Scope and Sequence for Science/Grade 6
2026-27

Unit Title	Duration	STEELS Standards
Unit One: *Ecosystems and Interactions*	8/24/2026– 1/20/2027 **90 Instructional Periods**	**3.1.6-8.E** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. **3.1.6-8.F** Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. **3.1.6-8.I** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. **3.1.6-8.J** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. **3.1.6-8.K** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. **3.1.6-8.L** Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. **3.1.6-8.U** Evaluate competing design solutions for maintaining biodiversity and ecosystem services. **3.1.6-8.S** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment. **3.1.6-8.T** Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.
Unit Two: *Energy, Forces, and Motion*	1/25/2027 – 4/5/2027 **45 Instructional Periods**	**3.2.6-8.G** Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. **3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. **3.2.6-8.I** Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. **3.2.6-8.K** Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact**.** **3.2.6-8.L** Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass and speed of an object. **3.2.6-8.P** Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system. **3.2.6-8.O** Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

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Unit Three: *Weather and Climate Systems*	4/6/2027 - 6/4/2027 **45 Instructional Periods**	**3.3.6-8.H** Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. **3.3.6-8.J** Collect data to provide evidence for how the motion and complex interactions of air masses result in changes in weather conditions. **3.3.6-8.I** Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. **3.3.6-8.L** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. **3.3.6-8.N** Construct an argument supported by evidence for how increases in human population and per capita consumption of natural resources impact Earth's systems. **3.3.6-8.O** Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century. **3.2.6-8.N** Plan an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.

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