

**INQUIRY****Scientific Inquiry****Process Skills**

\_\_\_ Formulate hypotheses, design controlled experiments using the steps in the inquiry process. **ABio-01**

**Technological Design**

\_\_\_ Propose and create a solution to a current or future biology-related issue using available resources. **ABio-02**

**CONTENT****Physical Science****Basic Chemistry**

\_\_\_ Describe basic characteristics of the structure atoms and molecules, their properties and how they combine. **ABio-03**

**Organic Chemistry**

\_\_\_ Identify the structure and function of carbohydrates, lipids, proteins and nucleic acids, and their role in living organisms. **ABio-04**

**Life Science****Photosynthesis and Respiration**

\_\_\_ Explain and relate the relationship between the energy production in photosynthesis and energy use in respiration. **ABio-05**

**Cellular Biology and Mitosis**

\_\_\_ Identify and describe the structural components of cells and relate their function to the life processes of living organisms. **ABio-06**

**Genetics**

\_\_\_ Explain and analyze Medelian and modern genetic concepts to determine patterns of inheritance. **ABio-07**

**Biochemistry**

\_\_\_ Describe the structure of DNA and RNA, and analyze the processes of replication, transcription and translation. **ABio-08**

**Origin of Life**

\_\_\_ Describe the events of Earth's history and relate the changes and events to adaptations of life. **ABio-09**

**Human Systems**

\_\_\_ Explain the structure and function of human body systems. **ABio-10**

**Microbiology and Disease**

\_\_\_ Describe and relate the interactions between microbes, both beneficial and harmful to the immune system. **ABio-11**

**Ecology**

\_\_\_ Analyze characteristics of a biome including the energy and nutrient flow and societal impact on ecological stability. **ABio-12**

**CONNECTIONS****Science Practices**

\_\_\_ Demonstrate ways to apply scientific research to consumer choices, including nutritional choices and environmental decisions. **ABio-13**

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

\_\_\_ Examine biological issues in light of scientific and technological knowledge and relate them to ethical issues. **ABio-14**