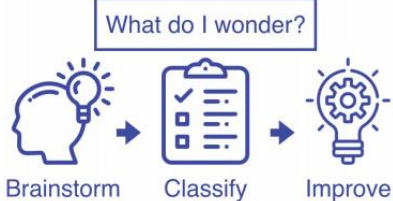

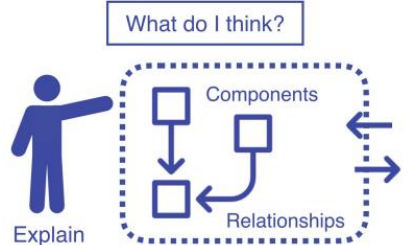
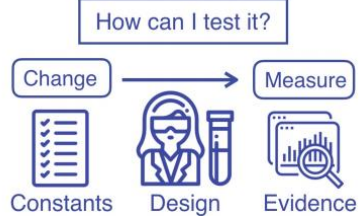

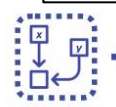







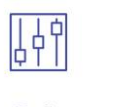








NTPS Next Generation Science Standards Grading Definitions

3rd Grade Report Card Insert

SCIENCE AND ENGINEERING PRACTICES	Physical Science, Life Science, and Earth & Space Science Descriptions of what proficient students KNOW and DO
<p style="text-align: center;">Asking Questions (Science)</p> <p style="text-align: center;">and</p> <p style="text-align: center;">Defining Problems (Engineering)</p>	<p>Students can generate scientific questions about observations, investigations, and conclusions.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>What do I wonder?</p>  <p>Brainstorm Classify Improve</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Example:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>D. Learn and Ask Questions</p> <p>Listen actively to the other groups' presentations. Ask questions and take notes in your science notebook.</p> </div> </div> </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>What is the problem?</p>  <p>Problem Criteria Constraints</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Example:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Task: Choose a weather-related hazard and design a solution to reduce that hazard's impact.</p> </div> </div> </div>
<p style="text-align: center;">Developing and Using Models</p>	<p>Students create models focused on describing, predicting or explaining the natural world and the relationships of its components (<i>parts</i>).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>What do I think?</p>  <p>Explain</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Example:</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>B. Choose a project.</p> <ul style="list-style-type: none"> A. Design and construct a scale model of a device to sort scrap metal from general trash. B. Design and construct a magnetic latch to keep a door shut. C. Design and construct a magnet-based device to keep two moving objects from touching </div> </div> </div>
<p style="text-align: center;">Planning and Carrying Out Investigations</p>	<p>Students design or conduct investigations and gather data. Students make decisions about variables and procedures and refine their plans if necessary.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>How can I test it?</p>  <p>Constants Design Evidence</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Example:</p> <p><i>Students follow written procedures when doing an investigation about plant survival based on available resources. They make predictions, observations, and collect data to reach a conclusion.</i></p> </div> </div>
<p style="text-align: center;">Analyzing and Interpreting Data</p>	<p>Students organize and interpret data to recognize patterns and relationships in the natural and designed world.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>What did I observe?</p>  <p>Organize Analyze Interpret</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Example:</p> <p><i>Students analyze provided data from a chart in order to build a graph, and analyze whether the chart or the graph is best for communicating information.</i></p> </div> </div>

<p>Using Mathematics & Computational Thinking</p>	<p>Students use mathematical skills, reasoning, and technology to answer a scientific question and support conclusions.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">How can I prove it?</div> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Represent Model Analyze</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Example:</p> <p><i>Students take data on themselves about inherited and acquired traits, report it as part of class data, and create a bar graph that represents this class data.</i></p> </div>
<p>Constructing Explanations (Science)</p> <p style="text-align: center;">and</p> <p>Designing Solutions (Engineering)</p>	<p>Students can construct their own explanations of how a phenomenon occurs and design their own solutions to a problem.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">How does it work?</div> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Question Cause Mechanism</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;">How can I fix the problem?</div> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Solution Criteria Constraints Refine</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Example:</p> <p><i>Students create a balanced system and can communicate the forces acting on it that help it balance.</i></p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Example:</p> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> <p>Task: Choose a weather-related hazard and design a solution to reduce that hazard's impact.</p> </div> </div>
<p>Engaging in Argument from Evidence</p>	<p>Students use evidence and reasoning to defend and support their claims and explanations.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">How do I know?</div> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Claim Reasoning Evidence</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Example:</p> <p><i>After conducting four trials during a force investigation, the student can use their recorded data as evidence to explain Law of Inertia.</i></p> </div>
<p>Obtaining, Evaluating, and Communicating Information</p>	<p>Students communicate information, evidence, and ideas in multiple ways.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px; text-align: center;">What did I learn?</div> <div style="display: flex; justify-content: space-around; align-items: center;">    </div> <p style="text-align: center;">Obtain Evaluate Communicate</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Example:</p> <div style="border: 1px solid black; padding: 2px; margin-top: 5px; text-align: center;"> <p>C. Prepare and Present Your Information</p> </div> <p>1. Combine your findings and prepare a presentation to share with the class. Your presentation may be a poster or any other visual display that you have the materials to make.</p> </div>

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 3–5, your child will begin to form deeper connections between concepts and skills previously learned in grades K–2, such as evaluating methods for collecting data, revising models based on evidence, and analyzing data to make sense of phenomena. Upon completion of grades 3–5, your child should have a deeper understanding of: • the effects of chemical reactions, forces, and energy on the world around us; • the ways different organisms and the environment interact; • the ways the geosphere, biosphere, and hydrosphere interact; and • how engineering design can be a regular part of problem solving.