

7th Life Science
Curriculum Mapping
2019-2020
Mark Joachim

Unit: <i>Exploring and Classifying Life</i>		Time: <i>August 2019</i>
Standards Taught		
<ul style="list-style-type: none"> • <i>Identify scientific methods.</i> • <i>MS-LS1-2, MS-LS2-3</i> 		
Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
<i>Students who needed the extra help received guided notes, extra individual practice, modified questions and shortened tests.</i>	<i>The classroom is set up using student tables, with 2 students per table. The students move into different groups for labs and group projects.</i>	<i>The students will be discussing the scientific method. The students will work on learning how to classify organisms. Discuss where life comes from and the cell theory.</i>
Prior Knowledge Needed	Vocabulary	Assessments
<i>Students have a limited foundation in science that they will draw upon in this course.</i>	<i>Scientific methods, hypothesis, control, variable, theory, law, organism, cell, homeostasis, spontaneous generation, biogenesis, phylogeny, kingdom, binomial nomenclature, genus</i>	<i>Students will answer questions in class, participate in discussions, daily assignments, group work, labs, and take chapter tests.</i>
Reflection: <i>This chapter was a bit of a challenge for some of the 7th graders.</i>	Essential Questions: <ul style="list-style-type: none"> • <i>What are scientific methods?</i> • <i>Why is classifying organisms important?</i> • <i>How does life come from?</i> • <i>Why is the cell theory an important concept to study?</i> 	
Relevance:	Students need to work with the scientific method as they study life science.	

Unit: <i>Life's Structure and Function</i>		Time: <i>September- November 2019</i>
Standards Taught		
<ul style="list-style-type: none"> • <i>MS-LS1-1, MS-LS1-2, MS-LS1-3, MS-LS1-5, MS-LS1-6</i> • <i>MS-LS3-1, MS-LS3-2, MS-LS4-1, MS-LS4-2, MS-LS4-4,</i> 		
Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
<i>Students who needed the extra help received guided notes, extra individual practice, modified questions and shortened tests.</i>	<i>The classroom is set up using student tables, with 2 students per table. The students move into different groups for labs and group projects.</i>	<i>The students will be naming organelles and learning their function in the cell. Learn how important the nucleus is in the cell. Compare tissues, organs, and organ systems.</i>
Prior Knowledge Needed	Vocabulary	Assessments
<i>Students have a limited foundation in science that they will draw upon in this course.</i>	<i>Cell membrane, cytoplasm, cell wall, organelle, nucleus, chloroplast, mitochondrion, Ribosome, endoplasmic reticulum(ER), Golgi body, tissue, organ, cell theory, virus, host cell, mixture, organic compound, enzyme, inorganic compound, passive transport, diffusion, equilibrium, osmosis, active transport, endocytosis, exocytosis, metabolism, photosynthesis, respiration, fermentation, mitosis, chromosomes, asexual reproduction, sexual reproduction, sperm, egg, fertilization, zygote, diploid, haploid, meiosis, DNA, gene, RNA, mutation, heredity, alleles, genetics, hybrid, dominant, recessive, Punnett square, genotype, phenotype, homozygous, heterozygous, incomplete dominance, polygenic inheritance, sex-linked gene, genetic engineering</i>	<i>Students will answer questions in class, participate in discussions, daily assignments, group work, labs, and take chapter tests.</i>
Reflection: <i>This unit is important for the student to appreciate how important all cell parts are.</i>	Essential Questions: <ul style="list-style-type: none"> • <i>How does water enter and leave a cell?</i> • <i>What is the function of the mitochondria?</i> • <i>What is the source of energy for all cells?</i> • <i>Why do siblings look alike?</i> • <i>Why do people look different?</i> 	
Relevance:	Students will .	

Unit: <i>Bacteria to Plants</i>		Time: <i>November - December 2019</i>
Standards Taught		
<ul style="list-style-type: none"> • <i>MS-LS1-2, MS-LS1-3, MS-LS1-4, MS-LS1-6, MS-LS1-7,</i> • <i>MS-LS3-2,</i> 		
Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
<i>Students who needed the extra help received guided notes, extra individual practice, modified questions and shortened tests.</i>	<i>The classroom is set up using student tables, with 2 students per table. The students move into different groups for labs and group projects.</i>	<i>The students will investigate how plants are simple to increasing in complexity.</i>
Prior Knowledge Needed	Vocabulary	Assessments
<i>Students have a limited foundation in science that they will draw upon in this course.</i>	<i>Flagella, fission, aerobe, anaerobe, antibiotic, saprophyte, nitrogen-fixing bacteria, pathogen, toxin, endospore, vaccine, protist, algae, protozoan, cilia, pseudopod, hyphae, spore, basidium, ascus, budding, sporangium, lichen, mycorrhizae, cuticle, cellulose, vascular plant, nonvascular plant, rhizoid, pioneer species, stomata, guard cells, xylem, phloem, cambium, gymnosperm, angiosperm, monocot, dicot, gametophyte stage, spore, sporophyte stage, frond, rhizome, sori, prothallus, pollen grain, pollination, ovule, stamen, pistil, ovary, germination, stomata, photosynthesis, chlorophyll, respiration tropism, auxin, photoperiodism, long-day plant, short-day plant, day-neutral plant</i>	<i>Students will answer questions in class, participate in discussions, daily assignments, group work, labs, and take chapter tests.</i>
Reflection: <i>Students enjoy working with seeds, growing plants and watching the changes as the grow & develop.</i>	Essential Questions: <ul style="list-style-type: none"> • <i>What makes a fern different from a flowering plant?</i> • <i>How do plants reproduce?</i> • <i>Why are some bacteria necessary to plants and animals?</i> 	
Relevance:	Understanding plants and usefulness and importance is important in a farming community.	

Unit: <i>Animal Diversity</i>		Time: <i>December 2019 – March 2020</i>
Standards Taught		
<ul style="list-style-type: none"> • MS-LS1-1, MS-LS1-2, MS-LS1-3, MS-LS1-4, MS-LS1-5, MS-LS1-7, MS-LS2-1 • MS-LS-4-1, MS-LS4-2, MS-LS4-4, MS-LS4-5, MS-LS1-6 		
Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
<i>Students who needed the extra help received guided notes, extra individual practice, modified questions and shortened tests.</i>	<i>The classroom is set up using student tables, with 2 students per table. The students move into different groups for labs and group projects.</i>	<i>The students will investigate how body systems vary from organism to organism. Identify characteristics common to most animals. Distinguish between invertebrates and invertebrates. Distinguish between free-living and parasitic organisms. Identify how animals are able to adapt to different environments. Identify between innate and learned behavior.</i>
Prior Knowledge Needed	Vocabulary	Assessments
<i>Students have a limited foundation in science that they will draw upon in this course.</i>	<i>Herbivore, carnivore, omnivore, vertebrae, invertebrate, radial symmetry, bilateral symmetry, sessile, hermaphrodite, polyp, medusa, tentacles, stinging cells, free-living organisms, anus, mantle gill, open circulatory system, closed circulatory system, radula, setae, crop, gizzard, appendage, exoskeleton, molting, spiracle, metamorphosis, water-vascular system, tube feet, chordate, notochord, postanal tail, nerve cord, pharyngeal pouch, endoskeleton, cartilage, vertebrate, ectotherm, endoderm, fin, scale, hibernation, estivation, amniotic egg, contour feather, down feather, endotherm, ectotherm, preening, mammal, mammary gland, omnivore, carnivore, herbivore, monotreme, marsupial, placental, gestation period, placenta, umbilical cord, Behavior, innate behavior, reflex, instinct, imprinting, conditioning, insight, social behavior, society, aggression, courtship behavior, pheromone, cyclic behavior, hibernation, migration</i>	<i>Students will answer questions in class, participate in discussions, daily assignments, group work, labs, and take chapter tests.</i>
Reflection: <i>Students enjoy learning about the different types of animals.</i>	Essential Questions: <ul style="list-style-type: none"> • <i>How are animals diverse and important to the ecosystem?</i> • <i>How are mammals able to live in the many diverse ecosystems?</i> • <i>What impact do all the animals have in the ecosystem</i> 	
Relevance:	Understanding animals simpleness and also complexity, and their diversity is important in sustaining the organisms.	

Unit: <i>Human Body Systems</i>		Time: <i>April- May 2020</i>
Standards Taught		
<ul style="list-style-type: none"> <i>MS-LS1-1, MS-LS1-2, MS-LS1-3, MS-LS1-5, MS-LS1-7, MS-LS3-1, MS-LS1-2,</i> 		
Differentiation/Assessment:	Classroom Management and Environment:	What will the students be doing?
<i>Students who needed the extra help received guided notes, extra individual practice, modified questions and shortened tests.</i>	<i>The classroom is set up using student tables, with 2 students per table. The students move into different groups for labs and group projects.</i>	<i>The students will be investigating how the body is designed and its movements. Investigate how nutrients provide the healing and energy for movement.</i>
Prior Knowledge Needed	Vocabulary	Assessments
<i>Students have a limited foundation in science that they will draw upon in this course.</i>	<i>Skeletal system, periosteum, cartilage, joint, ligament, muscle, voluntary muscle, involuntary muscle, skeletal muscle, tendon, cardiac muscle, smooth muscle, striated muscle, epidermis, melanin, dermis, nutrient, protein, amino acid, carbohydrate, fat, vitamin, mineral, food group, digestion, mechanical digestion Chemical digestion, enzyme, peristalsis, chime, villi, atrium, ventricle, coronary circulation, pulmonary circulation, systemic circulation, artery, vein, capillary, plasma, hemoglobin, platelet, lymph, lymphatic system, lymphocyte, lymph node</i>	<i>Students will answer questions in class, participate in discussions, daily assignments, group work, labs, and take chapter tests.</i>
Reflection: <i>Students did well on this topic. They want to know more about their body and how it works.</i>	Essential Questions: <ul style="list-style-type: none"> <i>Why is the skeletal system important?</i> <i>How are the different muscles used in the body, and in different organs?</i> <i>What is the relationship between diet and health?</i> <i>How does the cardiac system have a comparison to highway/</i> 	
Relevance	Knowledge of the body works is important in maintain health, and a healthy body.	