

The tables that follow are designed to provide information about the SEEd benchmark cluster assessments by grade. Each SEEd benchmark includes one cluster. In the table you will find the name of the benchmark cluster, a brief description of the skills the cluster assesses, and the number of scoring assertions associated with the cluster.

Benchmark Modules: Science Grade 4

Test Name	Standard Description	Number of Assertions
Benchmark Cluster: Science Standard 4.1.3	Analyze and interpret data from fossils to provide evidence of the <u>stability and change</u> in organisms and environments from long ago. Emphasize using the structures of fossils to make inferences about ancient organisms. Examples of fossils and environments could include comparing a trilobite with a horseshoe crab in an ocean environment or using a fossil footprint to determine the size of a dinosaur.	6
Benchmark Cluster: Science Standard 4.3.1	Develop and use a model to describe the regular <u>patterns</u> of waves. Emphasize patterns in terms of amplitude and wavelength. Examples of models could include diagrams, analogies, and physical models such as water or rope.	7
Benchmark Cluster: Science Standard 4.3.2 A	Develop and use a model to describe how visible light waves reflected from objects enter the eye <u>causing</u> objects to be seen. Emphasize the reflection and movement of light.	11
Benchmark Cluster: Science Standard 4.3.2 B	Develop and use a model to describe how visible light waves reflected from objects enter the eye <u>causing</u> objects to be seen. Emphasize the reflection and movement of light.	13
Benchmark Cluster: Science Standard 4.4.2	Analyze and interpret data of observable patterns to show that Earth rotates on its axis and revolves around the Sun. Emphasize patterns that provide evidence of Earth's rotation and orbits around the Sun. Examples of patterns could include day and night, daily changes in length and direction of shadows, and seasonal appearance of some stars in the night sky. Earth's seasons and its connection to the tilt of Earth's axis will be taught in Grades 6 through 8.	5

Benchmark Modules: Science Grade 5

Test Name	What This Test Measures	Number of Assertions
Benchmark Cluster: Science Standard 5.1.2	Use mathematics and computational thinking to compare the <u>quantity</u> of saltwater and freshwater in various reservoirs to provide evidence for the distribution of water on Earth. Emphasize reservoirs such as oceans, lakes, rivers, glaciers, groundwater, and polar ice caps. Examples of using mathematics and computational thinking could include measuring, estimating, graphing, or finding percentages of quantities.	9
Benchmark Cluster: Science Standard 5.1.3	Ask questions to plan and carry out investigations that provide evidence for the <u>effects</u> of weathering and the rate of erosion on the geosphere. Emphasize weathering and erosion by water, ice, wind, gravity, or vegetation. Examples could include observing the effects of cycles of freezing and thawing of water on rock or changing the slope in the downhill movement of water.	6
Benchmark Cluster: Science Standard 5.1.4	Develop a model to describe interactions between Earth's <u>systems</u> including the geosphere, biosphere, hydrosphere, and/or atmosphere. Emphasize interactions between only two systems at a time. Examples could include the influence of a rainstorm in a desert, waves on a shoreline, or mountains on clouds.	6
Benchmark Cluster: Science Standard 5.2.3	Plan and carry out investigations to determine the effect of combining two or more substances. Emphasize whether a new substance is or is not created by the formation of a new substance with different properties. Examples could include combining vinegar and baking soda or rusting an iron nail in water.	8
Benchmark Cluster: Science Standard 5.2.4	Use mathematics and computational thinking to provide evidence that regardless of the type of change that occurs when heating, cooling, or combining substances, the total weight of <u>matter</u> is conserved. Examples could include melting an ice cube, dissolving salt in water, and combining baking soda and vinegar in a closed bag.	9
Benchmark Cluster: Science Standard 5.3.3	Develop and use a model to describe the movement of matter among plants, animals, decomposers, and the environment. Emphasize that matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Examples could include simple food chains from ecosystems such as deserts or oceans or diagrams of decomposers returning matter to the environment.	15