

# Grade 5

## Matter and Its Interactions

### Structure and Properties

---

#### Scale, Proportion, and Quantity

- 1 Plan and carry out investigations to provide evidence that matter is made of particles too small to be seen. 5.1
- 

### Structure and Properties

---

#### Structure and Function

- 2 Analyze data collected through observations and measurements to identify materials based on their properties, including color, hardness, and reflectivity. 5.2
- 

### Physical and Chemical Changes

---

#### Energy and Matter

- 3 Conduct investigations to provide evidence that the total weight of matter is conserved during phase changes when substances are heated, cooled, or mixed. 5.3
- 

### Physical and Chemical Changes

---

#### Cause and Effect

- 4 Analyze data from tests to determine whether a new substance is formed after two or more substances are combined. 5.4
- 

## Motion and Stability: Forces and Interactions

### Non-Contact Forces

---

#### Systems and System Models

- 5 Make a claim, supported by evidence, that the gravitational force exerted by Earth pulls objects towards the center of Earth. 5.5
- 

### Non-Contact Forces

---

#### Cause and Effect

- 6 Design and conduct a test to modify the speed of an object falling due to gravity. 5.6
- 

## Ecosystems: Interactions, Energy, and Dynamics

### Matter and Energy Flow

---

**Structure and Function**

- 7 Support an argument from evidence that plants primarily use air and water to process matter needed for growth. 5.7
- 

**Matter and Energy Flow****Energy and Matter**

- 8 Use evidence to explain that energy from the sun is present in animals' food and is used for body repair, growth, motion, and maintenance of body warmth. 5.8
- 9 Create and use a model to explain the transfer of matter and energy between the environment and organisms within it. 5.9
- 

**Earth's Place in the Universe****Sun, Moon, and Stars****Scale, Proportion, and Quantity**

- 10 Obtain and communicate information to explain why the sun appears to be larger and brighter than other stars. 5.10
- 

**Sun, Moon, and Stars****Patterns**

- 11 Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky. 5.11
- 

**Earth's Systems****System Interactions****Systems and System Models**

- 12 Use a model to represent how any two of Earth's systems (atmosphere, biosphere, geosphere, and hydrosphere) interact and support life. 5.12
- 

**Water****Scale, Proportion, and Quantity**

- 13 Construct a model to represent the distribution of freshwater and saltwater on Earth. 5.13
- 

**Earth and Human Activity****Human Impact****Stability and Change**

- 14 Obtain and evaluate information to communicate how science-based solutions are being used to protect Earth's natural resources and its environment. 5.14
- 15 Design, test, and revise solutions to clean a polluted environment. 5.15