

Class: **Biology**

Teachers: **King & Wren**

Assessment format (MC, Fill-in, Short Answer, etc.):

75 Multiple Choice

Open Ended Questions

1 Claim, Evidence, Reasoning (CER)

Key Terms from this semester:

- saturated vs. unsaturated fats and trans fats
- negative feedback vs. positive feedback in plants and animals
- autotrophs and heterotrophs
- reactants and products
- photosynthesis and cellular respiration
- aerobic and anaerobic
- Cell Types
- Levels of Organization: write about the organelles and their function
- Nucleus
- Mitochondria
- chloroplast
- Ribosomes
- Vacuoles
- Stomata
- Hypertonic, hypotonic, isotonic.
- Concentration gradient

Important Concepts to Understand/ Questions to consider:

- lab safety

- scientific steps for a lab experiment
- basic microscope skills
- measuring skills
- Graphing skills
- lab analysis: making conclusions based on data and graphs
- various organs and systems and how they help maintain homeostasis in the body
- know how the body maintains homeostasis
- know how a plant maintains homeostasis & water balance
- feedback interactions/mechanisms in the human body and in plants
- level of cellular organization in living things
- types of cells & function in organisms
- know all of the systems in the human body & plants and the function
- how systems in the human body interact with each other to perform functions for life activities
- organisms' reactions to their environment and stimuli
- Diffusion and Osmosis
- Photosynthesis and Respiration lab experiments
- 4 types of macromolecules
- macromolecule chart (structure, function, components)
- saturated vs. unsaturated fats and trans fats
- four commonly occurring organic elements from periodic table and how the body uses them
- Explain the reactants and products of photosynthesis and cellular respiration (both aerobic and anaerobic) and describe the impact on organisms and the environment

CER: Claim, Evidence, Reasoning (Response)

*CER Directions: Write a **scientific explanation**:*

- **Claim**

- **Evidence** (*must include 4 pieces of evidence*)
- **Reasoning** Explain why you chose the evidence. How does it help support your claim?

Teacher's Tips for this Assessment:

- refer to your class notes, lab handouts, worksheets, lab journal, STEMscopes online references, and class experiences to complete this study guide
- **DO NOT** just study definitions. You will need to know the application of each concept.
- Use the prior STEMSCOPEDIA study guides in addition to this midterm study guide for a more lengthy review