

# 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
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## 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
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## 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
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## 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
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### 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
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## **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
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## **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