Biology Syllabus (2017-2018)

First Grading Period

UNIT 1: Lab Safety
Laboratory Safety and Emergency Procedure
Laboratory skills- (observation, graphing, problem solving, parts and functions of the microscope)

UNIT 2: Introduction to Biology and Characteristics of Life / Microscopes
Chapter 1: Biology in the 21st Century

UNIT 3: Chemistry of Life
Chapter 2: Chemical Basis of Life: Organic and Inorganic Compounds; Polymers

UNIT 4: Cell Structure and Function
Chapter 3: Cellular structures and how they perform life functions.

Second Grading Period

UNIT 4: Cell Structure and Function
Chapter 3: Cellular structures and how they perform life functions.

UNIT 5: Cell Transport
Chapter 3: Cell Transport - Cells exchange materials with their environment by chemical and physical means.

UNIT 6: Cell Cycle, Cellular Division (Mitosis) and DNA
Chapter 5: Cell Cycle, Mitosis, and Cytokinesis
Chapter 8: DNA, Genes and Chromosomes, & DNA Replication

UNIT 7: Cells & Energy
Chapter 4: Photosynthesis

Third Grading Period

UNIT 7: Cells & Energy
Chapter 4: Cellular Respiration - Organisms get energy by breaking down chemical compounds in food and making ATP and other molecules.

UNIT 8: Protein Synthesis
Chapter 8: Protein Synthesis, and Genetic Engineering

UNIT 9: Meiosis & Genetics
Chapter 6-8: Introduction and Fundamentals of Genetics
Learning about Inheritance, Genetic Prediction, Mitosis vs. Meiosis, Genotype, Phenotype, Homozygous, Heterozygous, and Punnett squares.

End of First Semester
Fourth Six Weeks

UNIT 10: Biotechnology
   Chapter 9: Human Genome, Human Heredity and Human Chromosomal disorders.

UNIT 11: Taxonomy & Classification
   Chapter 17: Classifying organism into hierarchy of groups based on evolutionary relationships.
   Making a Dichotomous Key

UNIT 12: Viruses and Prokaryotes (Bacteria)
   Chapter 18: Viruses and Prokaryotes

UNIT 13: Fungi and Protista
   Chapter 19: Protists & Fungi

Fifth Six Weeks

UNIT 14: Plants

UNIT 15: Animal Kingdoms
   Chapter 23-27 - Animal Characteristics, Diversity, and Behaviors

UNIT 16: Human Systems
   Chapter 25-34 - Human Systems and Interactions

UNIT 17: Darwin & Evolution
   Chapters 10-11: Population change through Natural Selection, Fossil Record, Earth's History,
   Patterns of Evolution, Process of speciation

UNIT 18: Ecology
   Chapters 13-16: Biosphere, Ecosystems, Communities and populations
   (Food Webs, Food Chains and cycles)

Sixth Grading Period

UNIT 19: Ecology
   Chapters 13-16: Biosphere, Ecosystems, Communities and populations
   (Food Webs, Food Chains and cycles)

Review for STAAR Test
UNIT 20: Human Body and Animal Dissections

End of Second Semester