

5th 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 conducts an investigation.	Plans and conducts an investigation with adult support; tests models with adult support.	Plans and conducts specific parts of an investigation in which variables are controlled and the number of trials are considered; tests specific models and compares results with peers to determine which better meets criteria for success.	Plans and conducts parts of an investigation in which variables are controlled and the number of trials are considered; tests models and compares results with peers to determine which better meets criteria for success.	Plans and conducts an investigation collaboratively that uses fair tests in which variables are controlled and the number of trials are considered; tests two different models of the same proposed object, tool or process to determine which better meets criteria for success.	In addition to Level 4 performance, designs investigations that would enable trials to be conducted more efficiently; designs multiple model tests in order to refine criteria for success.
Analyzes and interprets data.	Analyzes and interprets data with adult support.	Analyzes specific data produced from a trial; uses specific data to evaluate and refine design solutions.	Analyzes data produced from a trial; uses data analysis to develop a problem statement or to design a proposed object, tool or process; uses some data to evaluate and refine design solutions.	Analyzes data produced from multiple trials; uses data analysis to refine a problem statement or the design of a proposed object, tool or process; uses data to evaluate and refine design solutions.	In addition to Level 4 performance, organizes data drawn from multiple trials to better understand findings; uses findings to further refine design solutions.

Constructs explanations and designs solutions to problems.	Generates a solution to a problem with adult support.	Generates a solution to a problem based on some of the criteria and constraints of the design solution; makes a claim about the merit of a solution to a problem by citing evidence that may or may not be relevant.	Generates a solution to a problem based on how well it meets the criteria and constraints of the design solution; makes a claim about the merit of a solution to a problem by citing some relevant evidence.	Generates and compares multiple solutions to a problem based on how well they meet the criteria and constraints of the design solution; makes a claim about the merit of a solution to a problem by citing relevant evidence.	In addition to Level 4 performance, develops a rating system for designing solutions that incorporates both criteria met and design constraints.
Evidences understanding of content and concepts.	Demonstrates understanding of specific content and concepts with adult support.	Demonstrates understanding of some content and concepts; understanding may be limited or confused.	Demonstrates understanding of most content and concepts based on unit rubrics and assessments.	Demonstrates understanding of content and concepts based on unit rubrics and assessments.	In addition to Level 4 performance, evidences understanding that exceeds grade level content and concepts.