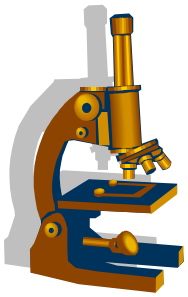

# Student Study Guide - Biology

## *Introduction to Biology:*

For your test you should be able to demonstrate your understanding of the following items:

***Section A.*** **Vocabulary**

Know the following Vocabulary terms for the unit. (20 points)

| | | |
|---|---|---|
| BIOLOGY | UNICELLULAR | MULTICELLULAR |
| GROWTH | DEVELOPMENT | ANABOLISM |
| CATABOLISM | RESPONSE | STIMULUS |
| HOMEOSTASIS | CELL | ASEXUAL REPRODUCTION |
| SEXUAL REPRODUCTION | | |

***Section B.*** **The Microscope**

Be able to label the parts of a microscope (review handout) (16 points).

***Section C.*** **The Characteristics of Life**

Be able to list the 5 characteristics of Life. (15 points)

***Section D.*** **The Flow of Energy and Matter**

1. Explain how energy flows through an ecosystem. (10 points)

2. Trace one of the following elements through its cycle: carbon, water, nitrogen, and oxygen (review your notes, text, or chapter assignment). ( total 20 points)

3. Create a food chain in which you are a member. It must contain at minimum one other consumer, a producer, and a decomposer (e.g. bacteria or fungi) for full credit.

***Section E.*** **The Scientific Method and SI units**

Be able to convert the measurements

* Remember - Larger ⟶ Smaller × (move decimal to right)

Smaller ⟶ Larger ÷ (move decimal to left)

Be able to list the four basic units of SI measurement.

| | |
|---|---|
| Length = meter (m) | Volume = liter (L) |
| Mass = kilogram (kg) | Time = second (s) |
| Temperature = Celsius scale (°C) | |

***** You may use your conversions index cards for this section.**

Be able to form a hypothesis from a stated purpose. (what you think will happen)
Be able to complete a graph from data in table
Be able to compare the results in a given experiment. (identify the differences or similarities)
Be able to write a conclusion of these results. (compare the results to the original hypothesis; was hypothesis proven to be true or false?)