

REPORTING CATEGORY: Force, Motion, Energy and matter

Force, Motion & Energy

FOCUS: Understanding of what force, motion and energy are and how they are connected.

MAJOR TOPICS:

- Magnetism
- Types of Motion
- Simple and Compound Machines
- Energy Forms
- Energy Transformations (especially electrical, sound and light)



Reporting Category: Force, Motion, Energy and Matter

Force, Motion and Energy

K	1 st	2 nd	3 rd	4 th	5 th
K.3 Magnetism and useful applications		2.2 Characteristics of magnetism & important applications		4.3 Characteristics of electricity/circuits	
				4.3 Electromagnets	
K.4 Position, motion & speed of an object can be determined	1.2 Different kinds of motion		3.2 Simple Machines	4.2 Characteristics and interactions of moving objects	
K.8 Shadows occur when light is blocked					5.3 Properties and applications of light energy
	1.2 Objects may vibrate and produce sound				5.2 Properties and applications of sound energy

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Matter

FOCUS: Understanding of the physical properties and basic structure of matter.

MAJOR TOPICS:

- Basic description of objects
- Phases of matter
- Phase changes (especially water)
- Mass and volume
- How matter is classified



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Matter

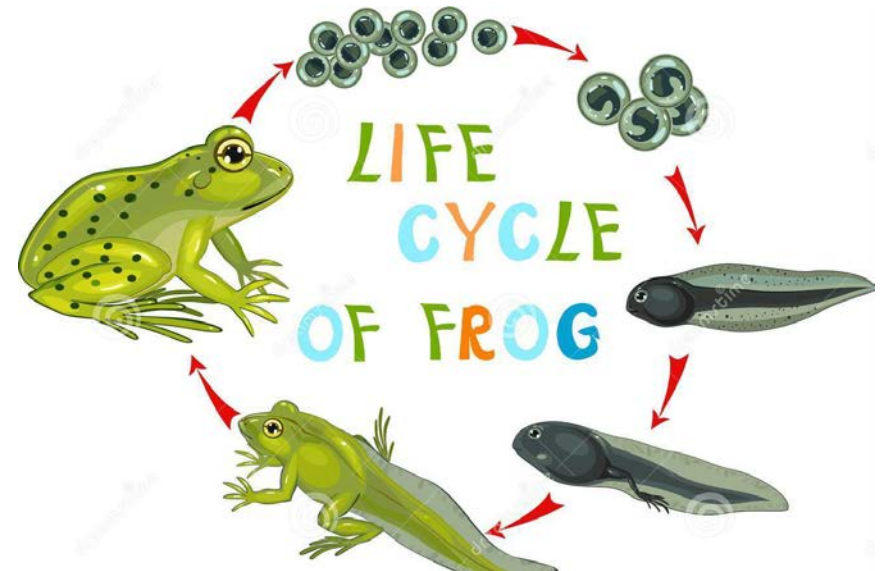
K	1 st	2 nd	3 rd	4 th	5 th
K.4 Physical properties of an object can be described		2.3 Solid, liquid, and gas properties	3.3 Objects are made of materials that can be described by their physical properties		5.4 Properties of matter and intro into the atomic theory
K.5 Water has properties and water flows					
		2.3 Phase changes and energy	3.9 Condensation, evaporation, and precipitation as relates to the water cycle		5.4 Phase changes and energy at the molecular level
	1.3 Common materials interact with water				5.4 Mixtures and solutions

Life Processes

FOCUS: Understanding the life processes of plants and animals and specific needs of each.

MAJOR TOPICS:

- Basic needs of plants and animals
- Life processes of organisms
- Physical characteristics
- Orderly changes in life cycles
- Behavioral and physical adaptations
- Survival and perpetuation of species



Reporting Category: Living Processes and Living Systems

Life Processes

K	1 st	2 nd	3 rd	4 th	5 th
K.6 Differences between living and nonliving	1.4 & 1.5 Plants & animals can be classified using a variety of characteristics				
	1.5 Animals have different physical characteristics				
K.7 Basic needs of plants and animals	1.4 & 1.5 Needs and characteristics of plants & animals			4.4 Basic Plant Anatomy & Processes: Photosynthesis	
	1.4 Basic parts of plants			4.4 Basic Plant & Flower Anatomy	
K.7 All plants & animals have life cycles		2.4 Animal & plant life cycles	3.8 Animal & plant life cycles	4.4 Plant reproduction	
K.9 Repeating patterns in animal & plant growth					

Reporting Category: Living Processes and Living Systems

<p>K.10 Change occurs over time</p>		<p>2.5 Fossils provide info on living systems on earth years ago</p>			<p>5.7 Earth history & fossil evidence</p>
			<p>3.4 Behavioral and physical adaptations</p>	<p>4.4 Adaptations allow plants to satisfy life needs & respond to the environment</p>	<p>5.5 Traits of organisms which help them survive in environment</p>
			<p>3.10 Natural events and human influence can affect the survival of a species</p>	<p>4.5 Plant & animal adaptations</p>	

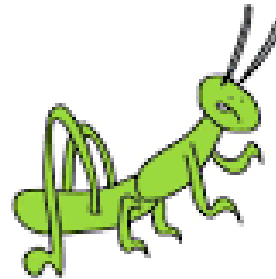
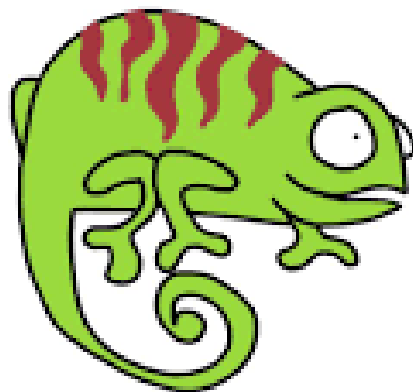
Reporting Category: Living Processes and Living Systems

Living Systems

FOCUS: Builds from a basic to a more complex understanding of a system both at the ecosystem level and at the cellular.

MAJOR TOPICS:

- Classification of organisms
- Types of relationships of organisms in a food chain
- Different types of environments
- Environments and the organisms they support
- Relationship between organisms and their nonliving environment



Reporting Category: Living Processes and Living Systems

Living Systems

K	1 st	2 nd	3 rd	4 th	5 th
		2.5 Living things are part of a system (habitat)	3.6 Ecosystems support a diversity of plants & animals that share limited resources	4.5 Plants & animals in an ecosystem interact with non-living components of the ecosystem	
				4.5 Organization of populations / communities/ ecosystems	
			3.5 Relationships among organisms in aquatic & terrestrial food chains	4.5 Flow of energy through food webs	
					5.5 Cells & classification systems of plants & animals

Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Interrelationships of Space Systems

FOCUS: Understanding how Earth interacts with other members of the solar system.



MAJOR TOPICS:

- Shadows
- Relationships between the sun, Earth, and moon
- Objects in the solar system

Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Interrelationships of Space Systems

K	1 st	2 nd	3 rd	4 th	5 th
K.8 Shadows Relationship between objects & the sun	1.6 Shadows Relationship between the sun and Earth			4.7 Relationships between the Earth, moon and sun	
				4.8 Characteristics and organization of the solar system	

Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Interrelationships of Earth Systems

FOCUS: Understanding of how Earth systems are connected.

MAJOR TOPICS:

- Water flows and can be tested
- Relationships between the sun & Earth
- Weather types
- Weather patterns
- Weather instruments
- Properties of soil
- Characteristics of the ocean environment



Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Interrelationships of Earth Systems

K	1 st	2 nd	3 rd	4 th	5 th
K.5 Water flows & can be observed and tested			3.9 Many water sources available on Earth	4.9 Watersheds and water resources	5.6 Characteristics of the ocean environment
		2.7 Weathering and erosion of land surfaces	3.7 Components of soil and its importance		5.7 Weathering, Erosion, Deposition
					5.7 Plate tectonics, Earth's structure
			3.8 Day/night Seasons Moon phases Tides	4.8 Relationships between the Earth, moon, and sun (seasons)	
K.9 Simple patterns in everyday life-weather	1.7 Weather and seasonal changes	2.6 Basic types, changes and patterns of weather		4.6 Weather conditions and phenomena occur and can be predicted	
		2.6 Weather affects plants, animals and their surroundings			

Reporting category: EARTH/SPACE SYSTEMS AND CYCLES

Patterns, Cycles, Processes, and Changes that shape the Earth

FOCUS: Understanding the patterns that occurs in nature and the natural cycles and changes that occur both quickly and slowly over time.

MAJOR TOPICS:

- Relationships among patterns, cycles and changes
- Effects on living things
- Noting and measuring change
- Weather and seasonal change
- Water cycle
- Cycles in the Earth – moon – sun system
- Changes in Earth's surface over time



Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Patterns, Cycles, Processes, and Changes that Shape the Earth

K	1 st	2 nd	3 rd	4 th	5 th
K.9 Simple patterns in everyday life-natural shapes			3.8 Patterns & cycles: day/night, seasons, moon phases, tides, animal & plant life cycles		5.7 Rock types and rock cycle
			3.9 Water cycle		
K.10 Change occurs over time		2.5 Habitats change over time due to many influences	3.10 Human influences can affect the survival of species		5.7 Human impact

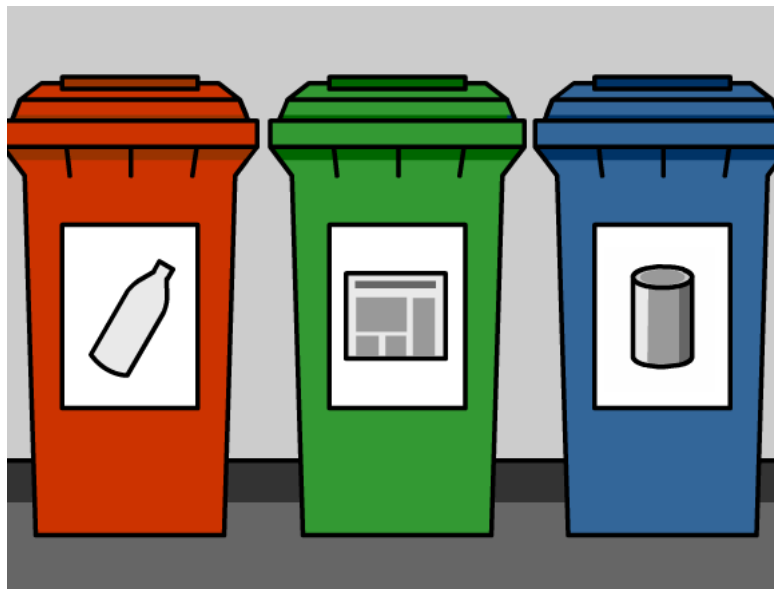
Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Earth Resources

FOCUS: To understand the role of natural resources and how people can use them in a sustainable way.

MAJOR TOPICS:

- Management of resource use
- Basic ideas of conservation of materials
- Conservation of soil, plants and energy use, water and Virginia resources
- How public policy impacts the environment



Reporting Category: EARTH/SPACE SYSTEMS AND CYCLES

Earth Resources

K	1 st	2 nd	3 rd	4 th	5 th
	1.8 Identifying Natural Resources/ resources are limited	2.8 Plants produce oxygen, food and are a source of useful products & provide benefits in nature	3.11 Different sources of energy	4.9 Virginia Natural Resources	
K.11 Reuse, Recycle, Conserve (materials, water & energy)	1.8 Recycling, reusing, reducing		3.10 Conservation and resource renewal		
			3.9 Water on Earth is limited and needs to be conserved		