Alabama Science

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: Int an

Skip to main content

Matter and Energy Flow

ructure 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