c) below.

(b) For candidates seeking certification through an alternative 3, 4 or 5 pathway, ***pursuant to Ed 505.03, Ed 505.04, or Ed 505.05***, the department of education shall assess the skills, competencies, and knowledge of candidates for certification as teachers in middle level mathematics by reviewing evidence, such as, but not limited to, college course work, documented professional experience, letters of recommendation, professional development hours or CEU's, and artifacts of professional practice.

(c) A candidate for certification as a middle level mathematics teacher for grades 5-8 shall have skills, competencies, and knowledge in the following areas:

(1) In the area of number and number operations the candidate shall have the ability to:

- a. Represent, use, and apply introductory concepts and properties of complex numbers;
 - b. Identify and illustrate the mathematics that underlies the procedures and operations involving real numbers and their subsets; and
 - c. Explain the distinctions among real numbers and their subsets with connection to field axioms; ~~and~~
- (2) In the area of functions and algebra the candidate shall have the ability to:
- a. Understand, identify, and apply arithmetic and geometric sequences; and
 - b. Represent and analyze group and field properties of real numbers and other mathematical structures; ~~and~~
- (3) In the area of calculus the candidate shall have the ability to demonstrate an understanding of calculus concepts including limits, continuity, differentiation, and integration; and
- (4) In the area of discrete mathematics demonstrate a conceptual understanding of the fundamental ideas of discrete mathematics, including, but not limited to:
- a. Finite graphs;
 - b. Trees;
 - c. Networks;
 - d. Propositional logic; and
 - e. Combinatorics.

Readopt with amendment Ed 507.26, effective 5/14/2010 (Doc #9715), and renumber as Ed 507.27, and renumber the existing Ed 507.27 through Ed 507.54 as Ed 507.28 through Ed 507.55 so that Ed 507.27 reads as follows:

Ed 507.27 Mathematics Teacher – Upper Level

- (a) To be certified as an upper level mathematics teacher, the candidate shall:

(1) Obtain certification ~~through one of the alternatives in Ed 505.01—Ed 505.05 having also met the requirements Ed 507.25 and (c) below~~ to teach pre-algebra through advanced placement math courses: ***through one of the alternatives in Ed 505.01-Ed 505.05; and***

(2) Meet the requirements of Ed 507.25 and Ed 507.27(c) below.

(b) For candidates seeking certification through an alternative 3, 4 or 5 pathway, ***pursuant to Ed 505.03, Ed 505.04, or Ed 505.05***, the department of education shall assess the skills, competencies, and

knowledge of candidates for certification as teachers in upper level mathematics by reviewing evidence, such as, but not limited to, college course work, documented professional experience, letters of recommendation, professional development hours or CEU's, and artifacts of professional practice.

(c) A candidate for certification as an upper level mathematics teacher shall have skills, competencies, and knowledge ~~in the following areas~~ *as follows*:

(1) In the area of number and operations, the candidate shall have the ability to identify and illustrate the mathematics underlying the theory of groups, rings, and fields and the relationships among them; ~~and~~

(2) In the area of functions and algebra, the candidate shall have the ability to:

a. Understand and apply major concepts of:

1. Linear algebra, including vector spaces and matrices; and
2. Abstract algebra, including groups, rings, and fields;

b. Connect major concepts of linear and abstract algebra to the complex number system and other mathematical structures; and

c. Understand, identify, and apply arithmetic and geometric sequences, including partial sums of infinite arithmetic and geometric sequences, with connections to linear and exponential functions;

(3) In the area of calculus, the candidate shall have the ability to:

a. Demonstrate a conceptual understanding of and procedural facility with basic calculus concepts including limits, continuity, differentiation, and integration; and

b. Demonstrate an understanding of the basic concepts of multivariable calculus; *and*

~~(94)~~ In the subject area of discrete mathematics, the candidate shall ~~not~~ demonstrate a conceptual understanding of, and procedural facilitation of, the knowledge of the basic elements of discrete mathematics, including but not limited to:

1. Graph theory;
2. Propositional logic;
3. Mathematical induction;
4. Recurrence relations;
5. Finite differences;
6. Linear programming; and
7. Combinatorics.

Readopt with amendment Ed 612.17, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 612.17 Mathematics – Middle Level.

(a) The middle level mathematics program shall provide the candidate with the skills, competencies, and knowledge gained through a combination of academic and supervised field-based experiences as ~~outlined~~**required** in Ed 507.25~~(c)~~ and Ed 507.26.

Readopt with amendment Ed 612.18, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 612.18 Mathematics – Upper Level.

(a) The upper level mathematics program shall provide the teaching candidate with the skills, competencies, and knowledge gained through a combination of academic and supervised field-based experiences as ~~outlined~~**required** in Ed 507.25 and Ed 507.27.

Appendix I

Rule	Statute
Ed 507.25 - Ed 507.26	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 507.27 (formerly Ed 507.26)	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 612.17 – Ed 612.18	RSA 186:8, IV; RSA 186:11, X(c)

RULEMAKING NOTICE FORM

NOTE: ADDITIONAL NOTICE

See page one of the instructions regarding additional notice.

Notice Number 2018-53

Rule Number

Ed 507.25, Ed 507.26, Ed
507.27, Ed 612.17 and Ed
612.18

1. Agency Name & Address:

State Board of Education
c/o Department of Education
101 Pleasant Street
Concord, NH 03301

2. RSA Authority:

RSA 186:8, III-IV; RSA
186:11, X(a) & (c); RSA 21-
N:9, II(s)

3. Federal Authority:

4. Type of Action:

Adoption XAmendment Repeal Readoption Readoption w/amendment X

5. Short Title: Math Teacher Certification

6. (a) Summary of what the rule says and of any proposed amendments:

The existing Ed 507.25 contains the requirements for certification as a math teacher for grades 5-8, and Ed 507.26 as a math teacher for grades 7-12. Ed 507.25 is being readopted with amendments to include the requirements for all math teachers seeking certification under Ed 507.26, Ed 507.27, or both as a middle level or upper level math teacher. A new Ed 507.26 is being adopted for middle level math teachers which includes only the content knowledge and pedagogy for a middle level math teacher. The existing Ed 507.26 is being readopted with amendment and renumbered as Ed 507.27 to include only the content knowledge and pedagogy for an upper level math teacher. Ed 612.17 and Ed 612.18 are the requirements for educator preparation programs and are being readopted with amendment to point to the content knowledge and pedagogy in Ed 507.25, Ed 507.26, and Ed 507.27.

As noted above, Ed 507.26 and Ed 507.27 will address the levels of math subjects that each credential is authorized to teach instead of the grade spans in the existing Ed 507.25 and Ed 507.26.

The existing rules Ed 507.25, Ed 507.26, Ed 612.17 and Ed 612.18 are scheduled to expire 5-14-18 but are subject to extension pursuant to RSA 541-A:14-a.

6. (b) Brief description of the groups affected:

Current and future certified math teachers, local school districts and students are affected by these rules.

6. (c) Specific section or sections of state statute or federal statute or regulation which the rule is intended to implement:

Rule	Statute
Ed 507.25-Ed 507.26	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 507.27 (formerly Ed 507.26)	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 612.17-Ed 612.18	RSA 186:8, IV; RSA 186:11, X(c)

7. Contact person for copies and questions including requests to accommodate persons with disabilities:

Name:	Amanda Phelps	Title:	Program Assistant II
Address:	Department of Education	Phone #:	(603) 271-2408
	101 Pleasant Street	Fax#:	(603) 271-4134
	Concord, NH 03301	E-mail:	amanda.phelps@doe.nh.gov
		TTY/TDD Access:	Relay NH 1-800-735-2964 or dial 711 (in NH)

8. Deadline for submission of materials in writing or, if practicable for the agency, in the electronic format specified: **May 18, 2018**

☒ Fax

☒ E-mail

☐ Other format (specify):

9. Public hearing scheduled for:

Date and Time: **May 10, 2018 at 12:30 p.m.**

Place: **Department of Education, State Board Room, 101 Pleasant Street,
Concord, NH 03301**

10. Fiscal Impact Statement (Prepared by Legislative Budget Assistant)

FIS # 18:039 , dated March 6, 2018

11. Statement Relative to Part I, Article 28-a of the N.H. Constitution:

Relative to Part I. Article 28-a of the N.H. Constitution, there are no added costs for these proposed rules to the state. These rules provide the requirements for the credentialing and educator preparation program approval processes. These processes, which are already in place, are self-funded activities of the NH Department of Education from the credentialing fee revenues.

Fiscal Impact Statement for State Board of Education rules governing Middle Level and Upper Level Math Teacher. [Ed 507.25, Ed 507.26, Ed 507.27, Ed 612.17 and Ed 612.18]

1. Comparison of the costs of the proposed rule(s) to the existing rule(s):

There is no difference in cost when comparing the proposed rule to the existing rule. Not applicable to Ed 507.26 as this is a new rule.

2. Cite the Federal mandate. Identify the impact on state funds:

No federal mandate, no impact on state funds.

3. Cost and benefits of the proposed rule(s):

A. To State general or State special funds:

None.

B. To State citizens and political subdivisions:

None.

C. To independently owned businesses:

None.

Readopt with amendment Ed 507.25, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 507.25 ~~Educator in Mathematics~~ ***Teacher; For Grades 5-8*** ***General Requirements.***

(a) To be certified as an ~~educator in mathematics~~ ***teacher*** for grades 5-8, the candidate shall have:

Edit: CEU is not written out in Ed 500. Please write out what CEU stands for and put CEU in parentheses. Also, it probably should not be possessive.

(1) ~~Have At~~ least a bachelor's degree; and

Edit: delete

Edit: Insert “, pursuant to Ed 505.03, Ed 505.04, or Ed 505.05,”

(2) ~~Obtain certification through~~ ***Qualify for certification under one of the alternatives in Ed 505.01 – Ed 505.05*** ~~having also met the requirements of (c) below and either Ed 507.26, Ed 507.27, or both.~~

Edit: semicolon

Edit: comma

(b) ~~For candidates seeking certification through an alternative 3, 4 or 5 pathway, the department of education shall assess the skills, competencies and knowledge of candidates for certification as mathematics teachers by reviewing evidence, such as, but not limited to, college course work, documented professional experience, letters of recommendation, professional development hours or CEU's, and artifacts of professional practice.~~

(bc) A candidate for certification as an ~~educator in mathematics~~ ***teacher*** for grades 5-8 shall have the following skills, competencies, and knowledge through a combination of academic and supervised field-based experience in the following areas:

(1) In the area of knowledge of pedagogy, the candidate shall have the ability to:

Edit: comma

Edit: “and which”

a. Plan and conduct units and lessons appropriate for the grade range which:

Edit: Break up the end of subparagraph (2) as shown below:
“(3) Meet the requirements of (c) below; and
(4) Meet the requirements of either Ed 507.26, Ed 507.27, or both.”

1. Enable students to construct new concepts through active participation in mathematical modeling, investigations, and problem- solving;

2. Include multiple explanations and representations, including, but not limited to ~~intuitive~~ ***informal*** and formal arguments or proofs;

3. Incorporate literacy strategies that assist students in reading and understanding mathematics;

4. Provide opportunities for students to use written, oral, and other creative expressions to demonstrate their understanding of mathematical concepts to a variety of audiences;

5. Emphasize connections within and between mathematics and other disciplines;

6. ~~Incorporate:~~

(i) ~~Manipulatives, including, but not limited to:~~

i. ~~Pattern Blocks™;~~

ii. ~~Virtual manipulatives;~~

iii. ~~Geoboards; and~~

iv. ~~Algebra tiles; and~~

(ii) ~~Current technologies, including, but not limited to:~~

i. ~~Dynamic statistical and geometric programs;~~

ii. ~~Data collection devices; and~~

iii. ~~21st century tools;~~

Edit: Start subclause (7) here and capitalize "Make".

Select and use instructional tools, including, but not limited to, manipulatives and physical models, drawings, virtual environments, spreadsheets, presentation tools, and mathematics-specific technologies such as graphing tools and interactive geometry software, computer algebra systems, and statistical packages, and make sound decisions about when such tools enhance teaching and learning, recognizing both the insights to be gained and possible limitations of such tools.

Edit: semicolon

Edit: delete

Edit: "instructional"

Edit: "8."

7. ~~Model and nurture habits of minds within the context of mathematics~~ *Model and develop the following 8 standards of mathematical practices; and:*

(i) *Make sense of problems and persevere in solving them;*

(ii) *Reason abstractly and quantitatively;*

(iii) *Construct viable arguments and critique the reasoning of others;*

(iv) *Model with mathematics;*

(v) *Use appropriate tools strategically;*

(vi) *Attend to precision;*

(vii) *Look for and make use of structure; and*

(viii) *Look for an express regularity in repeated reasoning; and*

Edit: delete

~~8. Use technology appropriately and effectively in the learning and teaching of mathematics, including, but not limited to:~~

(i) ~~Scientific and graphing calculators;~~

(ii) ~~Computer-based laboratory (CBL) units;~~

(iii) ~~The internet; and~~

(iv) ~~Computer software including the 4 areas of:~~

i. ~~Symbolic manipulators;~~


~~ii. Dynamic geometry programs;~~

~~iii. Spreadsheets; and~~

~~iv. Statistical packages;~~

b. Apply an understanding of learning theories and ~~styles~~ ***equitable teaching practices*** to the teaching of mathematics appropriate for ***students within*** the grade range which articulate:

1. Why conceptual knowledge of mathematics is needed in conjunction with the teaching of procedures or algorithms; and

2. ~~The role of teacher beliefs about mathematics and its effect on student learning~~ ***Foundations of pedagogical knowledge, effective and equitable mathematics teaching practices, and positive and productive dispositions toward teaching mathematics to support students' sense making, understanding, and reasoning;*** 

Edit: Insert "and"

c. Plan and conduct a variety of assessments and evaluations appropriate for the grade range that:

1. Diagnose students' preconceptions, misconceptions, and understandings of mathematics and continuously monitor students' understandings; and

2. Evaluate procedural and conceptual understanding, and interpret students' mathematical processes and communication skills; ~~and.~~

~~d. Demonstrate a capacity to appreciate and recognize the value of professional practices which include:~~

~~1. Learning mathematics content independently and collaboratively; and~~

~~2. Demonstrating knowledge of current state, national, and international research, standards, and recommendations regarding the teaching of the mathematics;~~

(2) In the area of knowledge of mathematical processes and habits of mind, the candidate shall have the ability to:

a. Use problem-solving to investigate and understand increasingly complex mathematical content, including, but not limited to, the ability to:

1. Apply and adapt a problem-solving process using a variety of heuristics or strategies to solve problems that arise in mathematics and other contexts;

2. Use problem-solving to develop one's own mathematical knowledge;

3. Reflect upon ***one's own and others'*** solutions and the problem-solving process; and

4. Refine problem-solving strategies, as needed;

b. Use mathematical reasoning and proof, including, but not limited to, the ability to:

1. Develop and evaluate mathematical conjectures;
2. Construct and evaluate proofs and logical arguments to verify conjectures;
3. Select and use various types of reasoning and methods of proof; and
4. Demonstrate the capacity to articulate an understanding of how reasoning and proof are integral components of mathematics;

c. Communicate an understanding of mathematics, including, but not limited to, the ability to:

1. Demonstrate the capacity to communicate ~~coherently~~ **clearly** about mathematics and mathematics education in both written and oral ways ~~forms~~ using **accurate and** appropriate mathematical language and notation;
2. Interpret and explain mathematical ideas acquired through reading mathematics in professional publications; and
3. Analyze and assess the mathematical thinking and strategies of others;

Edit: delete

d. Create and use representations, including, but not limited to, the ability to:

1. Illustrate learning progression from concrete to abstract representations;
2. Articulate how the use of formal language and notation increases in importance as mathematical concepts are developed in the mathematics curriculum;
3. Select, apply, and translate among mathematical representations to investigate mathematical concepts and solve mathematical problems; and
4. Develop and use models to explain mathematical concepts;

e. Recognize, explore, and develop mathematical connections, **both within mathematics and across disciplines**, including, but not limited to, the ability to:

1. Provide examples of how mathematics is practiced in various fields; and
2. Build mathematical understanding by **showing how ideas build on one another across grade levels to form a coherent discipline.**

Edit: Insert “; and”

~~(i) Identifying and applying connections among mathematical ideas; and~~

~~(ii) Showing how ideas build on one another across grade levels to form a coherent discipline; and~~

f. Develop additional habits of the mind related to mathematics, including, but not limited to, the ability to:

1. Learn mathematics independently;

2. Exhibit a curiosity for mathematics;
 3. Recognize that learning from mistakes is an essential component when working mathematically;
 4. Recognize the power and value of estimation and mental computation when working mathematically;
 5. Understand the value and power of strategic use of technology when solving mathematical problems;
 6. Recognize that mathematics is the language of science and nature; and
 7. Recognize that mathematics is a tool for quantitative reasoning;
- (3) In the area of knowledge of the learner, including developmental and environmental characteristics appropriate for the grade range, the candidate shall have the ability to:
- a. Demonstrate appropriate strategies for ~~helping~~ **supporting** students to:
 1. Move from concrete to abstract representations of mathematical concepts; and
 2. Connect conceptual and procedural knowledge;
 - b. Communicate understanding of mathematics anxiety, including signs of it, issues related to it, and ~~strategies to help students~~ **supporting students to respond to and** overcome it;
 - c. Recognize that ~~poor~~ attitudes about mathematics ~~solidify~~ **can change across a lifespan in the middle school years and therefore so that teachers** need to address the affective domain; and
 - d. Demonstrate knowledge of how exceptional students learn mathematics and strategies to use with exceptional students;
- (4) In the ~~subject~~ area of number and operations, the candidate shall have the ability to:
- a. Demonstrate a capacity to use models to explore and explain relationships, including magnitude, among fractions, decimals, percents, ratios, and proportions;
 - ~~b. Demonstrate knowledge of the historical development of number and number systems;~~
 - eb.** Apply, explain, and justify concepts in number and number theory;
 - ~~dc.~~ Demonstrate computational proficiency and fluency, including the use of a variety of algorithms, estimation strategies, and mental mathematics techniques to judge the reasonableness of answers or approximate solutions;
 - ed.** Demonstrate knowledge of concepts and applications of limits and infinity;

~~fe.~~ Demonstrate a capacity to apply the concepts of proportional reasoning;

~~gf.~~ Demonstrate a capacity to make sense of large and small numbers and use scientific notation in mathematical and scientific modeling;

~~hg.~~ Demonstrate a capacity to use physical materials and models to explore and explain the operations and properties of real and complex numbers with extensions to matrices and vectors; *and*

~~i.~~ Represent, use, and apply introductory concepts and properties of complex numbers;

~~j.~~ Identify and illustrate the mathematics that underlies the procedures used for operations involving real numbers and their subsets

~~k.~~ Explain the distinctions among real numbers and their subsets with connection to field axioms; and

~~lh.~~ Demonstrate a capacity to apply the concepts of exponents, including integer and rational, through modeling and applications;

(5) In the ~~subject~~ area of geometry and measurement, the candidate shall have the ability to:

a. Build and manipulate representations of 2-and 3-dimensional objects and perceive an object from different perspectives;

b. Analyze properties of and relationships among geometric shapes and structures;

c. Apply transformations with connections to congruency and similarity;

~~d. Demonstrate knowledge of non-Euclidean geometries and the historical development of the various geometries;~~

e. Connect the ideas of algebra and geometry through the use of coordinate geometry, graphing, vectors, and motion geometry;

f. Recognize measurement attributes and their effect on the choice of appropriate tools and units;

Edit: comma

g. Apply strategies, techniques, tools, and formulas to determine measurements and their application in a variety of contexts;

~~h. Demonstrate knowledge of the historical development of measurement and measurement systems;~~

~~ih.~~ Employ estimation as a way of understanding measurement processes and units;

~~ji.~~ Complete error analysis through determination of the reliability of numbers obtained from measurement;

- ~~kj~~. Understand and apply measurement conversion strategies;
- ~~lk~~. Apply geometric ideas and tools relating to the Pythagorean theorem, similar triangles, and trigonometry to solve problems;
- ~~ml~~. Use constructions, models, and dynamic geometric software to explore geometric relationships;
- ~~nm~~. Derive and explain formulas found in Euclidean geometry; and
- ~~on~~. Construct proofs using the axioms of Euclidean and non-Euclidean geometries;

(6) In the ~~subject~~ area of functions and algebra, the candidate shall have the ability to:

- a. Model and analyze change and rates of change in various contexts;
- b. Use mathematical models to understand, represent, and communicate quantitative relationships, including, but not limited to equality, equations, inequalities, and proportional relationships;
- c. Explore, analyze, and generalize a wide variety of patterns and functions using multiple representations including, **but not limited to**, tables, graphs, written word, and symbolic rules;
- d. Represent information and solve problems using matrices;
- e. Use graphing utilities and other technological tools to represent, explain, and explore algebraic ideas including functions, equations, and expressions;
- ~~f. Demonstrate knowledge of the historical development of algebra;~~
- ~~gf~~. Generalize patterns and functions using recursive and explicit representations;
- ~~h. Understand, identify, and apply arithmetic and geometric sequences;~~
- ~~ig~~. Articulate the meaning of functions and their inverse relationships, both formally and informally, with the use of concrete materials and graphing utilities; Edit: Insert "and"
- ~~jh~~. Understand and compare the properties of classes of functions and their inverses, including exponential, polynomial, rational, step, absolute value, root, logarithmic, and periodic, including trigonometric; and Edit: delete
- ~~k. Represent and analyze group and field properties of real numbers and other mathematical structures;~~

(7) In the ~~subject~~ area of data, statistics, and probability, the candidate shall have the ability to:

- a. Design investigations, collect data, display data in a variety of ways, and interpret data representations including bivariate data, conditional probability and geometric probability;
- b. Use appropriate methods to estimate population characteristics, test conjectured relationships among variables, and analyze data;
- c. Use appropriate statistical methods and technology to analyze data and describe shape, spread, and center;
- d. Use both descriptive and inferential statistics to analyze data, make predictions, test hypotheses, and make decisions;
- ~~e. Draw conclusions involving uncertainty by using hands-on and computer-based simulations;~~
- ~~f.~~ Apply probability concepts in identifying odds, fair games, mathematical expectation, and invalid conclusions;
- ~~g.~~ Judge the validity of a statistical argument, including evaluating the sample from which the statistics were developed and identify misuses of statistics;
- ~~h. Demonstrate knowledge of the historical development of probability and statistics;~~
- ~~i.~~ Determine and compare experimental, theoretical, and conditional probabilities; and
- ~~j.~~ Use statistical models to explore the connections between statistics and probability including correlation, regression, and analysis of variance;

(8) In the ~~subject~~ area of calculus, the candidate shall have the ability to:

- a. Use mathematical modeling and the concepts of calculus to represent and solve problems from real-world contexts;
- b. Use technology to explore and represent fundamental concepts of calculus; *and*
- ~~c. Demonstrate knowledge of the historical development of calculus;~~
- d. Understand and describe the connection of calculus to middle and high school mathematics topics; and
- ~~e. Demonstrate an understanding of basic calculus concepts including limits, continuity, differentiation, and integration; and~~

Edit: delete

(9) In the ~~subject~~ area of discrete mathematics, the candidate shall:

- ~~a.~~ Have the ability to:

Edit: delete

1- *a.* Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations; and

2- *b.* Use technology to solve problems involving the use of discrete structures; and

~~b. Demonstrate:~~

~~1. Knowledge of the historical development of discrete mathematics; and~~

~~2. A conceptual understanding of the fundamental ideas of discrete mathematics, including but not limited to:~~

~~(i) Finite graphs;~~

~~(ii) Trees;~~

~~(iii) Networks;~~

~~(iv) Propositional logic; and~~

Edit: "numbers"

~~(v) Combinatorics~~

Edit: comma

(10) In the area of history of mathematics, demonstrate a knowledge of the historical development of number and number systems, measurement and measurement systems, geometry, including non-euclidean geometry, algebra, probability and statistics, calculus and discrete mathematics.

Edit: Break subparagraph (1) into 2 subparagraphs as shown:
 "(1) Obtain certification to teach upper level elementary mathematics through algebra I or integrated I through one of the alternatives in Ed 505.01-Ed 505.05; and
 (2) Meet the requirements of Ed 507.25 and Ed 507.26(c) below."

Adopt Ed 507.26 to read as follows:

Ed 507.26 Mathematics Teacher – Middle Level.

(a) To be certified as a middle level mathematics teacher, the candidate shall:

(1) Obtain certification through one of the alternatives in Ed 505.01 – Ed 505.05 having also met the requirements Ed 507.25 and (c) below, to teach upper level elementary mathematics through algebra I or integrated I.

(b) For candidates seeking certification through an alternative 3, 4 or 5 pathway, the department of education shall assess the skills, competencies and knowledge of candidates for certification as teachers in middle level mathematics by reviewing evidence, such as, but not limited to, college course work, documented professional experience, letters of recommendation, professional development hours or CEU's, and artifacts of professional practice.

Edit: comma

Edit: Insert ", pursuant to Ed 505.03, Ed 505.04, or Ed 505.05,"

(c) A candidate for certification as a middle level mathematics teacher for grades 5-8 shall have skills, competencies, and knowledge in the following areas:

Edit: If this is written out in Ed 507.25(b), then it does not need to be written out here and can stay as is, but it probably should not be possessive.

(1) In the area of number and number operations the candidate shall have the ability to:

- a. Represent, use, and apply introductory concepts and properties of complex numbers;
 - b. Identify and illustrate the mathematics that underlies the procedures and operations involving real numbers and their subsets; and
 - c. Explain the distinctions among real numbers and their subsets with connection to field axioms; and
- (2) In the area of functions and algebra the candidate shall have the ability to:
- a. Understand, identify, and apply arithmetic and geometric sequences; and
 - b. Represent and analyze group and field properties of real numbers and other mathematical structures; and
- (3) In the area of calculus the candidate shall have the ability to demonstrate an understanding of calculus concepts including limits, continuity, differentiation, and integration; and
- (4) In the area of discrete mathematics demonstrate a conceptual understanding of the fundamental ideas of discrete mathematics, including, but not limited to:
- a. Finite graphs;
 - b. Trees;
 - c. Networks;
 - d. Propositional logic; and
 - e. Combinatorics.

Edit: delete

Edit: delete

Edit: Break subparagraph (1) into 2 subparagraphs as shown:
 “(1) Obtain certification to teach pre-algebra through advanced placement math courses through one of the alternatives in Ed 505.01-Ed 505.05; and
 (2) Meet the requirements of Ed 507.25 and Ed 507.27(c) below.”

Readopt with amendment Ed 507.26, effective 5/14/2010 (Doc #9715), and renumber as Ed 507.27, and renumber the existing Ed 507.27 through Ed 507.54 as Ed 507.28 through Ed 507.55, so that Ed 507.27 reads as follows:

Ed 507.267 ~~Teacher in Secondary Mathematics~~ **Teacher – Upper Level For Grades 7-12.**

(a) To be certified as **an upper level mathematics teacher** ~~in secondary mathematics for grades 7-12~~, the candidate shall have:

(1) Obtain certification through one of the alternatives in Ed 505.01 – Ed 505.05 having also met the requirements Ed 507.25 and (c) below **to teach pre-algebra through advanced placement math courses.**

(b) **For candidates seeking certification through an alternative 3, 4 or 5 pathway, the department of education shall assess the skills, competencies and knowledge of candidates for certification as teachers in upper level mathematics by reviewing evidence, such as, but not limited to, college course**

Edit: comma

Edit: Insert “, pursuant to Ed 505.03, Ed 505.04, or Ed 505.05,”

work, documented professional experience, letters of recommendation, professional development hours or CEU's, and artifacts of professional practice.

(bc) A candidate for certification as an *upper level mathematics* teacher in secondary mathematics for grades 7-12 shall have the following skills, competencies, and knowledge through a combination of academic and supervised field-based experience in the following areas:

Edit: "as follows:"

Edit: If this is written out in Ed 507.25(b), then it does not need to be written out here and can stay as is, but it probably should not be possessive.

(1) In the area of pedagogy, the candidate shall have the ability to:

a. Plan and conduct units and lessons appropriate for the grade range which:

1. Enable students to construct new concepts through active participation in mathematical modeling, investigations, and problem solving;
2. Include multiple explanations and representations, including, but not limited to intuitive and formal arguments or proofs;
3. Incorporate literacy strategies that assist students in reading and understanding mathematics;
4. Provide opportunities for students to use written, oral, and other creative expressions to demonstrate their understanding of mathematical concepts to a variety of audiences;
5. Emphasize connections within and between mathematics and other disciplines;
6. Incorporate:

(i) Manipulatives, including, but not limited to:

- i. Pattern BlocksTM;
- ii. Virtual manipulatives;
- iii. Geoboards; and
- iv. Algebra tiles; and

(ii) Current technologies, including, but not limited to:

- i. Dynamic statistical and geometric programs;
- ii. Data collection devices; and
- iii. 21st century tools;

7. Model and nurture habits of minds within the context of mathematics; and

8. Use technology appropriately and effectively in the learning and teaching of mathematics, including, but not limited to:

- ~~(i) Scientific and graphing calculators;~~
- ~~(ii) Computer-based laboratory (CBL) units;~~
- ~~(iii) The internet; and~~
- ~~(iv) Computer software including the 4 areas of:~~
 - ~~i. Symbolic manipulators;~~
 - ~~ii. Dynamic geometry programs;~~
 - ~~iii. Spreadsheets; and~~
 - ~~iv. Statistical packages;~~

~~b. Apply an understanding of learning theories and styles to the teaching of mathematics appropriate for the grade range which articulate:~~

- ~~1. Why conceptual knowledge of mathematics is needed in conjunction with the teaching of procedures or algorithms; and~~
- ~~2. The role of teacher beliefs about mathematics and its effect on student learning;~~

~~c. Plan and conduct a variety of assessments and evaluations appropriate for the grade range that:~~

- ~~1. Diagnose students' preconceptions, misconceptions, and understandings of mathematics and continuously monitor students' understandings; and~~
- ~~2. Evaluate procedural and conceptual understanding, and interpret students' mathematical processes and communication skills; and~~

~~d. Demonstrate a capacity to appreciate and recognize the value of professional practices which include:~~

- ~~1. Learning mathematics content independently and collaboratively; and~~
- ~~2. Demonstrating knowledge of current state, national, and international research, standards, and recommendations regarding the teaching of the mathematics;~~

~~(2) In the area of knowledge of mathematical processes and habits of mind, the candidate shall have the ability to:~~

~~a. Use problem solving to investigate and understand increasingly complex mathematical content, including, but not limited to, the ability to:~~

- ~~1. Apply and adapt a problem-solving process using a variety of heuristics or strategies to solve problems that arise in mathematics and other contexts;~~
- ~~2. Use problem solving to develop one's own mathematical knowledge;~~

3. ~~Reflect upon solutions and the problem-solving process; and~~
4. ~~Refine problem-solving strategies, as needed;~~
- b. ~~Use mathematical reasoning and proof, including, but not limited to, the ability to:~~
 1. ~~Develop and evaluate mathematical conjectures;~~
 2. ~~Construct and evaluate proofs and logical arguments to verify conjectures;~~
 3. ~~Select and use various types of reasoning and methods of proof; and~~
 4. ~~Demonstrate the capacity to articulate an understanding of how reasoning and proof are integral components of mathematics;~~
- c. ~~Communicate an understanding of mathematics, including, but not limited to, the ability to:~~
 1. ~~Demonstrate the capacity to communicate coherently about mathematics and mathematics education in both written and oral ways using appropriate mathematical language and notation;~~
 2. ~~Interpret and explain mathematical ideas acquired through reading mathematics in professional publications; and~~
 3. ~~Analyze and assess the mathematical thinking and strategies of others;~~
- d. ~~Create and use representations, including, but not limited to, the ability to:~~
 1. ~~Illustrate learning progression from concrete to abstract representations;~~
 2. ~~Articulate how the use of formal language and notation increases in importance as mathematical concepts are developed in the mathematics curriculum;~~
 3. ~~Select, apply, and translate among mathematical representations to investigate mathematical concepts and solve mathematical problems; and~~
 4. ~~Develop and use models to explain mathematical concepts;~~
- e. ~~Recognize, explore, and develop mathematical connections, including, but not limited to, the ability to:~~
 1. ~~Provide examples of how mathematics is practiced in various fields; and~~
 2. ~~Build mathematical understanding by:~~
 - (i) ~~Identifying and applying connections among mathematical ideas; and~~
 - (ii) ~~Showing how ideas build on one another across grade levels to form a coherent discipline;~~

~~f. Develop additional habits of the mind related to mathematics, including, but not limited to, the ability to:~~

- ~~1. Learn mathematics independently;~~
- ~~2. Exhibit a curiosity for mathematics;~~
- ~~3. Recognize that learning from mistakes is an essential component when working mathematically;~~
- ~~4. Recognize the power and value of estimation and mental computation when working mathematically;~~
- ~~5. Understand the value and power of strategic use of technology when solving mathematical problems;~~
- ~~6. Recognize that mathematics is the language of science and nature; and~~
- ~~7. Recognize that mathematics is a tool for quantitative reasoning;~~

~~(3) In the area of knowledge of the learner, including developmental and environmental characteristics appropriate for the grade range, the candidate shall have the ability to:~~

~~a. Demonstrate appropriate strategies for helping students to:~~

- ~~1. Move from concrete to abstract representations of mathematical concepts; and~~
- ~~2. Connect conceptual and procedural knowledge;~~

~~b. Communicate understanding of mathematics anxiety, including signs of it, issues related to it, and strategies to help students overcome it;~~

~~c. Recognize that poor attitudes about mathematics solidify in the middle school years so that teachers need to address the affective domain; and~~

~~d. Demonstrate knowledge of how exceptional students learn mathematics and strategies to use with exceptional students;~~

~~(4I) In the subject area of number and operations, the candidate shall have the ability to:~~

~~a. Demonstrate a capacity to use models to explore and explain relationships, including magnitude, among fractions, decimals, percents, ratios, and proportions;~~

~~b. Demonstrate knowledge of the historical development of number and number systems;~~

~~c. Apply, explain, and justify concepts in number and number theory;~~

~~d. Demonstrate computational proficiency and fluency, including the use of a variety of algorithms, estimation strategies, and mental mathematics techniques to judge the reasonableness of answers or approximate solutions;~~

- ~~e. Demonstrate knowledge of concepts and applications of limits and infinity;~~
 - ~~f. Demonstrate a capacity to apply the concepts of proportional reasoning;~~
 - ~~g. Demonstrate a capacity to make sense of large and small numbers and use scientific notation in mathematical and scientific modeling;~~
 - ~~h. Demonstrate a capacity to use physical materials and models to explore and explain the operations and properties of real and complex numbers with extensions to matrices and vectors;~~
 - ~~i. Identify and illustrate the mathematics underlying the theory of groups, rings, and fields and the relationships among them; and~~ Edit: delete Edit: comma
 - ~~j. Demonstrate a capacity to apply the concepts of integer and rational exponents through modeling and applications;~~
- (5) In the subject area of geometry and measurement, the candidate shall have the ability to:
- ~~a. Build and manipulate representations of 2 and 3 dimensional objects and perceive an object from different perspectives;~~
 - ~~b. Analyze properties of and relationships among geometric shapes and structures;~~
 - ~~c. Apply transformations with connections to congruency and similarity;~~
 - ~~d. Demonstrate knowledge of non-Euclidean geometries and the historical development of the various geometries;~~
 - ~~e. Connect the ideas of algebra and geometry through the use of coordinate geometry, graphing, vectors, and motion geometry;~~
 - ~~f. Recognize measurement attributes and their effect on the choice of appropriate tools and units;~~
 - ~~g. Apply strategies, techniques, tools and formulas to determine ——— measurements and their application in a variety of contexts;~~
 - ~~h. Demonstrate knowledge of the historical development of measurement and measurement systems;~~
 - ~~i. Employ estimation as a way of understanding measurement processes and units;~~
 - ~~j. Complete error analysis through determination of the reliability of numbers obtained from measurement;~~
 - ~~k. Understand and apply measurement conversion strategies;~~

- ~~l. Apply geometric ideas and tools relating to the Pythagorean theorem, similar triangles, and trigonometry to solve problems;~~
- ~~m. Use constructions, models, and dynamic geometric software to explore geometric relationships;~~
- ~~n. Derive and explain formulas found in Euclidean geometry; and~~
- ~~o. Construct proofs using the axioms of Euclidean and non-Euclidean geometries;~~

(62) In the subject area of functions and algebra, the candidate shall have the ability to:

- ~~a. Model and analyze change and rates of change in various contexts;~~
- ~~b. Use mathematical models to understand, represent, and communicate quantitative relationships, including, but not limited to equality, equations, inequalities, and proportional relationships;~~
- ~~c. Explore, analyze, and generalize a wide variety of patterns and functions using multiple representations including tables, graphs, written word, and symbolic rules;~~
- ~~d. Represent information and solve problems using matrices;~~
- ~~e. Use graphing utilities and other technological tools to represent, explain, and explore algebraic ideas including functions, equations, and expressions;~~
- ~~f. Demonstrate knowledge of the historical development of algebra;~~
- ~~g. Generalize patterns and functions using recursive and explicit representations;~~
- ~~h. Articulate the meaning of functions and their inverse relationships, both formally and informally, with the use of concrete materials and graphing utilities;~~
- ~~i. Understand and compare the properties of classes of functions and their inverses, including exponential, polynomial, rational, step, absolute value, root, logarithmic, and periodic, including trigonometric;~~
- ~~ja. Understand and apply major concepts of:~~
 - ~~1. Linear algebra, including vector spaces and matrices; and~~
 - ~~2. Abstract algebra, including groups, rings, and fields;~~
- ~~kb. Connect major concepts of linear and abstract algebra to the complex number system and other mathematical structures; and~~
- ~~lc. Understand, identify, and apply arithmetic and geometric sequences, including partial sums of infinite arithmetic and geometric sequences, with connections to linear and exponential functions;~~

(7) In the subject area of data, statistics, and probability, the candidate shall have the ability to:

- a. Design investigations, collect data, display data in a variety of ways, and interpret data representations including bivariate data, conditional probability and geometric probability;
- b. Use appropriate methods to estimate population characteristics, test conjectured relationships among variables, and analyze data;
- c. Use appropriate statistical methods and technology to analyze data and describe shape, spread, and center;
- d. Use both descriptive and inferential statistics to analyze data, make predictions, test hypotheses, and make decisions;
- e. Draw conclusions involving uncertainty by using hands-on and computer-based simulations;
- f. Apply probability concepts in identifying odds, fair games, mathematical expectation, and invalid conclusions;
- g. Judge the validity of a statistical argument, including evaluating the sample from which the statistics were developed and identify misuses of statistics;
- h. Demonstrate knowledge of the historical development of probability and statistics;
- i. Determine and compare experimental, theoretical, and conditional probabilities; and
- j. Use statistical models to explore the connections between statistics and probability including correlation, regression, and analysis of variance;

(8) In the subject area of calculus, the candidate shall have the ability to:

- a. Use mathematical modeling and the concepts of calculus to represent and solve problems from real-world contexts;
- b. Use technology to explore and represent fundamental concepts of calculus;
- c. Demonstrate knowledge of the historical development of calculus;
- d. Understand and describe the connection of calculus to middle and high school mathematics topics;
- ea. Demonstrate a conceptual understanding of and procedural facility with basic calculus concepts including limits, continuity, differentiation, and integration; and
- fb. Demonstrate an understanding of the basic concepts of multivariable calculus;

Edit: Insert "and"

Edit: "(4)"

(9) In the subject area of discrete mathematics, the candidate shall:

Edit: delete

a. Have the ability to:

1. Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations; and

2. Use technology to solve problems involving the use of discrete structures; and

Edit: lowercase

b. Demonstrate *a conceptual understanding of and procedural facilitation of the* knowledge of the:

Edit: comma

1. Historical development of discrete mathematics; and

2. Basic elements of discrete mathematics, including but not limited to:

(i) 1. Graph theory;

(ii) 2. Propositional logic;

(iii) 3. Mathematical induction;

(iv) 4. Recurrence relations;

(v) 5. Finite differences;

(vi) 6. Linear programming; and

(vii) 7. Combinatorics.

Readopt with amendment Ed 612.17, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 612.17 Mathematics – *Middle Level* for Grades 5–8.

(a) In compliance with RSA 193-C:3, IV(f) and consistent with RSA 193-C:3, III, the teacher preparation program in mathematics for grades 5–8 shall require the candidate to demonstrate competency in the area of mathematics for grades 5–8, including techniques for enhancing student learning and the use of assessment results to improve instruction:

Edit: "required"

(b) The *middle level* mathematics program for grades 5–8 shall provide the teaching candidate with the skills, competencies, and knowledge gained through a combination of academic and supervised field-based experiences in the following areas: *as outlined in Ed 507.25(c) and Ed 507.26.*

(1) In the area of knowledge of pedagogy, the candidate shall have the ability to:

a. Plan and conduct units and lessons appropriate for the grade range which:

1. Enable students to construct new concepts through active participation in mathematical modeling, investigations, and problem solving;

2. Include multiple explanations and representations, including, but not limited to intuitive and formal arguments or proofs;

Unclear: Is this supposed to be a reference to all of Ed 507.25, as in Ed 612.18(a), or only Ed 507.25(c)?

~~3. Incorporate literacy strategies that assist students in reading and understanding mathematics;~~

~~4. Provide opportunities for students to use written, oral, and other creative expressions to demonstrate their understanding of mathematical concepts to a variety of audiences;~~

~~5. Emphasize connections within and between mathematics and other disciplines;~~

~~6. Incorporate:~~

~~(i) Manipulatives, including, but not limited to:~~

~~i. Pattern Blocks™;~~

~~ii. Virtual manipulatives;~~

~~iii. Geoboards; and~~

~~iv. Algebra tiles; and~~

~~(ii) Current technologies, including, but not limited to:~~

~~i. Dynamic statistical and geometric programs;~~

~~ii. Data collection devices; and~~

~~iii. 21st-century tools;~~

~~7. Model and nurture habits of minds within the context of mathematics; and~~

~~8. Use technology appropriately and effectively in the learning and teaching of mathematics, including, but not limited to:~~

~~(i) Scientific and graphing calculators;~~

~~(ii) Computer-based laboratory (CBL) units;~~

~~(iii) The internet; and~~

~~(iv) Computer software including the 4 areas of:~~

~~i. Symbolic manipulators;~~

~~ii. Dynamic geometry programs;~~

~~iii. Spreadsheets; and~~

~~iv. Statistical packages;~~

~~b. Apply an understanding of learning theories and styles to the teaching of mathematics appropriate for the grade range which articulate:~~

~~1. Why conceptual knowledge of mathematics is needed in conjunction with the teaching of procedures or algorithms; and~~

- ~~2. The role of teacher beliefs about mathematics and its effect on student learning;~~
- ~~c. Plan and conduct a variety of assessments and evaluations appropriate for the grade range that:~~
 - ~~1. Diagnose students' preconceptions, misconceptions, and understandings of mathematics and continuously monitor students' understandings; and~~
 - ~~2. Evaluate procedural and conceptual understanding, and interpret students' mathematical processes and communication skills; and~~
- ~~d. Demonstrate a capacity to appreciate and recognize the value of professional practices which include:~~
 - ~~1. Learning mathematics content independently and collaboratively; and~~
 - ~~2. Demonstrating knowledge of current state, national, and international research, standards, and recommendations regarding the teaching of the mathematics;~~
- ~~(2) In the area of knowledge of mathematical processes and habits of mind, the candidate shall have the ability to:~~
 - ~~a. Use problem-solving to investigate and understand increasingly complex mathematical content, including, but not limited to, the ability to:~~
 - ~~1. Apply and adapt a problem-solving process using a variety of heuristics or strategies to solve problems that arise in mathematics and other contexts;~~
 - ~~2. Use problem-solving to develop one's own mathematical knowledge;~~
 - ~~3. Reflect upon solutions and the problem-solving process; and~~
 - ~~4. Refine problem-solving strategies, as needed;~~
 - ~~b. Use mathematical reasoning and proof, including, but not limited to, the ability to:~~
 - ~~1. Develop and evaluate mathematical conjectures;~~
 - ~~2. Construct and evaluate proofs and logical arguments to verify conjectures;~~
 - ~~3. Select and use various types of reasoning and methods of proof; and~~
 - ~~4. Demonstrate the capacity to articulate an understanding of how reasoning and proof are integral components of mathematics;~~
 - ~~c. Communicate an understanding of mathematics, including, but not limited to, the ability to:~~
 - ~~1. Demonstrate the capacity to communicate coherently about mathematics and mathematics education in both written and oral ways using appropriate mathematical language and notation;~~

- ~~2. Interpret and explain mathematical ideas acquired through reading mathematics in professional publications; and~~
- ~~3. Analyze and assess the mathematical thinking and strategies of others;~~
- ~~d. Create and use representations, including, but not limited to, the ability to:~~
 - ~~1. Illustrate learning progression from concrete to abstract representations;~~
 - ~~2. Articulate how the use of formal language and notation increases in importance as mathematical concepts are developed in the mathematics curriculum;~~
 - ~~3. Select, apply, and translate among mathematical representations to investigate mathematical concepts and solve mathematical problems; and~~
 - ~~4. Develop and use models to explain mathematical concepts;~~
- ~~e. Recognize, explore, and develop mathematical connections, including, but not limited to, the ability to:~~
 - ~~1. Provide examples of how mathematics is practiced in various fields; and~~
 - ~~2. Build mathematical understanding by:~~
 - ~~(i) Identifying and applying connections among mathematical ideas; and~~
 - ~~(ii) Showing how ideas build on one another across grade levels to form a coherent discipline; and~~
- ~~f. Develop additional habits of the mind related to mathematics, including, but not limited to, the ability to:~~
 - ~~1. Learn mathematics independently;~~
 - ~~2. Exhibit a curiosity for mathematics;~~
 - ~~3. Recognize that learning from mistakes is an essential component when working mathematically;~~
 - ~~4. Recognize the power and value of estimation and mental computation when working mathematically;~~
 - ~~5. Understand the value and power of strategic use of technology when solving mathematical problems;~~
 - ~~6. Recognize that mathematics is the language of science and nature; and~~
 - ~~7. Recognize that mathematics is a tool for quantitative reasoning;~~
- ~~(3) In the area of knowledge of the learner, including developmental and environmental characteristics appropriate for the grade range, the candidate shall have the ability to:~~
 - ~~a. Demonstrate appropriate strategies for helping students to:~~

- ~~1. Move from concrete to abstract representations of mathematical concepts; and~~
 - ~~2. Connect conceptual and procedural knowledge;~~
 - ~~b. Communicate understanding of mathematics anxiety, including signs of it, issues related to it, and strategies to help students overcome it;~~
 - ~~c. Recognize that poor attitudes about mathematics solidify in the middle school years so that teachers need to address the affective domain; and~~
 - ~~d. Demonstrate knowledge of how exceptional students learn mathematics and strategies to use with exceptional students;~~
- (4) In the subject area of number and operations, the candidate shall have the ability to:
- ~~a. Demonstrate a capacity to use models to explore and explain relationships, including magnitude, among fractions, decimals, percents, ratios, and proportions;~~
 - ~~b. Demonstrate knowledge of the historical development of number and number systems;~~
 - ~~c. Apply, explain, and justify concepts in number and number theory;~~
 - ~~d. Demonstrate computational proficiency and fluency, including the use of a variety of algorithms, estimation strategies, and mental mathematics techniques to judge the reasonableness of answers or approximate solutions;~~
 - ~~e. Demonstrate knowledge of concepts and applications of limits and infinity;~~
 - ~~f. Demonstrate a capacity to apply the concepts of proportional reasoning;~~
 - ~~g. Demonstrate a capacity to make sense of large and small numbers and use scientific notation in mathematical and scientific modeling;~~
 - ~~h. Demonstrate a capacity to use physical materials and models to explore and explain the operations and properties of real and complex numbers with extensions to matrices and vectors;~~
 - ~~i. Represent, use, and apply introductory concepts and properties of complex numbers;~~
 - ~~j. Identify and illustrate the mathematics that underlies the procedures used for operations involving real numbers and their subsets;~~
 - ~~k. Explain the distinctions among real numbers and their subsets with connection to field axioms; and~~
 - ~~l. Demonstrate a capacity to apply the concepts of exponents, including integer and rational, through modeling and applications;~~

~~(5) In the subject area of geometry and measurement, the candidate shall have the ability to:~~

- ~~a. Build and manipulate representations of 2 and 3 dimensional objects and perceive an object from different perspectives;~~
- ~~b. Analyze properties of and relationships among geometric shapes and
—— structures;~~
- ~~c. Apply transformations with connections to congruency and similarity;~~
- ~~d. Demonstrate knowledge of non-Euclidean geometries and the historical development of the various geometries;~~
- ~~e. Connect the ideas of algebra and geometry through the use of coordinate geometry, graphing, vectors, and motion geometry;~~
- ~~f. Recognize measurement attributes and their effect on the choice of appropriate tools and units;~~
- ~~g. Apply strategies, techniques, tools and formulas to determine —— measurements and their application in a variety of contexts;~~
- ~~h. Demonstrate knowledge of the historical development of measurement and measurement systems;~~
- ~~i. Employ estimation as a way of understanding measurement processes and units;~~
- ~~j. Complete error analysis through determination of the reliability of numbers obtained from measurement;~~
- ~~k. Understand and apply measurement conversion strategies;~~
- ~~l. Apply geometric ideas and tools relating to the Pythagorean theorem, similar triangles, and trigonometry to solve problems;~~
- ~~m. Use constructions, models, and dynamic geometric software to explore geometric relationships;~~
- ~~n. Derive and explain formulas found in Euclidean geometry; and~~
- ~~o. Construct proofs using the axioms of Euclidean and non-Euclidean geometries;~~

~~(6) In the subject area of functions and algebra, the candidate shall have the ability to:~~

- ~~a. Model and analyze change and rates of change in various contexts;~~

- b. Use mathematical models to understand, represent, and communicate quantitative relationships, including, but not limited to equality, equations, inequalities, and proportional relationships;
 - c. Explore, analyze, and generalize a wide variety of patterns and functions using multiple representations including tables, graphs, written word, and symbolic rules;
 - d. Represent information and solve problems using matrices;
 - e. Use graphing utilities and other technological tools to represent, explain, and explore algebraic ideas including functions, equations, and expressions;
 - f. Demonstrate knowledge of the historical development of algebra;
 - g. Generalize patterns and functions using recursive and explicit representations;
 - h. Understand, identify, and apply arithmetic and geometric sequences;
 - i. Articulate the meaning of functions and their inverse relationships, both formally and informally, with the use of concrete materials and graphing utilities;
 - j. Understand and compare the properties of classes of functions and their inverses, including exponential, polynomial, rational, step, absolute value, root, logarithmic, and periodic, including trigonometric; and
 - k. Represent and analyze group and field properties of real numbers and other mathematical structures;
- (7) In the subject area of data, statistics, and probability, the candidate shall have the ability to:
- a. Design investigations, collect data, display data in a variety of ways, and interpret data representations including bivariate data, conditional probability and geometric probability;
 - b. Use appropriate methods to estimate population characteristics, test conjectured relationships among variables, and analyze data;
 - c. Use appropriate statistical methods and technology to analyze data and describe shape, spread, and center;
 - d. Use both descriptive and inferential statistics to analyze data, make predictions, test hypotheses, and make decisions;
 - e. Draw conclusions involving uncertainty by using hands-on and computer-based simulations;
 - f. Apply probability concepts in identifying odds, fair games, mathematical expectation, and invalid conclusions;

- ~~g. Judge the validity of a statistical argument, including evaluating the sample from which the statistics were developed and identify misuses of statistics;~~
- ~~h. Demonstrate knowledge of the historical development of probability and statistics;~~
- ~~i. Determine and compare experimental, theoretical, and conditional probabilities; and~~
- ~~j. Use statistical models to explore the connections between statistics and probability including correlation, regression, and analysis of variance;~~

~~(8) In the subject area of calculus, the candidate shall have the ability to:~~

- ~~a. Use mathematical modeling and the concepts of calculus to represent and solve problems from real-world contexts;~~
- ~~b. Use technology to explore and represent fundamental concepts of calculus;~~
- ~~c. Demonstrate knowledge of the historical development of calculus;~~
- ~~d. Understand and describe the connection of calculus to middle and high school mathematics topics; and~~
- ~~e. Demonstrate an understanding of basic calculus concepts including limits, continuity, differentiation, and integration; and~~

~~(9) In the subject area of discrete mathematics, the candidate shall:~~

- ~~a. Have the ability to:~~
 - ~~1. Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations; and~~
 - ~~2. Use technology to solve problems involving the use of discrete structures; and~~
- ~~b. Demonstrate:~~
 - ~~1. Knowledge of the historical development of discrete mathematics; and~~
 - ~~2. A conceptual understanding of the fundamental ideas of discrete mathematics, including but not limited to:~~
 - ~~(i) Finite graphs;~~
 - ~~(ii) Trees;~~
 - ~~(iii) Networks;~~
 - ~~(iv) Propositional logic; and~~
 - ~~(v) Combinatorics.~~

Readopt with amendment Ed 612.18, effective 5/14/2010 (Doc #9715), to read as follows:

Ed 612.18 Secondary Mathematics – Upper Level For Grades 7-12.

(a) ~~In compliance with RSA 193-C:3, IV(f) and consistent with RSA 193-C:3, III, the teacher preparation program in secondary mathematics for grades 7-12 shall require the candidate to demonstrate competency in the area of secondary mathematics, including techniques for enhancing student learning and the use of assessment results to improve instruction.~~

Edit: "required"

(b) The *upper level* mathematics program for grades 7-12 shall provide the teaching candidate with the skills, competencies, and knowledge gained through a combination of academic and supervised field-based experiences *as outlined in Ed 507.25 and Ed 507.27* in the following areas:

(1) In the area of pedagogy, the candidate shall have the ability to:

a. ~~Plan and conduct units and lessons appropriate for the grade range which:~~

- ~~1. Enable students to construct new concepts through active participation in mathematical modeling, investigations, and problem solving;~~
- ~~2. Include multiple explanations and representations, including, but not limited to intuitive and formal arguments or proofs;~~
- ~~3. Incorporate literacy strategies that assist students in reading and understanding mathematics;~~
- ~~4. Provide opportunities for students to use written, oral, and other creative expressions to demonstrate their understanding of mathematical concepts to a variety of audiences;~~
- ~~5. Emphasize connections within and between mathematics and other disciplines;~~
- ~~6. Incorporate:~~

~~(i) Manipulatives, including, but not limited to:~~

- ~~i. Pattern Blocks™;~~
- ~~ii. Virtual manipulatives;~~
- ~~iii. Geoboards; and~~
- ~~iv. Algebra tiles; and~~

~~(ii) Current technologies, including, but not limited to:~~

- ~~i. Dynamic statistical and geometric programs;~~
- ~~ii. Data collection devices; and~~
- ~~iii. 21st century tools;~~

~~7. Model and nurture habits of minds within the context of mathematics; and~~

~~8. Use technology appropriately and effectively in the learning and teaching of mathematics, including, but not limited to:~~

- ~~(i) Scientific and graphing calculators;~~
- ~~(ii) Computer-based laboratory (CBL) units;~~
- ~~(iii) The internet; and~~
- ~~(iv) Computer software including the 4 areas of:~~
 - ~~i. Symbolic manipulators;~~
 - ~~ii. Dynamic geometry programs;~~
 - ~~iii. Spreadsheets; and~~
 - ~~iv. Statistical packages;~~

~~b. Apply an understanding of learning theories and styles to the teaching of mathematics appropriate for the grade range which articulate:~~

- ~~1. Why conceptual knowledge of mathematics is needed in conjunction with the teaching of procedures or algorithms; and~~
- ~~2. The role of teacher beliefs about mathematics and its effect on student learning;~~

~~c. Plan and conduct a variety of assessments and evaluations appropriate for the grade range that:~~

- ~~1. Diagnose students' preconceptions, misconceptions, and understandings of mathematics and continuously monitor students' understandings; and~~
- ~~2. Evaluate procedural and conceptual understanding, and interpret students' mathematical processes and communication skills; and~~

~~d. Demonstrate a capacity to appreciate and recognize the value of professional practices which include:~~

- ~~1. Learning mathematics content independently and collaboratively; and~~
- ~~2. Demonstrating knowledge of current state, national, and international research, standards, and recommendations regarding the teaching of the mathematics;~~

~~(2) In the area of knowledge of mathematical processes and habits of mind, the candidate shall have the ability to:~~

~~a. Use problem-solving to investigate and understand increasingly complex mathematical content, including, but not limited to, the ability to:~~

- ~~1. Apply and adapt a problem-solving process using a variety of heuristics or strategies to solve problems that arise in mathematics and other contexts;~~
 - ~~2. Use problem-solving to develop one's own mathematical knowledge;~~
 - ~~3. Reflect upon solutions and the problem-solving process; and~~
 - ~~4. Refine problem-solving strategies, as needed;~~
- b. ~~Use mathematical reasoning and proof, including, but not limited to, the ability to:~~
- ~~1. Develop and evaluate mathematical conjectures;~~
 - ~~2. Construct and evaluate proofs and logical arguments to verify conjectures;~~
 - ~~3. Select and use various types of reasoning and methods of proof; and~~
 - ~~4. Demonstrate the capacity to articulate an understanding of how reasoning and proof are integral components of mathematics;~~
- e. ~~Communicate an understanding of mathematics, including, but not limited to, the ability to:~~
- ~~1. Demonstrate the capacity to communicate coherently about mathematics and mathematics education in both written and oral ways using appropriate mathematical language and notation;~~
 - ~~2. Interpret and explain mathematical ideas acquired through reading mathematics in professional publications; and~~
 - ~~3. Analyze and assess the mathematical thinking and strategies of others;~~
- d. ~~Create and use representations, including, but not limited to, the ability to:~~
- ~~1. Illustrate learning progression from concrete to abstract representations;~~
 - ~~2. Articulate how the use of formal language and notation increases in importance as mathematical concepts are developed in the mathematics curriculum;~~
 - ~~3. Select, apply, and translate among mathematical representations to investigate mathematical concepts and solve mathematical problems; and~~
 - ~~4. Develop and use models to explain mathematical concepts;~~
- e. ~~Recognize, explore, and develop mathematical connections, including, but not limited to, the ability to:~~
- ~~1. Provide examples of how mathematics is practiced in various fields; and~~
 - ~~2. Build mathematical understanding by~~
 - ~~(i) Identifying and applying connections among mathematical ideas; and~~

~~(ii) Showing how ideas build on one another across grade levels to form a coherent discipline;~~

~~f. Develop additional habits of the mind related to mathematics, including, but not limited to, the ability to:~~

- ~~1. Learn mathematics independently;~~
- ~~2. Exhibit a curiosity for mathematics;~~
- ~~3. Recognize that learning from mistakes is an essential component when working mathematically;~~
- ~~4. Recognize the power and value of estimation and mental computation when working mathematically;~~
- ~~5. Understand the value and power of strategic use of technology when solving mathematical problems;~~
- ~~6. Recognize that mathematics is the language of science and nature; and~~
- ~~7. Recognize that mathematics is a tool for quantitative reasoning;~~

~~(3) In the area of knowledge of the learner, including developmental and environmental characteristics appropriate for the grade range, the candidate shall have the ability to:~~

~~a. Demonstrate appropriate strategies for helping students to:~~

- ~~1. Move from concrete to abstract representations of mathematical concepts; and~~
- ~~2. Connect conceptual and procedural knowledge;~~

~~b. Communicate understanding of mathematics anxiety, including signs of it, issues related to it, and strategies to help students overcome it;~~

~~c. Recognize that poor attitudes about mathematics solidify in the middle school years so that teachers need to address the affective domain; and~~

~~d. Demonstrate knowledge of how exceptional students learn mathematics and strategies to use with exceptional students;~~

~~(4) In the subject area of number and operations, the candidate shall have the ability to:~~

~~a. Demonstrate a capacity to use models to explore and explain relationships, including magnitude, among fractions, decimals, percents, ratios, and proportions;~~

~~b. Demonstrate knowledge of the historical development of number and number systems;~~

~~c. Apply, explain, and justify concepts in number and number theory;~~

- d. Demonstrate computational proficiency and fluency, including the use of a variety of algorithms, estimation strategies, and mental mathematics techniques to judge the reasonableness of answers or approximate solutions;
 - e. Demonstrate knowledge of concepts and applications of limits and infinity;
 - f. Demonstrate a capacity to apply the concepts of proportional reasoning;
 - g. Demonstrate a capacity to make sense of large and small numbers and use scientific notation in mathematical and scientific modeling;
 - h. Demonstrate a capacity to use physical materials and models to explore and explain the operations and properties of real and complex numbers with extensions to matrices and vectors;
 - i. Identify and illustrate the mathematics underlying the theory of groups, rings and fields and the relationships among them; and
 - j. Demonstrate a capacity to apply the concepts of integer and rational exponents through modeling and applications;
- (5) In the subject area of geometry and measurement, the candidate shall have the ability to:
- a. Build and manipulate representations of 2- and 3-dimensional objects and perceive an object from different perspectives;
 - b. Analyze properties of and relationships among geometric shapes and structures;
 - c. Apply transformations with connections to congruency and similarity;
 - d. Demonstrate knowledge of non-Euclidean geometries and the historical development of the various geometries;
 - e. Connect the ideas of algebra and geometry through the use of coordinate geometry, graphing, vectors, and motion geometry;
 - f. Recognize measurement attributes and their effect on the choice of appropriate tools and units;
 - g. Apply strategies, techniques, tools and formulas to determine measurements and their application in a variety of contexts;
 - h. Demonstrate knowledge of the historical development of measurement and measurement systems;
 - i. Employ estimation as a way of understanding measurement processes and units;
 - j. Complete error analysis through determination of the reliability of numbers obtained from measurement;

- k. Understand and apply measurement conversion strategies;
 - l. Apply geometric ideas and tools relating to the Pythagorean theorem, similar triangles, and trigonometry to solve problems;
 - m. Use constructions, models, and dynamic geometric software to explore geometric relationships;
 - n. Derive and explain formulas found in Euclidean geometry; and
 - o. Construct proofs using the axioms of Euclidean and non-Euclidean geometries;
- (6) In the subject area of functions and algebra, the candidate shall have the ability to:
- a. Model and analyze change and rates of change in various contexts;
 - b. Use mathematical models to understand, represent, and communicate quantitative relationships, including, but not limited to equality, equations, inequalities, and proportional relationships;
 - c. Explore, analyze, and generalize a wide variety of patterns and functions using multiple representations including tables, graphs, written word, and symbolic rules;
 - d. Represent information and solve problems using matrices;
 - e. Use graphing utilities and other technological tools to represent, explain, and explore algebraic ideas including functions, equations, and expressions;
 - f. Demonstrate knowledge of the historical development of algebra;
 - g. Generalize patterns and functions using recursive and explicit representations;
 - h. Articulate the meaning of functions and their inverse relationships, both formally and informally, with the use of concrete materials and graphing utilities;
 - i. Understand and compare the properties of classes of functions and their inverses, including exponential, polynomial, rational, step, absolute value, root, logarithmic, and periodic, including trigonometric;
 - j. Understand and apply major concepts of:
 - 1. Linear algebra, including vector spaces and matrices; and
 - 2. Abstract algebra, including groups, rings, and fields;
 - k. Connect major concepts of linear and abstract algebra to the complex number system and other mathematical structures; and

~~l. Understand, identify, and apply arithmetic and geometric sequences, including partial sums of infinite arithmetic and geometric sequences, with connections to linear and exponential functions;~~

~~(7) In the subject area of data, statistics, and probability, the candidate shall have the ability to:~~

~~a. Design investigations, collect data, display data in a variety of ways, and interpret data representations including bivariate data, conditional probability and geometric probability;~~

~~b. Use appropriate methods to estimate population characteristics, test conjectured relationships among variables, and analyze data;~~

~~c. Use appropriate statistical methods and technology to analyze data and describe shape, spread, and center;~~

~~d. Use both descriptive and inferential statistics to analyze data, make predictions, test hypotheses, and make decisions;~~

~~e. Draw conclusions involving uncertainty by using hands-on and computer-based simulations;~~

~~f. Apply probability concepts in identifying odds, fair games, mathematical expectation, and invalid conclusions;~~

~~g. Judge the validity of a statistical argument, including evaluating the sample from which the statistics were developed and identify misuses of statistics;~~

~~h. Demonstrate knowledge of the historical development of probability and statistics;~~

~~i. Determine and compare experimental, theoretical, and conditional probabilities; and~~

~~j. Use statistical models to explore the connections between statistics and probability including correlation, regression, and analysis of variance;~~

~~(8) In the subject area of calculus, the candidate shall have the ability to:~~

~~a. Use mathematical modeling and the concepts of calculus to represent and solve problems from real-world contexts;~~

~~b. Use technology to explore and represent fundamental concepts of calculus;~~

~~c. Demonstrate knowledge of the historical development of calculus;~~

~~d. Understand and describe the connection of calculus to middle and high school mathematics topics;~~

- e. ~~Demonstrate a conceptual understanding of and procedural facility with basic calculus concepts including limits, continuity, differentiation, and integration; and~~
- f. ~~Demonstrate an understanding of the basic concepts of multivariable calculus; and~~
- (9) ~~In the subject area of discrete mathematics, the candidate shall:~~
 - a. ~~Have the ability to:~~
 - 1. ~~Apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from real-world situations; and~~
 - 2. ~~Use technology to solve problems involving the use of discrete structures; and~~
 - b. ~~Demonstrate knowledge of the:~~
 - 1. ~~Historical development of discrete mathematics; and~~
 - 2. ~~Basic elements of discrete mathematics, including but not limited to:~~
 - (i) ~~Graph theory;~~
 - (ii) ~~Propositional logic;~~
 - (iii) ~~Mathematical induction;~~
 - (iv) ~~Recurrence relations;~~
 - (v) ~~Finite differences;~~
 - (vi) ~~Linear programming; and~~
 - (vii) ~~Combinatorics.~~

Appendix I

Rule	Statute
Ed 507.25 - Ed 507.26	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 507.27 (formerly Ed 507.26)	RSA 186:8, III- IV, RSA 186:11,X(a), RSA 21-N:9,II(s)
Ed 612.17 – Ed 612.18	RSA 186:8, IV; RSA 186:11, X(c)

Amend Ed 1102.01, effective 3-24-17 (Doc. #12141), by deleting (y) and readopting and renumbering (z)-(ab) as (y)-(aa), so that Ed 1120.01 (y)-(aa) are cited and read as follows:

PART Ed 1102 DEFINITIONS

Ed 1102.01 Definitions A-C.

(y) “Court” means a court of competent jurisdiction.

(z) “Curriculum” means all of the courses and other educational opportunities offered by the responsible local education agency.

(aa) “Curriculum for preschoolers” means all of the organized educational activities, experiences, or both that are offered within the early childhood program to address all aspects of development and to promote meaningful learning experiences regarding preschoolers, their families and their community.

Readopt with amendment Ed 1102.03, effective 3-24-17 (Doc. #12141), to read as follows:

Ed 1102.03 Definitions H-M.

(a) “Health care facility” means any hospital, nursing home, sheltered home or other facility licensed under RSA 151.

(b) “Health evaluation” means an evaluation that provides the IEP team with information on the child’s physical condition and can include, but is not limited to:

- (1) A physical assessment, health screening, or both;
- (2) A review of a child’s medical history;
- (3) Classroom observations of the child with health related concerns; and
- (4) Identification of health barriers to learning, as determined by the IEP team.

(c) “Home education” means “home education” as defined in RSA 193-A:4, and includes the term homeschooling.

(d) “Home for children” means:

- (1) Any orphanage, or institution for the care, treatment, or custody of children;
- (2) As defined by RSA 170-E: 25 any child care agency, child care institution, experiential wilderness facility, and independent living home; or
- (3) Any residential school approved under RSA 186-C:5.

(e) “Home instruction” means a home-based LEA placement as detailed in Ed 1111.04 that provides home instruction for school-aged children.

(f) “Independent educational evaluation” means “independent educational evaluation” as defined in 34 CFR 300.502(a)(3)(i).

(g) “Individualized education program (IEP)” means “individualized education program” as defined in 34 CFR 300.22 and which meets the requirements in Ed 1109.

(h) “Individualized education program team (IEP team)” means “individualized education program team” as defined in 34 CFR 300.23 and which meets the requirements in Ed 1103.01(b) and (c).

(i) “Individualized family service plan or (IFSP)” means “individualized family service plan” as detailed in 34 CFR 300.323. The term includes individualized family support plans.

(j) “Individuals with Disabilities Education Act (IDEA) and Individuals with Disabilities Education Improvement Act (IDEIA)” each mean the Individuals with Disabilities Education Act, 20 U.S.C. 1400, et seq., as amended by the Individuals with Disabilities Education Improvement Act of 2004, and as implemented by the U.S. Department of Education’s regulations, 34 CFR 300 et seq.

(k) “Interim alternative educational setting” means the setting, as determined by the IEP team pursuant to 34 CFR 300.530(g) through 34 CFR 300.532, in which a child with a disability receives services when removed from placement for disciplinary reasons.

(l) “Interpreter services” means interpreting services provided by an interpreter for the deaf and hard of hearing who is licensed in accordance with Int 300 and RSA 326-I:2,IV that are necessary for a parent, surrogate parent, guardian, or adult student to participate in the special education process.

(m) “Interpreting services for a child with a disability” means “interpreting services for a child with a disability” as defined in 34 CFR 300.34(c)(4) and 300.322(e).

(n) “Local education agency (LEA)” means “local education agency” as defined in 34 CFR 300.28.

(o) “Local school board” means the elected governing body of the LEA which is responsible for providing elementary and secondary education to all children who reside in the district.

(p) “Local school district” means the political subdivisions of the state as defined in RSA 194:1, RSA 195:1, and RSA 195-A:1,I.

(q) “Local school board officials” means the administrators of the local school district.

(r) “Manifestation determination” means the process by which the IEP team determines whether the behavior that violated a student code of conduct is a manifestation of a student’s disability pursuant to 34 CFR 300.530(e).

(s) “Mediation” means an alternative dispute resolution process in which an impartial mediator assists the parties in resolving issues in dispute pursuant to RSA 186-C:24.

(t) “Migratory child with disabilities” means a “migratory child” as defined in 20 U.S.C. 6399(2) who has been identified as a child with a disability.

(u) “Modification” means any change in instruction or evaluation determined necessary by the IEP team that impacts the rigor, validity or both, of the subject matter being taught or assessed.

Readopt with amendment Ed 1113.12, effective 3-24-17 (Doc. #12141), to read as follows:

Ed 1113.12 Personnel Standards.

(a) Personnel providing services to children with disabilities in public elementary and secondary schools shall be appropriately and adequately trained as required by 34 CFR 300.156.

- (b) Paraprofessional personnel providing services to children with disabilities shall:
- (1) Work under the supervision of a certified special education teacher;
 - (2) Be supervised and observed by a certified special education teacher under whom they work as often as deemed necessary by the LEA, but no less than once each week;
 - (3) Implement a plan designed by the certified educator;
 - (4) Monitor the behavior of children with whom they are working; and
 - (5) Assist in the provision of special education and related services.
- (c) Paraprofessional personnel providing services to children with disabilities shall not:
- (1) Design programs;
 - (2) Evaluate the effectiveness of programs;
 - (3) Assume responsibilities of a teacher or a substitute teacher; or
 - (4) Instruct a child with a disability.

RULE	STATUTE
Ed 1102.01 (y) [deleted], (y), (z), (aa) [formerly (z), (aa), (ab)]	RSA 186-C:16, 20 U.S.C 6301 [ESEA as amended by ESSA P.L. 114-95]
Ed 1102.03	RSA 186-C:16, 20 U.S.C 6301 [ESEA as amended by ESSA P.L. 114-95]
Ed 1113.12	34 CFR 300.18 and 34 CFR 300.156, RSA 186-C:16,VIII, RSA 186-C:16, 20 U.S.C 6301 [ESEA as amended by ESSA P.L. 114-95]

Readopt with amendment Ed 1301-Ed 1304.01, effective 7-14-11 (Doc #9954-A), Ed 1304.02, effective 7-14-11 (Doc #9954-B), Ed 1401-Ed 1409, effective 6-10-17 (Doc #12205, Interim), and Ed 1410, effective 8-25-17 (Doc #12371, Interim) and renumber as Ed 1300 to read as follows:

CHAPTER Ed 1300 ALTERNATIVE EDUCATION AND REGIONAL CAREER AND TECHNICAL EDUCATION

PART Ed 1301 DEFINITIONS

Ed 1301.01 Definitions. Terms defined in RSA 188-E:2 shall be used as reference in this rule, in addition to the following:

- (a) “Department” means the New Hampshire department of education;
- (b) “Qualified project” means a qualified project as defined in RSA 188-E:10, I(f);
- (c) “Receiving board” means the board of education in the receiving district where a high school has been designated under RSA 188-E as a regional career and technical education center to serve the region. The receiving district can be a single district or a cooperative district in accordance with the organization of that particular region;
- (d) “Region” means a collection of sending and receiving districts and at least one regional career and technical education center that are all parties to an agreement that defines the relationships among them;
- (e) “Regional career and technical education center” means a receiving board for secondary education which has been designated by the commissioner under RSA 188-E:1 as part of a high school regional career and technical education program;
- (f) “Transportation cost” means the reimbursable amount of the total transportation cost for a sending district student who attends a regional career and technical education center or who attends an alternative education program related to RSA 188-E:8, and as provided in Ed 1305.03; and
- (g) “Tuition cost” means the reimbursable amount of education cost for a sending district student who attends a regional career and technical education program or an alternative education program related to RSA 188-E:7, and as provided in Ed 1305.02.

PART Ed 1302 PLANNING, DESIGNATION, AND IMPLEMENTATION OF A NEW REGIONAL CAREER AND TECHNICAL EDUCATION CENTER FOR CAREER AND TECHNICAL EDUCATION

Ed 1302.01 Purpose. The purpose of this part is to implement the statutory provisions relative to planning new career and technical education facilities.

Ed 1302.02 Responsibility of School Boards for Receiving Board.

- (a) The receiving board, in accepting designation as a regional career and technical education center, shall agree to fully cooperate with the education personnel and citizens of the school districts within their region in the planning, designation, and implementation of the career and technical education programs and facilities of the regional career and technical education center.

(b) The region as defined in Ed 1301.01(d) shall establish a regional advisory committee according to RSA 188-E:4-a, to advise the receiving ~~district school~~ board on matters related to career and technical education including the planning, designation, and implementation of the career and technical education programs and facilities of the regional career and technical education center.

(c) In addition to 1302.02(a) and (b), the process for constructing a new regional career and technical education center shall follow the requirements in Ed 1303.

PART Ed 1303 RENOVATION OF EXISTING REGIONAL CAREER AND TECHNICAL EDUCATION CENTERS

Ed 1303.01 Purpose. The purpose of this part is to implement the statutory provisions relative to planning renovations to existing career and technical education facilities.

Ed 1303.02 Application for Initial Project Approval.

(a) The receiving board shall submit an application for funding as a qualified project which contains all the required criteria specified in RSA 188-E:10, I(f)(1)-(9) in addition to the following:

(1) An analysis for each program to be included in the regional career and technical education center providing assurances that:

- a. A need related to the labor market exists for new skills and competencies of students that is directly linked to new equipment requirements or other requests for renovation;
- b. The program is best provided via a school-based career and technical education program; and
- c. The program is supported through local community and regional and program advisory committees', pursuant to RSA 188-E:4-a, validation;

(2) A program design description for each program to be included in the regional career and technical education center which:

- a. Specifies the equipment needed to provide for the learning activities based on the curriculum; and
- b. Describes the space and configuration needed based on the learning activities;

(3) The proposed site of the renovation; and

(4) The total cost of renovations taking into account the specific financial responsibilities of the receiving board, which includes the following:

- a. Acquisition of sufficient land for construction or expansion of the center including any easements or rights-of-way that might be necessary;
- b. Acquisition of sufficient land for parking or long term agreements to utilize off-site parking;

- c. Environmental and geotechnical studies necessary to ensure that the proposed construction can be completed at the site;
- d. Permits for construction required by authorities having jurisdiction including, but not limited to, the NH department of environmental services, NH department of transportation, NH department of health and human services, and municipal code enforcement authority;
- e. Site work outside the building footprint including, but not limited to, clearing and grubbing, earth moving, blasting, removal of unsuitable materials, cut and fill work, soil testing, compaction, grading, site drainage, and landscaping;
- f. Planning, design, and construction of utilities including electrical power, water, sewer, natural gas, and communications to a point one foot outside the building entrance for each specific utility;
- g. Planning, design, and construction of roadways and sidewalks;
- h. Planning, design, and construction of parking facilities;
- i. Other site requirements as identified by the department based on Ed 321;
- j. Provision of a clerk of the works to manage the construction project;
- k. Legal review of construction contracts;
- l. Builders risk and accident liability insurance during construction;
- m. Property and liability insurance following construction; and
- n. Development of equipment specifications lists and purchasing.

(b) The receiving board shall provide the site for parking and other related areas for the regional career and technical education center pursuant to RSA 188-E:3, II not covered under the state grant for construction of regional career and technical education centers. Such site shall be the property of the school district, or there shall be positive assurance of the continued availability of the site for the reasonable life of the regional career and technical education center, such as a long-term agreement, an easement, or right-of-way.

(c) The application shall include the final plans, program descriptions, equipment lists, and total cost for the construction or renovation of a regional career and technical education center and shall be submitted to the department, for recommendation to the state board of education, 18 months prior to the availability of funds in the capital budget.

Ed 1303.03 Application Approval.

(a) The department, in cooperation with the receiving board, shall complete a thorough review of the application, with particular emphasis upon need as related to the labor market, enrollment, and programs. The allotment of specific funds shall be determined after a review of the application by the department as provided in Ed 1302 and in consultation with representatives of the regional career and technical education center.

(b) The department shall approve and recommend the project and the final plan for legislative action as a qualified project pursuant to the capital budget timeline identified in RSA 188-E:10, I(c) and capital budget procedure identified in RSA 9:3-a when the plan, as set forth in the application, appears to be both educationally and fiscally acceptable, as required by Ed 1303.02.

(c) Prioritization of funds of approved renovation projects shall follow the timeline established in Ed 1303.05.

Ed 1303.04 Signed Agreement. If funding is approved by the legislature, all the school board chairpersons in the region and the commissioner of the department shall sign an agreement containing at a minimum the following elements:

- (a) The cost of the qualified project and the payment reimbursement schedule;
- (b) The commitment and responsibilities of the receiving and sending district;
- (c) The commitment and responsibilities of the department;
- (d) An assurance that the regional career and technical education center shall include only programs which conform to the approved qualified project;
- (e) A designation of enrollment quotas for individual programs in each district as determined by the parties to the agreement;
- (f) The end date of the agreement as determined by mutual agreement of the parties;
- (g) Assurances of cooperation with the master plans of both the sending and receiving district required under Ed 512;
- (h) Assurances of ongoing maintenance of the facilities and equipment for the purposes approved in the qualified project; and
- (i) Any special conditions to which all parties agree.

Ed 1303.05 Criteria for Priority of Renovation Projects. The commissioner of the department shall use the following criteria for determining the priority of renovation projects:

- (a) The opening date of the regional career and technical education center as set forth in Table 1303-1 below shall be the determining factor in prioritizing the order in which renovation projects are to be included in the capital budget request:

Table 1303-1 Opening Dates for Regional Career and Technical Education Centers

Regional Career and Technical Education Center	Opening Date	
Nashua Technology Center – Nashua	Fall	1974
The Cheshire Career Center – Keene	Fall	1976
Portsmouth Career Technology Center #19 - Portsmouth	Fall	1977
Berlin Regional Career and Technology Center – Berlin	Fall	1977
Concord Regional Technology Center - Concord	Fall	1980
Mt. Washington Valley Career Technology Center - North Conway	Fall	1980
Seacoast School of Technology – Exeter	Fall	1980
Manchester School of Technology – Manchester	Fall	1982

J. Oliva Huot Technical Center – Laconia	Fall	1983
Hugh Gallen Regional Vocational Center – Littleton	Fall	1983
Plymouth Applied Technology Center - Plymouth	Fall	1983
Region 9 Vocational Technical Center - Wolfeboro	Fall	1983
Pinkerton Academy - Derry	Fall	1984
White Mountain Regional High School - Whitefield	Fall	1985
Salem High School Vocational Center – Salem	Fall	1989
Dover Career Technical Center – Dover	Fall	1990
Creteau Regional Technology Center - Rochester	Fall	1991
Somersworth Career Technology Center - Somersworth	Fall	1991
Wilbur H. Palmer Vocational Technical Center - Hudson	Fall	1992
Sugar River Valley Regional Technology Center - Claremont	Fall	1993
Sugar River Valley Regional Technology Center - Newport	Fall	1993
Winnisquam Regional High School – Tilton	Fall	1993
Region 14 Applied Technology Center - Peterborough	Spring	1996
Milford High School and Applied Technology Center - Milford	Fall	1997

(b) If more than one regional career and technical education center opened in a given year, priority shall be established based on the date of governor and council approval.

Ed 1303.06 Substantial Changes to an Approved Project. The receiving board shall notify the department of any substantial changes to a renovation project approved under this section. Substantial changes shall include a change in project cost of 5% or greater or the addition or removal of a career and technical education program, or any substantial change which alters the scope of the project.

PART Ed 1304 ADVISORY COMMITTEES

Ed 1304.01 Advisory Committees. Regions and regional career and technical education centers shall establish and maintain the regional advisory committees and program advisory committees, respectively, per RSA 188-E:4-a.

PART Ed 1305 TUITION AND TRANSPORTATION COST DETERMINATIONS

Ed 1305.01 Purpose. The purpose of this part is to implement the statutory provisions relating to the formula for determining the tuition and transportation costs for approved career and technical education programs and alternative education programs and the procedures for disbursement of funds.

Ed 1305.02 Tuition Cost Determination.

(a) The per student rate as outlined in RSA 188-E:7, II used for tuition payment related to this section shall be equal to the balance of appropriation for tuition and transportation available divided by the total number of students, where:

(1) The balance of appropriation available equals the tuition and transportation total appropriation, minus:

a. The total payments made for transportation reimbursements;

b. The total payments made for alternative education tuitions that are less than full per student rate determined in this section;

c. All differential fees paid under RSA 188-E:7, IV; and

d. Any adjustments made to the budget; and

(2) The total number of students equals the sum of all the sending districts' total number of students formally reported to, and verified by, the department.

(b) In any case, the tuition payment related to this section shall not exceed the previous year average cost per student in the receiving district, as determined by the department.

Ed 1305.03 Transportation Cost Determination.

(a) The per student transportation cost shall be equal to the number of days a student attended the program multiplied by the round trip distance in miles from a student's sending high school to the regional career and technical education center multiplied by the per mile reimbursement rate, which shall be either:

(1) \$0.10 per mile for students who have access to regularly scheduled district transportation or public transportation; or

(2) \$0.25 per mile for students who self-transport and whose sending district does not provide regularly scheduled transportation.

PART Ed 1306 OTHER CAREER AND TECHNICAL EDUCATION PROGRAM REQUIREMENTS

Ed 1306.01 Requirements for Pre-Engineering and Technology Programs.

(a) In order to secure funding to develop and implement a pre-engineering and technology program and curriculum pursuant to RSA 188-E:14, the school shall:

(1) Submit to the department either a "NH Pre-Engineering and Technology Application (Grades K-5)," March 2018 edition "NH Pre-Engineering and Technology Application (Grades 6-12)" March 2018 edition to includes course content, competency and curricular requirements, equipment requirements, and space requirements;

(2) Demonstrate the statutorily required 50/50 match of public and private funds which:

a. Shows how district expenditures complement the development of the engineering technology program;

b. Provides a list of expenditures by the district and includes a rationale for using these as match funds; and

c. Includes equipment items purchased for use not earlier than one year prior to the project start date for the engineering technology program; ~~and~~

(3) Assure that certified educators delivering the program are trained to teach the engineering and technology program by submitting the current course load, college transcript, teaching certification, and résumé; and

(4) Submit a final funding report providing:

- (a) Outcomes and key achievements;
- (b) Number of students served, disaggregated by gender; and
- (c) Impact/benefits of course/program.

(b) In order to secure funding to develop and implement a pre-engineering and technology program and curriculum pursuant to RSA 188-E:14, the department shall:

- (1) Provide technical assistance in the planning and development of the pre-engineering and technology program;
- (2) Receive and review the NH Pre-Engineering and Technology Application that the school submits under Ed 1306.01(a)(1) above to determine that the school meets the criteria for approval;
- (3) Submit the proposed program content and curriculum to the pre-engineering and technology advisory council for review; and
- (4) Release state funds up to limits determined by the pre-engineering and technology advisory council.

Ed 1306.02 Requirements for Automotive Technology Programs.

(a) In order to secure funding to develop and implement an automotive technology curriculum the regional career and technical education center shall:

- (1) Establish a program advisory committee as set forth in RSA 188-E:20;
- (2) Submit to the department new program approval application that includes course content, curricular requirements, equipment requirements, and space requirements that are aligned to the standards established by the National Automotive Technicians Education Foundation (NATEF); and
- (3) Demonstrate the statutorily required 50/50 match of public and private funds which:
 - a. Shows how district expenditures complement the development of the automotive technology program;
 - b. Provides a list of expenditures by the district and include a rationale for using these as match funds; and
 - c. Includes equipment items purchased for use not earlier than one year prior to the project start date for the automotive technology program; and
- (4) Assure that certified educators delivering the program are trained to teach in the automotive technology program.

(b) In order to secure funding to develop and implement an automotive technology curriculum the department shall:

- (1) Provide technical assistance in the planning and development of the automotive technology program;
- (2) Receive and review the department's new program approval application that the regional career and technical education center submits to determine that the program meets the criteria for approval; and
- (3) Submit the proposed program content and curriculum to the automotive advisory council for review.

PART Ed 1307 RULES FOR THE ROBOTICS EDUCATION FUND

Ed 1307.01 Purpose of the Robotics Education Fund. The purpose of the robotics education fund is to motivate public school and chartered public school students in New Hampshire to pursue education and career opportunities in science, technology, engineering, and mathematics while building critical life and work-related skills.

Ed 1307.02 Scope. Grants from the robotics education fund shall be available to any eligible public school or chartered public school for the purpose of financing the establishment of a robotics team and its participation in competitive events.

Ed 1307.03 Definitions.

(a) "Competitive event" means an event administered by a national or international organization whose mission is to promote and organize robotics competitions.

(b) "Eligible public school or chartered public school" means any public school which meets the minimum standards as defined by Ed 306 or a chartered public school as defined in RSA 194-B:1, IV in the state of New Hampshire.

(c) "Technical resources" means mentors, space, equipment, travel to events, use of office equipment, use of computers, and other similar forms of assistance.

Ed 1307.04 Uses of Grant Funds for the Robotics Education Fund.

(a) Grant funds administered through the robotics education fund shall be limited to the purchase of robotics kits, stipends for coaches, and the payment of associated costs from participation in competitions which shall include, but not be limited to, registration fees, supplies, and equipment necessary for competition. Grant funds shall not be used for travel costs. Grant recipients shall submit a report to the department detailing how the grant funds were spent at the end of each fiscal year for which grant funds are received.

(b) Grant funds shall only be used to cover direct costs associated with the cost of the robotics team.

(c) Said grants shall not exceed the following amounts per year:

- (1) For elementary school, the amount of the grant that can be applied toward the cost of the kit shall not exceed \$1,000 per year and the amount of the grant that can be applied toward the stipend shall not exceed \$250 per year;
- (2) For middle school, the amount of the grant that can be applied toward the cost of the kit shall not exceed \$1,500 per year and the amount of the grant that can be applied toward the stipend shall not exceed \$750 per year; and
- (3) For high school, the amount of the grant that can be applied toward the cost of the kit shall not exceed \$5,000 per year and the amount of the grant that can be applied toward the stipend shall not exceed \$1,500 per year.

Ed 1307.05 Eligibility Criteria. An eligible public school or chartered public school which is applying for a grant from the robotics education fund shall demonstrate that:

- (a) It has established, or is in the process of establishing, a its first robotics team or club that is associated with the school;
- (b) It has at least one coach or adult advisor;
- (c) It has established a partnership with, or has a valid letter of commitment from, at least one sponsor, business entity, institution of higher education, or technical school for the purpose of participation in a robotics competition;
- (d) A sponsor, business entity, institution of higher education, or technical school will contribute funds, technical resources, or both to allow for the school to participate in the competition;
- (e) It has developed a 2-year budget for the current year of the application;
- (f) It has not received a grant from the robotics education development program in the prior year; and
- (g) It has identified at least one competitive event in which the team or club will participate in and that it meets all criteria for participation in the competitive event(s).

Ed 1307.06 Robotics Education Development Program Grant Application.

- (a) A public or chartered public school shall complete and submit a grant application on the “Student Support and Academic Enrichment Application for Funds,” form October 2017 edition, by email as indicated on the application.
- (b) The grant application period shall start on September 1 and will close on September 30 of each year.
- (c) The amount of each grant shall be sufficient to cover the costs of establishing and supporting a team for 2 years as set forth in Ed 1307.04(c).
- (d) Pursuant to RSA 188-E:25, VII, no school shall receive more than one grant every 2 years, however, a school district may receive multiple grant awards. A school may support multiple teams

through the use of a single grant. However, it shall not support more than one team in any one of the 3 areas enumerated in Ed 1307.04(c)(1)-(3).

Ed 1307.07 Review of Robotics Education Development Program Grant Application.

(a) The bureau of career development shall review all grant applications within 15 working days of the September 30 date as established in Ed 1307.06(b). In making a decision the bureau of career development shall approve an application if the school has met all the criteria set forth in Ed 1307.05.

(b) If the amount of grant funds requested exceeds the balance in the fund that is available in any year, preference shall be given to schools that have a higher percentage of students in the school's average daily membership in attendance who are eligible for a free or reduced-price meal as reported pursuant to Ed 306.23. Secondary preference shall be given to schools which did not receive a grant in the previous year due to lack of funds.

Ed 1307.08 Robotics Education Development Program Grant Disbursement.

(a) Grants shall be awarded and funds made available by October 31 of each year.

(b) The department shall disburse-grant funds as a single payment each year of the grant after approval of the robotics program.

Appendix I

RULE	STATUTE
Ed 1301	RSA 188-E:2
Ed 1302	RSA 188-E:3, I
Ed 1303	RSA 188-E:3, I
Ed 1304	RSA 188-E:4-a
Ed 1305.01-1305.02	RSA 188-E:6, IV; RSA 188-E:9
Ed 1305.03	RSA 188-E:8; RSA 188-E:9
Ed 1306.01	RSA 188-E:18, II
Ed 1306.02	RSA 188-E:18, II; RSA 188-E:20
Ed 1307.01 – Ed 1307.08	RSA 188-E:25

May 30, 2018

Mr Frank Edelblut, Commissioner
New Hampshire Department of Education
101 Pleasant Street
Concord, NH 03301-3494

Dear Commissioner Edelblut:

I am writing to request an extension of Gate City Charter School for the Arts, until the Department of Education is able to complete its portion of the process for our renewal. Listed below are the events that have occurred to date.

- Intent to renew charter submitted to the DOE on 3/14/2018 via fax, and again on 4/25/2018 via e-mail to Mrs. Jane Waterhouse.
- 2016/2017 Annual report completed on 5/30/2018, and the 2017/2018 Annual report will be completed and submitted at the culmination of the current schoolyear.
- Renewal application process was begun on 5/23/2018 during our monthly Board of Trustees meeting.
- Communicated with Jane Waterhouse, Charter School Administrator, beginning on 5/10/2018 about our renewal. Through e-mail, phone conversations, and an in-person meeting at Gate City Charter School, school administration has discussed the charter renewal process and timeline with Mrs. Waterhouse. Due to school administrative turnover and transitions, an annual report for the 2016/2017 school year was not available. We have completed a summary of the 2016/2017 school year using documentation that was available to us, have begun to complete our 2017/2018 annual report, and have begun our Charter Renewal Application at our most recent Board of Trustees meeting.
- Our charter will expire on 7/18/2018.

I have attached our annual report which serves as our renewal application.

Sincerely,



Richard Boardman

Executive Director

Gate City Charter School for the Arts


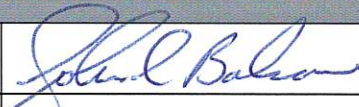
INTENT TO RENEW CHARTER

The renewal of a public charter school takes place every five (5) years.

The first step in the renewal process: A public charter school submits *Intent to Renew Charter* document to the New Hampshire Department of Education by the end of the school's fourth year of operation.

The renewal process consists of a comprehensive on-site review conducted by a team of educators. The on-site review includes a review of academic performance, financial and organizational goals focus group interviews with school leadership, teachers, parents, students and members of the Board of Trustees. For additional details, please review the Guidelines for the Charter Renewal Process at the following link: https://www.education.nh.gov/instruction/school_improve/charter/renewal_process.htm.

Please complete information below:

Name of Public Charter School	Gate City Charter School for the Arts.
School Address	7 Henry Clay Dr. Merrimack NH 03054
School Director	Richard Boardman
Email Address	boardmanr@gccs-nh.org
School Director Signature	 - Richard Boardman
Date	3/14/2018
Board Chair Signature	 John Balcom
Date	3/14/2018

Please submit completed document to:

NH Department of Education
Charter School Office
101 Pleasant Street
Concord, NH 03301-3860
Fax: 271-7381

2016/2017 Annual Accountability Report

GATE CITY CHARTER SCHOOL FOR THE ARTS



Mission

The mission of the Gate City Charter School for the Arts is to use an arts-integrated curriculum to educate all interested students in grades K-8, to produce graduates who excel in both academics and the arts and have the knowledge, creativity and inquisitive nature that foster a lifelong love of learning.

Guiding Principle

The arts, in all their media, can be an invaluable tool in the education of our children, building problem-solving skills, enabling students to express unique ideas, fostering critical thinking and enhancing overall learning.

Vision

The vision of the Gate City Charter School for the Arts is to become a transformative leader in the education of students who will be prepared to successfully advance into the complex economy of the 21st century.

We envision a school where creativity is at the center of all we do. Curriculum will be designed to encourage students to recognize their creative potential and express ideas through music, dance, movement, visual arts, and drama. Students and teachers will be encouraged to ask questions about the world around them, make discoveries and solve problems.

Our arts-integrated model that infuses the arts across the curriculum assists in the definitive development of innovative, flexible, creative people who look at solving complex problems in a unique manner and have the skills necessary to engineer new, transformative, solutions to the challenges that face the future of New Hampshire and the global economic market.

2016/2017 Staff

Karin Cevasco, Executive Director
Esther Kosofsky, Deputy Director
Nancy Donaghey, Office Manager
Christina Whitaker, Finance Manager
Cheri Gratton, Special Education Coordinator
Caleb Swann, IT Specialist
Amy Savoie, Teacher
Lisa Duffy, Teacher
Shannon Ferris, Teacher
Julia Waterman, Teacher
Jen Berube, Teacher
September Frost, Teacher
Amanda Tanguay, Teacher
Astrid Alvarado, Teacher
Stephanie Fritz, Teacher
Airel Kone, Teacher
Elizabeth Keefe, Visual Arts Teacher
Jessica Mason, Music Teacher
Christine Ferguson, Assistant Teacher

Melanie Butler, Assistant Teacher
Mary Ellen Wessels, Assistant Teacher
Mari Angelica Twitchell, Assistant Teacher
Lori White, Paraprofessional
Jennifer Abel, Paraprofessional
Laura Dechnese, Paraprofessional
Michaelene Koskela, Lunch Support
Sandra Smith, Title I Director

2016-17 Board of Trustees

Bill Spinelli (Chairman)
Peter Bonaccorsi (Vice Chairman)
Jenny Hitzeman
Kim Rivers
Rebecca Fredrickson
Eric Drouart
Jay Lustig
Tom Tyler
John Keiche

Summary

The 2016/2017 school year saw significant and impactful administrative turnover throughout the school year. In April of 2017, Executive Director, Karen Cevasco resigned from her position. The Board of Trustees appointed Assistant Director (Esther Kosofsky) and Finance Director (Christina Whitaker) as Co-Directors. Within a month's time, based on troubling relationships with numerous staff members, Board members, and parents, the Co-Directors both resigned. In May of 2017, the Board of Trustees appointed Title I Director, Sandra Smith as Interim Director for the remainder of the year and to assist in the Executive Director search committee.

Given all these transitions, an Annual Report for the 2016/2017 school year was not submitted in August of 2017. In lieu of this omission, we respectfully submit copies of the monthly

Directors Report, written by Karen Cevasco for each Board of Trustees meeting from September 2016 - April 2017.

Current School Administration has worked tirelessly throughout the 2017/2018 school year to stabilize and grow our school community - academically, social/emotionally, and within the intricate relationships with all stakeholders. We will eagerly complete the 2017/2018 Annual Accountability Report at the conclusion of the current school year to more specifically describe our growth, progress, and outlook for the future.

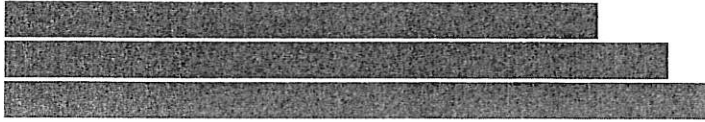
Respectfully,

Richard Boardman
Executive Director
Gate City Charter School for the Arts



Director's Report
September 2016

Personnel Update (Move to Non-Public Session)



Title 1

1. Approved by NHDOE for for 2016-17 for approximately \$14,000
2. Process consumed the last three months. Time and effort
3. Annual Title I meeting for parents will be held in October/November

Title II

1. 2015-16 funding recently approved
2. 2016-17 application awaiting further information

Deputy Director Update

1. Process ongoing, limited resumes, few outstanding candidates, one interview scheduled, additional strategies being considered

2016 SBAC

1. Student reports released by NHDOE, requires time for Director and Office Manager to retrieve and print reports

Report Card Updates

1. On agenda for next curriculum committee meeting, draft updates being reviewed by teachers
2. Updates are to meet goal of better tracking student progress and communications progress to the student and parents

Enrollment Update

1. Day 1 count 169, current 174

**Gate City Charter School for the Arts
Director's Report
Board of Trustees Meeting
October 18, 2016**

Personnel Update

Deputy Director - Esther Kosofsky

Hiring Committee: Bill Spinelli, Karin Cevasco, Christina Whitaker

The hiring committee interviewed Esther Kosofsky on Friday, October 7, 2016

There was a meet and greet attended by all teachers on Tuesday, October 11, 2016 after school. Feedback from teachers was positive toward this candidate.

The hiring committee feels that Esther's background in communications, theater, the arts, and expressive arts therapy will serve our school's mission. Her experience with counseling will assist in our teacher to teacher mentoring goals.

I checked Esther's references and they were all positive. Some mentioned that there would be a learning curve in gaining knowledge in the Common Core State Standards, but Esther gives 110% of herself to everything she does and she will learn quickly. She is magnetic and enthusiastic and said, "I love your school! I am all in!"

Enrollment Update

(Distribute Table)

Curriculum Update - Physical Education Classes for grades 1-4

Gym classes for grades 1-4 have begun utilizing YMCA instructors

(Distribute Handout)

Update on HB 126 Commission

Since September 2015, I have served as a member on the Governor's Commission to Study Issues Related to Students Receiving Special Education Services While Attending a Chartered Public School. The Commission met for the last time on Monday, October 17, 2016 and the findings and recommendations from the commission were presented in a report that will be presented to Governor Maggie Hassan by the Chair of the Commission, Alan Pardy (NH Special Educators Administration Association) by the end of this month. The majority finding of the Commission is that when charter school staff and district school staff are committed to working together in a collaborative nature to serve the student, things are working well. The overall challenges presented are that the state does not currently have a full understanding of the costs related to special education as a whole, let alone the difference in cost when that child is attending a public charter school. The smaller size of a charter school, coupled with the unique structure of special education responsibility when a child attends a public chartered school as outlined in RSA 194-B:11, III, adds to district costs because the economies of scale are not advantageous in most scenarios. In some cases, such as when the charter school environment reduces the child's needs for services (a child with anxiety being the number one situation

cited), the district benefits from a cost savings. However, when charter school staff and district school staff have a collaborative working relationship, all parties benefit. It was the Commission's majority opinion that the rights of the student with special education needs should be protected at every level when that family decides to enroll in a public chartered school. The full Commission's report with all its findings and recommendations will be available publicly after November 1.

Debate Club Request for Field Trip to Washington DC

(distribute handout)

Field trip dates April 16-19, 2017

Close Up (www.closeup.org)

Fundraising to cover cost of trip through Close Up. Close up will hold on to funds for the school and will keep an account that carries over from one year to the next to support the next group of students. Donors can contribute to one specific student or to the school in general. The school decides how to distribute those funds to students. Close Up offers scholarship money for the school to decide how to distribute to students.

Cost to school is for substitute teachers to cover 6th grade and $\frac{3}{4}$ Grade Humanities

Director's Report
November 15, 2016

Personnel

Esther Kosofsky started work on October 24 in her role as Deputy Director. She brings enthusiasm and passion for the arts integrated mission of our school. She is nicely getting acquainted with the faculty and staff, the students and parents, and with the responsibilities of the job.

All positions are currently filled.

Enrollment

Enrollment is currently 173.
(Distribute table)

Policy Needs

I am currently drafting a key holder policy to present to the Policy Committee for review. This policy will mitigate risk related to building access and protection of property, while ensuring our employees have building access at needed times.

Additionally, in recent conversations, our insurance provider, Primex, has identified several policies related to employment for which our organization has a need. Primex would like our school to consult with our local council to guide the writing of the policy to ensure it aligns with employment law. It is important in practices of employment that our policy be reviewed by local council before going to the Board of Trustees for approval.

School Events

Food Drive - 7th grade students are coordinating a food drive to benefit the Nashua Soup Kitchen and Shelter (NSKS). After researching community need, the students have decided to focus their collections on the NSKS's greatest needs: boxed Mac & Cheese, cereal, beans and toiletries (toothpaste, toothpaste, and bars of soap). Additionally, the 7th grade students are integrating the arts integrated mission of our school as they create marbleized placemats to decorate the tables at the NSKS during their Thanksgiving meal service.

Showcase Tour - The Marketing and PR Committee has invited local business leaders, local municipal leaders, education leaders, and state government leaders to visit our school on Thursday, November 17, 2016 at 9:30 AM. Kindergarten will sing for our guests and 8th grade will teach our guests some bucket drumming rhythms. We will conduct a tour of the school and invite our guests to further engage by attending our concert in December and to consider membership on our Board of Trustees.

The Winter Concert is scheduled for Tuesday, December 13, 2016. We will be renting the Keefe Auditorium at Elm Street Middle School in Nashua. Our Music Teacher, Mrs. Jessica

Mason, has organized with the students a festive winter show. All students will participate with singing, a bucket drum ensemble, and concert band. The auditorium has plenty of seating; we hope to see many families, friends, guests, and Board Members in the audience.

Other Needs

(none at this time)

Director's Report
December 20, 2016

Personell

We anticipate the need to hire an additional paraeducator starting in January 2017. The job has been posted.

Policy

To fulfill the policy needs related to employment that were identified last month, I have been working with our Finance Manager to identify options for utilizing an employee handbook template that conforms with all NH employment laws.

We will begin the installation of a card swipe entry system in January. The installation will use hardware that already existed in the facility, reactivating the hardware and integrating the system with new software. This new system will allow keyless door access for all employees during scheduled hours. Training on the system use will inform the new building access policy.

Enrollment

As of December 20, 2016

Grade	Number of Students Enrolled	January 3, 2017	Number of Students on Wait list
K	20	20	56
1	19	18	8
2	19	18	24
3	20	20	21
4	20	19	20
5	17	17	1
6	20	20	25
7	20	20	4
8	20	20	10
TOTAL	175	172	169

School Events

The winter concert that was held on December 13, 2016 was a success. The Keefe Auditorium is a nice venue for the event. We are fortunate to have parent volunteer, George Barnett, along with community volunteer John Francini, who facilitated lighting and sound for the event. Volunteer Mary Ann McHugh accompanied the choruses on piano.

The 2017-18 kindergarten enrollment opens in January. We have begun to advertise this upcoming opportunity. Pre-registration for siblings of current students will open on January 9,

2017. Open registration begins on January 23, 2017. The Enrollment Lottery is scheduled for March 14, 2017.

We have researched opportunities for the Debate Club to debate and visit other middle school groups of students. We were successful in introducing Steph Fritz and Astrid Alvarado, Debate Club advisors, to two teachers who run debate clubs or social studies classes at other NH charter schools and are interested in debate. They hope to debate later this school year.

There are a group of students who have asked to form a school newspaper. Esther Kosofsky and Karin Cevasco will facilitate the newspaper club after school on Mondays beginning in the new year.

There are a group of students wanting to form an a cappella group. Esther Kosofsky is working with those students to facilitate that extracurricular singing opportunity.

We continue to have parent volunteers Mary Grace Markham and Daniel Barluschke run the French Club after school on Wednesdays. Charles Savoie has also been volunteering in the French conversation group.

After school enrichment opportunities with outside vendors will resume in January. Play Well Lego engineering classes will be offered on Mondays and Wednesdays. We are also looking into a vendor who offers after school computer coding classes for grades 3-8.

We have the opportunity to participate in **ARTventures** and the "Comeback Kitchen Table" project in 2017. This artist in residency project will allow our students to work with Jerry Beck of **The Revolving Museum** to create a sculpture piece as an interactive kitchen table that will be on display in Downtown Nashua, installed during the Downtown Arts Festival on May 4, 2017. We will kickoff a fundraising effort in January 2017 with a goal of raising \$3000 to participate in this community art opportunity.

Gate City Charter School for the Arts
Director's Report
January 17, 2017

Events:

January 24, 2017: Gate City Charter School for the Arts students have been invited to perform at the Currier Art Museum for the National School Choice Week. This event will occur from 4:00 to 6:00 pm. We will offer bus transportation to/from the event. The 8th grade bucket drumming ensemble will perform, as well as our 3rd grade production of "Tacky the Penguin."

This event is sponsored by the NH Alliance for a Public Charter School's, The Children's Scholarship Fund, NH Home Educators, NH for School Choice, and National School Choice Week.

March 17, 2017: NH Alliance for Public Charter Schools Best Practices Conference at The Founders Academy in Manchester

All employees and Board Members are invited to attend.

A registration link was emailed.

Policy Update:

The work is underway to install the keyless card entry system for building access. Currently, the hardware is activated. The next step is to install the software. That work requires an update to our Windows computer and the work is ongoing. Once our staff is trained in use of the system, a building access policy will be drafted. Progress is being made with the efforts of our Finance and Office Managers.

Legislative Updates:

The 2017 Session of the NH General Court is now open. There are ten bills proposed that relate to public charter schools. A summary of those bills can be found here:

<https://nhcharterschools.wildapricot.org/Legislation-2017>

Enrollment Update:

As of January 17, 2017

Grade	Number of Students Enrolled	Number of Students on Wait list
K	20	60
1	19	9
2	15	24
3	20	25
4	19	20
5	19	2
6	19	27
7	20	4

8	20	10
TOTAL	171	181

Personnel Update:

- We have hired an additional paraprofessional to fulfill special education needs.
- The resignation of Christine Ferguson, Assistant Teacher, was received on December 28, 2016.
- Mark McHugh, substitute teacher, has been hired as the new Assistant Teacher and will start in that position once his substitute teacher work in second grade is complete.
- The resignation of Lisa Duffy, second grade teacher, was received on January 4, 2017.
- The position of second grade teacher was posted on January 4, 2017. Interviews were conducted by a three-person committee. It was the unanimous decision of the committee to hire Shannon Ferris as second grade teacher. Mrs. Ferris is a certified teacher, with endorsements in elementary and special education. Shannon comes with glowing recommendations from her colleagues at the elementary school where she is currently working as a part time Title I teacher. Mrs. Ferris will begin at GCCSA on February 1, 2017, having requested this start date to give ample notice to her current school principal and to complete the progress reports for her current students.
- We are currently interviewing for additional Substitute Teachers.

Director's Report

Submitted February 21, 2017

Karin Cevalco, Executive Director



Personnel

The new second grade teacher started her employment on February 1, 2017. She has settled into her classroom and has built a relationship with the students and with colleagues.

An additional paraprofessional was hired to meet special education service requirements. This is a position that is reimbursed by the district of responsibility under RSA 194-B:11,3. The special education needs at Gate City Charter School for the Arts have increased during the 2017-18 school year. Some of this is due to students who are newly enrolled at GCCSA this year, and some of the increase is accredited to previously unidentified needs.

The GCCSA Special Education Teacher and Case Manager is a new position in the 2016-17 school year. When the position was created in the Spring of 2016, the Nashua School District agreed to fund the position up to \$23,000 for the school year, provided this certified special educator serves as case manager for all Nashua students with an Individualized Education Plan (IEP) and provides all academic instruction related services for Nashua students with that service in the IEP. GCCSA also employed this individual to coordinate special education under RSA 194-B:11,3 with other school districts. When the position was created, there were a total of 13 students enrolled at GCCSA with an IEP; those students were from two different school districts. As of the date of this report, there are 26 students in total with an IEP enrolled at GCCSA. Of those 26 students, 15 reside in Nashua. The other 11 reside in six different towns. This requires coordination with seven different school districts. The average duration of an IEP team meeting is one hour. In addition to team meetings, there is progress monitoring, data collection on the student, communicating with parents, communicating with district staff, coordinating related services, meeting with classroom teachers to adapt curriculum, and meeting with classroom teachers about behavior intervention strategies.

In the 2016-17 school year, GCCSA is receiving Title I funds. The amount of monies are sufficient to fund a part time teacher. In creating the Title I program, GCCSA chose to focus on Reading Instruction. In accordance with Title I regulations, funds can be used to supplement classroom instruction. Title I services may NOT take place of, or teach new or different skills than, the instruction in the regular classroom. Title I instruction is used to reinforce general education. The GCCSA Title I teacher is employed for 20 hours a week because of the funding available to our school. Student eligibility to receive Title I reading services is determined through benchmark assessment, report card grades, state standardized assessments, and teacher observations of the student's reading ability.

21 students are currently receiving Title I reading services

12 students are eligible for services and have been placed on a Title I wait list

9 students are eligible and are NOT being served (reasons could include that the parents denied services or that special education services are adequate to meet the reading needs of the student)

The data describing the needs of our student population will inform strategic decisions about staffing and professional development during the development of the 2017-18 budget.

Data Dashboard

The following data presents a snapshot of the population of students in which we serve at Gate City Charter School for the Arts, an open enrollment public charter school.

Enrollment - As of February 20, 2017

Grade	Number of Students Enrolled	As of March 6, 2017	Number of Students on Wait list
K	19	19	61
1	18	18	15
2	15	15	26
3	19	20	26
4	18	20	22
5	19	19	6
6	19	19	23
7	19	19	4
8	19	19	10
TOTAL	165	168	193

Geographic Concentration

Nashua	65	59%
Manchester	12	11%
Hudson	11	10%
Merrimack	10	9%
Milford	4	4%
Hollis	3	3%
Brookline	2	2%
Candia	1	1%
Goffstown	1	1%
Weare	1	1%
Total Families	110	

Percentage of Families Eligible for Free & Reduced Lunch (based on those who completed the Voluntary Low Income Report in October 2016)

30% F&R Eligible

Policy Needs

Through work with the Grant Committee and through discussions with our insurance provider, PRIMEX, we discovered an immediate need for the approval of a Whistleblower Policy. This policy is prepared for Board approval this evening.

Our Finance Manager has brought forward several finance policy needs. The extent of the needs have been identified through the independent audit process and are recommended through general accounting standards. We continue to work to develop these policies, including a Fixed Asset Capitalization Policy, to present to the Finance Committee.

The draft of the Building Access Policy is prepared. Our school leadership team is editing and revising the policy based on the availability of the new card access system and the need for distribution of physical interior keys. Upon completing the draft, it will be forwarded to the Policy Committee for final agreement before presentation to the Board for approval. The effort to develop the draft Building Access Policy has involved months of coordination between members of our school leadership team to investigate and determine a solution that will most comprehensively meet the needs of all our employees, while ensuring the integrity of the school's property and liability.

Curriculum

We are in the process of finalizing the Smarter Balanced Assessment (SBAC) schedule for the Spring 2017.

4th and 8th Grade students will participate in the Science NECAP.

Once the schedule is finalized with school leadership and teachers, parents will receive notification of the assessment schedule and suggestions for helping students prepare for these important tests.

The internal process of scheduling SBAC and NECAP assessment involves coordination between our School Leadership Team, our Special Education Teacher, the Section 504 Coordinator, the Specialist Teachers, The Classroom Teachers, The Support Staff, the IT Wizard/Computer Teacher, and our Office Manager/i4See Coordinator.

Volunteer Handbook

The Volunteer Handbook was originally developed before the school opened in 2014. I am in the process of working with our school leadership team, and with the participants of the Parent-Teacher Action Committee (PTAC) to update the handbook. Needed updates include important procedures for working in the building during the school day, including safety protocols. We are including job descriptions for volunteer opportunities with the objective of increasing parent volunteer engagement in the 2017-18 school year. Such opportunities will include planning events and assisting in the classrooms, fundraising ventures, and being an ambassador for the school. Opportunities are available to meet a variety of scheduling and time availability needs.

Facility

We continue to monitor and assess the cleaning contract needs of our school. The winter months present challenges with sand and salt tracking in on the floors. It is proving to be time consuming to our cleaning crew to clean the floors and keep up with all other priorities this month. Our school leadership team keeps in close communication with our cleaning company to prioritize and ensure a clean facility within budget.

We are looking to create a culture of responsibility amongst our students and staff, encouraging everyone to pick up after themselves. We plan to implement new procedures for end of day to ask students and teachers to tie up trash bags in their rooms, sweep floors, and put up chairs (much of which is currently part of the routine) to assist in facility cleanliness.

On Wednesday, February 15, 2017, GCCSA hosted approximately 200 infants, children, and staff from the YMCA due to an evacuation of their facility. The event went smoothly for all involved, with timely and safe evacuation for the YMCA facility and an easy accommodation in our building. Noise from the additional young people in the Great Room was a factor for the two hours the guests stayed with us while the gas leak was repaired at the YMCA, though GCCSA students and teachers were flexible, patient, and hospitable. After the event, I spoke with the Directors at the YMCA. We processed the event and were able to learn from communication needs during the evacuation to better prepare for a future event. Their takeaways will help our GCCSA staff to prepare for a similar evacuation emergency. One major takeaway involved the ability to quickly communicate with parents. As such, GCCSA teachers will be instructed to take their laptop with them during an evacuation for the ability to link up to a wifi network off site and access the Sycamore School Management Database for parent contact information. By the Director having her cell phone and laptop available during an evacuation, I will be able to access the Remind Text Messaging and Sycamore systems.

Events

Library Day

Gate City Charter School for the Arts hosted "Library Day" on Friday, February 17, 2017. Students and teachers dressed in costumes inspired by favorite storybook characters as a celebration of literacy. Our school also celebrated the volunteers who built and organized our school library. Mandy Darah is a Gate City Charter School for the Arts parent and volunteer who assisted in the expansion of our school library. She categorized and catalogued books. On Library Day, Mandy Darah met with each class of students to introduce the searchable online card catalog and to invite students to borrow books and keep reading. Debbie Christianson is a Gate City Charter School for the Arts parent and volunteer who led the efforts to build the original school library. Her literary dreams have continued to grow over the three years since the school has opened. Jennifer Berube, third grade teacher, organized the day's events. Costumes included teachers dressed as Miss Frizzle from Magic School Bus, Amelia Bedelia, and "the Pigeon" from Don't Let the Pigeon Stay Up Late. Student costumes included Harry Potter, The Very Hungry Caterpillar, the Mad Hatter, the Queen of Hearts, and "I Love You Stinky Face."

6th Grade Performance of The Odyssey

One of the English Language Arts standards is to identify and comprehend a variety of genres of literature. As a quality example of a myth, the **Wit and Wisdom** curriculum includes the study of Homer's "The Odyssey." Our sixth grade teacher, Ms. Alvarado, asked for coaching from our Deputy Director, Mrs. Kosofsky, for how to

facilitate a theater production with students. The result was a phenomenal production of "The Odyssey," including memorized script, costumes, scenery and props. The play was performed for other GCCSA students, 6th grade parents, and grandparents on Friday, February 17, 2017.

"Middle School" Dance

Students in grades 6, 7, and 8 hosted their second dance of the year on Friday, February 17, 2017. Students organized the event with the assistance of a teacher advisor. In addition to myself, Mrs. Kosofsky, Mrs. Fritz, Ms. Alvarado, Mr. Finnell, and eight parents chaperoned the dance. Funds raised at the event will contribute to the costs of 8th grade events - graduation and Canobie Lake Park trip.

Professional Development Day for Teachers and Staff - February 20, 2017

All teachers and staff, as well as the school directors, participated in a day a professional development on the topic of executive functioning. Noel Foy from AAMPE Brain Based Learning led the training, which included topics of metacognition, stress and brain development, growth mindset, and how executive functioning affects student learning. Ms. Foy will return on a different occasion to observe teachers in classrooms, conduct model lessons, and coach teachers in the topic of executive functioning.

Comeback Kitchen Table Project

GCCSA is partnering with the Nashua Public Library and The Revolving Museum to build a table and chairs for the Comeback Kitchen Table project. The project will be built at our school facility, then moved to the Nashua Public Library.

In addition to building a table and chairs from recycled books, students will make Origami and paper sculpture using the pages from recycled books. On the day of the installation of our art at the Nashua Public Library, there will be theater performances around the kitchen table.

The Comeback Kitchen Table project is an initiative to bring public art and focus to Downtown Nashua. City Arts Nashua has contracted with Jerry Beck of The Revolving Museum to work with educators, artists, and Downtown businesses to create a series of kitchen table artworks. Comeback Kitchen Table will explore the role of the kitchen table, including the social relationship between family members, health concern, problem solving, and creativity. The project will emphasize the importance of face-to-face gatherings of family networks, and the importance of conversation.

For more information on the project, visit <https://downtownnashua.org/comeback-kitchen-tables/>

Gate City Charter School for the Arts
Director's Report
Respectfully Submitted March 21, 2017
Karin Cevalco, Executive Director



Arts Integrated Mission

Highlights

To highlight the Arts Integrated Mission of the Gate City Charter School for the Arts, some recent curriculum projects are included.

“What is Love?” Mural on Canvas: Work-in-progress by 8th Grade students. Based on their study of murals, and the style of such artists as Picasso, students first learned to create cubist faces depicting a range of emotions. Then the process of creating a mural on canvas began. Pairs of students created life-sized figures of on heavy tracing paper. Figures were transferred to canvas to fit together in one composition. Working all together on one 12' x12' canvas, the entire 8th grade is now painting this cubist inspired mural on canvas to answer the question, ‘What is Love.’ The mural is to be complete and on display by the GCCSA Arts Exhibition in May.

Cubist Students Mural - Art In Process - Grades 5-7: During the twice-a-week Arts Enrichment Block, students have been learning about the art form of Cubism. Each student outlined their full body onto heavy tracing paper in pencil. Then, using this body outline, each student created a cubist figure of him/her self. Each figure was then colored by markers, cut out, and hung on the many of the walls of the great room. Once the cubist student figures are grouped in theme placements, the figures will then be transferred directly onto to walls and a painted mural will brighten our school.

8th Grade Rap Battles: A few students suggested the idea of creating raps, based on their reading and interpretation of specific scenes and characters in Shakespeare’s *A Midsummer Night’s Dream*, the play they are studying this quarter.

2nd Grade Music Play: With Music Teacher Mrs. Jessica Mason, the second graders have been studying how music affects a person’s emotions and how it can be used in storytelling. After listening to some pieces of music, they created a story to coincide with the emotions that each piece evoked. The class then started to learn about the processes that it took to create a play. We added lines and the class created costumes and scenery. Students also learned about auditioning, blocking, and the importance of speaking strong so they can be heard. They will present their play for their parents and schoolmates in April.

K-4 Arts Collaborative - Patterns: Students in grades K-4 come together once a week in five multi-age groups to work together on a pattern project. Studying geometry concepts through play, students in a multiage learning experience solve problems, replicate patterns, explore symmetry, create and repeat patterns, and combine shapes to design unique images. One possible culmination to the K-4 collaborative this school year is designing and creating a quilt.

The Buddy Bench Project - The 4th grade students at the beginning of the school year discussed the concept of a Buddy Bench. The students wanted to create a seating area on the playground where someone could go to indicate that they are in need of a company - a Buddy. Fourth grade teacher Miss September Frost supported the students in their vision and solicited the carpentry efforts of GCCSA supporter Alex Flanders. Alex built a wooden bench and presented it to the 4th grade students. Students, then, painted the bench in vibrant designs and patterns. When the snow melts and Spring remains, the Buddy Bench will be installed on the GCCSA playground for our students to have a place to connect with each other in friendship.

Catapult Art - 5th and 6th Grades: As part of a study of Force, Motion, and Models in science, 5th and 6th grade students researched and designed catapults. Each student build a catapult and used it to launch paint, glitter, and other items onto a wooden canvas. The completed catapult artworks are on display in the GCCSA Great Room.

Upcoming Visual and Expressive Arts Experiences:

GCCSA Annual Arts Exhibition curated by Ms. Liz Keefe, Visual Arts Teacher, in May 2017, student work will be on display, additionally with performances by various student groups including Sing Disney.

GCCSA Literary Arts Magazine

Under the direction of Mrs. Jen Berube and Mrs. Jenn Blanchette, students have been invited to submit poetry, creative writing pieces, and visual art works for publication in the first edition of the Literary Arts Magazine in June 2017.

Data Dashboard

The following data presents a snapshot of the population of students in which we serve at Gate City Charter School for the Arts, an open enrollment public charter school.

Enrollment

Grade	Enrollment As of March 10, 2017	Number of Students on Wait list
K	19	64
1	19	17
2	15	28
3	19	31
4	20	24
5	19	7
6	19	25
7	19	4
8	19	10
TOTAL	168	210

Geographic Concentration

Nashua	65	59%
Manchester	12	11%
Hudson	11	10%
Merrimack	10	9%
Milford	4	4%
Hollis	3	3%
Brookline	2	2%
Candia	1	1%
Goffstown	1	1%
Weare	1	1%
Total Families	110	

Data Dashboard --Continued

Percentage of Families Eligible for Free & Reduced Lunch (based on those who completed the Voluntary Low Income Report in October 2016)

30% F&R Eligible

Special Education

Students Identified with IEP	29	17.26%
Students with 504 Plan (Disability Accommodations)	12	7.15%

Title I: Reading Intervention

Students eligible and serviced	20
Students eligible and waitlisted	25

2017 Kindergarten Enrollment Lottery

The 2017 Kindergarten Enrollment Lottery was scheduled for March 14, 2017, but was postponed due to a snowstorm and school closure. The new date is Tuesday, March 21, 2017 at 10:00 AM.

Rachel Gualco from the Nashua Public Library is going to assist in the drawing of the lottery numbers.

2017 Kindergarten Lottery Statistics:

There are 5 siblings on the 2017-18 kindergarten enrollment list.

There are 15 seats to fill through the lottery.

There are 29 students registered for the lottery.

Of those 29 students, there is one set of twins.

15 students are from Nashua.

4 students are from Merrimack.

4 students are from Manchester.

3 students are from Hooksett.

1 student is from Concord.

1 student is from Bedford.

1 student is from Milford.

For interest in the extended day enrichment program:

16 said they would definitely use the fee based extended day enrichment option.

15 said they may use the fee based extended day enrichment option.

3 said they will not use the fee based enrichment option.

Personnel

There currently are no new updates pertaining to personnel.

Our school leadership team has begun to assess the staffing needs for the 2017-18 school year.

Policy

A Building Access Policy has been submitted to the HR and Policy Committee for review and consideration.

Charter School Legislation

The House Finance Committee voted HB 584 Inexpedient to Legislate (ITL). HB 584 proposed a funding formula for public charter schools to provide per pupil funding at 55% the state average per public school student. Despite the ITL vote on HB 584, there are discussions about increased funding support for public charter schools in the next State budget.

NH Alliance for Public Charter Schools

The NH Alliance held its annual Best Practices conference on March 17, 2017 at The Founders Academy in Manchester. GCCSA teachers, support staff, administrators, and Board Members were in attendance.

2017-18 Proposed School Calendar

The proposed calendar is being presented at the March 2017 Board of Trustees meeting. The proposed calendar counts instructional hours within a set 180 day calendar.

Standardized Assessments

The Smarter Balanced Assessments Consortium (SBAC) for students in grades 3 through 8 and the Science NECAP for students in grade 4 and 8 will be administered during the month of May 2017

Gate City Charter School for the Arts

Director's Report

Respectfully Submitted April 18, 2017

Karin Cevalco, Executive Director

Arts Integrated Mission Highlights

To highlight the Arts Integrated Mission of the Gate City Charter School for the Arts, some recent curriculum projects are included.

8th Grade Production of A Midsummer Night's Dream: The Wit and Wisdom ELA curriculum includes a study of Shakespeare. In their Tuesday Enrichment class, the 8th graders worked with Mrs. Amanda Tanguay to put on a production of A Midsummer Night's Dream.

4th Grade NH History: 4th Grade has been studying civics and is learning about the branches of government, with a focus on New Hampshire history. Students went on a field trip to tour The NH State House. While in the Senate Hall, students took on the role of State Senators with pride, learning and applying through role playing the rules of decorum in the Senate.

3rd Grade Important Person Projects: Third grade students researched an important person in history to conduct research and create timelines. Additionally, students wrote biographies on a famous American. They designed paper portraits to represent the subject of their biographical research. Next, students will be creating "Bottle buddy" sculptures as a 3-d sculpture representation.

2nd Grade Birdhouses: Second grade students have been designing birdhouses for an art display that will be installed on a tree outside their classroom. It is a good time for this installation, as we have noticed the robins building their nests under the awning on our school patio.

1st Grade Author's Day: The first graders have been working on their writing through The Writer's Workshop. The process involves learning about editing and revising a piece of writing. Each student authored and illustrated a book which will be debuted for their parents at an April 21 author's event.

Nashua Plays: Three GCCSA students, Kiara Barrett, Brayden Lambert, and Alyjah McHugh, and their music teacher, Jessica Mason, participated in the Nashua Plays concert on April 12, 2017. The experience brings together middle school students from all Nashua schools to perform

in one ensemble. Students have to work with their individual music teachers throughout the winter months to prepare for the concert, with three ensemble rehearsals prior to the final concert.

Opera New Hampshire: Opera New Hampshire will be visiting GCCSA on Friday, April 21 as part of their tour of New Hampshire to bring free opera performance and education to New Hampshire's youth. We are grateful for their visit to our school.

Comeback Kitchen Table Project: GCCSA students, faculty, and staff participated in the Comeback Kitchen Table Project through City Arts Nashua and The Revolving Museum. Our project was sponsored in partnership with the Nashua Public Library (NPL). The theme for the table and chairs is "A Bookish Banquet." Using books as our medium, students worked with Artist Jerry Beck from the Revolving Museum, as well as Rachel Gaulco from the Nashua Public Library, to design a table, benches, and chairs from recycled books. GCCSA art teacher, Liz Keefe, created paper mache' bowls with our students to add as a dimensional object to the table surface. Additionally, GCCSA students created abstract sculptures using books, thinking about form, shape, and elements throughout the process. The sculptures will be on display in the NPL gallery throughout the month of May. To add to the gallery exhibit, each class at GCCSA created a canvas using recycled books. The result of each canvas was as unique as each teacher and group of students in our school, each class thinking about the books and pages from the books in different ways while creating a new masterpiece. The tables will be installed during the Downtown Art Festival on May 6, 2017. Our table will be placed in the courtyard at the NPL.

Data Dashboard

The following data presents a snapshot of the population of students in which we serve at Gate City Charter School for the Arts, an open enrollment public charter school.

Enrollment

Grade	Enrollment As of March 10, 2017	Number of Students on Wait list
K	19	49
1	19	13
2	15	38
3	19	30
4	21	27
5	19	9

6	19	20
7	18	6
8	20	4
TOTAL	169	196

Geographic Concentration

Nashua	65	59%
Manchester	12	11%
Hudson	11	10%
Merrimack	10	9%
Milford	4	4%
Hollis	3	3%
Brookline	2	2%
Candia	1	1%
Goffstown	1	1%
Weare	1	1%
Total Families	110	

Percentage of Families Eligible for Free & Reduced Lunch (based on those who completed the Voluntary Low Income Report in October 2016)

30% F&R Eligible

Special Education

Students Identified with IEP	29	17.26%
Students with 504 Plan (Disability Accommodations)	12	7.15%

Title I: Reading Intervention

Students eligible and serviced	20
Students eligible and waitlisted	25

2017-18 Enrollment

Based on the response from the kindergarten lottery and the Intent to Return forms from our current families, the following shows our current knowledge of 2017-18 enrollment. Seats will

be filled from the current wait lists, according to current GCCSA policy. The first of several open houses that will be scheduled will occur on Wednesday, April 19, 2017 at 4:30 PM.

Grade	Enrollment	Number of Students on Wait list
K	17	20
1	18	49
2	18	13
3	15	38
4	16	30
5	20	27
6	20	9
7	16	20
8	16	6
TOTAL	156	210

Personnel Update

Mrs. Amy Savoie has issued a letter of intent to resign at the end of the 2016-17 contract year, July 30, 2017, stating that her family is moving out of New Hampshire. We wish the Savoie family joy in their new home and Amy success in her future career endeavors.



MOUNTAIN VILLAGE CHARTER SCHOOL

13 Route 25 · Plymouth, NH 03264 · PHONE (603) 536-3900 · FAX (603) 947-0189 ·
www.mountainvillagecharterschool.org

May 21, 2018

Mr. Frank Edelblut, Commissioner
New Hampshire Department of Education
101 Pleasant Street
Concord, NH 03301-3494

Dear Commissioner Edelblut:

I am writing to request an extension of Mountain Village Charter School's current charter until the Department of Education is able to complete its portion of the process for our renewal. Listed below are the events that have occurred to date.

1. Intent to renew charter submitted to the DOE on May 21, 2018
2. Annual report completed on July 2017
3. Renewal application process was begun on May 18, 2018
4. Communicated with Jane Waterhouse, Charter School Administrator, on May 18, 2018 about our renewal. Jane and I have been in email communication beginning May 10, 2018 and have spoken on the phone about the extension steps on two occasions.
5. Our charter will expire on July 18, 2018

I have attached our annual report which serves as our renewal application.

Sincerely,

A handwritten signature in blue ink that reads "Katy Gautsch". The signature is fluid and cursive, with the first name "Katy" and last name "Gautsch" clearly distinguishable.

Katy Gautsch
Head of School

**MOUNTAIN VILLAGE CHARTER SCHOOL**13 Route 25 · Plymouth, NH 03264 · PHONE (603) 536-3900 · FAX (603) 947-0189 · www.mountainvillagecharterschool.org

June 1, 2018

Commissioner Frank Edelblut,
New Hampshire Department of Education
101 Pleasant Street
Concord, NH 03301-3860

Dear Commissioner Edelblut,

Greetings from the pioneering nature-based Montessori charter school, Mountain Village (MVCS)! The 2018/2019 school year will find us entering our fifth year of operation and adding seventh grade.

The Board of Trustees and I have spent a lot of time studying our projected enrollment and growth plan and have come up with an innovative way to manage our low enrollment numbers for our Upper Elementary/ Middle School for the 2018/2019 school year. Therefore, I am requesting a change to our charter growth plan for one full school year.

For the 2018/2019 school year we planned to add one seventh-grade class with one full-time lead teacher. This new Middle School position would be added to the two Upper Elementary (grades 4-6) classes that are currently staffed with two full time lead teachers, one full time assistant teacher and one part time assistant teacher. Because of our current enrollment projections for next year, we propose changing the class grouping to: one 4th and 5th grade classroom and one 6th and 7th grade classroom. This grouping would mean that grades 4-7 are fully staffed with two full time lead teachers and two full time assistant teachers, allowing us to postpone the hiring of a third full time lead teacher.

MVCS will realize many benefits from this plan. For example, this strategy allows us to remain true to our multi-age classroom design. Also, our current projected enrollment numbers support this change and will allow us to get much closer to full enrollment for the 2018/2019 school year in our Upper Elementary/ Middle School. And importantly, we would only need to hire one additional full-time assistant teacher, a substantial cost savings for our budget.

The 2019/2020 school year will function per the original plan. There will again be two Upper Elementary (4th-6th grade) classrooms and we will add one 7th-8th grade classroom.

2018/2019 Upper Elementary/ Middle School enrollment	2019/2020 Upper Elementary/ Middle School enrollment
One 4 th and 5 th grade classroom = 21 total students	Two 4 th -6 th grade classrooms = 20 students per classroom, 40 total students
One 6 th and 7 th grade classroom = 23 total students	One 7 th -8 th grade classroom = 23 total students

I will attend the July 11, 2018 Board of Education meeting to answer questions related to this request and am available at any time before that date as well.

Sincerely,

Katy Gautsch
Head of School

www.mountainvillagecharterschool.org

May 30, 2018

State Board of Education
101 Pleasant Street
Concord, NH 03301

State Board of Education:

Thank you for giving us the opportunity to review, on behalf of the people of New Hampshire, the state social studies standards. We are gratified to see that the Board of Education is focusing on improving the state social studies standards to make them rich and rigorous to help better prepare our students for full lives as informed, responsible citizens of our republic.

In reviewing the task before us, it has become clear that the focus of this panel should be shifted. The Department of Education is equipped to conduct a far more thorough standards review on behalf of the Board of Education than this panel can reasonably be expected to undertake. Rather than conduct a rival standards review, we write to request a new mission.

We ask that the Board of Education charge us with conducting a review of social studies instruction in New Hampshire. We would like to spend the next year examining thoroughly the quality of social studies education provided in New Hampshire's public schools. We would like to focus particular attention on professional development, the time and resources devoted to social studies instruction and the balance between skills and discipline-specific knowledge. We believe that only such a review can guide New Hampshire in improving social studies education and restoring it to its proper place as one of the central pillars of the curriculum.

While the Department of Education is working on social studies standards, no one will be doing a comprehensive review of social studies education in the state. We ask that you let us conduct this review and report our results to you by July of 2019. We believe that this will be a far more productive use of our time that will deliver much greater benefits for New Hampshire's children.

New Hampshire has committed to making students college and career ready. It also should commit to making them citizenship ready. With its large citizen-legislature and tradition of local self-governance, New Hampshire functions best when its people are as well-educated and as well-informed in social studies as they are in English language arts, mathematics, and science. Yet there are signs that social studies education is not as effective as it could be. What New Hampshire lacks is a clear understanding of what we do well and what we do poorly. We want to provide those answers. If you will let us focus on that critically important task, we believe that, together, we can help New Hampshire create a national model for civics education.

Sincerely,

The Social Studies Advisory Panel

New Hampshire
State Board of Education
Minutes of the Thursday, May 10, 2018 Meeting

AGENDA ITEM I. CALL TO ORDER

The regular meeting of the State Board of Education was convened at 9:20 a.m. at the State Department of Education, 101 Pleasant Street, Concord, New Hampshire. Drew Cline presided as Chairman.

Members present: Cindy Chagnon, Drew Cline, Chairman, Sally Griffin, Helen Honorow, Anne Lane, and Phil Nazzaro. Kate Cassady was not able to attend due to a prior commitment. Frank Edelblut, Commissioner of Education, was also present. Christine Brennan, Deputy Commissioner of Education, was not able to attend due to a prior commitment.

AGENDA ITEM II. PLEDGE OF ALLEGIANCE

Drew Cline, Chairman, led the Pledge of Allegiance.

AGENDA ITEM III. PUBLIC COMMENT

Jim O'Shaughnessy, attorney representing the Grantham School District requested, with regards to the Rulemaking Petition under Ed 215, that the Board delay action until the pending case under this rule is resolved.

Rebecca Dobles, a Family Success Behaviorist at Manchester School District, came before the Board to request a change in requirements or waivers be added back into the Administrative Rule allowing individuals with a master's degree in social work to become certified without taking the PRAXI teachers exam. She noted that this standardized test is designed specifically for classroom teachers and having to take this exam creates a major barrier for school social workers.

AGENDA ITEM IV. SPECIAL PRESENTATIONS

A. Mascoma Valley Regional School District Apportionment Change Request – Debra Ford, Business Administrator for the Mascoma Valley Regional School District (MVRSD) explained that last summer a school board subcommittee comprised of community members from each town reviewed the current apportionment formulas. The MVRSD voters approved the change to one based on 100% average daily membership averaged over the most recent three years available and is seeking approval from this Board to make the change. The cooperative was formed on July 1, 1963 and it is not foreseen that

any of the five towns will want to pull out of the agreement and there has been no discussion around this possibility.

MOTION: Cindy Chagnon made the following motion, seconded by Ann Lane, that the State Board of Education approves Mascoma Valley Regional School District Apportionment Change Request.

VOTE: The motion was approved by vote of the State Board of Education with the Chairman abstaining.

B. Student/Litchfield School Board – SB-FY-18-01-009

Ms. Tracy Chen, Parent, requested the session be nonpublic.

MOTION: Phil Nazzaro made the following motion, seconded by Cindy Chagnon, that the State Board of Education enter into nonpublic session per RSA 91-A:3, II(c).

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Cindy Chagnon made the following motion, seconded by Ann Lane that the State Board of Education returns to public session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Phil Nazzaro made the following motion, seconded by Ann Lane, that the State Board of Education seal the minutes of the nonpublic session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

The nonpublic session decision of the State Board of Education on Student versus Litchfield School Board was unanimous to accept the Hearing Officer's report and concluded there was Manifest Educational Hardship, and the student should be assigned to Pinkerton Academy for her last two years of academic work there or until she graduates.

C. Student/Rye School Board – SB-FY-18-02-011

Chairman Cline informed the Board that the parents had submitted a withdrawal. The parents were present and stated they were told by Stephen Berwick, the Coordinator of Dispute Resolution and Constituent Complaints for the department, that they would have their allotted ten minutes to speak before the Board about their frustrations and issues with the process. Chairman Cline offered his opinion that if the petition was withdrawn there was nothing to speak about. Ms. Honorow stated that issue before the Board was the recommendation from the Hearing Officer that the State Board of Education approve the withdrawal. Chairman Cline noted for the record the only Board action will be on the Hearing Officer's report and recommendation to accept the withdrawal and added that no one was opposed to hearing the parent's issues, but this was not the correct format for doing so.

MOTION: Helen Honorow made the following motion, seconded by Sally Griffin, that the State Board of Education to enter into nonpublic session per RSA 91-A:3, II(I) to discuss procedural questions with legal counsel.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Helen Honorow made the following motion, seconded by Cindy Chagnon that the State Board of Education returns to public session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Phil Nazzaro made the following motion, seconded by Cindy Chagnon, that the State Board of Education seal the minutes of the nonpublic session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

Chairman Cline explained different options that the Board could take into consideration to accommodate the parent's wish to be heard. After discussion of the options outlined it was the parent's choice to withdraw the withdrawal and continue with the process.

MOTION: Helen Honorow made the following motion, seconded by Phil Nazzaro, that the State Board of Education accepts the

parent's request to reinstate this case and remand it back to the Hearing Officer for a hearing on its merits.

VOTE: The motion was approved by a unanimous vote of the State Board of Education with the Chairman abstaining.

D. Student/Rochester School Board – SB-FY-18-02-012

The parent requested the session be nonpublic.

MOTION: Helen Honorow made the following motion, seconded by Phil Nazzaro, that the State Board of Education enter into nonpublic session per RSA 91-A:3, II(c).

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Cindy Chagnon made the following motion, seconded by Phil Nazzaro that the State Board of Education returns to public session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Helen Honorow made the following motion, seconded by Cindy Chagnon, that the State Board of Education seal the minutes of the nonpublic session.

VOTE: The motion was approved by a unanimous vote of the State Board of Education with the Chairman abstaining.

The nonpublic session decision of the State Board of Education on Student versus Rochester School Board was a 4-1 vote, with the chairman abstaining, to accept the Hearing Officer's report and recommendation to uphold the decision of the school board.

E. Approval of Professional Educator Preparation Programs at New Hampshire Technical Institute (NHTI) - Mary Ford, NHDOE Liaison Consultant, provided an overview of the review process undertaken of the ten NHTI professional educator preparation programs conducted by five reviewers who are experts in their fields. The site visit was conducted February 12, 13, and 14, 2018 and included an in-depth review of program materials, data, comprehensive continuous improvement model, clinical practice model, as well as program assessment. These are outstanding programs and a commendation was made

for NHTI's decision to focus on critical shortage areas such as Special Education, English for speakers of other languages, as well as focusing on math and science, which are critical areas of need in New Hampshire. There is also a focus on career changes for educators which allows for a change to the profile of educators and the changing levels of expertise. The quality of their candidates was evidenced by the significantly higher minimum qualifying score required for PRAXIS II from the math and science completers.

The one suggestion made by the reviewers was that NHTI better articulate and formalize their systemized approach. The committee presented the report to the Council for Teacher Education and they have recommended the seven-year approval across all programs.

Helen Honorow stated it was a good report and she appreciated the thoroughness of the evaluation. She asked that the suggestion to formalize their systemized approach be stronger than a suggestion. Ms. Ford explained why it was worded as a suggestion rather than a recommendation and noted that it can be included as a requirement in the annual report.

Ann Lane commended them for addressing critical shortage areas and as well as having the flexibility to place teacher candidates in communities where there are critical shortages.

MOTION: Cindy Chagnon made the following motion, seconded by Ann Lane, that the State Board of Education grants full program approval for seven years, expiring on February 27, 2025 to NHTI, Concord's Community College for their educator preparation programs leading to New Hampshire educator certification. NHTI, Concord's Community College will be required to submit the customary Annual Report on or before August 31, 2019.

VOTE: The motion was approved by a unanimous vote of the State Board of Education with the Chairman abstaining.

AGENDA ITEM V. OPEN BOARD DISCUSSIONS

A. Rule Making Petition under Ed 215

The State Board of Education has received a petition from Tanya McIntire requesting the Board reopen the Manifest Educational Hardship Rules recently completed.

Ms. Honorow stated under the statute Ms. McIntire has the right to bring a petition to the Board, but she does not believe the Board's statutory authority includes modifying regulations in the way Ms. McIntire has suggested. She

added this was an extensive rulemaking process that included public hearings, public comment, comments from JLCAR, and this Board feels the regulations are consistent with the statute, and at this time, rulemaking should not be reopened. Ms. Chagnon agreed and suggested the Chairman work with the Board's attorney to draft a response document.

MOTION: Helen Honorow made the following motion, seconded by Ann Lane, that the State Board of Education declines the request to reopen rulemaking related to Manifest Educational Hardship. The State Board of Education has considered the petition and the request exceeds the statutory authority provided in the statute, and that the thorough rulemaking process in which we engaged included an opportunity for all stakeholders to submit testimony and comments and it would not be appropriate to reopen rulemaking at this time.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

In other business, Ms. Adams noted to the Board that a September date is being considered for the Board's retreat and asked that the Board members

please email her dates of availability. Chairman Cline added that it was his preference to hold the retreat no later than October.

On the road meeting plans are to visit the Academy of Science and Design next spring and the Board still needs to determine a location for a meeting in the North Country this fall.

AGENDA ITEM VI. LEGISLATIVE ISSUES/RULES

A. 12:00-12:30 PM – PUBLIC HEARING – Basic Academic Skills (Ed 513.01) Amendment to Existing Rules in Response to HB 1498

The Public Hearing opened at 12:15 p.m.

- Scott Mayotte, a Teacher at Concord Regional Technical Center was before the Board to speak in favor of this amendment and share his thoughts and experiences about his transition to teaching after 18 years in the automotive technology industry.
- Dan Bennett, of the New Hampshire Automobile Dealers Association, NHADA, provided written testimony in support of the rule change. There is a critical need for trained employees and NHADA is a partner with high schools and the CTEs in 20

automotive programs. The change is also supported by the Automotive Education Foundation and the Legislative Advisory Council.

- Josh Reap, President of the Association of Builders and Contractors of New Hampshire and Vermont also spoke in support of the change.
- Val Zanchuk, President, Graphicast, Inc., spoke in support of the change on behalf the manufacturing community where there is also a critical need for trained employees.
- Barney Keenan, retired Dean of Granite State College, former 6-year member of the Professional Standards Board, and 12-year member of the Council of Teacher Education, spoke in support of the rule change. He feels that this rule change provides an onramp to prospective candidates to the educator preparation process while maintaining all the professional education standards. It allows for more flexibility to provide the training needed for those transitioning to teaching.

Ms. Chagnon thanked everyone for speaking and noted this is an area where continued work with business and industry helps in remediating problems. Chairman Cline discussed with the public speakers ideas for possible solutions to address trades where formal certification or credentials were not available.

Ms. Honorow noted to Mr. Keenan that he changed her perspective on this by affirming the educational requirements for teachers do not change with this rule change. She is more comfortable with the rule change and thanked him for his insightful testimony.

Commissioner Edelblut responded to questions around the addition of paragraph (b) (3) in the rule. Commissioner Edelblut noted that the addition of this paragraph was not necessary and explained how it was redundant.

Mr. Keenan explained the process for assessment of standards for candidates with follow-up development plans to assure candidates are fully prepared prior to full certification. The board thanked him for providing clarity to this process.

The Public Hearing closed at 12:55 p.m.

B. 12:30 AM - 1:00 PM – PUBLIC HEARING – Mathematics Teacher; General Requirements (Ed 507.26); Middle Level (Ed 507.27); Upper Level (Ed 612.17); Mathematics – Middle Level (Ed 612.17) and Mathematics – Upper Level (Ed 612.18)

The Public Hearing opened at 12:55 PM

There was no public comment.

The Public Hearing was closed.

C. Initial Proposal – Educational Interpreter/Transliterators for Children and Youth Ages 3-21 (Ed 507.35 and Ed 612.36)

Mr. William Ross from the DOE Bureau of Credentialing, and Laurie Gilbert, teacher for the deaf and hard of hearing at Nashua School District, and member of the review committee, provided the background for work conducted to complete revisions to the rules to reflect the level of knowledge and skill believed most effective for children who are deaf and hard of hearing. They provided copies of a research study *Patterns of Practice: Current Investigations of Educational Interpreting*, that noted a lack of consistency in state standards and that the existing standards are set too low. They noted that increasing requirements to a bachelor's degree will bring the educational requirement for educational interpreters/transliterators to a level more on par with other related service providers.

Ms. Lane voiced concern that raising requirements to a bachelor's degree will eliminate dedicated and qualified candidates who hold associate degrees. Mr. Ross noted that National Interpreters Certification requires a bachelor's degree. In response to Ms. Lane's question about critical shortage he stated

there are not enough positions in the state to meet the minimum requirements to be included in the critical shortage survey.

Mr. Nazzaro noted the proposed requirements would not allow a skilled interpreter with an associate degree to be in a classroom. Mr. Ross responded that the way the rule was written it would allow grandfathering for those teachers currently in their positions.

Ms. Chagnon voiced her concern that having a bachelor's degree does not necessarily make a better transliterator considering the wide-range of degree options. She noted that the Board went through this process with nurses and found it was not realistic and could limit the number of candidates available.

Ms. Honorow stated this is an initial proposal that will go out for public comment and the concerns and issues raised would be addressed at that time. She proposed that the Board move forward with this initial proposal and set a public hearing date.

Chairman Cline stated nothing presented today has convinced him to support the change and that there is a connection between interpreter skills and having bachelor's degree.

MOTION: Helen Honorow made the following motion, seconded by Cindy Chagnon that the State Board of Education approve the Initial Proposal for Ed 507.35 and Ed 612.36, Educational Interpreter/Transliterater and hold a Public Hearing for this rule on June 13, 2018.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

D. Initial Proposal – Digital Learning Specialist (Ed 507.22 and Ed 612.19) – Ms. Amanda Phelps from DOE introduced herself and other representatives present and provided an executive summary and a letter explaining why changes were necessary. The National Educational Technology Standards are now called International Society for Technology in Education ISTE Standards, and the changes reflect updates in the evolution from basic computers and a broadening of education technology to digital learning, digital devices, software, and programming.

MOTION: Cindy Chagnon made the following motion, seconded by Ann Lane that the State Board of Education approve the Initial Proposal Digital Learning Specialist Ed 507.22 and Ed 612.19, Digital Learning Specialist and hold a Public Hearing for this rule on July 11, 2018.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

E. Adopt – Specialist in Assessment of Intellectual Functioning (SAIF) (Ed 507.19 and Ed 614.08) - This rule was before the Board last month and has been approved by JLCAR with editorial changes.

MOTION: Phil Nazzaro made the following motion, seconded by Cindy Chagnon, that the State Board of Education Adopt Ed 507.19 and Ed 614.08, Specialist in Assessment of Intellectual Functioning (SAIF) as written.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

F. Code of Ethics (Ed 505.07 and Ed 610.02) and Code of Conduct (Ed 501) Suggested Amendments - This item is on the agenda for discussion prior to the vote scheduled for next month. This was a long and complex process and Amanda Phelps from the Department of Education provided a summary of the process and noted there were changes due to investigative and suspension or revocation procedures as well as suggested changes for wording. The Bureau of Credentialing has requested a review of all rules and guidelines this change

will affect and that it will be conducted prior to finalization. The new version will also include the Office of Legislative Services (OLS) comments as well.

The Code of Ethics cannot be incorporated by reference per the OLS and a plan is being worked on to integrate this into the Code of Conduct. Chairman Cline, Commissioner Edelblut, and legal counsel will have ongoing communication to assure things are clear and easily understandable before this comes to the Board next month. All information should be provided to Board members for their review at least two weeks prior to the meeting.

AGENDA ITEM VII. REPORTS AND NEW DEPARTMENT BUSINESS

- A. The Founders Academy charter extension request
- B. Next Charter School charter extension request

Chairman Cline stated these items may be combined.

Mr. Dan Courter, representing the Founders Academy and representatives from the school was available to answer questions. Mr. Courter expressed his appreciation for the support and advice from Jane Waterhouse, the department's Charter School Administrator, through this process. The Board was extended an invitation to be present at the Academy on Monday, May 14th when Betsy DeVos, Secretary of the U.S. Department of Education will visit.

Joe Crawford of Next Charter School was also present to answer questions and stated all renewal documentation has been submitted with the request for extension.

MOTION: Cindy Chagnon made the following motion, seconded by Helen Honorow, Pursuant to Ed 318.12 and Ed 318.13 that the State Board of Education authorizes the extension of the charter of the Founders Academy Charter School and Next Charter School for a period of six months.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

In response to Mr. Nazzaro's question about having a formal process implemented to eliminate the need for the charter school extensions, Jane Waterhouse noted that the charter school renewals should be caught up by December 2018. This includes changes and notifications necessary due to an error discovered in the renewal requirement dates for some of the schools. The charter schools affected have been notified and will be coming before the Board for extensions in June. During the renewal process, follow-up will also be conducted to make sure the Department receives the required reports from the charter schools.

Ms. Honorow inquired as to the status of the charter school dashboard that was created and was told the dashboard was never completed by the contractor. She noted that a lot of good work was done and maybe the project can be resurrected.

AGENDA ITEM VIII. OLD BUSINESS

There was no old business.

AGENDA ITEM IX. CONSENT AGENDA

A. Meeting Minutes of April 12, 2018

MOTION: Cindy Chagnon made the following motion, seconded by Ann Lane, that the State Board of Education approves the Meeting Minutes of April 12, 2018, as amended.

VOTE: The motion was unanimously approved by vote of the State Board of Education with the Chairman abstaining.

B. Tuition Agreement – Stratford and Northumberland School Districts

C. A.R.E.A. Agreement between Rochester School Department and the Wakefield School District

Chairman Cline stated these can be combined.

MOTION: Cindy Chagnon made the following motion, seconded by Phil Nazzaro, that the State Board of Education approves the Tuition Agreement between Stratford and Northumberland School Districts, and the A.R.E.A. Agreement with the Rochester School Department and the Wakefield School District.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

Commissioner Edelblut inquired as to whether feedback should be provided to the districts regarding rewording needed in some of the agreements. Ms. Honorow explained there was discussion about this in the past. The Board's counsel reviews all agreements submitted to assure statutory compliance. Ms. Adams noted that if there are changes needed the attorney communicates that to her and Chairman Cline and she reaches out to school districts or business administrators making them aware of the problems and they respond with changes. Chairman Cline added that the general approach has been to have the agreements reviewed by the Attorney General's office to make sure the legal questions are addressed.

AGENDA ITEM X. TABLED ITEMS**A. Initial Proposal – Educational Interpreter/Transliterater for Children and Youth Ages 3-21 (Ed 507.35 and Ed 612.36)**

MOTION: Helen Honorow made the following motion, seconded by Ann Lane, that the State Board of Education removes this Initial Proposal from Tabled Items.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

AGENDA ITEM XI. NONPUBLIC SESSION

MOTION: Phil Nazzaro made the following motion, seconded by Cindy Chagnon, that the State Board of Education enter into nonpublic session per RSA 91-A:3, II(c).

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Phil Nazzaro made the following motion, seconded by Helen Honorow that the State Board of Education returns to public session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

MOTION: Phil Nazzaro made the following motion, seconded by Cindy Chagnon, that the State Board of Education seal the minutes of the nonpublic session.

VOTE: The motion was approved by roll call vote by State Board of Education members Cindy Chagnon, Drew Cline, Sally Griffin, Helen Honorow, Ann Lane, and Phil Nazzaro.

AGENDA ITEM XII. ADJOURNMENT

The meeting was adjourned at 2:00 PM

MOTION: Cindy Chagnon made a motion to adjourn, seconded by Sally Griffin.

VOTE: The motion was approved by unanimous vote of the State Board of Education with the Chairman abstaining.

Secretary

Pierre L. Couture
Superintendent
p.couture@sau35.org



Kristin Franklin, CPA
Business Manager
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State of New Hampshire
Atty. Dianna Fenton
Department of Education
101 Pleasant Street
Concord, NH 03301-3860

May 10, 2018

Dear Atty. Fenton,

Enclosed please find two copies of an amendment to the existing tuition agreement between the Landaff School District and the Lisbon Regional School District, as well as two copies of the existing agreement. As noted in the amendment, an error was discovered in the middle school tuition rate as stated in the existing agreement.

Please let me know if you have any questions or need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Kristin J. Franklin".

Kristin Franklin, CPA
Business Manager

Enclosures

AMENDMENT TO
LISBON -LANDAFF
TUITION AGREEMENT

This amendment is made to the LISBON-LANDAFF TUITION AGREEMENT previously executed by and entered into on the Thirteenth day of March 2017, by and between the Landaff School District of Landaff, County of Grafton, State of New Hampshire hereinafter referred to as Landaff, and the Lisbon Regional School District, County of Grafton, State of New Hampshire, hereinafter referred to as Lisbon.

It is mutually understood and agreed by and between the undersigned contracting parties that an error was made in the previously executed agreement, causing the tuition rate for middle school to be misstated. It is therefore mutually understood and agreed by and between the undersigned contracting parties to amend said previously executed agreement as follows:

Article 4, Paragraph 1 is changed to delete:

	<u>Tuition Rate</u>	<u>w/5% reduction</u>
High School	\$16,500	\$15,675
Middle School	\$14,880	\$14,136
Elementary	\$13,500	\$12,825
Kindergarten	\$13,500	\$12,825

And to replace it with:

	<u>Tuition Rate</u>	<u>w/5% reduction</u>
High School	\$16,500	\$15,675
Middle School	\$15,500	\$14,725
Elementary	\$13,500	\$12,825
Kindergarten	\$13,500	\$12,825

It is further mutually understood and agreed by and between the undersigned contracting that Paragraphs A, B, and C of Article 7 and Article 8 are identical and to amend said previously executed agreement as follows:

Article 7, Paragraphs A, B, and C are deleted in their entirety.

IN WITNESS WHEREOF, the parties to this agreement have, by their School Boards respectively hereunto set their hands and seals on the day noted above the signatures.

Date: 4/17/18

LANDAFF SCHOOL DISTRICT

[Signature]
Meghan Hamilton
Cathy Tarosh

Date: 5-9-18

LISBON REGIONAL SCHOOL DISTRICT

[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]

Date: -----

NH COMMISSIONER OF EDUCATION

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Kindergarten	\$13,500	\$12,825

It is further mutually understood and agreed by and between the undersigned contracting that Paragraphs A, B, and C of Article 7 and Article 8 are identical and to amend said previously executed agreement as follows:

Article 7, Paragraphs A, B, and C are deleted in their entirety.

IN WITNESS WHEREOF, the parties to this agreement have, by their School Boards respectively hereunto set their hands and seals on the day noted above the signatures.

Date: 4/17/18

LANDAFF SCHOOL DISTRICT

[Signature]
Meghan Hamilton
Cathy Larosh

Date: 5-9-18

LISBON REGIONAL SCHOOL DISTRICT

[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]
[Signature]

Date: _____

NH COMMISSIONER OF EDUCATION

**LISBON -LANDAFF
TUITION AGREEMENT**

AGREEMENT made and entered into this 13th of March 2017 by and between the Landaff School District of Landaff, County of Grafton, State of New Hampshire hereinafter referred to as Landaff, and the Lisbon Regional School District, County of Grafton, State of New Hampshire, hereinafter referred to as Lisbon.

WITNESSETH THAT:

WHEREAS, Landaff is desirous of having most of their students, Grades 4-12 attend school in Lisbon, and has authorized its School Board to enter into a five (5) year agreement, 2017-2022, providing for such attendance terminating on June 30, 2022.

WHEREAS, Lisbon is maintaining a school system which includes Grades 4-12 and its School Board has authority to enter into a tuition contract to receive students from Landaff and is willing to receive students and afford them a course of instruction to be given in the Lisbon School System, and

WHEREAS, Landaff and Lisbon are mutually aware of the educational and financial advantages to be enjoyed by both school districts through their association together under a five year contract, particularly in terms of the long-range improvement of the educational environments and most efficient use of the tax resources in both communities;

NOW, THEREFORE, in consideration of the mutual provisions and undertakings set forth, the parties agree as follows:

1. **Tuition Arrangement:** Landaff shall send its students, Grades 4 through 12, with the exceptions hereinafter noted, to Lisbon for schooling and shall be responsible for the transportation methods and all expenses in connection with such attendance, and Lisbon shall accept said pupils and be responsible for their education on the same terms and conditions, and provide them with the same opportunities for education and cultural advancement and improvement as currently exists. Special Education students from Landaff who are assigned to a special program or facility outside of Lisbon, whether the assignment is made by Landaff or Lisbon or otherwise, shall remain the responsibility of Landaff. Additional related services, i.e. speech, psychologist, etc. will be billed.

EXCEPTIONS:

- A. This tuition agreement shall provide an exception for those students who reside in South Landaff, whose driveways enter onto Route 112 or 116. The Landaff School Board reserves the right to assign these students to either SAU #23, Profile School or Lisbon Regional, and to approve tuition requests by those parents of students in South Landaff on an individual basis.
- B. This tuition agreement shall provide an exception for those students who participate in the Voucher System established at the March 2004 Annual

Meeting. The Landaff School Board reserves the right to approve tuition requests by those parents requesting such a voucher.

- C. However, should at least 90% of the students in grades 4 through 12 from Landaff, exclusive of those students identified in 1.A. above, attend Lisbon Regional the tuition rate will be reduced by 4% in addition to the 5% discount offered for a five year agreement.
 - D. However, should at least 85% of the students in grades 4 through 12 from Landaff, exclusive of those students identified in 1.A. above, attend Lisbon Regional the tuition rate will be reduced by 3% in addition to the 5% discount offered for a five year agreement.
 - E. However, should at least 80% of the students in grades 4 through 12 from Landaff, exclusive of those students identified in 1.A. above, attend Lisbon Regional the tuition rate will be reduced by 2% in addition to the 5% discount offered for a five year agreement.
- 2. Attendance Commencement: Attendance of Landaff students in the Lisbon School System pursuant to this agreement shall commence at the inception of the school year, 2017-2018 however for purposes of the percent Attendance discount the percent will be determined, for the whole year, by the number of Landaff students in attendance, exclusive of those students identified in 1A above, on October 1st.
 - 3. Termination of Contract: This contract shall be for a five year period beginning in 2017 and ending in June 2022. For purposes of this paragraph, a school year shall be considered as beginning July 1 and ending June 30 of the following year.
 - 4. Tuition Rate: The rate of tuition per year, shall not exceed the tuition cost per pupil for the prior year for Grades 4 through 12. For the 2017-2018 school year, the tuition rate shall be as follows:

	<u>Tuition Rate</u>	<u>w/5%reduction</u>
High School	\$16,500	\$15,675
Middle School	\$14,880	\$14,136
Elementary	\$13,500	\$12,825
Kindergarten	\$13,500	\$12,825

The fiscal year is July 1 to June 30. The tuition rate will not change for the First Two (2) years of this agreement (2017-2018 and 2018-2019). In the third through fifth years the increase will be a maximum of 1% each year. The tuition rate, shall be set no later than December 31 of each year preceding the year the charge is made and the Landaff School District shall be notified at that time. The tuition rate does not include out-of-district tuition/transportation, speech services, psychologist services and regular transportation. Extra-curricular and vocational transportation will be included.

the applicable per pupil tuition rate by the actual number of Landaff students attending the Lisbon School shall be paid in ten (10) monthly payments with an adjustment to be made, if necessary, for the percent of students attending on October 1st.

6. Assigned School -Exceptions: Lisbon shall be deemed the assigned school for Landaff students in Grades 4 through 12 for the purposes of school attendance laws with the exception of those students identified in section 1 A & B above.
7. Joint School Board Meetings: The School Boards of Landaff and Lisbon shall meet jointly at least biannually and as many other times as the Boards mutually deem advisable while this contract is in effect. It is agreed that the Landaff School District shall have a representative appointed by the Landaff School Board to serve on the Lisbon Regional Steering Committee.
 - A. On or before January 1 of each calendar year, either party may notify the other party of its desire to modify the terms and conditions of the Agreement, and shall submit to the other party its proposals for consideration not later than January 15th of that year.
 - B. The two (2) School Boards or their designated committees shall meet and confer on the submitted proposals no later than February 1 in order to reach a mutual agreement.
 - C. After discussion of any and all proposals made by both parties, the final decision for ratification of amending this Agreement shall require the approval of both School Boards.
8. Revisions to Agreement: This agreement may be amended during the prescribed duration period by mutual consent of both parties. It shall remain in effect as described in this document until altered by mutually accepted amendments reached through the following process:
 - A. On or before January 1 of each calendar year, either party may notify the other party of its desire to modify the terms and conditions of the Agreement, and shall submit to the other party its proposals for consideration not later than January 15th of that year.
 - B. The two (2) School Boards or their designated committees shall meet and confer on the submitted proposals no later than February 1 in order to reach a mutual agreement.
 - C. After discussion of any and all proposals made by both parties, the final decision for ratification of amending this Agreement shall require the approval of both School Boards.

IN WITNESS WHEREOF, the parties to this agreement have, by their School Boards respectively hereunto set their hands and seals on the day noted above the signatures.

Date: 3/28/17

LANDAFF SCHOOL DISTRICT

Chris Smith
Gail Yoush

Date: 3/28/17

LISBON REGIONAL SCHOOL DISTRICT

[Signature]
Rodney L. Grier
Arthur P. Borge
[Signature]
[Signature]
[Signature]

Date: 6-7-17

NH COMMISSIONER OF EDUCATION

[Signature]



School Administrative Unit #23

Bath ♦ Benton ♦ Haverhill Cooperative
Piermont ♦ Warren

IX, C

RECEIVED

MAY 02 2018

STATE DEPARTMENT
OF EDUCATION

Laurie Melanson
Superintendent

Nancy Schloss
Director of Special Education

April 30, 2018

Mr. Frank Edelblut, Commissioner of Education
NH Department of Education
101 Pleasant Street
Concord, NH 03301

Dear Commissioner Edelblut:

Enclosed please find the following original tuition agreements for your approval and signature for school year 2018-2019.

Bath and Haverhill Cooperative
Benton and Haverhill Cooperative
Piermont and Haverhill Cooperative

Please contact me if you should have any questions or concerns.

Thank you for your attention to this matter.

Sincerely,

Carol A. Smith
Administrative Assistant

/cs

Enclosure

**TUITION AGREEMENT
HAVERHILL COOPERATIVE AND BENTON
SCHOOL DISTRICTS**

THIS AGREEMENT entered into as of the 30th of April, 2018 by and between the Benton School District (Benton), located in the County of Grafton and the State of New Hampshire, and the Haverhill Cooperative School District (Haverhill), located in the County of Grafton and the State of New Hampshire.

WITNESSETH THAT

WHEREAS said Benton School District, which does not maintain a school, and is desirous of having its students attend school in said Haverhill Cooperative School District, and has authorized its School Board to enter into a contract therefore on the terms and conditions hereinafter set forth; and

WHEREAS said Haverhill Cooperative School District maintains schools approved by the State of New Hampshire Board of Education and bound by their rules and regulations, through its School Board, is willing to receive certain students from outside the district and to afford them the complete course of instruction now given in its schools;

NOW, THEREFORE, in consideration of the promise and of the mutual covenants and agreement hereinafter set forth it is mutually covenanted and agreed as follows:

1. This agreement shall become effective upon signing and shall remain in effect through school year 2018-2019.

2. Should either of the parties wish to extend this agreement beyond the 2018-2019 school year, written notice should be given the other party on or before January of the contract year. Any extension may be subject to renegotiation and mutual agreement.

3. Haverhill agrees to accept Benton students as tuition students in Haverhill School District schools, grades K-12. Such accepted students shall be subject to the rules and regulations pertaining to all Haverhill students. Haverhill further agrees to make available for such high school students facilities and a program of studies comparable in quality to that presently existing.

4. All Benton students in attendance shall be given equal opportunity with Haverhill students to participate in all school programs and activities.

5. Special Education placement of disabled students will be in accordance with State law and regulations.

6. Benton agrees to pay the discounted tuition rate of \$9,486.53 for grades 7-8 at the middle school, if 100% of the eligible 7th & 8th grade students attend Haverhill, with no further discounts applied to this rate. If 100% of the 7-8 grade students do not attend the middle school the rate and any discount will be the same as is charged for grades 4-6.

Benton agrees to pay Haverhill tuition (\$15,477.00 for high school, \$14,442.00 for grades 4-6 in middle school, and \$14,132.00 for grades K-3) less 4% if at least 50% of the eligible students attend Haverhill Schools; less 5% if at least 60% of the eligible students attend, less 6% if at least 70% of the eligible students attend, less 7% if at least 80% of the eligible students attend, less 8% if at least 90% of the eligible students attend. If 100% of the eligible students attend Haverhill schools, Benton shall pay Haverhill tuition less 10%. Haverhill agrees to give Benton a 2% discount if annual tuition costs are over \$400,000. Transportation costs for Benton students will be the responsibility of the Benton School District.

7. The term "eligible Benton students" as used above shall mean those Benton students enrolled in regular public school classes in grades K-12. The term shall not include educationally disabled children or students attending non-public schools.

8. Benton shall be responsible for the actual cost of special education services, which exceed the average cost of services available to all non-coded Haverhill and Benton students. Benton shall be solely responsible for all educationally related services and all other extraordinary costs of special education.

9. A special education surcharge of \$5,533 will be charged for any Benton student enrolled in the Life Skills Integration Program at WHS. If a student attending this program requires a full time IA, the surcharge will be reduced to \$2,500.

10. Haverhill shall be responsible for the identification, referral and routine screening of any Benton student who may need special educational services. Benton shall be invited to all IEP team meeting and attend such meetings at a mutually agreed time and place. Benton shall have the final say as the Local Educational Agency (LEA) in making final decisions as to program and placement.

11. Benton shall pay over to the Treasurer of the Haverhill Cooperative School District in a timely fashion all tuition payments and assessed special education costs. Tuition will be billed on a quarterly basis and is due and payable within 30 days.

12. If, at the end of the school year, a refund is due Benton School District for overpayment of tuition or assessed special education costs, Haverhill may pay to the Treasurer of the Benton School District any excess payments on or before June 30 of the school year in which said costs were paid or credit the Benton School District toward the next years cost.

13. Any Benton student in attendance in Haverhill schools at the time this Agreement may be terminated or expires will be accepted by Haverhill in return for timely payment of tuition in accord with the payment schedule set out above, at tuition rates which will be established annually, until the normal expected time of graduation for each student's class.

IN WITNESS WHEREOF, the parties hereto, acting by their respective School Boards, have executed this agreement in duplicate by the Chairperson or other duly authorized officer thereof as the day and year first above written.

BENTON SCHOOL DISTRICT

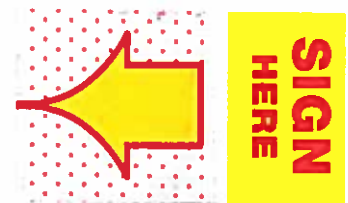
By: [Signature]
School Board Chair

Date: 4/25/18

HAVERHILL COOPERATIVE SCHOOL DISTRICT

By: [Signature]
School Board Chair

Date: 4/30/18



NH COMMISSIONER OF EDUCATION

By: _____

Date: _____

Frank Edelblut, Commissioner of Education

**TUITION AGREEMENT
HAVERHILL COOPERATIVE AND PIERMONT
SCHOOL DISTRICTS**

THIS AGREEMENT entered into as of the 10th day of April, 2018 by and between the Piermont School District (Piermont), located in the County of Grafton and the State of New Hampshire, and the Haverhill Cooperative School District (Haverhill), located in the County of Grafton and the State of New Hampshire.

WITNESSETH THAT

WHEREAS said Piermont School District, which does not maintain a high school, is desirous of having certain of its students, who seek a high school education, attend high school in said Haverhill Cooperative School District, and has authorized its School Board to enter into a contract therefore on the terms and conditions hereinafter set forth; and

WHEREAS said Haverhill Cooperative School District maintains a high school approved by the State of New Hampshire Board of Education and bound by their rules and regulations, through its School Board, is willing to receive certain students from outside the district and to afford them the complete course of instruction now given in its high school;

NOW, THEREFORE, in consideration of the promise and of the mutual covenants and agreement hereinafter set forth it is mutually covenanted and agreed as follows:

1. This agreement shall become effective upon signing and shall remain in effect through school year 2018-2019.

2. Should either of the parties wish to extend this agreement beyond the 2018-2019 school year, written notice should be given the other party on or before January of the contract year. Any extension may be subject to renegotiation and mutual agreement.

3. Haverhill agrees to accept Piermont students as tuition students in Haverhill School District schools, grades 9-12. Such accepted students shall be subject to the rules and regulations pertaining to all Haverhill students. Haverhill further agrees to make available for such high school students facilities and a program of studies comparable in quality to that presently existing.

4. All Piermont students in attendance shall be given equal opportunity with Haverhill students to participate in all school programs and activities.

5. Special Education placement of disabled students will be in accordance with State law and regulations.

6. Piermont agrees to pay Haverhill tuition (\$15,477.00 for high school) less 4% if at least 50% of the eligible students attend Haverhill Schools; less 5% if at least 60% of the eligible students attend, less 6% if at least 70% of the eligible students attend, less 7% if at least 80% of the eligible students attend, less 8% if at least 90% of the eligible students attend. If 100% of the eligible students attend Haverhill schools, Piermont shall pay Haverhill tuition less 10%. Haverhill agrees to give Piermont a 2% discount if annual tuition costs are over \$400,000.

7. The term "eligible Piermont students" as used above shall mean those Piermont students enrolled in regular public school classes in grade 9-12. The term shall not include educationally disabled children or students attending non-public schools.

8. Piermont shall be responsible for the actual cost of special education services, which exceed the average cost of services available to all non-coded Haverhill and Piermont students. Piermont shall be solely responsible for all educationally related services and all other extraordinary costs of special education.

9. Haverhill Cooperative School District shall be responsible for the identification, referral and routine screening of any Piermont student who may need special educational services. Piermont School District shall be invited to all IEP team meeting and attend such meetings at a mutually agreed time and place. Piermont School District shall have the final say as the Local Educational Agency (LEA) in making final decisions as to program and placement.

10. A special education surcharge of \$5,533 will be charged for any Piermont student enrolled in the Life Skills Integration Program at WHS. If a student attending this program requires a full time IA, the surcharge will be reduced to \$2,500.

11. Piermont shall pay over to the Treasurer of the Haverhill Cooperative School District in a timely fashion all tuition payments and assessed special education costs. Tuition will be billed on a quarterly basis and is due and payable within 30 days.

12. If, at the end of the school year, a refund is due the Piermont School District for overpayment of tuition or assessed special education costs, Haverhill may pay to the Treasurer of the Piermont School District any excess payments on or before June 30 of the school year in which said costs were paid or credit the Piermont School District toward the next years cost.

13. Any Piermont student in attendance in Haverhill schools at the time this Agreement may be terminated or expires will be accepted by Haverhill in return for timely payment of tuition in accord with the payment schedule set out above, at tuition rates which will be established annually, until the normal expected time of graduation for each student's class.

IN WITNESS WHEREOF, the parties hereto, acting by their respective School Boards, have executed this agreement in duplicate by the Chairperson or other duly authorized officer thereof as the day and year first above written.

PIERMONT SCHOOL DISTRICT

By: 
School Board Chair

Date: 10 April 2018

HAVERHILL COOPERATIVE SCHOOL DISTRICT

By: 
School Board Chair

Date: 4/2/18

NH COMMISSIONER OF EDUCATION

By: _____
Frank Edelblut, Commissioner of Education

Date: _____

**TUITION AGREEMENT
HAVERHILL COOPERATIVE AND BATH
SCHOOL DISTRICTS**

THIS AGREEMENT entered into as of the 2nd day of April 2018 by and between the Bath School District (Bath), located in the County of Grafton and the State of New Hampshire, and the Haverhill Cooperative School District (Haverhill), located in the County of Grafton and the State of New Hampshire.

WITNESSETH THAT

WHEREAS said Bath School District, which does not maintain a high school, is desirous of having certain of its students, who seek a high school education, attend high school in said Haverhill Cooperative School District, and has authorized its School Board to enter into a contract therefore on the terms and conditions hereinafter set forth; and

WHEREAS said Haverhill Cooperative School District maintains a high school approved by the State of New Hampshire Board of Education and bound by their rules and regulations, through its School Board, is willing to receive certain students from outside the district and to afford them the complete course of instruction now given in its high school;

NOW, THEREFORE, in consideration of the promise and of the mutual covenants and agreement hereinafter set forth it is mutually covenanted and agreed as follows:

1. This agreement shall become effective upon signing and shall remain in effect through school year 2018-2019.
2. Should either of the parties wish to extend this agreement beyond the 2018-2019 school year, written notice should be given the other party on or before January of the contract year. Any extension may be subject to renegotiation and mutual agreement.
3. Haverhill agrees to accept Bath students as tuition students in Haverhill School District schools, grades 7-12. Such accepted students shall be subject to the rules and regulations pertaining to all Haverhill students. Haverhill further agrees to make available for such high school students facilities and a program of studies comparable in quality to that presently existing.
4. All Bath students in attendance shall be given equal opportunity with Haverhill students to participate in all school programs and activities.
5. Special Education placement of disabled students will be in accordance with State law and regulations.
6. Bath agrees to pay Haverhill tuition (\$15,477.00 for high school and \$14,442.00 for middle school) less 4% if at least 50% of the eligible students attend Haverhill Schools; less 5% if at least 60% of the eligible students attend, less 6% if at least 70% of the eligible students attend, less 7% if at least 80% of the eligible students attend, less 8% if at least 90% of the eligible students attend. If 100% of the eligible students attend Haverhill schools, Bath shall pay Haverhill tuition less 10%. Haverhill agrees to give Bath a 2% discount if annual tuition costs are over \$400,000. Bath agrees to be responsible for the transportation of their eligible students.
7. The term "eligible Bath students" as used above shall mean those Bath students enrolled in regular public school classes in grade 7-12. The term shall not include educationally disabled children or students attending non-public schools.

8. Bath shall be responsible for the actual cost of special education services, which exceed the average cost of services available to all non-coded Haverhill and Bath students. Bath shall be solely responsible for all educationally related services and all other extraordinary costs of special education.

9. A special education surcharge of \$5,533 will be charged for any Bath student enrolled in the Life Skills Integration Program at WHS. If a student attending this program requires a full time IA, the surcharge will be reduced to \$2,500.

10. Haverhill Cooperative School District shall be responsible for the identification, referral and routine screening of any Bath student who may need special educational services. Bath School District shall be invited to all IEP team meeting and attend such meetings at a mutually agreed time and place. Bath School District shall have the final say as the Local Educational Agency (LEA) in making final decisions as to program and placement.

11. Bath shall pay over to the Treasurer of the Haverhill Cooperative School District in a timely fashion all tuition payments and assessed special education costs. Tuition will be billed on a quarterly basis and is due and payable within 30 days.

12. If, at the end of the school year, a refund is due the Bath School District for overpayment of tuition or assessed special education costs, Haverhill may pay to the Treasurer of the Bath School District any excess payments on or before June 30 of the school year in which said costs were paid or credit the Bath School District toward the next years cost.

13. Any Bath student in attendance in Haverhill schools at the time this Agreement may be terminated or expires will be accepted by Haverhill in return for timely payment of tuition in accord with the payment schedule set out above, at tuition rates which will be established annually, until the normal expected time of graduation for each student's class.

IN WITNESS WHEREOF, the parties hereto, acting by their respective School Boards, have executed this agreement in duplicate by the Chairperson or other duly authorized officer thereof as the day and year first above written.

BATH SCHOOL DISTRICT

By: _____

School Board Chair

Date: _____

4.9.2018

HAVERHILL COOPERATIVE SCHOOL DISTRICT

By: _____

School Board Chair

Date: _____

4/2/18

NH COMMISSIONER OF EDUCATION

By: _____

Frank Edelblut, Commissioner of Education

Date: _____