4th Grade SEEd Standards Pacing Guide

Strand	SLCSD Science Prioritized Standards*	
4.1	**Organisms Functioning in their Environment**	
Through the study of organisms, inferences can be made about environments both past and present. Plants and animals have both internal and external structures that serve various functions for growth, survival, behavior, and reproduction. Animals use different sense receptors specialized for particular kinds of information to understand and respond to their environment. Some kinds of plants and animals that once lived on Earth can no longer be found. However, fossils from these organisms provide evidence about the types of organisms that lived long ago and the nature of their environments. Additionally, the presence and location of certain fossil types indicate changes that have occurred in environments over time.		
4.1.1	Structures & Survival	Oct. 5- Nov. 6
Construct an explanation from evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Emphasize how structures support an organism's survival in its environment and how internal and external structures of plants and animals vary within the same and across multiple Utah environments. Examples of structures could include thorns on a stem to prevent predation or gills on a fish to allow it to breathe underwater. (LS1.A)		
4.1.2	Environmental Information	Nov. 9 - Dec. 4
Develop and use a model of a system to describe how animals receive different types of information from their environment through their senses, process the information in their brain, and respond to the information. Emphasize how animals are able to use their perceptions and memories to guide their actions. Examples could include models that explain how animals sense and then respond to different aspects of their environment such as sounds, temperature, or smell. (LS1.D)		
4.1.3	Fossils & Stability and Change	Dec. 7 - Jan. 15
Analyze and interpret data from fossils to provide evidence of the stability and change 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. (LS4.A)		
	RISE Benchmark 4.1.3 as SLCSD Interim	January 19-22
4.2	**Energy Transfer**	
Energy is present whenever there are moving objects, sound, light, or heat. The faster a given object is moving, the more energy it possesses. When objects collide, energy can be transferred from one object to another causing the objects' motions to change. Energy can also be transferred from place to place by electrical currents, heat, sound, or light. Devices can be designed to convert energy from one form to another.		
4.2.2	Colliding Objects	Jan. 25 - Feb. 12
Ask questions and make observations about the changes in energy that occur when objects collide. Emphasize that energy is transferred when objects collide and may be converted to different forms of energy. Examples could include changes in speed when one moving ball collides with another or the transfer of energy when a toy car hits a wall. (PS3.B, PS3.C)		
4.2.3	Energy Transfers Heat, Light, Sound	Feb. 16 - Mar. 12
Plan and carry out an investigation to gather evidence from observations that energy can be transferred from place to place by sound, light, heat, and electrical currents. Examples could include sound causing objects to vibrate and electric currents being used to produce motion or light. (PS3.A, PS3.B)		
4.3	**Wave Patterns**	
Waves are regular patterns of motion that transfer energy and have properties such as amplitude (height of the wave) and wavelength (spacing between wave peaks). Waves in water can be directly observed. Light waves cause objects to be seen when light reflected from objects enters the eye. Humans use waves and other patterns to transfer information.		
4.3.2	Light Waves	Mar. 15 - Apr. 9

Develop and use a model to describe how visible light waves refelcted from objects enter the eye causing objects to be seen. Emphazise the refelction and movement of light. The structure and function of organs and organ systems and the relationship between color and wavelength will be taught in Grades 6 through 8.		
	RISE Benchmark 4.3.2 as SLCSD Interim	April 12-16
4.4.1	Relative Distance	Apr. 19- May 7
Construct an explanation that differences in the apparent brightness of the Sun compared to other stars is due to the relative distance (scale) of stars from Earth. Emphasize relative distance from Earth. (ESS1.A)		

*As we launch Year 1 of SEEd Standard Implementation, we are aware of the unique environment and uncertainty around school closures and limited professional learning around three-dimensional instruction to due COVID-19 closures. To this end, new prioritized pacing guides have been provided to support K-5 science instruction for the 2020-2021 school year. District professional learning will follow and support standards in the timeframes indicated above. For more information around prioritized pacing guides, please consult Rationale for Prioritized Pacing Guides 2020-2021.