

8th Grade Benchmarks Science

Level 5 – Student performance exceeds year-end standard

Level 4 – Student performance meets year-end standard

Level 3 – Student performance approaches year-end standard

Level 2 – Student demonstrates limited performance to year-end standard

Level 1 – Student does not yet evidence understanding or application of skills related to year-end standard

NOTE: MPI and MPII performance levels are determined based on performance expectations at the time of reporting

Student Performance Standard – Student	Level 1 Below	Level 2 Limited	Level 3 Approaches	Level 4 Meets	Level 5 Exceeds
Plans and carries out investigations.	Designs and conducts an investigation with adult guidance.	Designs and conducts an investigation and/or evaluates or revises an experimental design to produce some data that meets specific goals of the investigation; collects some data under a range of conditions; requires some adult guidance.	Designs and conducts an investigation and/or evaluates and/or revises an experimental design to produce some data that meets the goals of the investigation; collects specific data under a range of conditions; little adult guidance is needed.	Designs and conducts an investigation and/or evaluates and/or revises an experimental design to produce data to serve as the basis for evidence that meets the goals of the investigation; collects data under a range of conditions.	In addition to Level 4 performance, extends application of scientific ideas and principles by conducting additional research and/or conducting multiple investigations that differ in meaningful ways.
Constructs scientific explanations and arguments.	Constructs a scientific explanation with adult guidance	Constructs components of a scientific explanation based on evidence obtained from sources; arguments may lack claims, evidence or both.	Constructs a scientific explanation based on evidence obtained from sources (including a claim, at least two pieces of evidence and valid reasoning) and includes references to theories and laws that describe the natural world;	Constructs a scientific explanation based on valid and reliable evidence obtained from sources (including a claim, multiple pieces of evidence, and valid reasoning) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future	In addition to Level 4 performance, conducts additional research to strengthen arguments; supports peers by making recommendations to strengthen designs and assisting with revisions.

<p>Develops solutions to real-world problems.</p>	<p>Makes an oral or written argument with adult guidance.</p>	<p>Makes an oral or written argument that supports or refutes specific aspects of the performance of a device, process, or system, based on empirical evidence; evaluates specific aspects of competing design solutions based on jointly developed and agreed-upon design criteria; improves aspects of a design by prioritizing criteria, making tradeoffs, testing, revising, or retesting.</p>	<p>Makes an oral or written argument that supports or refutes some aspects of the performance of a device, process, or system, based on empirical evidence; evaluates aspects of competing design solutions based on jointly developed and agreed-upon design criteria; improves performance of a design by prioritizing criteria, making tradeoffs, testing, revising, or retesting.</p>	<p>Makes an oral or written argument that supports or refutes the performance of a device, process, or system, based on empirical evidence concerning whether or not the technology meets relevant criteria and constraints; evaluates competing design solutions and models based on jointly developed and agreed-upon criteria; optimizes performance of a design by prioritizing criteria, making tradeoffs, testing, revising, and retesting.</p>	<p>In addition to Level 4 performance, develops additional possible solutions that demonstrate application of additional research including conducting multiple trials, developing several iterations of models, or reaching a final solution after refining multiple preceding versions.</p>
<p>Evidences understanding of content and concepts.</p>	<p>Demonstrates understanding of some content and concepts; understanding may be limited or confused.</p>	<p>Demonstrates understanding of specific content and concepts with adult support.</p>	<p>Demonstrates understanding of most content and concepts based on unit rubrics and assessments.</p>	<p>Demonstrates understanding of content and concepts based on unit rubrics and assessments.</p>	<p>In addition to Level 4 performance, evidences understanding that exceeds grade level content and concepts.</p>