Science Grades K-2

PBGR

The scientifically literate individual knows how to ask questions investigate everyday phenomena, and construct explanations. They describe, explain, and make predictions related to phenomena. Scientifically literate individuals engage in social and civic discourse using valid scientific evidence to express positions to inform global, national, and local decisions. They evaluate the quality of scientific information based on its source and the methods used to generate it, and revise thinking based on new information.

Critical Proficiency	Critical Proficiency	Critical Proficiency	Critical Proficiency
Structure and Function	**Cause and Effect**	**Energy and Matter**	**Systems and Systems Models**
Demonstrate that the way an object or organism is shaped or structured determines many of its properties and functions.	Use evidence to identify or predict cause and effect relationships for complex natural and human designed systems.	Analyze energy and matter flows within, between, and among systems to understand the systems' behaviors.	Define the boundaries and initial conditions of a system, analyze inputs and outputs, and describe and predict behavior using models.

Priority Performance Indicators	Priority Performance Indicators	Priority Performance Indicators	Priority Performance Indicators
Structure and Function	**Cause and Effect**	**Energy and Matter**	**Systems and Systems Models**
Matter and Its Interactions: Structure of Matter Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 2-PS1-1	**Biological Evolution: Unity and Diversity** Make observations of plants and animals to compare the diversity of life in different habitats. 2-LS4-1	**Matter and Its Interactions** Make observations to construct an evidence-based account of how an object made of a small set of pieces can be made into a new object. 2-PS1-3	**Earth and Human Activity: Impact on Earth's Systems** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. K-ESS3-1
Waves and Their Applications: Structure of Waves and Their Applications in Technology Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-1	**Heredity: Inheritance and Variation of Traits** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. 1-LS3-1	**Ecosystems: Interactions, Energy, and Dynamics** Plan and conduct an investigation to determine if plants need sunlight and water to grow. 2-LS2	**Engineering Design: DEVISING SOLUTIONS TO COMPLEX REAL-WORLD PROBLEMS** Ask questions, make observations, and gather information to define a simple problem that can be solved through the development of a new or improved object or tool and analyze data from tests of the object/tool designed to solve the problem and identify its strengths and weaknesses. K-2-ETS1-1; K-2-ETS1-3
From Molecules to Organisms: Structure and Function of Organisms Identify mechanisms that plants and animals use to survive; design a solution to a human problem by mimicking a survival mechanism that enables animals and plants to survive, grow, and meet their needs. K-LS1-1; 1-LS1-1		**Earth's Systems: Energy and Climate Change** Make observations to determine the effect of sunlight on Earth's surface. K-PS3-1	
Engineering Design Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. K-2-ETS-2			

Type of Science	Breakdown of PBGR by Discipline
Physical Science	4
Life Sciences	5
Earth Science	1
Engineering, Technology, and Application of Science (ETS)	3

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