Teacher: CORE Science Grade 5 Year: 2011-12
Course: Science Grade 5 Month: All Months

September

Basic Building Blocks ~ This unit has been combined with photosynthesis unit to provide consistency and

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary
LS1.2.1-LIVING THINGS & ORGANIZATION-Recognize that all living things are composed of cells, and explain that while many organisms are single celled, such as yeast, others, including humans, are multicellular.	**Students will develop an initial understanding of various cellular parts. Students will utilize this knowledge to compare/contrast how organisms co-exist.	cells	recognize and explain that all organisms are singular or multicellular	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit A Ch1 L1 National Geographic Video	Unit Vocab. cell nucleus organelle cilia diffusion flagellum osmosis fungi protist kingdom organ organ system tissue
LS1.2.3-Recognize that cells use energy obtain from food, to conduct the functions necessary to sustain life, such as cell growth.		animal/ plant cells	Compare and contrast human/animal cells to plant cells		Unit A Ch1 L1	NECAP Vocab Analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer
LS1.2.3-		Life and	Recognize		Unit A Ch1	

Recognize that cells use energy obtain from food, to conduct the functions necessary to sustain life, such as cell growth.		growth of cells	that cells use energy from food to function		L2		

Photosynthesis ~ This unit will extend through the month of October.

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary
LS2.2.3- Describe the process of photosynthesis and explain that plants can use the food they make immediately or store it for later use. SPS2.5.2- Diagram and label the structure of the primary components of representative organs in plants and animals.	**Students will be able to explain and illustrate the characteristics of the photosynthesis process.	Process of photosynthesis	**Describe process of photosynthesis** Explain/ Illustrate how plants make, store, and use food Draw and label a plant's structure	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit A Ch2 L2 Unit A Ch2 L1 PBS Teacher Resources - see video under lesson National Geographic Video - *How a Plant Works*	Unit Vocab. chlorophyll chloroplast photosynthesis stomata nonvascular plant phloem transpiration vascular plant xylem NECAP Vocab Analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer

	LS2.2.2- Recognize that one of the most general distinctions among organisms is between plants, which use sunlight to make their own food, and animals, which consume energy-rich foods.	**Students will be able to draw conclusions about the roles of producers and consumers.	Producers vs. Consumers	**Recognize and explain role of plants in food chain** Compare and contrast producers and consumers (energy pyramid)	Producer/Consumer Website	Unit B Ch4 L3		

November

Human Body Systems ~ May extend into December

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary
LS1.3.1- REPRODUCTION- Explain that cells repeatedly divide to make more cells for growth and repair.	**Students will recognize that the human body includes many important and vital systems.	Cell growth and repair	Cell reproduce through dividing and repair		CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit A Ch1 L2	Unit Vocab. cell nucleus organelle cilia diffusion flagellum osmosis fungi protist kingdom organ organ system tissue
LS1.2.5- Explain that multicellular organisms have specialized	**Students will recognize that the human body includes many	Specialized functions of multicellular organisms	Explain interaction of the systems of the human body		Unit A Ch1 L4	NECAP Vocab analyze conclude compare classify

cells, tissues, organs and organ systems that perform certain necessary functions, including digestion, respiration, reproduction, circulation, excretion, movement, control and coordination and protection from disease.	systems, each of which is important to survival.						predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer	
LS1.3.1-REPRODUCTION-Explain that cells repeatedly divide to make more cells for growth and repair. LS1.3.3-Explain that all living things reproduce in order to continue their species. LS3.3.2-Recognize that only organisms that are able to reproduce can pass on their genetic information to the next generation.	** Describe the processes by which single-celled organisms sustain life.	Reproduction	Explain that all living things reproduce Recognize that only organisms that reproduce pass on genetic information		Unit A Ch1 L2 Unit A Ch2 L3			
LS1.2.4-Recognize and describe the hierarchical organization of living	** Students will understand that cells join together to perform basic life	Hierarchical organization: cells, tissues, organs, organ systems, whole organisms,	Describe the hierarchical organization of living systems Diagram and label	Cell Match Game	Unit A Ch1 L4 SRS nurse or other health practitioners EDMES nurse or			

	systems, including cells, tissues, organs, organ systems, whole organisms, and ecosystems. LS1.2.6- Recognize that the human cells found in tissues and organs are similar to those of other animals, but somewhat different from cells found in plants. LS2.2.4- Recognize that energy, in the form of heat, is usually a byproduct when one form of energy is converted to another, such as when living organisms transform stored energy to motion. SPS2.2.1- SYSTEMS AND ENERGY	functions in multistage organisms.	and ecosystems	representative organs and animals Describe which organs carry out which functions Recognize relationships between systems Recognize the transfer of energy between body systems		other health practitioners PBS Teacher Resources - see video under lessons		

	(SAE)-Thinking about things as systems means looking for how every part relates to others. SPS2.5.1-FORM AND FUNCTION (FAF)-Describe the structure and function of organs. SPS2.5.2-Diagram and label the structure of the primary components of representative organs in plants and animals.								
December	Health								
	Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary	A	
	LS4.2.4-Recognize a healthy body cannot fight all germs that invade it, and explain how some germs interfere with the body's defenses.	**Students will explain how germs can affect the human body.	Germs	Explain how germs interfer with body's defense	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com SRS nurse or other health practitioners EDMES nurse or other health practitioners	Unit Vocab. barriers of defense germs vaccine medicine hygiene disease anti-bodies immunity white blood cells red blood		

							cells
LS4.2.1- DISEASE- Explain that the human body has ways to defend itself against disease causing organisms and describe how defenders, including tears, saliva, the skin, some blood cells and stomach secretions support the defense process. LS4.2.2- Recognize that there are some diseases that human beings can only get once, and explain how many diseases can be prevented by vaccination. LS4.2.3-	** Students will recognize which diseases are preventable and which are not. They will compare/contrast various vaccines/medicines that can used to protect one's body.	Disease Prevention Medicines Diseases (body's natural defenses)	Summarize how vaccines build immunity in the body without causing the disease Recognize that disease can be prevented (vaccines or good hygiene) Compare/ Contrast vaccines and medicines (preventing, relieving, or curing) Recognize the body's inability to fight all germs Explain and describe the body's defense against disease: tears, saliva, skin, blood cells, and stomach secretions	Germinator Game Glitter Germ Game	Unit A Ch3 L1 pA90 PBS Teacher Resources - see game under Lessons	NECAP Vocab analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer

	Explain how vaccines induce the body to build immunity to a disease without actually causing the disease itself. LS5.3.A.2- Differentiate between vaccines, which help prevent diseases from developing and spreading, and medicines, which relieve symptoms or cure diseases.								
	LS4.3.1-HUMAN IDENTITY- 1. Recognize that the length and quality of human life are influenced by many factors, including sanitation, diet, medical care, gender, genes, environmental conditions, and personal health behaviors. LS5.3.A.1-SOCIAL ISSUES (LOCAL AND GLOBAL)- MEDICAL TECHNOLOGIES-	** Students will recognize and infer how diet, environmental conditions, and health behaviors can affect human life.	Human life	Recognize the influences of the following factors: sanitation, diet, medical care, gender, genes, environmental conditions, and personal health behaviors Explain how advanced technologies i.e health care have				

	Provide examples of early health care technology that helped to extend the life expectancy of humans, such as the discovery of penicillin, sterilization of surgical instruments. LS5.3.B.3-BIOTECHNOLOGIES-Recognize that the quality of personal health can be influenced by society and technology.			improved life expectancy i.e penicillin, sterilization				
J a n u a r y	Kingdoms							
	Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary	
	LS1.1.1-CLASSIFICATION-Identify ways in which living things can be grouped and organized, such as taxonomic groups of plants, animals and fungi. LS1.1.2-Categorize organisms into kingdoms that are currently recognized, according to shared characteristics.	**Students will understand how cell structure and functions are used to classify living things. Students will be able to identify the 6 kingdoms of living things.	Taxonomic groups of plants, animals, and fungi	Categorize organisms into taxonomic groups and kingdoms	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit A Ch 1 L3 Unit B Ch5 L1	Unit Vocab. fungi kingdom protist adaptation habitat niche symbiosis extinction population predator prey endangered species pollution threatened species	
							NECAP Vocab analyze conclude compare classify predict collect data	

						observation investigation identify experiment support justify prediction evaluating explanations infer	

February

Ecosystems

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary	A
LS2.0-Energy flows and matter recycles through an ecosystem. LS2.3.1-RECYCLING OF MATERIALS-1. Define a population as all individuals of a species that exist together at a given place and time, and explain that all populations living together in a community, along with the physical factors with which they interact, compose an ecosystem. SPS2.3.2-	**Students will identify the critical relationships between living and nonliving things. Students will explore various biomes and be able to compare/contrast characteristics of each.	Habitats, Niches, and Biomes	Describe the interactions among populations, communities and the factors affecting an ecosystem	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit B Ch4 L1 + L2 Unit B Ch5 L1 pB48 National Geographic Video - Ecosystems and Biomes	Unit Vocab. energy pyramid community ecosystem population biome climate desert grasslands taiga temperate forests tropical rainforest tundra food chain food web habitat symbiosis niche producer consumer decomposer	

	Finding out the biggest and smallest values of something are often as revealing as knowing what the usual value is.							
	LS2.3.2- Identify and describe the ways in which organisms interact and depend on one another in an ecosystem, using food webs. LS2.3.3- Explain how insects and various other organisms depend on dead plant and animal matter for food, and describe how this process contributes to the system. SPS2.2.3- Estimate or predict the effect of making a change in one part of	**Students will recognize that a food web is made up of interconnected food chains and be able to compare/contrast relationships between various organisms.	Food webs and food chains from producers to decomposers.	**Explain the roles, interactions, and relationships among producers, consumers, and decomposers** Create a food web to show interdependence of organisms Predict effects if web is altered or changed		Unit B Ch4 L3	NECAP Vocab analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer	

	the system will have on other parts and on the system as a whole.							
	LS2.2.1- FLOW OF ENERGY- Describe how energy is transferred in an ecosystem through food webs, and explain the roles and relationships between producers, consumers and decomposers.	** Students will be able to explain how a food chain shows energy flowing from producers to other consumers to decomposers in an ecosystem.	Transference of energy through food webs in an ecosystem.	Recognize heat is a byproduct of motion		Unit B Ch4 L3 pB28		
	LS2.2.4- Recognize that energy, in the form of heat, is usually a byproduct when one form of energy is converted to another, such as when living organisms transform stored energy to motion.		Heat energy and motion	**Describe the flow of energy and matter through the ecosystem**				
Mar	Factors that affect Ecosystems							
	Standards	Enduring	Content	Skills	Lessons	Resources	Vocabulary	A

c h		Understandings						
	LS2.1.1-ENVIRONMENT-Identify and describe the factors that influence the number and kinds of organisms an ecosystem can support, including the resources that are available, the differences in temperature, the composition of the soil, any disease, the threat of predators, and competition from other organisms.	**Students will identify the cause and effect relationships between population and ecosystems. Students will recognize and identify environmental factors that can affect the ecosystem.	Environmental influences: temperature, composition of soil, disease, predators, and competition	Identify and describe the factors influencing the number and kind of organisms	Link to Websites	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit B Ch5 L2 pB44	Unit Vocab. selective breeding extinction population predator prey endangered species pollution threatened species adaptation dominant hybrid asexual reproduction sexual reproduction recessive NECAP Vocab analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer	
	LS3.1.1-CHANGE-Provide examples of how all	Students will be able to describe how human activity can	Organisms' actions impact the environment	Describe positive and negative examples of how humans	Human Impact	Unit B Ch5 L3 United Streaming - Video under		

	organisms, including humans, impact their environment and explain how some changes can be detrimental to other organisms.	alter the conditions in an ecosystem. Students will understand that human impact can be both negative and positive.		impact their environment		lessons		
	LS3.1.2- Explain how changes in environmental conditions can affect the survival of individual organisms and the entire species.		Survival of organisms or species	Explain how environmental changes impact survival		Unit A Ch3 L2 pA102+103		
	LS1.0-All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, & species).					Unit B Ch5 L1		

April

Natural Selection ~ This unit may be started at the end of March.

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary	A
LS1.0-All living organisms have identifiable	**Students will describe the process of natural selection and	Adaptations of organisms within an ecosystem Genetic	**Recognize and provide examples of variations and genetic**	Link to Websites Great Way to Intro. Genetics	CLICK ON "Lessons" TO ACCESS LINK eduplace.com	Unit Vocab. habitat niche symbiosis acquired trait	G S In 4/

	structures and characteristics that allow for survival (organisms, populations, & species). LS3.3.1-NATURAL SELECTION-Recognize that there are genetic variations among individuals in groups of organisms and provide examples of how these variations affect the survival of an organism.	be able to illustrate using examples. They will understand the difference between inherited traits and acquired traits.	variations	**adaptations affecting survival**		hspscience.com Unit B Ch5 L1 pB40 + B41 Unit A Ch3 L1 pA82 + A85	chromosome DNA gene heredity mutation nucleotide adaptation asexual reproduction dominant hybrid recessive selective breeding sexual reproduction NECAP Vocab analyze conclude compare classify predict collect data observation investigation identify experiment support justify prediction evaluating explanations infer	
	LS3.0-Groups of organisms show evidence of change over time (e.g. evolution, natural selection,		Evolution	Support evidence of how organisms evolve				

	structures, behaviors, and biochemistry). LS3.2.1-EVIDENCE OF EVOLUTION-Describe the fundamental concepts related to biological evolution, such as biological adaptations and the diversity of species.							

May

Medical Careers

Standards	Enduring Understandings	Content	Skills	Lessons	Resources	Vocabulary
LS5.4.1-CAREER TECHNICAL EDUCATION CONNECTIONS-Understand that some form of science is used in most jobs/careers and that some jobs/careers specifically require knowledge of life science.		Careers	Identify life science jobs/ careers	Link to Websites Real Scientist Interviews	CLICK ON "Lessons" TO ACCESS LINK eduplace.com hspscience.com Unit A Ch3 L2 pA105 Unit B Ch5 L3 pB65 PBS for Teachers-interviews under lessons Classroom Visitors (local community members/volunteers) to present their experience within a specific science field.	NECAP Vocab analyze conclude compare classify predict collect data observation investigation identify experimeny support justify prediction evaluating explanations infer