Biology – Grades 10-12
District 2853

Month	Content	Performance Standards Addressed	Skills for Student Achievement	Assessment
September	· Biological Principles · Scientific Methods · Biosphere Organization	IV A, G	· Understand the principles of biology · Define and give examples of observe, organize, analyze, classify and mode · Scientific method · Complete laboratory exercises using accepted procedures and equipment · Describe organization from smallest to largest Example: elements, molecules, organelles, cells, tissues, organ, organ system, organism, population, community, ecosystem, biosphere	· Test · Lab · Quiz · Written Application · Scientific method project
October	· Cell Parts/ Functions · Biology of Protozoans · Mitosis/Meiosis · Molecular/ Populations · Genetics	IV A, B A 1 IV D,E	· Identify the differences between plant and animal cells · Know cell parts/function · Demonstrate understanding of cell theory · Describe cell respiration, cell transport, transcription, translation, DNA replication · Distinguish characteristics of algae and protozoans · Distinguish and be able to describe stages in cell division · Discuss cancer and what causes it · Understand the differences between genotype and phenotype · Be able to analyze and predict genetic crosses · Understand human genetic disorder · Know and describe the parts of a chromosome · Describe the structure and function of DNA Describe the process of selective breeding · Describe how genetic variation has an influence on populations	· Test · Lab · Quiz · Written Application · Mitosis project
	· Adaptations/ Evolution, Natural Selection · Spontaneous Generation · Darwin/Lamarck	IV B,C	· The students will describe evaluation, change and adaptations · Compare spontaneous generation and biogene's · Be able to describe the	· Test · Lab · Quiz · Written Application

			mechanisms of change over time · Be able to describe natural selection and the role of adaptations · Be able to describe the theory of evolution, and the people behind it · Be able to analyze how sexual reproduction leads to evolution	
	· History of taxonomy · Classification · Organism Classification · 5-6 Kingdoms · Structural Classification · Reproductive Classification	IV B	· Understand and be able to apply the modern taxonomy system to organisms · Learning will describe age relationships of fossils in sedimentary rock · Distinguish the characteristics of mammals · Determine the parts and function -place of body systems, and the organs in those systems	· Test · Lab · Quiz · Written Application
			· Evolution of amphibians, reptiles · Distinguish the characteristics of each vertebrate group · Evolution and classification of fish · Distinguish the relationship of structure and functioning of the animal groups	· Test · Lab · Quiz · Written Application
			· Distinguish the relationship of structure and function with the invertebrates · Distinguish characteristics of invertebrates	
	· Plant Anatomy, Morphology and Physiology	IV F,C	· Determine the characteristics of plants · Compare and contrast the functions of photosynthesis and respiration · Understand the relationship of plant organs · Students will distinguish characteristics of plants as monocots and dicots; gymnosperms and angiosperms · Students will understand growth and needs of plants · Distinguish the life cycle of plants · Be able to distinguish the relationship of reproduction, fruit and seeds · Identify species by using a taxonomic key	· Test · Lab · Quiz · Written Application

	· Ecology	IV F,C	· Understand different ecosystems · Importance of energy and problems that are caused · Describe interactions of organisms and how they survive with one another	

Revised 10-7-04