

Teacher: Core Science Grade 2	Year: 2010-11
Course: Science Grade 2	Month: All Months

S e p t e m b e r	ASTRONOMY/SPACE							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Components of the solar system	General Skills: Identify orally and in writing the components of the solar system: sun, planets, moon, stars					

		<p>Revolution and Rotation</p> <p>General Skill: Orally and in writing describe the movements of the Earth: rotation and revolution</p> <p>General Skill: Orally and in writing define rotation and revolution</p> <p>General Skill: Kinesthetically or manipulatively differentiate rotation and revolution</p>					<p>4.1.1a.1- Natural cycles and patterns include: Earth spinning around once every 24 hours (rotation), resulting in day and night</p> <p>4.1.1a.2- Earth moving in a path around the Sun (revolution), resulting in one Earth year</p>
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		<p>Cycles: Seasons</p> <p>General Skill: In writing identify how the length of daylight and darkness changes as seasons change</p> <p>General Skill: Identify in writing how the weather changes from day to day and through the seasons</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>
		<p>Cycles: Phases of the moon</p> <p>General Skill: Orally and in writing explain the phase of the moon</p> <p>General Skill: IN writing label the phases of the moon</p>					<p>4.1.1a.5- the appearance of the Moon changing as it moves in a path around Earth to complete a single cycle</p>
		<p>Cycles: Day and night</p> <p>General Skill: In writing communicate how the rotation and revolution of the Earth affects the</p>					<p>4.1.1b.1- Humans organize time into units based on natural motions of Earth: second,</p>

N o v e m b e r			length of day and year.					minute, hour 4.1.1b.2- week, month
	METEOROLOGY/WEATHER/WATER CYCLES							
	Essential Questions	Content	Skills	Vocabulary Assessments		Lessons	Resources	Standards
		Concept of weather	General Skills: Define the term weather in writing					4.2.1a- Weather is the condition of the outside air at a particular moment.
		Types of weather	General Skill: Orally and in writing describe types of weather: sunny, windy, cloudy, partly cloudy, snowy, rainy, hail					4.2.1b.4- general sky conditions (cloudy, sunny, partly cloudy)
		Weather makers	General Skill: Orally and in writing describe why the weather changes (temperature, wind speed and direction, form and					4.2.1b.1- Weather can be described and measured by: temperature 4.2.1b.2- wind speed and direction 4.2.1b.3-

		amount of percipitation)					form and amount of precipitation
	Weather tools	General Skills: Identify orally and in writing weather tools General Skill: Label the tools used to measure various aspects of weather					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
	Water cycle	General Skills: Identify the parts of the Water Cycle in writing General Skill: Label the different parts of the Water Cylce: evaporation, condensation, precipitation, runoff and foundwater.					4.2.1c-Water is recycled by natural processes on Earth. 4.2.1c.1- evaporation: changing of water (liquid) into water vapor (gas) 4.2.1c.2- condensation: changing of water vapor (gas) into water (liquid) 4.2.1c.3- precipitation: rain, sleet, snow, hail 4.2.1c.4- runoff: water flowing on Earth's surface 4.2.1c.5-

							groundwater: water that moves downward into the ground
	Extreme natural events	General Skills: Label and describe the impact of extreme natural events on living things(hurricanes, tornados, blizzards...)					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.

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FORCES AND MOTION

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	Introduction to forces	General Skill: Define a force as a push or pull					4.5.1b-The position or direction of motion of an object can be changed by pushing or pulling.
	Heat	General Skill: Orally explain how friction changes the motion of an object					4.5.1d-The amount of change in the motion of an object is affected by friction.
	Gravity	General Skills: Explain in					4.5.1c-The force of gravity

F e b r u a r y			writing how the force of gravity pulls objects towards Earth					pulls objects toward the center of Earth.
		Magnetism	General Skill: Predict, demonstrate and explain why a magnet will attract or repel certain materials					4.5.1e- Magnetism is a force that may attract or repel certain materials.
	MATTER							
	Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
		Introduction to matter	General Skills: Define orally and in writing the term matter					4.3.1a- Matter takes up space and has mass. Two objects cannot occupy the same place at the same time.
		States of matter	General Skill: Communicate the three states of matter (solid, liquid, gas) General Skill: Orally and in writing define the terms solid, liquid, gas					4.3.1f- Objects and/or materials can be sorted or classified according to their properties. 4.3.2a- Matter

		General Skills: Classify matter into groups of solids, liquids and gases					exists in three states: solid, liquid, gas.
	Properties of matter	General Skills: Classify matter according to their properties: color, hardness, odor, sound, taste...) General Skills: Observe, describe, and measure orally and in written form the properties of objects with standard and nonstandard units General Skill: Explain orally and in written form the specific properties of an object(sink/float, conductivity, magnetism) General Skills: Manipulate tools to					4.3.1b-Matter has properties (color, hardness, odor, sound, taste, etc.) that can be observed through the senses. 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. 4.3.1d- Measurements can be made with standard metric units and nonstandard units. 4.3.1e-The material(s) an object is made

ENERGY

Essential Questions	Content	Skills	Vocabulary	Assessments	Lessons	Resources	Standards
	Forms of Energy	General Skills: Define energy orally and in written form General Skill: State the various forms of energy orally and in written form (heat, electric, sound, chemical, mechanical, light) General Skill: Explain orally and in written form how energy can be transferred from one place to another					4.4.1a- Energy exists in various forms: heat, electric, sound, chemical, mechanical, light. 4.4.1b- Energy can be transferred from one place to another.
	Heat	General Skill: Describe orally and in written form how heat can be released in					4.4.1f-Heat can be released in many ways, for example, by burning, rubbing

		various ways (burning, rubbing, or combining one substance with another) General Skill: Explain orally and in written form how the sun's energy warms the air and water					(friction), or combining one substance with another. 4.4.2a- Everyday events involve one form of energy being changed to another.

A p r i l

LIVING ENVIRONMENT

Essential Questions	Content	Skills	Vocabulary Assessments	Lessons	Resources	Standards
	Characteristics of Living and Nonliving Things	General Skills: Distinguish orally and in written form the differences between living and nonliving things General Skills: List orally and in written form the requirements all living things need to survive: air, water, nutrients, light General Skills: Describe orally				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,

		and in written form the functions of living things (grow, take in nutrients, breathe, eliminate, and die)					breathe, reproduce, eliminate waste, and die. 4.1.1a- Animals need air, water, and food in order to live and thrive. 4.1.1b- Plants require air, water, nutrients, and light in order to live and thrive.
	Heredity	General Skills: Explain orally and in written form the rationale behind offspring resembling parents General Skills: Describe orally and in written form the specific traits transferred during reproduction					4.2.2a- Plants and animals closely resemble their parents and other individuals in their species. 4.2.2b- Plants and animals can transfer specific traits to their offspring when they reproduce.
	Characteristics	General					4.3.1a-Each

	of Animals	Skills: Classify visually or in writing the plant's characteristics (root, leaves, stem, flower, seed)					animal has different structures that serve different functions in growth, survival, and reproduction.
	Characteristics of Plants	General Skills: Classify visually or in writing the plant's characteristics (root, leaves, stem, flower, seed)					4.3.1b-Each plant has different structures that serve different functions in growth, survival, and reproduction. 4.4.1c-The length of time from beginning of development to death of the plant is called its life span. 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.
	Life Cycle of an Animal (frog)	General Skills: State and describe visually,					4.4.1a- Plants and animals have life cycles.

			orally, and in writing various stages of a life cycle.				<p>These may include beginning of a life, development into an adult, reproduction as an adult, and eventually death.</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>4.4.1f-Each kind of animal goes through its own stages of growth and development during its life span.</p> <p>4.4.1g-The length of time from an animal's</p>
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							birth to its death is called its life span. Life spans of different animals vary.
	Life Cycle of a Plant (pumpkin)	General Skills: State and describe visually, orally, and in writing various stages of a life cycle.	life cycle adult reproduce death life span seed seedling sprout vine flower				4.4.1d-Life cycles of some plants include changes from seed to mature plant.
	Adaptations	General Skills: Identify and describe orally and in written form adaptations organisms possess to sustain life	adaptations migration hibernation camouflage shedding				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. 4.5.2f-Some animal behaviors are influenced by environmental conditions. These behaviors may include: nest building, hibernating,

								hunting, migrating, and communicating. 4.5.2d-Some animals, including humans, move from place to place to meet their needs.
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