

Scope and Sequence

| Subject/Title of Unit | Grade | 6 Weeks | Estimated Time Frame (# of days) |
|--|--------|---|----------------------------------|
| Biology Ecology | 9 - 12 | 4th Six Weeks | 8 - 10 Days |
| TEKS/Student Expectations | | Examples/Specifications: | |
| <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>3D The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to describe connections between physics and chemistry</p> <p>9D The student will analyze the flow of matter and energy through different trophic levels and between organisms in the physical environment.</p> <p>11D The student will summarize the role of microorganisms in maintaining and disrupting equilibrium including diseases in plants and animals and decay in an ecosystem.</p> <p>12A The student will analyze the flow of energy through various cycles including the carbon, oxygen, nitrogen, and water cycles.</p> <p>12B The student will interpret interactions between organisms exhibiting predation, parasitism, commensalisms, and mutualism.</p> <p>12C The student will compare variations, tolerances, and adaptations of plants and animals in different biomes.</p> <p>12D The student will identify and illustrate that survival of a species is determined by a resource base that may be limited.</p> <p>12E The student will investigate and explain the interactions in an ecosystem including food chains, food webs, and food pyramids.</p> | | <p>Students will: Gathering data, graphing data, interpreting data, distinguishing observations from inferences, using laboratory equipment properly.</p> <p>Students will interpret the scheme of population growth from graphs</p> <p>Students will diagram food chains, food webs and food pyramids</p> <p>Students will interpret interactions displayed in biogeochemical cycle diagrams</p> <p>Students will explain the various types of symbiotic relationships among organisms and providing specific examples of each Students will be able to describe characteristics of biomes and providing examples of cities found in each of the major land biomes; Distinguish different aquatic biomes and labeling the zones of a marine biome</p> <p>Students will evaluate the effects of various limiting factors on population size</p> <p>Students will diagram food chains, food webs and food pyramids Sequencing levels of organization in an ecosystem</p> | |

| Language of Instruction: | | Instructional Resources/Textbook Correlations: |
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| Ecology Biosphere Species Population Community Ecosystem Biome Autotrophy Heterotroph Herbivore Carnivore Omnivore Detritivore Decomposer Food chain Food web Trophic level Ecological pyramid Biogeochemical cycle Evaporation Transpiration Nutrient Nitrogen fixation Denitrification Limiting nutrient Algal bloom Greenhouse effect Temperate zone | Tropical zone Biotic factor Abiotic factor Habitat Niche Resource Predation Symbiosis Mutualism Commensalisms Parasitism Ecological succession Biome Deciduous Coniferous Taiga Permafrost Plankton Photic zone Aphotic zone Wetland Estuary Salt marsh Benthos Exponential growth Carrying capacity Limiting factor Density-dependent limiting factor Density-independent limiting factor Biodiversity | Textbook - Chapters 3 - 6 Lab – Lessons of the Kiabab Lab – Bird Beaks Weblinks/Other Resources: TAKS Tune-up book TexTeams Lab |
| Evaluation/External Assessment/Local Assessment: | | Best Instruction Timeline: |
| Chapter Worksheet TAKS Bell Ringers Graphing to find carrying capacity Daily Work Homework Teacher – designed test | | |