



# Gulfport School District QUARTER 2.2 BLUEPRINT

## BIOLOGY I

| Content Strands: Inquiry (I), Life Science (L), and Physical Science (P)  |                      |  |
|---|----------------------|--|
| QTR   | Competency/Objective |  |
| <b>Apply inquiry-based and problem-solving processes and skills to scientific investigations. (I), (L), and (P)</b> |                      |  |
| 1-4<br>Tested 1.1 to 2.2  | 1b                   | Formulate questions that can be answered through research and experimental design. (DOK 3)   |
| 1-4<br>Tested 1.1 to 2.2  | 1c                   | Apply the components of scientific processes and methods in classroom and laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development). (DOK 2)   |
| 1-4<br>Tested 1.1 to 2.2  | 1d                   | Construct and analyze graphs (e.g., plotting points, labeling x-and y-axis, creating appropriate titles and legends for circle, bar, and line graphs). (DOK 2)   |
| 1-4<br>Tested 1.1 to 2.2  | 1e                   | Analyze procedures, data, and conclusions to determine the scientific validity of research. (DOK 3)  |
| 1-4<br>Tested 1.1 to 2.2  | 1f                   | Recognize and analyze alternative explanations for experimental results and to make predictions based on observations and prior knowledge. (DOK 3)   |
| 1-4<br>Tested 1.1 to 2.2  | 1g                   | Communicate and defend a scientific argument in oral, written, and graphic form. (DOK 3)   |
| <b>Demonstrate an understanding of principles that explain the diversity of life and biological evolution. (L)</b>  |                      |  |
| 2.2   | 6a                   | Draw conclusions about how organisms are classified into a hierarchy of groups and subgroups based on similarities that reflect their evolutionary relationships. (DOK 2) <ul style="list-style-type: none"> <li>• Characteristics of the six kingdoms</li> <li>• Major levels in the hierarchy of taxa (e.g., kingdom, phylum/division, class, order, family, genus, and species)</li> <li>• Body plans (symmetry)</li> <li>• Methods of sexual reproduction (e.g., conjugation, fertilization, and pollination)</li> <li>• Methods of asexual reproduction (e.g., budding, binary fission, regeneration, and spore formation)</li> </ul> |
| 2.2   | 6b                   | Critique data (e.g., comparative anatomy, Biogeography, molecular biology, fossil record, etc.) used by scientists (e.g., Redi, Needham, Spallanzani, Pasteur) to develop an understanding of evolutionary processes and patterns. (DOK 3)   |
| 2.2   | 6c                   | Research and summarize the contributions of scientists (including Darwin, Malthus, Wallace, Lamarck, and Lyell) whose work led to the development of the theory of evolution. (DOK 2)  |



# ***Gulfport School District*** **QUARTER 2.2 BLUEPRINT**

## **BIOLOGY I**

| <b>Content Strands: Inquiry (I), Life Science (L), and Physical Science (P)</b> |  |   |
|---|--|---|
| <b>QTR</b>  | <b>Competency/Objective</b>  |   |
|   | <b>Demonstrate an understanding of principles that explain the diversity of life and biological evolution. (L)</b> |   |
| 2.2   | 6d   | Analyze and explain the roles of natural selection, including the mechanisms of speciation (e.g., mutations, adaptations, geographic isolation) and applications of speciation (e.g., pesticide and antibiotic resistance). (DOK 3) |
| 2.2   | 6e   | Differentiate among chemical evolution, organic evolution, and the evolutionary steps along the way to aerobic heterotrophs and photosynthetic autotrophs. (DOK 2)  |