

Southern Regional High School

Manahawkin, New Jersey

Course Syllabus

Department: Science

Course: AP Biology

Marking Period 1

Topics/Units to be covered:

- Classroom Expectations/Grading
- Lab Safety
- Inorganic chemistry and basic molecular structure
- Organic chemistry and macromolecule structure: proteins carbohydrates, lipids and nucleic acids.
- The structure and function of cells
- The cell membrane and its importance in homeostasis
- Photosynthesis : Light reaction, Calvin Cycle and Plant adaptations

- Cellular Respiration” Glycolysis, Krebs’ Cycle and The Electron Transport System

Quarterly

Marking Period 2

Topics/Units to be covered:

Cell Division and Mitosis

Cell to Cell communication: the function of cells in pancreatic and endocrine systems

Mendelian Genetics and Meiosis: gamete formation, mono and dihybrid crosses, patterns of inheritance.

DNA and RNA- DNA replication, the history of the discovery of DNA

Protein Synthesis: DNA to RNA, RNA to protein, one gene one polypeptide

DNA technology: genetic engineering, plasmid insertion and prokaryotic control of gene expression

- Quarterly

Southern Regional High School
Manahawkin, New Jersey
Course Syllabus

Marking Period 3

Topics/Units to be covered:

Evolution: Darwin evolution, natural selection, population genetics

Taxonomy and Classification: a comparative anatomy student of the invertebrate phyla

Plant Evolution: the move from aquatic to terrestrial

Plants: transport, structure, reproduction and response

Animals: the anatomy of the human body

- Quarterly

Marking Period 4

Topics/Units to be covered:

Stream Ecology

The Spanish Flu Epidemic of 1918