5th Grade Science Curriculum Map

Missouri Learning Standards

Unit 1: Engineering and Technology	Unit 2: Matter	Unit 3: Energy and Matter in Organisms	Unit 4: Energy and Matter in Ecosystems	Unit 5: Systems in Space	Unit 6: Earth's Systems	Unit 7: Earth and Human Activities
August/September	October/November	November/December	December/January	March/April	February/March	April
Priority Standards	**Priority Standards**	**Priority Standards**	**Priority Standards**	**Priority Standards**	**Priority Standards**	**Priority Standards**
5-ETS1.A - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	5-PS1.A.1 Structure and Properties of Matter: Matter of any type can be subdivided into particles that are too small to see, but even then, matter still exists and can be detected by other means.	5-LS1.C.1 Support and argument that plants get the materials they need for growth chiefly from air and water.	5-LS2.B.1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	5-ESS1.A.1 Support an argument that differences in the apparent brightness of the Sun compared to other stars is due to their reflective distances from Earth.	5-ESS2.A.1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	5-ESS3C.1- Obtain and combine information about ways individual communities use scientific ideas to protect Earth's resources and environment
5-ETS1.B - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	5-PS1.A.2 Structure and Properties of Matter: 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-PS3.D.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.ESS1.B.1 Make observations during different seasons to relate the amount of daylight to the time of year.	5-ESS2.C.1 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-ETS1.C - Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	5-PS1.B.2 Chemical Reactions: No matter what reaction or change in properties occurs, the total weight of the substances do not change. (Boundary: Mass and weight are not distinguished at this grade level.)			5-ESS1.B.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-PS1.B.1 Chemical Reactions: When two or more different substances are mixed, a new substance with different properties may be formed.			5.PS2.B.1 Support an argument that the gravitational force exerted by Earth on objects is directed toward the planet's center	.	
Essential Questions	**Essential Questions**	**Essential Questions**	**Essential Questions**	**Essential Questions**	**Essential Questions**	**Essential Questions**
	How do we know matter exists, even if it cannot be seen?	How do plants keep growing bigger?	How do plants keep growing bigger?	What patterns does Earth's movement cause?	How do organisms, land, air and water interact in an environment?	How much of Earth's surface is covered by water?

	Can matter just disappear? Do we ever create new substances?	Other than heat, how do animals depend on the Sun? Do all organisms eat plants?	Other than heat, how do animals depend on the Sun? Do all organisms eat plants?	Why do objects in the sky appear to move and change so much? If the Sun is an average-sized star, why does it look like the largest? Why is the direction of gravity downward toward Earth?	How much of Earth's surface is covered by water?	
I Can Statements	**I Can Statements**	**I Can Statements**	**I Can Statements**	**I Can Statements**	**I Can Statements**	**I Can Statements**
5-ETS1.A.1 I can create a simple design problem (investigation) that includes specific criteria for success. 5-ETS1.B I can generate and compare a variety of solutions to a problem or investigation. 5-ETS1.C I can plan and carry out a fair test in which variables are controlled to produce a model or prototype that can be improved.	5-PSA.1 I can explain how matter is made up of particles too small to be seen. 5-PS1.A.2 I can 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.B.2 I can demonstrate that no matter what type of reaction or change in properties occurs, the total weight of a substance does not change. 5-PS1.B.1 I can investigate how a new substance with different properties may be formed from a mixture of substances.	5-LS2.B.1 I can gather evidence to support an argument that plants gain materials needed for growth mainly from air (O2) and water by using demonstrations, models, and/or illustrations. 5-PS3.D.1 I can use a model to demonstrate how plant structures are involved in the photosynthesis process. I can observe and explain how animal growth depends on energy and matter obtained from food such as plants, and other sources of matter. I can create a model to explain the energy transformation process used by plants and animals that originates from the sun.	5-LS2.B.1 I can develop an understanding to explain energy transformation and matter movement through a food chain that includes producers, consumers, and decomposers.	5-ESS1-A.1 I can use a model to show that the sun appears larger and brighter than the other stars due to its distance from Earth. 5-ESS1.B.1 I can describe why seasons occur due to the amount of daylight changing. 5-ESSB.2 I can collect and analyze data to detect patterns, including the path of the sun across the day sky, the movements of constellations in the night sky, and hours of sunlight. 5-PS2.B.1 I can gather evidence to to explain that gravity is the force that pulls objects toward Earth's center.	5-ESS2.A.1 I can develop and use models to investigate how Earth's systems interact. 5-ESS2.C.1 I can observe and describe the distribution of water on Earth, and explore the effect of the oceans on landforms, climates, and ecosystems.	5-ESS3.C1 I can obtain, evaluate, and communicate information about what can be recycled, reduced, and reused, and why individuals and communities should recycle to offset effects on Earth's systems brought about by human activities.