

(NT) – Not SOL Tested**Seventh Grade Science CIP Pacing Guide****August 2017**

1st Nine Weeks	1st Nine Weeks	2nd Nine Weeks	2nd Nine Weeks
<p><u>Plan and Conduct Investigations</u> (LS. 1 a-j) Ongoing (5 Days)</p> <ul style="list-style-type: none"> Organize and analyze data into tables, graphs, and use to make predictions (LS. 1a, h) Safety in labs, metric measurement and equipment use (LS. 1c) Identify independent and dependent variables, constants (LS. 1f) Plan and conduct investigations which define possible errors, control variables, test hypotheses, repeat trials (T3-1e) (LS. 1e,g) Identify, interpret and evaluate patterns in data, (LS.1i) Construct models and simulations to illustrate and explain phenomena (LS.1d) Current applications are used to reinforce life science concepts (LS.1j) 	<p><u>Cells</u></p> <ul style="list-style-type: none"> Function of Genes, Chromosomes (LS.12b) Structure and role of DNA (LS.12a) Genetic Engineering and its Applications (LS.12e) <p>LS 13 (3-5 Days)</p> <ul style="list-style-type: none"> Relationship of mutation, adaptation, natural selection and extinction (LS.13a) Evidence of evolution of different species in fossil record (LS. 13b) Diversity of organisms influenced by genetic variation and environmental influences (LS.13c) 	<p><u>Characteristics of Living Things</u></p> <p>LS 7 (3-5 Days)</p> <ul style="list-style-type: none"> Animal/Plant Observable Behavior (LS.7a-b, LS.9c) Influence of Behavior on Population (LS.7b) <p>LS 1 & 4 (6-8 Days)</p> <ul style="list-style-type: none"> Distinguishing Characteristics of Plant/Animal Phyla-continued (LS.4c) Develop classification system based on multiple attributes (LS.1b) Contributions of Linnaeus (LS.4c) Distinguishing characteristics of 3 Domains (LS.4a) and 6 Kingdoms (LS.4b) Scientific Names (LS.4c) Distinguishing characteristics of Plant/Animal Phyla (LS.4c) The characteristics that define a species (LS.4d) 	<p>LS 6 & 9 (6-8 Days)</p> <ul style="list-style-type: none"> Recognize biotic and abiotic factors (LS.6,LS.9) Interactions resulting in a flow of energy and matter throughout the system (LS.6b) <p>Complex relationships within terrestrial, freshwater, and marine ecosystems (LS.6c)</p> <ul style="list-style-type: none"> Energy Flow in food webs and energy pyramids (LS.6d) Cycles of matter (LS.6a) <p>LS 7 & 10 (3-5 Days)</p> <ul style="list-style-type: none"> Population & factors that Increase/Decrease Population size (LS.7a, LS. 10b) Hibernation (LS.10a) Succession (LS.10) Phototropism, dormancy (LS.10a)

Seventh Grade Science Pacing Guide

1 st Nine Weeks	1 st Nine Weeks	2 nd Nine Weeks	2 nd Nine Weeks
<p>Cells</p> <ul style="list-style-type: none"> Describe development of cell theory (LS.2c) 1-2 Days Describe and label parts and functions of cell (LS.2a) 2 Days Similarities and differences between plant and animal cells (LS.2b) 1-2 Days <p style="text-align: center;">LS 3a, 3b, 2d (8-10 Days)</p> <ul style="list-style-type: none"> Cell Organization (LS.3a) Cell Processes (LS.3b) Cell Division (LS.2d) Purpose of mitosis and meiosis (LS.2d) <p style="text-align: center;">LS 12 (8-10 Days)</p> <ul style="list-style-type: none"> Historical contributions and significance of discoveries related to genetics (LS.12f) Characteristics that can and can't be inherited (LS.12d) Genotypes and Phenotypes (LS.12c) 	<ul style="list-style-type: none"> Photosynthesis-Basic physical and chemical processes-energy transfer between sunlight and chlorophyll (LS.5a, LS.5b, LS.5c) 1-2 Days <p style="text-align: center;">LS 3a & 3b (7-10 Days)</p> <ul style="list-style-type: none"> Life Functions of Organ Systems (LS.3) <ul style="list-style-type: none"> - Skeletal System (LS. 3a-b) - Muscular System (LS. 3a-b) - Skin (LS. 3a-b) - Digestive System (LS. 3a-b) - Circulatory System (LS. 3a-b) - Respiratory System (LS. 3a-b) - Nervous System (LS. 3a-b) - Urinary System (LS. 3a-b) - Reproductive System (LS. 3a-b) Strategies for Good Health (LS. 3) 	<p style="text-align: center;">LS 8 (6-8 Days)</p> <ul style="list-style-type: none"> Symbiotic relationships (LS.8d) Predator/prey relationships (LS.8b) Competition and cooperation (LS.8c) The relationships among producers, consumers, and decomposers in food webs (LS.8a) Niches (LS.8e) <p style="text-align: center;">LS 9 (5-7 Days)</p> <ul style="list-style-type: none"> Characteristics of land, marine, and freshwater ecosystems (LS.9b) Adaptations of plants and animals to biomes and/or ecosystems (LS.9c) Ecosystems/Biomes (LS.9a,) 	<p style="text-align: center;">LS 11 (8-10 Days)</p> <ul style="list-style-type: none"> Change in habitats (LS. 10, LS. 11b) Change in habitat size, quality, or structure (LS.11b) Change in species competition (LS. 11c) Population disturbances and factors that threaten survival (LS. 11d) Natural Resources Food production and harvest (LS. 11a) Environmental Issues and Climate change (LS. 10c, LS.11e)

Seventh Grade Science Vocabulary

1 st Nine Weeks	1 st Nine Weeks	2 nd Nine Weeks	2 nd Nine Weeks
Independent Variable	Photosynthesis		Domain Kingdom
Dependent Variable	Chlorophyll	Biotic Factors	Organism
Constant	Glucose	Abiotic Factors	Genus
Scientific Method		Biosphere	Phylum
Control	Cell Membrane	Community	Class
Hypothesis	Cell Theory Cell	Ecology	Order
Theory	Wall Cytoplasm	Ecosystem	Species
Graduated Cylinder	Endoplasmic Reticulum	Habitat	Dichotomous Key
Beaker	Mitochondria	Biome	Taxonomy
Conclusion	Nucleus	Adaptation	Fungi
Thermometer	Vacuole	Terrestrial ecosystems	Protista
Triple Beam Balance	Chloroplast	Freshwater ecosystems	Archaeobacteria
Unicellular	Respiration	Marine ecosystems	Eubacteria
Multicellular	Mitosis	Population	Cnidaria
Cell	Meiosis	Pioneer Species	Mollusks
Photosynthesis	Organelle	Succession	Annelids
Adaptations	Cell Cycle	Climax Community	Arthropods
Carbon Dioxide	Cytokinesis		Echinoderms
	Zygote		Chordates
	Fertilization		Mosses
	Organ		Ferns Conifers
	Tissue		Flowering Plants
	Organ System		Conditioning
	Osmosis		
	Diffusion		
	Selective permeability		

Seventh Grade Science Vocabulary

1 st Nine Weeks	1 st Nine Weeks	2 nd Nine Weeks	2 nd Nine Weeks
Cartilage	Mutation	Courtship Behavior	Acid Rain
Joint	Evolution	Cyclic Behavior	Global Warming
Ligament	Extinction	Imprinting	Fossil Fuel Greenhouse
Involuntary Muscle	Fossil record	Innate Behavior	Effect Nonrenewable
Voluntary Muscle	Natural Selection	Insight	Resource Renewable
Cardiac Muscle	Chromosome	Instinct	Resource Recycle
Skeletal Muscle	DNA	Social Behavior	Hydroelectric Power
Smooth Muscle	DNA Replication	Society	Consumer
Tendon	Double Helix	Trial and Error	Producer
Dermis	Gene	Territorial Behavior	Carbon Cycle
Epidermis	Dominant	Reflex	Energy Pyramid
Melanin	Recessive	Stimulus	Food Web
Carbohydrate	Genetic Engineering	Response	Nitrogen Cycle
Fat	Genotype	Pheromones	Water Cycle
Nutrient	Heredity	Aggression	Carnivore
Protein	Heterozygous	Social hierarchy	Herbivore
Artery	Homozygous	Territorial imperative	Omnivore
Capillary	Gregor Mendel	Carrying Capacity	Decomposer
Plasma	Rosalind Franklin	Commensalism	Predator
Platelet	James Watson	Limiting Factor	Prey
Hemoglobin	Francis Crick	Mutualism	
Pulmonary Circulation	Phenotype	Niche	
Systemic Circulation	Punnett Square	Parasitism	
Coronary Circulation		Competition	
		Cooperation	

Seventh Grade Science Vocabulary

1 st Nine Weeks	1 st Nine Weeks	2 nd Nine Weeks	2 nd Nine Weeks
Vein Hypertension Trachea Asthma Bronchi Diaphragm Epiglottis Alveoli Urinary Bladder Kidney Central Nervous System Cerebellum Cerebrum Peripheral Nervous System Brain Stem Vagina Penis Testis Ovary Uterus Amniotic Sac Embryo Fetus			