**Unit 1**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**What is biology????**

**Bio=\_\_\_\_\_\_\_\_\_ ology=\_\_\_\_\_\_\_\_\_\_\_\_\_**

**So biology is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**I have a theory the NE Patriots will win the Super Bowl this year. Is this really a theory????? If not what is a theory?**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - An educated guess about what you think will happen.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A very well supported explanation of something that has been observed. It tries to explain why something is happening. It can never really be proven, just highly supported by data.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A description of something that has been observed. It is known to be true.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A statement based on what you see. Does not try to explain.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - A logical interpretation of what you see based on prior knowledge.

**BIOLOGY**

**Characteristics of Life (all living things have ALL of these characteristics)**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**Steps of the Scientific Method**

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**Let’s Practice:**

**Design a lab to test the effect of different types of fertilizers on plant growth.**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**How do I design a lab?**

**An experiment includes these things:**

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the **ONE** thing you change in the setup
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Data or what you measure

	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - numbers
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - words or descriptions
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Group that does not receive treatment. What
 you compare your results back to.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Group(s) that receive the treatment (test
 groups).
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - Things that are kept the same between all
 the setups (also called
 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Now that I have all of this data, how do I organize it?**

**A graph includes these things:**

* **Independent** **variable** –placed on the **\_\_\_\_\_\_\_** axis(horizontal axis).
* **Dependent variable** – always placed on the **\_\_\_\_\_\_\_\_\_\_ axis** (vertical axis).
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – compares data need when more than one line or sets of bars
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – tells what the graph is about
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** – the scale on both the x and y-axis usually begin with zero (some exceptions include time/dates).
* Values must increase by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ spacing and the same numeric intervals. (Jump by 1’s, 10’s, 100’s, etc.)
* Do the X and Y axes have to have the same scale (i.e. jump by the same interval)? \_\_\_\_\_\_\_\_