RASD NGSS Fifth Grade Articulation of Skills: Science

Structures and Properties of Matter			
Grade:	**Standard:**	**Student Learning Targets:**	**Unit**
Students who demonstrate understanding can:			
5-PS1-1	Develop a model to describe that matter is made of particles too small to be seen.	• I can create a model that shows that matter is made of particles too small to be seen.	Matter
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.	• I can measure and graph quantities to show that the total weight of matter stays the same even when a substance changes state.	Matter
5-PS1-3	Make observations and measurements to identify materials based on their properties.	• I can make observations and measure materials based on their properties.	Matter
5-PS1-4	Conduct an investigation to determine whether the mixing of two or more substances results in new substances.	• I can conduct an investigation that shows that mixing two or more substances results in a new substance.	Matter
Living Systems			
Grade:	**Standard:**	**Student Learning Targets:**	
Students who demonstrate understanding can:			
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.	• I can use a model to describe the energy in an animal's food was once energy from the sun.	Living Systems (FOSS)
5-LS1-1	Support an argument that plants get the materials they need for growth chiefly from air and water.	• I can show evidence that plants get the materials they need for growth mostly from air and water.	Living Systems (FOSS)
5-LS2-1	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	• I can make a model to describe how matter moves between plants, animals, decomposers, and the environment.	LIving Systems (FOSS)
Earth's Systems			
Grade:	**Standard:**	**Student Learning Targets:**	**Unit**
Students who demonstrate understanding can:			

5-ESS2-1	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	• I can create a model with an example to describe the ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	Earth Systems (FOSS)
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.	• I can describe and graph the amounts and percentages of water on earth.	Earth Systems (FOSS)
5-ESS3-1	Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	• I can find information about how communities use science ideas to protect the Earth's resources and environment.	Earth Systems (FOSS)
Space Systems: Stars and the Solar System			
Grade:	**Standard:**	**Student Learning Targets:**	**Unit**
Students who demonstrate understanding can:			
5-PS2-1	Support an argument that the gravitational force exerted by Earth on objects is directed down. I	• I can show proof that the gravitational force on earth is directed down.	Earth Systems (FOSS)
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.	• I can prove that the brightness of the sun compared to other stars is due to their distance from earth.	Earth Systems (FOSS)
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.	• I can use data in a graph or chart to show patterns in daily shadows, length of day and night, and the stars in the night sky.	Earth Systems (FOSS)
Engineering Design			
Grade:	**Standard:**	**Student Learning Targets:**	**Unit**
Students who demonstrate understanding can:			
3-5-ETS1-1	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. Click here for additional priority standards page	• I can describe a design that helps to solve a problem using information about what the design needs to do, and the materials and time available.	Robotics and Automation (PLTW) Robotics and Automation Challenge (PLTW)

3-5-ETS1-2	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. Click here for additional priority standards page	• I can think of several possible solutions to a design problem and compare how well each might solve the problem	Robotics and Automation (PLTW) Robotics and Automation Challenge (PLTW)
3-5-ETS1-3	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. Click here for additional priority standards page	• I can plan and carry out fair tests to identify ways to improve a model.	Robotics and Automation (PLTW) Robotics and Automation Challenge (PLTW)