North Carolina Science

Grade 3

Matter and its Interactions

1 Understand the structure and properties of matter before and after they undergo a change. PS.3.1

1 Engage in argument from evidence to infer that air is a substance that surrounds us, takes up space, and has mass. PS.3.1.1

2 Carry out investigations to classify solids, liquids, and gases based on their basic properties. PS.3.1.2

3 Engage in argument from evidence to explain observable changes to the properties of matter when heated or cooled. PS.3.1.3

Motion and Stability- Forces and Interactions

2 Understand motion and factors that affect motion. PS.3.2

1 Carry out investigations to infer changes in speed or direction resulting from forces acting on an object. PS.3.2.1

2 Carry out investigations to compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time. PS.3.2.2

3 Use models to explain the effect of Earth's gravity on the motion of any object on or near the Earth. PS.3.2.3

Energy

3 Understand how energy can be transferred from one object to another. PS.3.3

1 Ask questions to explain how heat is created by friction. PS.3.3.1

2 Carry out investigations to explain how energy can be transferred from a warmer object to a cooler one by contact or at a distance. PS.3.3.2

From Molecules to Organisms- Structures and Processes

1 Understand human body systems and how they are essential for life: protection, movement, and support. LS.3.1

1 Use models to infer the functions of the skeletal and muscular systems. LS.3.1.1

2 Obtain, evaluate, and communicate scientific information to explain why skin is necessary for protection and for the body to remain healthy. LS.3.1.2

2 Understand how plant structures aid in survival. LS.3.2

1 Carry out investigations to explain the structures and functions of plants and how they are essential for life. LS.3.2.1

2 Use models to exemplify the distinct stages of the life cycle of seed plants. LS.3.2.2

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Ecosystems - Interactions, Energy, and Dynamics

3 **Understand how environmental factors aid in the survival of plants.** LS.3.3

1 Carry out investigations to explain how environmental conditions determine how well plants survive and grow. LS.3.3.1

2 Construct an explanation to infer how the basic properties and components of soil determine its ability to support the growth and survival of many plants. LS.3.3.2

Earth's Place in the Universe

1 **Remember the major components and patterns observed in the earth/moon/sun system.** ESS.3.1

1 Use models to recognize that the Earth is part of a system called the solar system that includes the sun (a star), planets, and many moons, and that the Earth is the third planet from the sun. ESS.3.1.1

2 Carry out investigations to recognize that changes in the length and direction of an object's shadow indicate the apparent changing position of the sun during the day. ESS.3.1.2

3 Obtain, evaluate and communicate information to recognize the patterns of the stars (including the sun) stay the same as they appear to move across the sky. ESS.3.1.3

Earth's Systems

2 **Understand the structures of the Earth's surface using models.** ESS.3.2

1 Use models to compare Earth's saltwater and freshwater features (including oceans, seas, rivers, lakes, ponds, streams, and glaciers). ESS.3.2.1

2 Use models to compare Earth's land features (including volcanoes, mountains, valleys, canyons, caverns, and islands). ESS.3.2.2