

OLEAN HIGH SCHOOL

Course Name Biology 157 Jamestown Community College Course

Text: Biology Fourth Edition Arms and Camp

Other Resources: Biology –Campbell, Study Guide for Arms and Camp Text

Grades 11 - 12

Month	Topic Content	Skills	Concepts	Major Assessments	Learning Standards	Resource/Text Page
Sept.	<ul style="list-style-type: none"> • Introduction • Basic Chemistry • Biochemistry • Cell Membranes • Cell Structure & Function • Energy and Living Cell 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Fundamental Concepts of Biology • Scientific Method • Elements of Life • Bonding • Compounds & Molecules • Lipids, Carb. , Prot. • Cell Parts and Properties • Energy Transformations 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text – Chaps. 1- 6
Oct.	<ul style="list-style-type: none"> • Cellular Respiration & Fermentation • Photosynthesis • DNA & Genetic Info. • RNA & Protein Synthesis • Genetic Engineering 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Coenzymes • Glycolysis • Fermentation • Citric Acid Cycle • Evidence of DNA • Structure of DNA & RNA • Restriction Enzymes • Gene Amplification • Gene Transplants 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 7 – 10 & 13
Nov.	<ul style="list-style-type: none"> • Mendelian Genetics • Inheritance Patterns & Gene Expression • Evolution and Natural Selection 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Monohybrid crosses • Dihybrid crosses • Genotype & Phenotype • Probability • Multiple Alleles • Polygenic Characters • Lamarck vs. Darwin & Wallace 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 15 - 17
Dec.	<ul style="list-style-type: none"> • Population Genetics & Speciation • Evolution & Reproduction • Origin of Life 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Hardy-Weinberg Law & Problems • Causes of Evolution • Mutations • Speciation • Spontaneous Generation • History of Earth 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 19 - 21

Jan.	<ul style="list-style-type: none"> • Origin of Life • Classification of Organisms 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Origin of Eukaryotes • Heterotroph Hypothesis • Formation of Aggregates • Binomial Nomenclature • Taxonomy • Molecular Systematics • Kingdoms 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 21 - 22
Feb.	<ul style="list-style-type: none"> • Viruses • Bacteria • Protista 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Structures & comparisons • Relationships to evolution • Identify various types 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 23 - 25
Mar.	<ul style="list-style-type: none"> • Lower Invertebrates • Higher Invertebrates • Vertebrates 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Identify examples • Learn classifications • Similarities and Differences between members of these groups 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 28 - 30
Apr.	<ul style="list-style-type: none"> • Animal Biology • Dissections 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Dissection techniques • Identification of parts and functions of organisms being dissected 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Written Required Papers 	None in Advanced Biology from the State	Text Chaps. 31 - 40
May	<ul style="list-style-type: none"> • Ecology • Biosphere • Ecosystems • Populations & Communities • Human Ecology 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Climate and vegetation • Biomes • Communities • Changes in ecosystems • Population interactions with environment 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Review for Final Exam 	None in Advanced Biology from the State	Text Chaps. 47 - 50
June	<ul style="list-style-type: none"> • Review for Final Exam 	<ul style="list-style-type: none"> • Laboratory safety • Note taking • Test taking • Writing skills 	<ul style="list-style-type: none"> • Review all above concepts for final exam 	<ul style="list-style-type: none"> • Written Tests • Written Labs • Class Participation • Review for Final Exam 	None in Advanced Biology from the State	Above chaps. and review of notes from the year