

BIOLOGY I (A/B): 33210
COURSE OUTLINE SY 2015-2016

Glencoe Biology; TN Ed. textbook. Course outline is based on the TN State Performance Indicators and Course Level Expectations. Since all students must complete the EOC exam it is important to teach as many topics as possible, although remembering that true understanding is more important than just briefly touching on each topic. This pacing guide *may be modified* due to time constraints and some topics may be taught together. *Course work will include use and knowledge of the metric system, inquiry, interpreting and conveying data, graphing, and the use of the scientific method and experimental design to solve scientific problems. Inquiry, math, technology and engineering are embedded in lessons. Labs may be modified based on availability and time constraints.

Unit 1: Nature of Life	State Performance Indicators (SPI)	Labs	Time
<ul style="list-style-type: none"> Safety (1.1) Nature of Science (1.1-2) Methods and Tools of Science (1.3) Graphing Independent and Dependent Variable 	<ul style="list-style-type: none"> Math, inquiry, technology and engineering 	Bubbleology, metric system, tools, IV & DV, Sig. Figs, graphing, measurement	5 weeks
Unit 2: Cells			
<ul style="list-style-type: none"> Organic Macromolecules (6.4) Enzymes & Digestion (6.2 & 35.1) Prokaryotic versus Eukaryotic Cells (7.3) Organelles (7.3) Cell Growth and Reproduction (9.1-3) Homeostasis and Transport (7.4) 	<ul style="list-style-type: none"> SPI 3210.1.3, SPI 3210.1.4 SPI 3210.1.5 SPI 3210.1.2 SPI 3210.1.1 SPI 3210.1.6 SPI 3210.1.7, SPI 3210.1.8, SPI 3210 Inq.1-7, SPI 3210.M.1 	Food tests, pH test, Factors affecting enzymes, Dialysis-diffusion and osmosis	8 weeks
Unit 3: Flow of Matter & Energy (Energetics)			
<ul style="list-style-type: none"> Energy Flow Through an Ecosystem (2.1) Biogeochemical Cycles (2.2) Photosynthesis and Cellular Respiration (8.1-2) Aerobic and Anaerobic Respiration (8.3) 	<ul style="list-style-type: none"> SPI 3210.3.1 SPI 3210.3.2 SPI 3210.3.4 SPI 3210.3.3 	Transpiration, Germination of seeds, chromatography	4 weeks
Unit 4: Heredity			
<ul style="list-style-type: none"> DNA Structure and Replication (12.1-2) Protein Synthesis (12.3) Mendelian Genetics (10.2) Meiosis and Genetic Variation (10.1) Mutations and Genetic Disorders (12.4) Gene Technologies: Scientific and Ethical Issues (13) 	<ul style="list-style-type: none"> SPI 3210.4.1, SPI 3210.4.2 SPI 3210.4.3 SPI 3210.4.4, SPI 3210.4.5, SPI 3210.M.2 SPI 3210.4.6, SPI 3210.4.7 SPI 3210.4.8 SPI 3210.4.9, SPI 3210.T/E.2 	DNA extraction n, Microscopes, PTC, Bottle biology w/ fast plants, genealogy, gen. disorder research	7 weeks
Unit 5: Interdependence			
<ul style="list-style-type: none"> Population Changes and Ecosystems (2.1 -4.1) Human Activities and the Environment (5.1) Endangered Species and Extinction (5.2) Biological Succession (5.2) 	<ul style="list-style-type: none"> SPI 3210.2.1, SPI 3210.2.2, SPI 3210.2.3 SPI 3210.2.4, SPI 3210.2.5, SPI 3210.Math.1 SPI 3210.2.6 SPI 3210.2.7 	Acid rain test on plants, micro yeast population, pond water, Frog dissection	6 weeks
Unit 6: Biodiversity and Change			
<ul style="list-style-type: none"> Adaptations (21.1) Form and Function Speciation (14.1) Biodiversity and Population Survival (5.1-3) Evolution/Natural Selection (15.1-3) Classification (17.1-3) 	<ul style="list-style-type: none"> SPI 3210.5.1 SPI 3210.5.2 SPI 3210.5.3, SPI 3210.5.4 SPI 3210.5.4, SPI 3210.M.1 SPI 3210.5.5 SPI 3210.5.6 	Bird beak, Fossil identification, Plant ID, Cladograms, Online Phylogenetic trees	4 weeks
Biology EOC Exam and Final Exam			2 weeks