Grade 4 Science Progress Report Card Rubric

Science Reporting Standard	December	March	June
Demonstrates understanding of unit concepts, facts, and principles ***M: Consistently demonstrates understanding of all of the following unit concepts:*** ***P: Inconsistently demonstrates understanding of one or more of the unit concepts.***	• The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges. (4-ESS2-2) • Maps can help locate the different land and water features areas of Earth. (4-ESS2-2) • Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. • The presence and location of certain fossil types indicate the order in which rock layers were formed. (4-ESS1-1) • Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around. (4-ESS2-1) • A variety of hazards result from natural processes (e.g., earthquakes, tsunamis, volcanic eruptions). Humans cannot eliminate the hazards but can take steps to reduce their impacts. • Waves transfer energy and can cause objects to move. • An object can be seen when light is reflected from		• The faster a given object is moving, the more energy it possesses. (4-PS3-1) • Energy can be moved from place to place by moving objects or through sound, light, or electric currents. (4-PS3-2),(4-PS3-3) • Energy is present whenever there are moving objects, sound, light, or heat. • When objects collide, energy can be transferred from one object to another, thereby changing their motion. In such collisions, some energy is typically also transferred to the surrounding air; as a result, the air gets heated and sound is produced. (4-PS3-2),(4-PS3-3) • When objects collide, the contact forces transfer energy so as to change the objects' motions. (4-PS3-3) • The expression "produce energy" typically refers to the conversion of stored energy into a desired form for practical use. (4-PS3-4)

	its surface enters the eye.		
Observes, questions, investigates, explains, and communicates using appropriate vocabulary. ***M: Consistently demonstrates understanding of all of the following unit concepts:*** ***P: Inconsistently demonstrates understanding of one or more of the unit concepts.***	• Analyzes and interprets data from maps to describe patterns of Earth's features. • Identifies evidence from patterns in rock formations and fossils in rock layers to explain changes over time. • Generates and compares multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. • Develops a model of waves to describe patterns in terms of amplitude and wavelength. • Plants and animals, including humans, have both internal and external structures that help them to navigate the world. (4-LS1-1) • Different sense receptors (e.g., eyes) are specialized for particular kinds of information, which may be then processed by the brain. • Animals are able to use their perceptions and memories to guide their actions. (4-LS1-2)		• Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. • Ask questions and predict outcomes about the changes in energy that occur. when objects collide. • Energy and fuels that humans use are derived from natural sources, and their use affects the environment in multiple ways. Some resources are renewable over time, and others are not. • Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. • 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.