PETAC Meeting – March 9, 2011

Present: Dan Caron, Zal Vanchuk, Thelma Brown, Michele Munson, Dean Cascadden, Bob Arredondo, Karen White,

Absent: Joan Fossum, Lisa Danley, Judy Houston, Rep Norm Major, Greg Donald, Kevin Shyne, Bob Henry

Approval of Minutes: Motion to Accept: Val Zanchuk
Second: Bob Arredondo All approved

1. **Joan Fossum** will be taking the place of Kim Runion at our meetings. She has been in attendance many times before. Joan is in Washington, D.C. right now and we will welcome her next meeting.

2. **Reports**
   a. Dan Caron gave the report for Kevin Shyne since he could not be here. Dan gave a number of schools that Kevin is working with around the state applying for funds for pre-engineering programs.
   b. Michele Munson updated us on EPSCoR initiatives-A site will become live to host all the STEM activities in NH. It should be running soon. They wish to also have a searchable website for grants, research projects, etc. It will be like the main STEM /Coalition. The summer camps are in planning and this year we have 2 international groups coming. A new grant is coming to bring new opportunities into the state for research and innovation. The Tech Camp flyers will be sent out. It will be the last 3 weeks of July and first 2 weeks of August.

3. **Unfinished Business**
   a. Tech Ed Standards in Rulemaking-Dean Cascadden-The problem with opening up minimum standards is that everyone wants to put something into the changes. He will meet on Friday to begin the process with Ed Murdough. Dean is not sure who did the redacting on the document of the DRAFT proposed from 12-27-10. Middle Schools are claiming to be K-8 schools to avoid the minimum courses and high schools are stating they have courses online while they actually mean that a student would have to go out to take a course online. Everyone should review any suggestions they want and give them to Dean as he is on the committee.
   b. Endowment Fund – No changes were suggested to Val. Val shrunk down their application to a 1 page document that will go out to the PETAC members to review. Michele questioned whether we could put any legislative funds leftover from the $400,000, could we put them in the endowment fund? We need $25,000 to start.
   c. Engineering Survey – The DOE was supposed to have sent the survey under their account but it has not been sent out. Either Kim or Lisa needs to see where it is. Michele will check on it.
   d. Tech Ed Teacher Certification – Dean Cascadden – ready to go to the state school board. They need to have hearings before it can go to rules. Barbara Cowan is developing a college level class to meet the competencies to meet the CTE technology teacher standards. If this meets the rule making standards then
this will be how the CTE technology teacher becomes certified. The whole area will require a bachelor’s degree. Rules are still being written for other CTE teachers not exclusively in the technology area.

e. PLTW NE Counselors’ Conference—several cancelations due to snow. Over a 100 teachers, counselors and administrators attended. It went well and mostly all positive evaluations. They are proposing to do it in the fall instead of the winter next year. There will be summer training for 2 PLTW courses in NH…SIM course and POE at the end of July. Half sections will allow 7 participants. PLTW sets up how the course has to be run. John Locke is no longer the CEO of PLTW.

f. Committees – i. Web-site updating – Kevin said he has someone in the North Country who would do it. Jennifer is still doing it from Toronto. We want to keep it updated for events, training, camps, etc. There will be a link to the STEM NH site. 

ii. Endowment Fund – a committee to get donations. Three people will be needed to represent PETAC, school side, and the DOE side.

iii. EbD/PLTW funding for future courses - Bob has not been able to meet with Kevin yet on this.

iv. Marketing Engineering Tech Fest – a plan for the future

4. New Business

a. Real World Design Challenge 2011 - no one had information on this.

b. Housekeeping - Lisa and Kevin are not here to speak to this. Not sure if it has to do with committee members elections/term limits.

c. Marketing/Tech fest – there was a discussion of the tech fest from last year and how it can be expanded or held elsewhere. Karen spoke about her interest in having it at her school in Manchester and saving the plan for others to use.

Engineering Conference Day - there was a meeting at SERESC about 5 years ago[Di]….would schools support that and send a teacher? Districts budget for these types of activities.

d. National Center for Technology Literacy – Yvonne Spicer from the Museum of Science. We will ask her to attend our meeting in May.

5. Business for Next Meeting – 3 year terms for people serving on our council and who would like to be chair? We hope to get survey results as well and any endowment info.

-Running Start courses in PLTW courses and the possibility of losing them due to transferability. Parent pay for them thinking they will be accepted anywhere and they are not.

-The Office of Naval Research has grant money. UNH applied to get funds to get 50 ROV kits. The goal is in the next 3 years to have 60 teachers incorporate these projects into these schools. The teacher would have to be trained and develop lessons for 2 weeks in the summer.

6. Thank you letter to Kim Runion for serving with us.

Motion to adjourn: Val Zanchuk     Second: Michele Munson     Meeting adjourned at 9:45AM. The next meeting is May 11th.
**PETAC Meeting – Minutes from May 11, 2011**

**PRESENT:** Dan Caron, Karen White, Thelma Brown, Bob Arredondo, Joan Fossum, Judy Houston, Rep Norm Majors, Kevin Shyne

**ABSENT:** Val Zanchuk, Michele Munson, Bob Henry, Greg Donald, Lisa Danley, Dean Cascadden,

1. **Review of minutes** from March 9, 2011 meeting. Under “Present” change type error of “Zal Vanchuk” to “Val Zanchuk”. Motion to accept: Kevin Shyne Second: Thelma Brown Abstain: Judy Houston All in Favor: All

2. **Introduction of our guest speaker, Dr. Yvonne Spicer**, Vice President of Advocacy and Educational Partnerships from the National Center for Technological Literacy, Museum of Science, Boston
   - Dr. Spicer gave the vision for the center (NCTL) and how it was founded. Dr. Spicer has been involved in education for decades as a technology teacher of architecture, a CTE administrator and has also worked with the Dept of Ed in Massachusetts. She has worked on the development of Science/Technology/Engineering standards
   - NH is one of 8 states with Engineering in Science standards in which Dr. Spicer helped to develop with the Dept of Education. In 2014, there will be a Technology and Engineering framework with NAEP as an assessment.
   - TEC Review is a searchable database of curriculum resources mapped to standards both nationally and in NH.
   - Other online resources for elementary curriculum. [http://www.mos.org/ele/](http://www.mos.org/ele/)
   - Middle School – Building Math replacement units – It has WGBH Design Squad math units.
   - High School- Engineering the Future is for beginner students at low cost [www.keypress.com/ ETF](http://www.keypress.com/ETF)
   - The STEM plan for MA/FL/ME drives a three prong effect to encourage a plan for curriculum and teacher development. It becomes a line item for state education funding.
   - A discussion followed on whether there is a lead person at the governor’s office to spearhead a policy for STEM education?
   - There was a suggestion that Dr. Spicer present to the High Tech Council with Dan Caron
   - There was a discussion as to whether we should change the language in 188-E14 to include K-5 education. Rep. Majors would have to introduce the new legislation from May 25-June 8 for next year’s consideration. The members of PETAC were asked to read 188-E14, 15, and 16 to suggest any changes.

3. **Reports**–Kevin is currently working with 10 different school districts across the state to implement new engineering programs. Eight are for EbD and 2 are PLTW. About $260,000 has been spent with $200,000 of requests left to potentially approve. No money can go to the endowment fund. There is a discussion as to the possibility of the money being carried over but not yet decided. The funding was cut to $100,000 from $400,000. Michele Munson is away so the EPSCor report was tabled.
4- Unfinished Business
   a. Tech Ed Standards – Joan Fossum – they are still in rulemaking
   b. Endowment Fund – all set – just need the money.
   c. Engineering Survey – Michele was not present
   d. Tech Ed teacher certification – in rulemaking
   e. Ad Hoc committees-
      i. Web-site – Kevin Shyne – will be taken over soon.
      ii. Endowment Fund – Val was not present
      iii. EbD/PLTW – need to get together to see if there is funding
      iv. Tech Fest – Manchester is still interested. EPScor grant funds for it yet?

5- New Business
   a. Kevin is looking up the information on membership. He will be obtaining a new list of membership requirements from the governor’s office.
   b. Leadership of PETAC – it was suggested and approved that we keep the current members in place. Motion was made by Judy Houston and seconded by Rep. Majors. All voted in Favor. The members are:
      Chair: Dan Caron
      Vice Chair: Thelma Brown
      Secretary: Karen White
   c. Engineering Conference Day – This day was held at SERESC as far as up to 5 years ago for various educators and guidance counselors, from elementary on up.
   d. Naval research grant ROV’s – there was no further info on this.
   e. Running Start – complaints about the transferability of the credits. There continues to be ongoing discussions on this matter with Lisa Danley (DOE) and Chuck Annal (state board)
   f. STEM-NH NSF Grant – this work for grant applications is just beginning. NH is the only state in the country not to have gotten a National Science Foundation grant. There are 2 possible coming and there is no shortage of funds.
   g. Summer Meeting – Thelma offered for the meeting to be held at Energy Park in Manchester. There are 2 potential weeks that needed to be responded to for availability: Aug 9-11th or Aug 22-25th. We will be able to have lunch and a tour of the building. Please let Dan know which dates are best and we will choose the time when most can make it. 
   h. The committee asked that a letter be sent to the NH STEM Math teacher of the year from 2010 to acknowledge her great achievement. Her name is Stephanie Wheeler from the Manchester School District. Karen will do so and send the letter to her.
   i. Rep Majors asked if we would consider other recognition awards or certificates for outstanding teachers and students in engineering programs. There are many groups that do so, such as “ED”ies, ITEEA and the Joint Commission of Engineering Societies.

Motion to adjourn at 10:52 by Kevin Shyne  Seconded by Judy Houston
Please let Dan Caron know your availability for our summer meeting!
1. Welcome – introductions
2. Minutes – motion to accept: Thelma Brown Seconded: Val Zanchuk no corrections were noted
3. Reports:
   a- The Shyne Report - Kevin Shyne reported on his work. He has been doing a lot of “clean-up” of pre-engineering requests and reviewing application requests for funds. Kevin spoke of the many schools he is still working with and the progress of their interest in implementing pre-engineering programs. There are $350,000 of applications and $400,000 of funds. The leftover can be carried over to add to the next budget cycle amount of $100,000. Dan Caron asked for a list of those schools in NH who are PLTW/EbD. PSNH helped to come up with the shortfall of funds with the EbD licensing. There was a question as to whether there is a fee for EbD schools….they are asked to pay $500 toward licensing. If there are enough participants it will become self-funded. Kevin reported on the pre-engineering summer camp in Berlin. There should be letters coming from the Governor’s Office regarding our board positions.
   Mary Laturnau and Beth Doran met with Carol from PLTW on the foundation of what schools need to have for PLTW, articulations, training, etc.

   b- EPSCor-Michele Munson-Grant that ended last year was extended to continue their work through a NSF grant. Manchester and Nashua will be the areas for environmental education. Also some graduate research work will be funded. There was 60 million dollars brought to NH for research due to our being an EPSCor state. The mission of the last year of a 3 year grant to get more diverse groups into STEM careers will continue in Milford, Claremont, and also with the community colleges regarding why students are choosing to take engineering classes. Another project is a statewide STEM project to assess for students, teachers and parents to be involved in STEM. An outreach website that highlights all the STEM opportunities in NH has been created. Scholarships have also been provided for students to attend the UNH tech camp.

   c- Bob Arredondo is training this week at NHTI for PLTW. There are 7 teachers at the training, 3 from NH. Is this enough to sustain the training here in NH? There are other participants from other states as well. Dan said that less and less people are participating in the EbD trainings as well.
4. Unfinished Business (updates)
   a. Tech Ed standards in rulemaking - there doesn’t seem to be any new information on the status of this.
   b. Endowment Fund – Val Zanchuk – we need $25,000 to start the program but it is ready to go. We need pledges to accrue this. Then we can decide who gets the money and for what purpose. We direct the endowment fund as to how it will be distributed. We can also decide how much will be distributed each year. The monies will stay there even if PETAC no longer existed. We would direct the endowment fund on how to expend the funds.
   c. Engineering Survey – Michele – started 2 years ago by Michele and Val. It went to the career development bureau in March and has not been sent out. It may be that Lisa can get it going again. Kevin will check on this.
   d. Tech Ed teacher certification is still in rulemaking.
   e. Real World Design Challenge – Tom Duda – his school in Plymouth won the RWDC and he is now in charge of it at the state level. Tom will be looking into whether Project Running Start can apply for credit for students. Tom gave all the information for teams and will be available for assistance. In October, the information will be on the website. There are many supports for the problem statements and videos to assist. Mentors for engineering will have to assist in the process. Mary asked for the schools in NH who have participated. Tom will also come out to speak to the schools. You can still win without the project being complete. You can submit what you have done. The state report must be finished in February. Most teams spend 400 hours on the project. Only for high schools students with 3-7 on a team.
   f. Rep Norm Major did submit the K-12 legislative bill that we suggested. It may be a few months to hear on this.

5. New Business – 2011-12
   a. Membership Terms – new members - The governor said he would handle the membership letters personally. What do we do about those appointees who never show up? Dan asked Kevin to bring this up with the governor. Thelma read the membership who was supposed to be on the board. Certain appointments do not have a term. There used to be 6 superintendents as well.
   b. Develop a plan to build up the reserves for the charitable endowment fund - Val will work on this.
   c. Statewide STEM plan for NH – there is no real plan for NH- needed for grants and other planning. There is a group for the community college applying for a NSF/ATE grant and this piece is missing. Should we contribute to it? EPSCor is trying to do something as well. Michele will send something out to all of us on it. Several people have worked on it but it is incomplete. There is no statewide science or STEM coordinator for the state.
There are no specialization centers in NH as well. Kevin will make inquiries to Lisa Danley about this. EPSCor should be involved as they can touch everyone. Should we make recommendations like we did for tech standards? David Kelly from Christa McAuliffe(NH STEM) is willing to work with any teacher to start a VEX club for smaller competitions. Michele will send that information around.

d. PLTW funding as we do for EbD? We have $150,000 left for school funding. It can eventually be something we can do with our endowment funding. Bob may need to come up with a proposal for PETAC to consider.

e. Engineering Conference- and also Tech Fest- Manchester is still interested in doing one as well. Should we have a STEM awareness day instead of just engineering? We should call is “STEM”-fest?? Karen will work on this.

f. Internships – should we create a plan for internships to assist students to go out to companies? Thelma and Greg willing to work on this.

g. Recognition for teachers and programs-nominations can come from PLTW. We can give out certificates internally. The “Eddies” seem to be discouraging more awards since they are so full of them. Would a company underwrite our participation? It would cost $1000. We would have to decide if it were for a program or individual. Michele will work on this.

h. Continuous promotion of K-8 Tech and FACS – he would need to clarify more of what he means. It would look different for elementary vs. middle school.

i. Crosswalk of Museum of Science Engineering course with EbD and PLTW. Should we pay someone to do that? Kevin will check to see if there is any information left on this.

j. Revision of EbD and PLTW complete competencies for first 3 courses. The courses have all been revised. Kevin will check if the competencies have been as well. They are CASE and the PETAC website.

k. Logo/letterhead competition-we need something that encompasses all types of engineering.

6. Announcements-Walker building- Kevin will reserve the dates. We will stay with the middle of the month for meetings. September 20th will be our first meeting from 8:30-10:30.

   November 15th will be the next meeting
   January 11th will be the next meeting
   March 20th will be the next meeting
   May 15th will be our last meeting
   Dan Caron’s ice cream social will be Sept 24th!! All invited!
PETAC Agenda – September 20, 2011 – 8:30 – 10:30
Walker Building, NH DoE, Concord, NH

Attending: Judy Houston, Michele Munson, Mary Laturnau, Dan Caron, Karen White, Thelma Brown, Val Zanchuk, Bob Arredondo, Beth Doiran, Kevin Shyne, Bob Henry

Absent: Rep Norm Majors, Senator Molly Kelly, Lisa Danley, Greg Donald, Supt Dean Cascadden.

1. Welcome
2. Introductions
3. Minutes of August Meeting – Under “b” of Reports – change EPSCoR and “another project is statewide for students, teachers and parents to be involved in STEM.” Motion to accept as corrected – Michele Munson 2nded by Val Zanchuk – All approved.
4. Reports
   a. The Shyne Report-Kevin updated us on the many happenings he has been working on at Conant High School, Berlin (EbD and PLTW) with White Mtns Community College, Nashua Middle School, and SAU 36 asking for matching funds to connect to the pre-engineering program. PLTW will be moving to Indianapolis, IN as a money-saving opportunity. Bedford High is going to apply for funding for EbD. There are a few more schools looking to apply and Kevin is continuing to work with them. There will be $200,000 for the next biennium unless things shift in the next election.
   b. ESPCoR – Michele Munson-The state plan for STEM is still in question. ESPCoR was involved in planning with the higher education council but there is no state plan for STEM. They are finishing their final reports for the project. ESPCoR is involved in their grants but have never spoken of any interest in putting together a state plan. A statewide effort without funds would have little chance of success because school district decisions are localized. A website is about as far as we might get right now. We may want to schedule a workshop for next year.
   c. PLTW-Bob Arredondo-New management team again but the same funding source. Carolyn is still there. There are some new people from Indiana. The guidance counselor event is in October this year in New Haven, CT. NHTI – looking at the Running Start credit being offered. They wish to maintain the college credit portion but make it transferable. They will change the course numbers around and how they link up. Bob Henry would like to work with Bob Arredondo on that to make the credits transferable to UNH. The courses
are in different areas and don’t fit into a single area. There was also a
question about how PLTW is working to recruit students into PLTW if they
have the courses in the CTE center. There is still a stigma regarding the CTE
center education as not being college bound. It is always addressed at the
PLTW guidance counselor conference.

d. EdD-They had a leadership meeting lately and the message is that the
program extensions to go into robotics and scientific visualization have been
very successful. These are specific career courses being offered. Eventually
they would like to offer college credit.

5. Unfinished Business –
b.  Engineering Survey – has not gone out yet.
c.  Real World Design Challenge – no further updates from Tom Duda. Tom has asked
   for a list of those participating in pre-engineering courses to send them info.
d.  Tech Ed Teacher Certification – Dean was not present for the update.
e.  K-12 Engineering legislation – N Major was not present to give us further
   information

6. New Business for 2011-12 Brainstorm sessions
a.  Membership – all nominated? Most all have gotten their letters. Kevin will check on
    those that are mandatory and it was assumed that they always stay on.
b.  Develop a plan to build the reserves in the “Granite State K-12 Engineering
   Education Fund” – Val and Thelma – Thelma is taking the lead on the solicitation
   letter to send out to ask for funds. Thelma thought we should send a bi-fold
   brochure out with information as to what our fund would do. Dan thought we
   should attach a card with phone numbers and information that can be pulled off.
   Bob thought we might have a kick-off event that could draw the media. We might
   be able to have it at UNH with the Dean’s permission. We could also have a table at
   other events later. We could have some companies there to sponsor the event with
   a contribution made at the event. We should involve the High Tech Council. Would
   a raffle help to raise money? Can we get a yearly commitment from some
   companies for 5 years? Silver, Gold or Platinum support levels? The NH High Tech
   Council Education committee is meeting next week. The Governor’s Manufacturing
   Council will now be held on December (7th) and may be another event to have a
   table at. The cost per table is $500. Mary Laturnau already has a table at it. We
   need to consider all the engineering councils that especially represent companies.
   Judy Houston has offered to help. Think about getting on Fred Kocher’s “Sunday
   Morning show”.

c. STEM/Tech Fest in Manchester – Karen updated the PETAC board on the plans for January 21st. It will combine with an open house for the school. The CTE programs will be inviting their advisory business partners to set up tables as well as bringing in other educational partners.

d. Engineering Internships - Thelma and Greg are going to work on this but have not been able to get together yet. We are looking for internships for high school students during the school year and summer. Thelma will contact UNH to look at their program. Judy has a long list of engineers who have participated in programs and could be a possible lead.

e. Recognition program for teachers and programs – Dan Caron and Michele Munson - the NH Society for Professional Engineers but the problem is getting nominations. They have tons of promotional materials but usually it ends up only having the same schools nominating. Should we put in on the DOE “Key Messages” or the NH Principals’ Assoc.? Not sure if it the word not being out there, it is just getting a response. The teachers themselves are not applying. There might need to be a financial incentive for the nominee and the school. There are 2-3 people recognized. All nominees should get a certificate. It is given out at the engineering banquet in February. Should we think about something for student recognition? We could ask every EbD and PLTW school to nominate. The Science Engineering Expo could be a place to decide where the nominees could go and be recognized.

f. K-12 Engineering legislation – Norm Majors is not here. We are not sure what he sketched out but he is on the docket for the legislature. He has until December to make changes to that proposal. Are there any other ideas for changes? Changes to the PETAC are also part of this. Dan has been the only teacher on the board since it began. Should it be stipulated to have a teacher on the board as opposed to just having a teacher as public person? Could we ask a superintendent to have a teacher designation? We seem to have lost the interest of a number of superintendents’ who have been on the board. We can suggest to Norm to also write in a teacher into the legislation? The group thought against it as we should allow the superintendent to choose the best person. A guidance counselor would be great as well. Dan will send an email to Norm asking for the draft of his proposal to be forwarded to us.

g. Logo/Letterhead competition-Karen will ask her teachers for students to participate on this project.

7. Announcements
a. Next meeting , November 15, at the Walker Building in room 243 (all year)
c. Thelma also got PSNH in touch with the Girl Scouts- she doesn’t have all the details but will be trying to get more of the books that Yvonne Spicer sent. ESPCoR has funds to support the girls at tech-camp.

Motion to Adjourn – Val Zanchuk and seconded by Judy Houston. Adjourn at 10:10 AM

Next Meeting: November 15th, 2011

Future meeting dates:

January 11th
March 20th
May 15th
PETAC Agenda – November 15, 2011 – 8:30 – 10:30

Walker Building, NH DoE, Concord, NH

Attending: Judy Houston, Michele Munson, Mary Laturnau, Dan Caron, Thelma Brown, Bob Arredondo, Beth Doiran, Kevin Shyne, Bob Henry

Absent: Rep Norm Majors, Senator Molly Kelly, Lisa Danley, Greg Donald, Supt. Dean Cascadden, Karen White

1. Welcome
2. Introductions
3. Minutes of Sept. Meeting – Bob Henry  Accepted, Thelma seconded
4. Reports
   a. The Shyne Report- Conant still considering the MS application
      Academy of Science and Design still considering, Nashua working on the MS.
      Unity School has rebuilt a room for the pre-engineering- looking at PLTW.
      SAU 36 using EbD for HS and want to incorporate into the MS.
      Money list: hasn’t moved much.
      In a meeting with Greg Donald, he agreed to write out different options
      when purchasing Autodesk software, for example: buying outright vs. leasing
      the suite yearly for a set fee.  UNH buys it all and everyone can use it
      (unlimited seats). Other options, buy one and get 20 seats vs lease and get
      100 seats.
      Greg D. will compile a list of the different payment packages to distribute and
      place online.
   b. Laturnau Report: visiting all the schools. Will have report for Bob with
      questions. Most want some sort of professional development.
   c. PETAC would like names and numbers for the different information such as
      surveys, awards, etc.
   d. ESPCoR – National Conference a few weeks ago. Main day on Water
      Research, second energy, third- where do we go from here? If we want to
      have an interesting STEM must focus on the Middle School and High School,
      get more science in the elementary school. Draft if new NCLB draft –
      technology and innovation is only mentioned three times in the whole
      document. HUGE disconnect.
      NFS- RRI2 grant- planning session this week. Kevin is the lead person.
      Main focus is environmental research.
      STEM equity pipeline grant: Dec. 14 at Plymouth State College from 10-
      3:30(must register) to report on the projects- equity practices.
Trying to start a NH Data Base-it should be fully functioning by the end of the month and housed on the Stem-NH website. It will include different organizations, teachers, etc. that are available.

e. PLTW-Bob Arredondo- Had guidance councilor conference in CT and it was well attended. State Leader/Affiliates meeting was also held in Oct. and Bob met with new president Vince Bertrand. Running Start credits working with the curriculum changes to make it work and the UNH articulation agreement. Working on it with the curriculum changes. Major issue to address, other colleges require that “test C” must be made, must be a certified school, must have a grade of B or better. NHTI will adopt this.

f. EbD information: 3-5 curricula has been started and should be available in March. IT Technology ready to start. ITEAA magazine has articles on “How to Recruit Women and Girls to the STEM classroom”.

g. 4. Unfinished Business (updates)
   a. Tech Ed Standards in Rulemaking - still in process
   b. Tech Ed Teacher Certification-still in process
   c. Engineering Survey- M Munson: survey had 57 responses. Mostly 73% were HS. Many focused on HS part. They want to do pre-engineering. About ½ of the SAUs of the 92 responded. There is a list of schools that would like to be contacted. Different questions were discussed. Some of the questions had a lot of “not answered” because there were skip questions built in created to get some feedback from there. Some offer it for other credits but don’t list it in the course credits.
   d. K-12 Engineering legislation-still in process

5. New Business
   a. Vex Robotics Competitions- Dave Kelly received the Christa McAuliffe Sabbatical. NH-STEM http://simplerobotics.org. An alternative to the FIRST to have more kids to have experience.

Have training for teachers and students to create an educational website, create competitions for the robots, and try and find funding avenues to create teams. Dec. 3rd at Pembroke Academy (judges needed), Mt. Washington – January 15th, Vt. will have one Thetford Academy January 21st, Scrimmage at Wilton-Lynboro Feb. 25th, March 10th Northern NE VEX championship.
The cost of the VEX kit is around $1500-2000 per kits. Registration is $75 per team. Small tournament fee ($25.00)

Every year they introduce a new game.
Sponsored by Robotevents.com, vexrobotics.com,
VEX will add some support, on-line challenges, Autodesk inventor online challenge.
All of these will be posted on the PETAC website.
Demonstration of the robot and the process that works in the competition will also be there.
Goal would be to have competitions in each geographical location then have a statewide competition to culminate the areas. UNH wants to have a league that competes like a track/football meet, similar to Math counts,
Bob suggests having a location to ask questions and answer for a school that can set up a competition. Also, a league within the state without the USA trip unless they want to have it. Suggestion to have it as part of the sports budget; make it part of the team philosophy. Advantages to this: no mentor, kids do it all, can be done all year, game comes out in April and can be competitive all year long; 4 students per team. First have 35 students. Very hands on-design process is ever changing.
Report will be generated at the end of the report.
There is a middle school division. Good to have Lego League or Mindstorms first.

b. Develop a plan to build the reserves in the "Granite State K-12 Engineering Education Fund"- Thelma and Val met. Presence at some events in the state. Start with the Gov. Summit on Dec. 7th. Work on the engineering banquet in Feb. Tri-fold glossy brochure being designed by PSNH and will be funding the first printing. First draft due Dec. 1st to start. Will start asking for donations. Ideas that will be incorporated: gold, silver and bronze sponsorship. Spring have more of a one-on-one presence.

c. STEM/Tech Fest at Manchester: K White- hold for Karen at MST meeting in January.

d. Engineering internships: T Brown- no progress on this yet. Greg is no longer on this committee.

e. Recognition program for teachers and programs- recognition, spoke to SME people with the forms, Sent to all the tech teachers on the list. Dan Caron update. Will need to send list to teacher list from PLTW and Ebd

f. K-12 Engineering legislation- on hold until we hear from Norm Major

g. Appointments: Suggestions: Tech-Ed Concepts (Autodesk, rap man- rapid photo type), superintendent to be re-appointed then someone else.

h. Girls Scouts of Bedford: Energy everything, 4th and 8th grades. STEM. UNH Manchester campus, Six Saturdays

i. Thelma went to a Clemson University program on exposing Girls to Engineering.
6. Announcements
   a. MST has invited us to meet there in January—a group of students are working on a logo design and will present their plans to us.
   c. Future Meetings, March 20 and May 15.

   DIRECTIONS TO MST: Take 293 either E or W and get off at Exit 1 on S. Willow Street. Take S. Willow St. north away from the Mall of New Hampshire. Continue down S. Willow to the Mobil on the Run gas station. Turn right onto Weston Rd. Continue through 1 set of lights and up to the flashing red light. You should see Memorial High on your left and the sign for MST on the right. Take a right onto S. Porter St. Park in the back as the main entrance to MST is in the back of the building. Come up to the entrance and buzz in. We will be in the admin conference room through the main office.