Alabama Science

Grade 3

Motion and Stability: Forces and Interactions

Changes in Motion

Cause and Effect

Changes in Motion

1 Conduct investigations to explain the effects of balanced and unbalanced forces exerted on an object, varying the size, number, and direction of the forces. 3.1

Patterns

2 Observe and measure an object's motion to provide evidence that a pattern of motion can be used to predict future motion. 3.2

Non-Contact Forces

Cause and Effect

3 Conduct investigations to determine cause and effect relationships between objects not in contact with one another, including magnetic and electrostatic forces. 3.3

Non-Contact Forces

Systems and System Models

4 Apply scientific ideas about magnetic interactions to solve a problem using the engineering design process. 3.4

From Molecules to Organisms: Structures and Processes

Growth and Development

Stability and Change

5 Develop and use models to compare the diverse life cycles of organisms other than humans, including birth, growth, reproduction, and death. 3.5

Heredity: Inheritance and Variation of Traits

Inherited Traits and Environmental Impact

Patterns

6 Use data to provide evidence that plants and animals have observable traits inherited from parents and that variations of these traits exist in groups of similar organisms. 3.6

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Inherited Traits and Environmental Impact

	Cause and Effect
	7 Use evidence to support a claim that traits can be influenced by the environment. 3.7
Unity and Diversity	**Fossil Evidence**
	Scale, Proportion, and Quantity
	8 Analyze and interpret data from fossils to provide evidence of the existence of organisms and information about the environments in which they lived. 3.8
	Biodiversity
	Systems and System Models
	9 Construct an explanation from evidence of how variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. 3.9
	Biodiversity
	Energy and Matter
	10 Make a claim from evidence that an organism's likelihood of survival depends upon access to sufficient resources in its habitat, including sunlight, air, water, food, and shelter. 3.10
	Biodiversity
	Cause and Effect
	11 Construct explanations of how forming groups helps some organisms survive. 3.11
	Human Impact
	Scale, Proportion, and Quantity
	12 Obtain and communicate information regarding the impact of existing solutions on plant and animal populations when environmental changes occur. 3.12
Earth's Systems	**Weather**
	Patterns
	13 Represent data in tables or graphical displays to reveal typical weather patterns during a particular season. 3.13
	Climate

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	Systems and System Models	
	14	Use information from a variety of sources to describe climates in different regions of the world. 3.14
Earth and Human Activity	**Natural Hazard Solutions**	
	Cause and Effect	
	15	Obtain and communicate information on the effectiveness of existing solutions designed to reduce the impact of weather-related hazards. 3.15