

BENCHMARK REPORT

SCIENCE GRADE 5



DOMAIN: Science

NGSS/ Aspire Practices	OCS Code:	Standards and Benchmarks	DOK
Strand: 5. Structure and Properties of Matter: 5-PS1 Matter and Structure			
Practice 2	5-PS1-1.	Develop a model to describe that matter is made of particles too small to be seen.	
	5-PS1-1.1a	Recall methods of visualizing matter that are not visible to the naked eye	1
	5-PS1-1.2a	Define expanding, compressing, dissolving, and evaporating matter	1
	5-PS1-1.3b	Gather information on the amount of invisible matter that results from expansion, compression, dissolving, or evaporation	2
	5-PS1-1.4d	Create a model that shows how matter changes as the result of expansion, compression, dissolving, or evaporation	4
Practice 5	5-PS1-2.	Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	
	5-PS1-2.1a	Define conservation of matter	1
	5-PS1-2.2a	Measure the weight of a variety of substances when they are heated, cooled, and mixed	1
	5-PS1-2.3b	Graph the weight of a variety of substances before and after they are heated, cooled, and mixed	2
	5-PS1-2.4c	Cite evidence to support or refute the argument that the weight of matter is conserved	3
Practice 3	5-PS1-3.	Make observations and measurements to identify materials based on their properties.	
	5-PS1-3.1a	Define properties that can be found in a specific set of materials	1
	5-PS1-3.2b	Categorize materials based on a set of defined properties	2
	5-PS1-3.3c	Use properties to identify unknown materials based on their properties	3
Practice 3	5-PS1-4.	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	
	5-PS1-4.1a	Identify the properties of substances	1
	5-PS1-4.2d	Plan an investigation to determine if a new substance is formed by mixing two substances	4
	5-PS1-4.3c	Conduct an investigation to determine if a new substance is formed by mixing two substances by following the steps of a fairly simple experiment	3
Strand: 5. Matter and Energy in Organisms and Ecosystems: 5-PS3 Energy			
Practice 2	5-PS3-1.	Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	
	5-PS3-1.1d	Create a plant growth cycle which includes the sun	4
	5-PS3-1.2d	Create an animal-food cycle to relate the intake of foods from plants to body repair, growth, motion, and maintenance of body warmth	4
	5-PS3-1.3d	Integrate the plant growth cycle and the animal-food cycle to create a diagram of the role of the sun's energy that works through an animals' food to provide energy for body repair, growth, motion, and maintenance of body warmth	4
Practice 7	5-LS1-1.	Support an argument that plants get the materials they need for growth chiefly from air and water.	
	5-LS1-1.1d	Plan an investigation to measure the growth of plants with air, water, and soil	4
	5-LS1-1.2b	Gather data on the growth of plants under varying air, water, and soil conditions	2
	5-LS1-1.3c	Cite evidence from an investigation to support or refute the argument that plants require chiefly air and water to grow	3
Practice 2	5-LS2-1.	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	
	5-LS2-1.1a	Define ecosystem, decomposition, and matter	1
	5-LS2-1.2b	Find information on the way plants change matter into food for animals	2
	5-LS2-1.3b	Find information on the way decomposers change matter into food for plants	2

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	5-LS2-1.4d	Create a web that shows the cycle of movement of matter from plants to animals to decomposers to the environment	4
Strand: 5. Earth and Space Science: 5-ESS2-1 Earth's Systems			
Practice 2	5-ESS2-1.	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	
	5-ESS2-1.1a	Define geosphere, biosphere, hydrosphere, and atmosphere	1
	5-ESS2-1.2b	Find information on the interaction between any two planetary spheres (i.e., geosphere, biosphere, hydrosphere, or atmosphere)	2
	5-ESS2-1.3d	Create a model that shows how two planetary spheres interact with each other	4
Practice 5	5-ESS2-2.	Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.	
	5-ESS2-2.1a	Define briny water, fresh water, reservoirs, and distribution of water	1
	5-ESS2-2.2b	Gather information about the amount and percentage of briny and fresh water in a water reservoir on each continent	2
	5-ESS2-2.3b	Graph the percentages of both briny and fresh water in each reservoir	2
	5-ESS2-2.4d	Create a diagram that shows the distribution of both briny and fresh water on each continent	4
Practice 8	5-ESS3-1.	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	
	5-ESS3-1.1b	Locate information on the ways that science ideas are used to conserve resources and help the environment	2
	5-ESS3-1.2b	Gather information about the ways that your community and other nearby communities protect the earth by conserving resources and helping the environment	2
	5-ESS3-1.3b	Categorize the different ways communities use science ideas to conserve resources and help the environment	2
Strand: 5. Space Systems: Stars and the Solar System: 5-PS2 Motion and Stability: Forces and Interactions			
Practice 7	5-PS2-1.	Support an argument that the gravitational force exerted by Earth on objects is directed down.	
	5-PS2-1.1a	Define gravitational force on the Earth	1
	5-PS2-1.2b	Gather information on the direction of gravitational force exerted on objects on the earth	2
	5-PS2-1.3c	Cite evidence to support the argument that objects fall to the Earth because of gravitational forces	3
Strand: 5. Space Systems: Stars and the Solar System: 5-ESS1 Earth's Place in the Universe			
Practice 7	5-ESS1-1.	Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.	
	5-ESS1-1.1b	Gather information about the luminosity and distance of Earth's closest stars including the sun	2
	5-ESS1-1.2d	Relate the distance of stars from the earth to their luminosity	4
	5-ESS1-1.3c	Cite evidence to support the argument that the luminosity of stars is related to their distance from Earth	3
Practice 4	5-ESS1-2.	Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	
	5-ESS1-2.1a	Identify patterns of change in the earth's position and motion with respect to the sun	1
	5-ESS1-2.2a	Measure the length and direction of a shadow, the number of minutes of dark and light, or the monthly location of selected stars in the sky	1

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	5-ESS1-2.3b	Graph data on the length and direction of a shadow, the number of minutes of dark and light, or the monthly location of selected stars in the sky	2
	5-ESS1-2.4d	Analyze data using information of the earth's position and motion to explain changes in the length and direction of a shadow, the number of minutes of dark and light, or the monthly location of selected stars in the sky	4