## End-of-Course Biology

**Beginning Learner**
- In general, your child can:
  - recognize that macromolecules provide organisms with different nutrients
  - recognize the structure and function of DNA
  - recognize that organisms can be grouped into six kingdoms based on similarities
  - recognize that some human activities affect the environment
  - recognize that investigators control the conditions of their experiments
  - use standard laboratory tools

**Developing Learner**
- In general, your child can:
  - identify the functions of each of the four major macromolecules (carbohydrates, proteins, lipids, and nucleic acids)
  - distinguish between osmosis and diffusion
  - compare hypertonic, hypotonic, and isotonic solutions
  - distinguish between RNA and DNA
  - compare structures among the six kingdoms of life
  - explain human activities that affect the environment
  - recognize the role of natural selection in the development of the theory of evolution
  - describe the appropriate use of tools for scientific investigations
  - describe characteristics of living things and viruses

**Proficient Learner**
- In general, your child can:
  - explain the role of cell organelles
  - identify enzymes as catalysts
  - explain the effect water has on life processes
  - identify factors that can alter DNA
  - use Mendel’s law to explain the role of meiosis
  - describe the processes of photosynthesis and respiration
  - recognize biological factors that influence reproductive differences
  - identify differences in the structure and function of the six kingdoms of life
  - recognize the basis of modern classification systems
  - identify the relationships between biological communities
  - explain the flow of matter and energy using a food chain
  - compare amounts of energy using an energy pyramid
  - relate natural selection to changes in organisms
  - describe biological resistance
  - describe evidence supporting evolution

**Distinguished Learner**
- In general, your child can:
  - apply homeostasis given a real-world scenario
  - describe how changing the genetic code of an organism can result in advantageous traits
  - analyze how genetic manipulation changes the genetic frequency of traits
  - explain the advantages and disadvantages of the different types of reproduction
  - analyze the relationships between different cellular processes
  - analyze the need for cycling essential elements
  - draw conclusions from data
  - explain how successful species evolve

**Biology – Understanding Your Child’s Performance:** Below is a summary of skills and knowledge students must demonstrate to achieve each performance level. A student should demonstrate mastery of knowledge and skills within his/her achievement level as well as all content and skills that precede it. For example, a Proficient Learner should also possess the knowledge and skills of a Developing Learner and a Beginning Learner.