

## Scope and Sequence

Subject/Title of Unit	Grade	6 Weeks	Estimated Time Frame (# of days)
Biology Plants	9 - 12	5th Six Weeks	10 days
<b>TEKS/Student Expectations</b>		<b>Examples/Specifications:</b>	
<p>1A Students will demonstrate safe practices during field and laboratory investigation</p> <p>1B Students will make wise choices in the use and conservation of resources and the disposal or recycling of materials.</p> <p>2A Students will plan and implement investigative procedures</p> <p>2B Students will collect data and make measurements with precision;</p> <p>2C Students will organize, analyze, evaluate, make inferences, and predict trends from data;</p> <p>2D Students will communicate valid conclusions.</p> <p>3C Students will evaluate the impact of research on scientific thought, society, and the environment</p> <p>5A Students will compare cells from different parts of plants and animals including roots, stems, leaves, epithelia, muscles and bones to show specialization of structure and function</p> <p>5B Students will identify cell differentiation in the development of organisms</p> <p>5C Students will sequence the levels of organization in multi-cellular organisms to relate the parts to each other and to the whole</p> <p>6D Students will compare genetic variations observed in plants and animals</p> <p>6E Students will compare the processes of mitosis and meiosis and their significance to sexual and asexual reproduction</p> <p>7A Students will identify evidence of change in species using fossils, DNA sequences, anatomical similarities, physiological similarities, and embryology</p> <p>7B Students will illustrate the results of speciation, diversity, phylogeny, adaptation, behavior, and extinction</p> <p>8A Students will collect and classify organisms at several taxonomic levels such as species, phylum, and kingdom using dichotomous keys</p> <p>8C Students will identify characteristics of kingdoms including monerans, protists, fungi, plants, and animals</p> <p>10C Students will analyze and identify characteristics of plant systems and subsystems</p> <p>11A Students will identify and describe the relationships between internal feedback mechanisms in the maintenance of homeostasis</p> <p>12C Students will compare variations, tolerances, and adaptations of plants and animals in different biomes</p> <p>13A Students will evaluate the significance of structural and physiological adaptations of plants to their environments</p> <p>13B Students will survey and identify methods of reproduction, growth, and development of various types of plants</p>		<p>Students will:</p> <p>Gather data, graph data, interpret data, distinguish observations from inferences, using laboratory equipment properly.</p> <p>Explain the evolution of plants onto land</p> <p>Identify the structures and functions of plant parts as they relate to their adaptations for survival</p> <p>Compare non-vascular Byophytes to vascular Ferns</p> <p>Compare adaptations and evolution of gymnosperms and angiosperms</p> <p>Draw and identify specialized cells, tissues and organs of plant systems</p> <p>Label the major parts of a plant: roots, stems, leaves</p> <p>Compare monocots and dicots</p> <p>Relate the structure of the leaf to the process of photosynthesis</p> <p>Demonstrate how capillary action and adhesion support transpiration in plants</p> <p>Compare the reproductive structures of gymnosperms and angiosperms</p> <p>Survey the phyla of plants and recognize evolution patterns that has allowed them to adapt</p> <p>Diagram the life cycles of Bryophytes, Ferns, Gymnosperms, Angiosperms</p>	
<b>Language of Instruction:</b>		<b>Instructional Resources/Textbook Correlations:</b>	

<p>Sporophyte, gametophyte, vascular tissue, tracheid, xylem, phloem, root, leaf, vein, stem, rhizome, frond, sporangium, sorus, gymnosperm, angiosperm, cone flower, pollen grain, pollination, seed, embryo, seed coat, fruit, monocot, dicot, cotyledon, annual, biennial, perennial, roots, stems, leaves, taproot, fibrous root, dermal tissue, ground tissue, vessel elements, sieve tube elements, companion cells, apical meristem, mesophyll, stoma, guard cell, transpiration, adhesion, capillary action, pollen cone, seed cone, ovule, pollen tube, sepal, petal, stamen, filament, anther,carpel, ovary, style, stigma, embryo sac, endosperm, double fertilization, dormancy, germination,</p>	<p>Textbook – Chapter 22 Section 1, 3-5, Chapter 23 Section 1-4, Chapter 24 Section 1-2</p> <p>Lab – Survey of Plant phyla Lab – Plant Key</p> <p>Plant Structure colorings</p>
	<p><b>Weblinks/Other Resources:</b></p>
	<p>TAKS Workbook Plant Diversity Video</p>
<p><b>Evaluation/External Assessment/Local Assessment:</b></p>	<p><b>Best Instruction Timeline:</b></p>
<p>TAKS Bell Ringers Lab reports Chapter Worksheets Coloring sheets Daily Work Homework Teacher-designed test</p>	<p>2 days - Evolution and Adaptations of Plants 3 days - Plant Structures 3 days - Reproduction 2 days - Assessment</p>