

INQUIRY**Process Skills**

_____ Formulate hypotheses and conduct scientific experiments that can be proven through data collection and analysis.

Technological Design

_____ Identify a design problem and build and test a prototype using available materials and technology.

CONTENT**LIFE SCIENCE****Cellular Biology & Microscope Use**

_____ Identify cell organelles with a microscope, describe their structure and function, and compare and contrast the organization of plant and animal cells.

Cellular Reproduction

_____ Compare and contrast events of cell division and end products of mitosis and meiosis.

Biochemistry

_____ Describe the structure of the DNA molecule and explain the process of replication, including the sequential steps of protein synthesis.

Genetics

_____ Describe patterns of inheritance using Punnet Squares to predict possible offspring of genetic crosses.

Adaptation

_____ Discuss the evidence for evolution of species and the theories of evolution including anagenesis, catastrophism, gradualism and punctuated equilibrium.

Classification

_____ Explain the system of binomial nomenclature to classify organisms using a dichotomous taxonomic key.

Kingdoms of Organisms

_____ Compare and contrast characteristics of organisms in the six kingdoms.

Environmental Biology: Ecology

_____ Compare the different levels of biological organization and living relationships in an ecosystem, and explain man's influence on the system.

CONNECTIONS**Science Practices**

_____ Explain how people can develop and test hypotheses in everyday situations.

S/T/S (Science, Technology and Society)

_____ Apply classroom-developed criteria to determine the effects of policies on local science and technology issues (e.g. energy consumption, landfills, water quality, habitat loss and introduction of invasive species).