

**State of Texas Assessments of Academic Readiness (STAAR®)
Performance Level Descriptors
Biology**

Performance Level Descriptors

Scientific process skills are not assessed in isolation but are incorporated into questions that assess the biology content. These process skills focus on safe, environmentally appropriate, and ethical laboratory and field investigations; using scientific methods and equipment in investigations; and using critical thinking, scientific reasoning, and problem solving to make informed decisions.

Students achieving Masters Grade Level Performance can

- Explain the effects of a variety of evolutionary mechanisms
- Apply the regulation of gene expression to its role in protein synthesis
- Evaluate how genes affect both Mendelian and non-Mendelian inheritance patterns
- Analyze the impact of environmental change on ecosystem stability

Students achieving Meets Grade Level Performance can

- Summarize the role of biomolecules in the metabolic, homeostatic, and reproductive processes that occur in cells
- Analyze how viruses are different from cells and how viruses can affect cells
- Describe the roles of DNA and RNA in gene expression
- Describe how genes affect inheritance patterns and use this information to predict outcomes of monohybrid and dihybrid crosses
- Analyze and evaluate the evidence, processes, and effects of evolutionary theory
- Classify organisms based upon similarities and differences
- Interpret interactions between organisms and their environment
- Describe how changes in the environment alter ecosystems

Students achieving Approaches Grade Level Performance can

- Distinguish between prokaryotic and eukaryotic organisms based on their cellular structures
- Recognize that the genetic code in DNA is universal
- Predict the outcomes of a simple Mendelian genetic cross
- Identify the body systems that interact to carry out biological processes in animals
- Relate the stages of ecological succession to the diversity of species in an ecosystem

Students achieving Did Not Meet Grade Level Performance can

- Recognize the components of DNA
- Identify the structures and functions of cells and viruses
- Recognize that genes affect inheritance
- Recognize the effects of evolution
- Identify relationships among organisms