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## NH K-12 MODEL SCIENCE COMPETENCIES

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| <b>Cross-Cutting Concepts</b>          |   |
| <b>Patterns</b>                        | Students will demonstrate the ability to observe and describe patterns in natural and human designed phenomena and use those patterns to support claims about the observed or predicted relationships among phenomena.  |
| <b>Cause and Effect</b>                | Students will demonstrate the ability to investigate, explain, and evaluate potential causal relationships by using evidence to support claims and predictions about the mechanisms that drive those relationships.   |
| <b>Scale, Proportion, and Quantity</b> | Students will demonstrate the ability to describe and represent the significance of changes in observable and non-observable phenomena in terms of relative scale, proportion, and quantity.  |
| <b>Systems and System Models</b>       | Students will demonstrate the ability to investigate and analyze a natural or human designed system in terms of its boundaries, inputs, outputs, interactions, and behaviors and use this information to develop a system model that can be used to understand and empirically evaluate the accuracy of models in terms of representing the underlying system.  |
| <b>Energy and Matter in Systems</b>    | Students will demonstrate the ability to analyze evidence from a variety of sources (investigations, models) to predict, connect and/or evaluate the cycling of matter and flow of energy within and between systems in order to understand, describe, or predict possibilities and limitations of systems.   |
| <b>Structure and Function</b>          | Students will demonstrate the ability to use evidence to support claims about the relationship among structure and function of natural and human designed objects.  |
| <b>Stability and Change of Systems</b> | Students will demonstrate the ability to investigate and analyze static and dynamic conditions of natural and human designed systems in order to explain and predict changes over time.   |
| <b>Nature of Science</b>               | Student will demonstrate the ability to work collaboratively and individually to generate testable questions or define problems, plan and conduct investigations using a variety of research methods in a various settings, analyze and interpret data, reason with evidence to construct explanations in light of existing theory and previous research, and effectively communicate the research processes and conclusions. |

TDD Access: Relay NH 711  
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