

Science II

Science II			
(revised 2008)	Levels: I - introduced; P - practiced; M - mastered		Current Text
CONCEPT	SKILLS	LEVEL	CHAPTER
I. Biology Principles	Biology explores life from global to the microscopic scale	IP	1
	Diversity of Life	P	1
	Major themes in living things	IP	1
	Scientific Method	PM	2
	Study of Animal Behavior	IP	3
II. Cells	Cell Theory	IP	6
	Cell Membranes	IP	6
	Organelles of the cell	IP	6
	Photosynthesis	IP	8
	Cellular Respiration	IP	7
III. Genetics	Mitosis and Meiosis	IP	9
	Genetic discoveries	IP	10
	Patterns of inheritance	IP	10
	DNA	I	11
	Human Genetics	IP	12
IV. Evolution	Charles Darwin	IP	14
	Evidence of change and evolution	IP	14
	New Species	IP	15
	Fossil Record	IP	15
V. Prokaryotes	2 kingdoms of prokaryotes	I	16
	Roles of bacteria in the environment	IP	16
	Pathogenic Bacteria	IP	16
	Viruses	I	16
VI. Simple Eukaryotes	Animal like protozoans	IP	17
	Plants like protozoans	IP	17
	Reproduction in protozoans	IP	17
	Fungi life cycles	IP	18
	Impact of Fungi on our lives	IP	18
VII. Plants	Ferns	IP	19
	Flowering Plants	IP	20
	Coniferous Plants	IP	19
	How plants evolved	IP	19
	Reproduction in plants	IP	20
	Structure of plants	IP	19/20
VIII. Invertebrates	Sponges and Cnidarians	I	23
	Why they are animals	IP	23
	Structure and Function of simple animals	I	23
	Flatworms and Roundworms	I	23

	Segmented Worms	I	23
	How these worms relate to classification	IP	23
	Mollusks	IP	23
	Echinoderms	IP	23
	Arthropods	IP	24
	Role of segmentation	IP	24
	Variations of body plans	IP	24
IX. Vertebrates	Fish	IP	25
	Amphibians	IP	25
	Evolution of the first vertebrates	I	25
	Anatomy and physiology of the vertebrates	I	25
	How reptiles have adapted to living in dry environments	I	25
	Connection between birds and reptiles	I	26
	Diversity of Mammals	IP	26
	How animals evolved and flourished in the Cenozoic Era	I	26
Current Text:			

TEACHING NOTES	STATE GOALS
Expanding scientific method and experiment design	11A4a, 4b, 4c 11B4c 13A4a
Recognizing patterns in biology	12B4a, 4b
Making models of cells	12A4b
Understanding balance between photosynthesis and respiration	
Difference between autosomal cells and sex cells	12A4a 11A4d
Punnett squares and how traits are inherited from each parent	
Natural Selection and Survival of the fit	12A4c 11A4a
Geologic Time and fossils	11A4c 12E4b
Viewing bacterial cells under the microscope.	13B4b 13B4e
Understanding disease	
Microscopic investigations	13B4c 12A4a,b,c
Foods lab for fungi and algae	
Outdoor study of the different types of plants, and how they are classified	12A4a,b,c 12B4a,b
Biome study of plants	
There will be some dissections of a variety of animals.	12A4a,b,c 12B4a,b
The students will be able to relate the	

