

Teacher: Core Science Grade 1

Year: 2010-11

Course: Science Grade 1

Month: All Months

September

CHARACTERISTICS OF LIFE FUNCTIONS: PLANTS/ANIMALS

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none">Living vs non livingnatural vs man made	General Skill: identify living vs. non-living orally and in writing Contrast the two in writing Differentiate between natural and man made orally Science Skills: Describe patterns and relations both visually and in writing of both living and nonliving things. Classify objects visually, kinesthetically, or in writing	living non-living natural man-made				4.1.1c- Nonliving things do not live and thrive. 4.1.1d- Nonliving things can be human-created or naturally occurring. 4.1.2a- Living things grow take in nutrients, breathe, reproduce, eliminate waste, and die.

METEOROLOGY/WEATHER/WATER CYCLES: CLIMATE, PRECIPITATION

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none">weather concepts: sunny, cloudy, precipit	General Skill: identify and describe daily weather conditions	weather sunny cloudy rainy snowy foggy				4.1.1a.4- weather changing from day to day and through the

		ation (snow, rain), temper ature, wind	orally Science Skills: M3.1a Use appropriate scientific tools, such as metric rulers, spring scale, pan balance, graph paper, thermometers [Fahrenheit and Celsius], graduated cylinder to solve problems about the natural world use different types of models, such as graphs, sketches, diagrams, and maps, to represent various aspects of the real world – Standard 6 Key Idea 2 use simple instruments to measure such quantities as distance,	windy cold hot precipitation temperature				seasons 4.1.1b.2- week, mon 4.2.1a- Weather is the condition o the outside air at a particular moment. 4.2.1b.1- Weather ca be describe and measured by: temperatur
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		size, and weight					
		and look for patterns in the data – Standard 6 Key Idea 5					

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CHARACTERISTICS OF LIFE FUNCTIONS: BASIC NEEDS

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> Animals around us (water, air, shelter, food) How animals and people work together (ox, bat, farm animals, food chain/supply) 	<p>General Skills:</p> <p>Identify the needs of animals to survive ?orally</p> <p>Communicate how people and animals work together orally</p> <p>Science Skills:</p> <p>Describe patterns and relations both visually and in writing of both living and nonliving things.</p> <p>Observe, discuss, and record data both visually and in writing use computer technology, traditional</p>	<p>food chain</p> <p>farming</p>				<p>S.LE.E.04.PI.E.0 LIVING ENVIRONMENT ~ describe some survival behavior of common living specimens</p> <p>S.LE.E.04.PI.F.0 LIVING ENVIRONMENT ~ describe how plants and animals including humans depend upon each other and the nonliving environment</p> <p>S.LE.E.04.PI.F.0 LIVING ENVIRONMENT ~ describe the relationship of the sun as an energy source for living and nonliving cycles</p>

		paper-based resources, and interpersonal discussions to learn, do, and share science in the classroom -- standard 2 key idea 1					
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ECOLOGY: LIFE CYCLES

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> Plants (pumpkins) harvesting plants as food 	General Skills: Explain the life cycle of pumpkins orally and in writing Classify which plants are used as food orally	pumpkin seeds seedling plant flower root stem vine harvest				4.1.1b-Plants require air, water, nutrients, and light in order to live and thrive. 4.1.2a-Living things grow, take nutrients, breathe, reproduce, eliminate waste, and die. 4.3.1b-Each plant has different structures that serve different functions in growth, survival, and reproduction 4.4.1a-Plants

								<p>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>4.4.1b-Each kind of plant goes through its own stages of growth and development that may include seed, young plant, and mature plant.</p> <p>4.4.1c-The length of time from beginning of development to death of the plant is called its life span.</p> <p>4.4.1d-Life cycles of some plants include changes from seed to mature plant.</p> <p>4.5.2a-Plants respond to changes in their</p>
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								<p>environment.</p> <p>For example, in deciduous trees, the leaves change color in the fall. Some green plants change their position as the direction of light changes; the leaves of some plants undergo seasonal changes that enable the plant to grow; seeds germinate, and leaves form and grow.</p> <p>4.6.1a-Green plants are producers because they provide the basic food supply for themselves and animals.</p> <p>4.6.2a-Plants manufacture food by utilizing air, water, and energy from the Sun.</p>
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CHARACTERISTICS OF LIFE FUNCTIONS: PLANTS/ANIMALS

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> seasonal changes plants/animals 	<p>General Skills:</p> <p>Compare</p>	<p>Migration</p> <p>Hibernation</p> <p>Adaptation</p>				<p>4.1.1a-Animals need air, water, and food in</p>

r		<p>around us</p> <ul style="list-style-type: none"> • getting ready for winter (migration, hibernation, adaptations) 	<p>and contrast seasonal changes orally and visually</p> <p>Explain how animals prepare for seasonal changes orally</p>				<p>order to live and thrive.</p> <p>4.1.2a-Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die</p> <p>4.3.1a-Each animal has different structures that serve different functions in growth, survival, and reproduction.</p> <p>4.3.1b-Each plant has different structures that serve different functions in growth, survival, and reproduction.</p> <p>4.3.1c-In order to survive in their environment, plants and animals must be adapted to that environment.</p> <p>4.4.1a-Plants and animals have life cycles. These may include beginning of a life, development into an adult,</p>
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								<p>reproduction a an adult, and eventually death.</p> <p>4.4.2b-Food supplies the energy and materials necessary for growth and repair.</p> <p>4.5.1a-All living things grow, take in nutrients, breathe, reproduce, and eliminate waste.</p> <p>4.5.2b-Animal respond to change in their environment, (e.g., perspiration, heart rate, breathing rate, eye blinking, shivering, and salivating).</p> <p>4.5.2d-Some animals, including humans, move from place to place to meet their needs.</p> <p>4.5.2e- Particular animal characteristics are influenced by changing environmental conditions including: fat</p>
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								<p>storage in winter, coat thickness in winter, camouflage, shedding of fur</p> <p>4.5.2f-Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating, hunting, migrating, and communicating</p> <p>4.6.1e-An organism's pattern of behavior is related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment.</p> <p>4.6.1f-When the environment changes, some plants and animals survive</p>
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								and reproduce and others die or move to new locations.
D e c e m b e r	CHARACTERISTICS OF LIFE FUNCTIONS: BASIC NEEDS							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> families: needs and wants similarities and differences 	<p>General Skills:</p> <p>Differentiate between needs and wants of humans orally and through writing</p> <p>Distinguish similarities and differences of individual family members and different families orally</p>	Needs Wants				<p>4.2.1a-Some traits of living things have been inherited (e.g., color of flowers and number of limbs of animals).</p> <p>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).</p> <p>4.2.2a-Plants and animals closely resemble their parents and other individuals in their species</p> <p>4.2.2b-Plants and animals can transfer specific traits to their offspring</p>

							when they reproduce.
RENEWABLE RESOURCES: ENERGY/MATTER: STATES OF MATTER, CHANGES IN STATE							
Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> solids, liquids, gases properties (color, smell, taste, hardness, sound) energy and safety 	<p>General Skills:</p> <p>Distinguish between the different states of matter orally</p> <p>Describe the properties using the 5 senses in writing</p> <p>Identify different forms of energy orally</p> <p>Describe ways to use energy safely orally and in writing</p>	<p>Matter</p> <p>Solid</p> <p>Liquid</p> <p>Gas</p> <p>Properties</p> <p>States of Matter</p> <p>Heat Energy</p> <p>Light Energy</p>				<p>4.3.1a-Matter takes up space and has mass. Two objects cannot occupy the same place at the same time.</p> <p>4.3.1b-Matter has properties (color, hardness, odor, sound, taste, etc.) that can be observed through the senses.</p> <p>4.3.1c- Objects have properties that can be observed, described, and/or measured: length, width, volume, size, shape, mass, or weight, temperature, texture, flexibility, reflectiveness of light.</p>

								<p>4.3.1f- Objects and/or materials can be sorted or classified according to their properties.</p> <p>4.3.2a-Matter exists in three states: solid, liquid gas.</p> <p>4.3.2c- Changes in the properties of materials of objects can be observed and described.</p> <p>4.4.1a- Energy exists in various forms: heat, electric, sound, chemical, mechanical, light.</p> <p>4.4.1b- Energy can be transferred from one place to another.</p> <p>4.4.1d- Energy and matter interact: water is evaporated by the Sun's heat; a bulb</p>
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								<p>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.</p> <p>4.4.1f-Heat can be released in many ways, for example by burning, rubbing (friction), or combining one substance with another.</p> <p>4.4.1g-Interactions with forms of energy can be either helpful or harmful.</p> <p>4.4.2b-Humans utilize interactions between matter and energy.</p>
J a n u a	FORCES AND MOTION: GRAVITY/WEIGHT							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> sink 	General Skill:					

r y		and float	Report which objects sink when immersed in water kinesthetically and in writing Report which objects float when immersed in water kinesthetically and in writing Describe reasons why orally and in writing						
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FORCES AND MOTION: FORCES, MAGNETISM

F e b r u a r y	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> magnets attract/repel push and pull directions: over, under, on top of, middle, next to 	General Skill: Demonstrate magnetism using different objects kinesthetically Discriminate which objects attract/repel when using magnets kinesthetically Interpret different forces(push/pull) kinesthetically and orally Identify directions kinesthetically, orally, and visually	attract repel poles				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

M a r c h								<p>changed by pushing or pulling.</p> <p>4.5.1c- The force of gravity pulls objects toward the center of Earth.</p> <p>4.5.1e- Magnetism is a force that may attract or repel certain materials.</p>
	CHARACTERISTICS OF LIFE FUNCTIONS: NUTRITION/HEALTH							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> dental health healthy habits 	<p>General Skill:</p> <p>Identify ways to keep teeth healthy orally</p> <p>Discuss foods and habits that promote healthy teeth orally</p>	<p>teeth</p> <p>molar gums cavity</p>				<p>4.5.3a- Humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health</p>
M a r c h	ASTRONOMY/SPACE: SOLAR SYSTEM, CYCLES							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> Earth and space sun: rotation 	<p>General Skill:</p> <p>Order the planets by distance from the Sun orally</p>	<p>Solar System</p> <p>Planets</p> <p>Venus</p> <p>Mercury</p> <p>Mars</p>				<p>4.1.1a.1- Natural cycles and patterns include:</p>

		on, orbit, plane ts, time, revie w seaso ns • stars, plane ts	Compare and contrast the different planets orally Understand the characteristics of Earth- the place we call home through writing Describe the importance of the Sun as the center of our universe orally Describe characteristics of each planet in writing	Earth Saturn Uranus Orbit Rotate				Earth spinning around once every 24 hours (rotation), resulting in day and night 4.1.1a.2- Earth moving in a path around the Sun (revolution) resulting in one Earth year 4.1.1a.3-the length of daylight and darkness varying with the seasons 4.1.1a.4- weather changing from day to day and through the seasons 4.1.1c-The Sun and other stars appear to move in a recognizable pattern both daily and
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ECOLOGY: ECOLOGICAL SYSTEMS/BIOMES

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	• Ocean	General Skill:	Ocean Fish				4.1.1a- Animals need

		life	Identify ocean dwellers orally and in writing Name organisms that live in the ocean orally Find Nemo visually	Shark Octopus Whales Ocean Food Chain				air, water, and food in order to live and thrive. 4.1.2a-Living things grow, take in nutrients, breathe, reproduce, eliminate waste, and die. 4.5.1b-An organism's external physical features can enable it to carry out life functions in its particular environment. 4.5.2d-Some animals, including humans, move from place to place to meet their needs. 4.6.1c-Animals that eat plants for food may in turn become food for other animals. This sequence is called a food chain. 4.6.1e-An organism's pattern of behavior is related to the
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								nature of the organism's environment including the kinds and numbers of other organisms present, the availability of food and other resources, and the physical characteristics of the environment
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APPENDIX A RENEWABLE RESOURCES

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> recycling environmental awareness 	General Skill: Understand the benefits to recycling orally and visually Determine items that are recyclable kinesthetically and visually Understand the methods of recycling orally	reduce reuse recycle environment compost glass metal plastic				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. 4.7.1c-Humans, as

							individuals or communities change environment in ways that can be either helpful or harmful for themselves and other organisms.
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CHARACTERISTICS OF LIFE FUNCTIONS: NUTRITION/HEALTH

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	<ul style="list-style-type: none"> • nutrition • food pyramid • healthy plates • portions 	General Skill: Understand the current food pyramid visually and orally List foods in their appropriate section in writing and through pictures Compose a healthy meal including proper portion size in pictures and writing	Food Pyramid Grains Dairy Fats/Oils Fruits Vegetables Meat/Beans Portion Fiber Protein Carbs				4.5.3a- Humans need a variety of healthy foods, exercise, and rest in order to grow and maintain good health

MEASUREMENT: MASS, VOLUME, DISTANCE/ LENGTH

May	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		<ul style="list-style-type: none"> • Non standard 	General Skills: Identify	Unifix cubes length				4.3.1d- Measurement can be made

		meas urem ent	length using non-standard units (cubes, etc...) kinesthetically Practice measuring lengths of objects kinesthetically Compare and contrast the lengths of objects in writing and kinesthetically	non- standard				with standar metric units and nonstandard units.
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