



Gulfport School District

QUARTER 1.1 BLUEPRINT

BIOLOGY I

Content Strands: Inquiry (I), Life Science (L), and Physical Science (P)		
QTR	Competency/Objective	
Apply inquiry-based and problem-solving processes and skills to scientific investigations. (I), (L), and (P)		
1.1 <small>Tested 1.1</small>	1a	Conduct a scientific investigation demonstrating safe procedures and proper care of laboratory equipment. (DOK 2) <ul style="list-style-type: none"> • Safety rules and symbols • Proper use and care of the compound light microscope, slides, chemicals, etc. • Accuracy and precision in using graduated cylinders, balances, beakers, thermometers, and rulers
1-4 <small>Tested 1.1 to 2.2</small>	1b	Formulate questions that can be answered through research and experimental design. (DOK 3)
1-4 <small>Tested 1.1 to 2.2</small>	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 <small>Tested 1.1 to 2.2</small>	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 <small>Tested 1.1 to 2.2</small>	1e	Analyze procedures, data, and conclusions to determine the scientific validity of research. (DOK 3)
1-4 <small>Tested 1.1 to 2.2</small>	1f	Recognize and analyze alternative explanations for experimental results and to make predictions based on observations and prior knowledge. (DOK 3)
1-4 <small>Tested 1.1 to 2.2</small>	1g	Communicate and defend a scientific argument in oral, written, and graphic form. (DOK 3)
Describe the biochemical basis of life and explain how energy flows within and between the living systems. (P)		
1.1	2a	Explain and compare with the use of examples the types of bond formation (e.g., covalent, ionic, hydrogen, etc.) between or among atoms. (DOK 2) <ul style="list-style-type: none"> • Subatomic particles and arrangement in atoms • Importance of ions in biological processes
1.1	2b	Develop a logical argument defending water as an essential component of living systems (e.g., unique bonding and properties including polarity, high specific heat, surface tension, hydrogen bonding, adhesion, cohesion, and expansion upon freezing). (DOK 2)
1.1	2c	Classify solutions as acidic, basic, or neutral and relate the significance of the pH scale to an organism's survival (e.g., consequences of having different concentrations of hydrogen and hydroxide ions). (DOK 2)



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	Describe the biochemical basis of life and explain how energy flows within and between the living systems. (P)	
1.1	2d	Compare and contrast the structure, properties, and principle functions of carbohydrates, lipids, proteins, and nucleic acids in living organisms. (DOK 2) <ul style="list-style-type: none">• Basic chemical composition of each group• Building components of each group (e.g., amino acids, monosaccharides, nucleotides, etc.)• Basic functions (e.g., energy, storage, cellular, heredity) of each group