

Teacher: Core Science Grade 3

Year: 2010-11

Course: Science Grade 3

Month: All Months

September

Characteristics of Life Functions: Animals							
Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	Animals are grouped in different ways *focus on trait	General Skill- Identify the needs of all animals. General Skill- Classify animals according to traits either manually or through writing.	<ul style="list-style-type: none">• trait			Scott Foresman pgs. 39-40 *omit vertebrates and invertebrates	4.2.1a-Some traits of living things have been inherited (e.g., color of flowers and number of limbs of animals). 4.2.1b-Some characteristics result from an individual's interactions with the environment and cannot be inherited by the next generation (e.g., having scars; riding a bicycle). 4.2.2b-Plants and animals can transfer specific traits to their offspring when they reproduce.
	Animals grow and change *focus on butterfly life cycle	General Skill- Name the stages in the life cycle of a plant and the pumpkin orally	<ul style="list-style-type: none">○ larva○ pupa○ life cycle○ life				4.2.2a-Plants and animals closely resemble their parents and other

		<p>*life span</p> <p>*compare life cycle and life span</p>	<p>or in writing for review.</p> <p>General Skill-Sequence the stages of the life cycle of a butterfly in writing.</p> <p>General Skill-Compare life cycles and life spans kinesthetically.</p>	span				<p>individuals in their species.</p> <p>4.4.1e-Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.</p> <p>4.4.2a-Growth is the process by which plants and animals increase in size.</p> <p>4.4.1a-Plants and animals have life cycles. These may include beginning of a life, development into an adult, reproduction as an adult, and eventually death.</p> <p>4.3.1a-Each animal has different structures that serve</p>
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							different functions in growth, survival, and reproduction.
	Adaptations help animals *focus on adaptations, trait, inherited- using different animals groups *can include plant adaptations	General Skill- Distinguish animals based on their adaptations visually. General Skill- Differentiate between plant and animal adaptations in writing. General Skill- Define inherited and elaborate on it in regards to different animal groups in writing.	<ul style="list-style-type: none"> o inherited o adaptation 			Scott Foresman pgs. 48-51 *omit migration and hibernation	4.5.2f-Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating, and communicating. 4.5.1b-An organism's external physical features can enable it to carry out life functions in its particular environment. 4.5.2e- Particular animal characteristics are influenced by changing environmental conditions including: fat storage in winter, coat thickness in winter, camouflage, shedding of fur. 4.3.1c-In order

								to survive in their environment, plants and animals must be adapted to that environment.
November	Characteristics of Life Functions:Plants/Animals							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Interactions between living things.	General Skill- Differentiate the ways living things interact in writing or visually.					4.1.2a- Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die. 4.3.2a- Individuals within a species may compete with each other for food, mates, space, water, and shelter in their environment. 4.3.2b- All individuals have variations, and because of these variations, individuals of a species may have an advantage in

							<p>surviving and reproducing.</p> <p>4.2.2b-Plants and animals can transfer specific traits to their offspring when they reproduce.</p> <p>4.5.1a-All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.</p>
	<p>Living things get energy</p> <p>*emphasize energy and the transfer of energy</p>	<p>General Skill- Define producer and consumer in writing.</p> <p>General Skill- Classify different kinds of consumers in writing.</p> <p>General Skill- Identify the transfer of energy through a food chain and food web visually.</p>	<ul style="list-style-type: none"> ○ producer ○ consumer ○ herbivore ○ carnivore ○ omnivore ○ prey ○ predator ○ food chain ○ food web 				<p>4.6.2b-The Sun's energy is transferred on Earth from plants to animals through the food chain.</p> <p>4.6.2a-Plants manufacture food by utilizing air, water, and energy from the Sun.</p> <p>4.6.1c-Animals that eat plants for food may in turn become food for other</p>

								animals. This sequence is called a food chain. 4.6.1a- Green plants are producers because they provide the basic food supply for themselves and animals.
	Living things and how they compete	General Skill- Generalize the ways living things compete within their environment in writing.	o competition					4.6.1b- All animals depend on plants. Some animals (predators) eat other animals (prey). 4.5.2d- Some animals, including humans, move from place to place to meet their needs.
	Changing environments *focus on decomposer and decay *people impact the change in	General Skill- Identify how living things and natural events cause	o decomposer o decay					4.7.1c- Humans, as individuals or communities, change environments in ways that can be either

		environments	change in the environment orally. General Skill- Compare and contrast decomposer and decay in writing.					helpful or harmful for themselves and other organisms. 4.7.1a- Humans depend on their natural and constructed environments. 4.7.1b-Over time humans have changed their environment by cultivating crops and raising animals, creating shelter, using energy, manufacturing goods, developing means of transportation, changing populations, and carrying out other activities. 4.5.2g-The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air,
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							water, space, shelter, heat, and sunlight.	
December	Forces and Motion: Simple Machines							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Changing positions	General Skill-Identify how things move visually. General Skill-Distinguish speed by constant or variable in writing.	<ul style="list-style-type: none">○ position○ motion○ relative position○ speed				4.5.1a-The position of an object can be described by locating it relative to another object or the background (e.g., on top of, next to, over, under, etc.). 4.5.1b-The position or direction of motion of an object can be changed by pushing or pulling.
		Force affects motions	General Skill-Demonstrate force as being a cause of motion kinesthetically. General Skill-Prove how an object moves based on how much mass and friction it has manipulatively.	<ul style="list-style-type: none">○ force○ friction○ gravity○ magnetism				4.5.1c-The force of gravity pulls objects toward the center of Earth. 4.5.1d-The amount of change in the

		General Skill- Identify three contact forces as pushes, pulls, and friction in writing. General Skill- Contrast gravity and magnetism as non-contact forces in writing.					motion of an object is affected by friction.
	How simple machines work	General Skill- Determine work as a force kinesthetically. General Skill- Label simple machines and how they work in writing.	<ul style="list-style-type: none"> o work o inclined plane o wedge o screw o lever o wheel and axle o pulley 				4.5.1f- Mechanical energy may cause change in motion through the application of force and through the use of simple machines such as pulleys, levers, and inclined planes.

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Water

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards			
	The Importance of Water	General Skill- Communicate the many importances of water orally. General	<ul style="list-style-type: none"> o water vapor o groundwater 							

		Skill- Distinguish between fresh and salt water sources in writing.							
	Changing Forms of Water	General Skill- Identify the different forms of water in writing. General Skills- Sequence the steps in the water cycles using correct terminology in writing. General Skill- Generalize why water needs to be cleaned in writing.	<ul style="list-style-type: none">o solido liquido gaso evaporationo condensationo precipitationo water cycle					4.2.1c-Water is recycled by natural processes on Earth. 4.2.1d- Erosion and deposition result from the interaction among air, water, and land. 4.2.1b.3-form and amount of precipitation 4.2.1c.5- groundwater: water that moves downward into the ground 4.2.1c.4- runoff: water flowing on Earth's surface 4.2.1c.1- evaporation: changing of water (liquid) into water vapor (gas) 4.2.1d.1- interaction between air	

F e b r u a r y								and water breaks down earth materials 4.2.1c.2- condensation: changing of water vapor (gas) into water (liquid) 4.2.1c.3- precipitation: rain, sleet, snow, hail
	Geology: Earth Changes							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Earth's Layers	General Skill- Review Earth's layers orally.					
		Volcanoes and Earthquakes	General Skill- Compare and Contrast magma and lava in writing. General Skill- Determine where most earthquakes happen and why in writing.	<ul style="list-style-type: none"> o magma o lava o volcano o earthquake 				4.2.1e-Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things. things.
		Weathering and Erosion	General Skill- Describe weathering	<ul style="list-style-type: none"> o weathering o erosion 				4.2.1d- Erosion and deposition

		as any process that breaks rocks into smaller pieces in writing. General Skill- Identify the four main causes of erosion in writing. General Skill- Compare and contrast weathering and erosion in different regions in writing. General Skill- Connect erosion and its' relationship to the water cycle visually.					result from the interaction among air, water, and land. 4.2.1d.4- soil is composed of broken-down pieces of living and nonliving earth material 4.2.1d.3- pieces of earth material will settle or deposit on land or in the water in different places 4.2.1d.2- pieces of earth material may be moved by air, water, wind, and gravity
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Weather

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	Components of Weather	General Skill- Identify the different components	<ul style="list-style-type: none"> weather atmosphere barometer anemometer wind vane 				4.2.1a- Weather is the condition of the outside air at

A p r i l			in weather visually. General Skill- Classify the different tools scientists use to describe weather in writing.	<ul style="list-style-type: none"> ○ hygrometer ○ rain gauge ○ weather map 			a particular moment. 4.2.1b.1- Weather can be described and measured by: temperature 4.2.1b.2- wind speed and direction 4.2.1b.3- form and amount of precipitation
		Different weather patterns	General Skill- Determine what factors weather patterns rely in writing.				4.2.1b.4-general sky conditions (cloudy, sunny, partly cloudy) 4.2.1e-Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things. things.
	Astronomy/Space						
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources Standards
		Patterns that repeat every day.	General Skill- Identify the sun as the main source of energy on earth orally. General Skill- Construct a drawing of	<ul style="list-style-type: none"> ○ star ○ axis ○ rotation 			4.1.1a.1- Natural cycles and patterns include: Earth spinning around once every

		<p>earth's axis while differentiating day and night kinestherically.</p> <p>General Skill- Distinguish how each place on earth has a beginning and end to daytime in writing.</p>					<p>24 hours (rotation), resulting in day and night</p> <p>4.1.1a.3- the length of daylight and darkness varying with the seasons</p> <p>4.1.1a.4- weather changing from day to day and through the seasons</p>
	Patterns that repeat every year.	<p>General Skill- Explain the earth's rotation and revolution around the sun and the resulting seasons orally.</p>	<ul style="list-style-type: none"> • revolution 				<p>4.1.1a.2- Earth moving in a path around the Sun (revolution), resulting in one Earth year</p>
	Changes in the moon's shape.	<p>General Skill- List the ways the moon moves and how it affects its' appearance in writing.</p> <p>General Skill-</p>	<ul style="list-style-type: none"> • phase 				<p>4.1.1a.5- the appearance of the Moon changing as it moves in a path around Earth to complete a single</p>

M a y			Compare and contrast the moon and the sun in writing. General Skill- Label the different phases in the moon in writing.					cycle
		Star Patterns	General Skill- Classify the different constellations in the universe in writing.	<ul style="list-style-type: none"> constellation 				4.1.1c-The Sun and other stars appear to move in a recognizable pattern both daily and
	Energy							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Defining Energy	General Skill- Identify the two forms of energy that the earth's get from the sun orally. General Skill- List the examples of potential and kinetic energy in writing.	<ul style="list-style-type: none"> energy potential energy kinetic energy 				4.4.1a- Energy exists in various forms: heat, electric, sound, chemical, mechanical, light. 4.4.1e- Electricity travels in a closed circuit.
		Changing forms of	General Skill-					4.4.1b- Energy can

	energy	Construct a diagram of the different forms of energy in writing. General Skill- Determine the types of energy that travel in ways in writing.					be transferred from one place to another. 4.4.2b- Humans utilize interactions between matter and energy. 4.4.2a- Everyday events involve one form of energy being changed to another. 4.4.1g- Interactions with forms of energy can be either helpful or harmful.
	Heat Energy	General Skill- Describe the four different kinds of heat sources in writing. General Skill- Explain how the amount of heat that causes	<ul style="list-style-type: none"> thermal energy 				4.4.1f-Heat can be released in many ways, for example, by burning, rubbing (friction), or combining one substance with another.

		matter to change to solid, liquid, or gas orally.					
	Light Energy	General Skill- Name three sources of light energy orally. General Skill- Describe how light changes in writing.	<ul style="list-style-type: none"> • reflect • refract • absorb 				4.4.1d- Energy and matter interact: water is evaporated by the Sun's heat; a bulb is lighted by means of electrical current; a musical instrument is played to produce sound; dark colors may absorb light, light colors may reflect light.
	Electrical Energy	General Skill- Predict what causes lightning and why orally. General Skill- Demonstrate how an electric current flows in a circuit kinesthetically.	<ul style="list-style-type: none"> • electric charge • electric current • electric circuit 				4.4.1c- Some materials transfer energy better than others (heat and electricity).