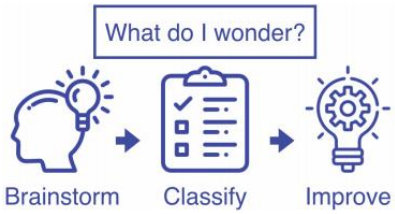
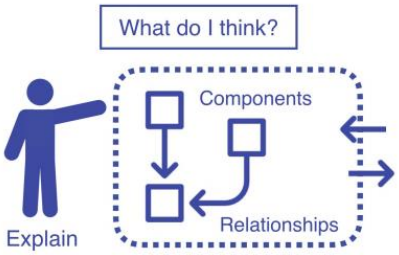
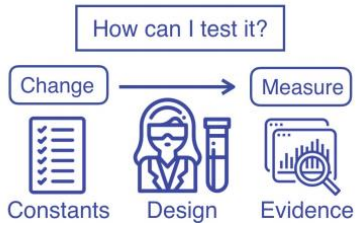
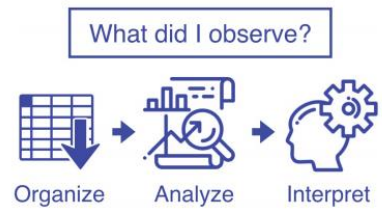
NTPS Next Generation Science Standards Grading Definitions
Kindergarten Report Card Insert

SCIENCE AND ENGINEERING PRACTICES	**Physical Science, Life Science, and Earth & Space Science** **Descriptions of what proficient students KNOW and DO**
Asking Questions (Science) and Defining Problems (Engineering)	**Students can generate scientific questions about observations, investigations, and conclusions.**  Example: *When participating in an investigation, students might ask "Why did the car change direction when it hit the other car?"*  Example: *Students find a solution to keep chocolates from melting at a birthday party.*
Developing and Using Models	**Students create models focused on describing, predicting or explaining the natural world and the relationships of its components *(parts).***  Example: *Students create a model of a natural resource cotton plant, and link it back to a product (sock). Or students might create a habitat for an organism (pill bugs).*
Planning and Carrying Out Investigations	**Students design or conduct investigations and gather data. Students make decisions about variables and procedures and refine their plans if necessary.**  Example: *When on a nature walk, students will collect data on foods different animals eat.*
Analyzing and Interpreting Data	**Students organize and interpret data to recognize patterns and relationships in the natural and designed world.**  Example: *Students fill out a graph to detemine force of a push or pull.*

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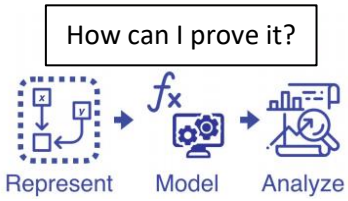
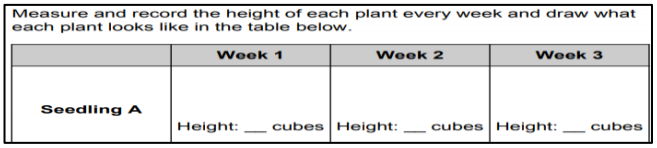
<td>Using Mathematics, Information and Computer Technology, and Computational Thinking</td>
<td>
Students use mathematical skills, reasoning, and technology to answer a scientific question and support conclusions.


Example: Students use non standard tools (cubes) to measure the height of a plant.


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<td>Constructing Explanations (Science)

and

Designing Solutions (Engineering)</td>
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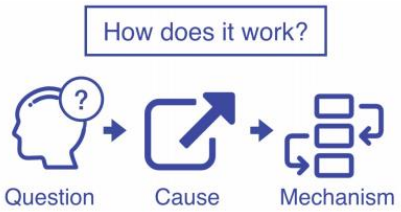
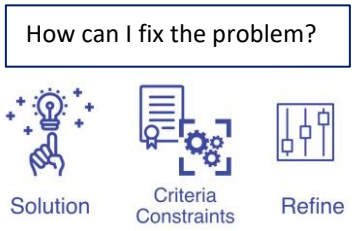
Students can construct their own explanations of how a phenomenon occurs and design their own solutions to a problem.


Example:

Students create a poster to share a type of weather, appropriate clothing, and activities for that specific weather type.



Example:
Students create and share a weather report using different weather conditions, describing activities that can happen during that specific weather condition and appropriate clothing to be worn.
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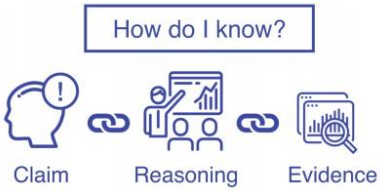
<td>Engaging in Argument for Evidence</td>
<td>
Students use evidence and reasoning to defend and support their claims and explanations.


Example:

While investigating force and motion, students can predict which ball they think will travel farthest, test, and use evidence to defend their thinking.
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<td>Obtaining, Evaluating, and Communicating Information</td>
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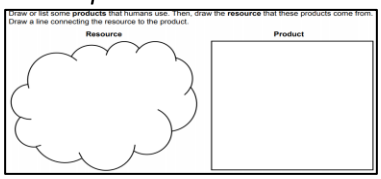
Students communicate information, evidence, and ideas in multiple ways.


Example: Students brainstorm a natural resource and possible products.


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Each year, students should be able to demonstrate greater capacity for connecting knowledge across, and between, the physical sciences, life sciences, earth and space sciences, and engineering design.

During grades K–2, your child will begin to form connections between concepts and skills such as understanding relationships between objects, planning and carrying out investigations, and constructing explanations.

Upon completion of grades K–2, your child should have a deeper understanding of: • Motion and properties of matter; • Relationship between sound and vibrating materials; • Factors that impact what plants and animals need to survive; and • How objects can be changed or improved through engineering.