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Unit Goals:

1.1: Measurements

The student will:
- Differentiate length, area and volume measurement.
- Express measurement in both English and metric units.

1.2: Thinking Like a Scientist
The student will:
- Describe how the scientific method is used in an experiment.
- Distinguish experimental and control variables.
- Design and test a hypothesis.

1.3: Graphs
The student will:
- Distinguish between different graph types and their uses.
- Construct and properly label a line graph.
- Identify relationships between variables on a graph.

Name: _____ Date: _____ Period: _____

Cornell Notes 1.1 "Measurements" (TB pp. 4-10)

Measurement and Data

Vocabulary (use words in a sentence that explains their meaning):

Measurement

The International System of Measurement (SI)

Q: SI units are based on multiples of what number?

Q: Why is SI measurment important?

Length and Area

Vocabulary (use words in a sentence that explains their meaning):

Length
Area

Q: What is the best unit to measure the length of a fruit fly?

Volume (add the formula to your notes)

Vocabulary (use words in a sentence that explains their meaning):

Volume
Meniscus

Cornell Notes 1.1 "Measurements" Continued (TB pp. 4-10)

Mass and Temperature

Vocabulary (use words in a sentence that explains their meaning):

Matter

Mass

Temperature

1.1 Section Review

(Use the diagrams on page 10 to answer the following)

1. Measure the length of the millipede. Give your answer in meters, centimeters, and millimeters.
Which is the best unit to describe its length?

2. An acre of land measures 64 meters by 64 meters. What is the area of an acre of land in square meters?

3. What is the volume of the fish tank (right) in cm^3? Given that one cm^3 equals one mL, what is the volume of the tank in liters?

Cornell Notes 1.2 Thinking Like a Scientist (TB pp. 11-16)

Thinking Like a Scientist.

Vocabulary (use words in a sentence that explains their meaning):
Biology

Scientific Method

Steps to the Scientific Method

Vocabulary (use words in a sentence that explains their meaning):

Hypothesis

Q: What are the five steps of the Scientific Method?

Q: What does a hypothesis **have** to be?

Designing Experiments
Vocabulary (use words in a sentence that explains their meaning):

Experiment

System

Variable

Experimental Variable

Control Variable

Q: What are two of the control variables in Maria's experiment?

Cornell Notes 1.2 Thinking like a Scientist (TB pp. 11-16)

Data and Conclusions

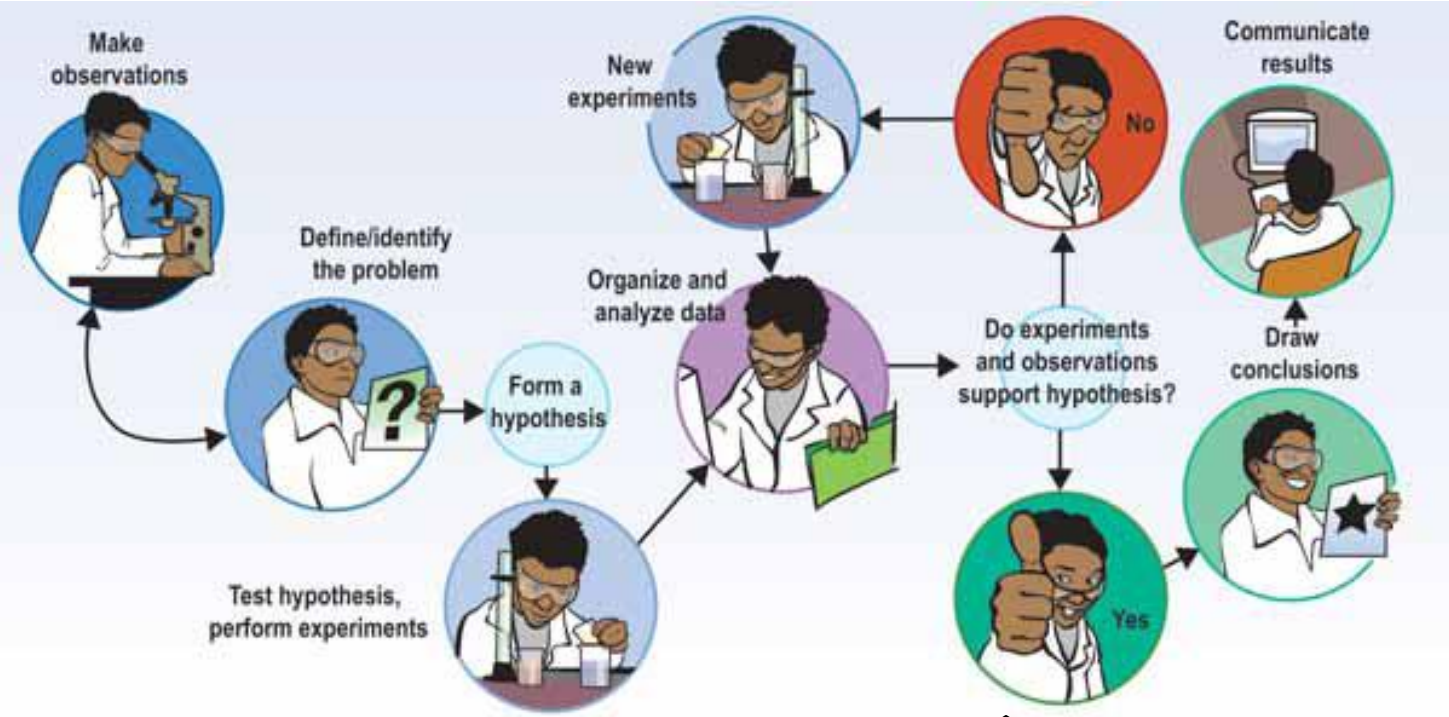
Q: What is one useful way to present data?

Q: What is a lab report?

Science is an ongoing process

Vocabulary (use words in a sentence that explains their meaning):

Theory:



Cornell Notes 1.3 Graphs (TB pp. 17-20)

Types of Graphs

Vocabulary (use words in a sentence that explains their meaning):

Graph

Draw the following:

1. Line graph
2. Bar graph
3. Pie graph

The Scientific Method

Making a line Graph

Vocabulary (use words in a sentence that explains their meaning):

Independent Variable

Dependent Variable

Cornell Notes 1.3 Graphs (TB pp. 17-20)

Identifying relationships between variables on a Graph

Vocabulary (use words in a sentence that explains their meaning):

Direct Relationship

Inverse Relationship

Q: What if there is no pattern evident on your graph?

1.3 Section Review

1. What are three types of graphs?
2. When would you use a pie graph?
3. Suppose you want to make a graph of average temperature for each month of the year. What is the dependent variable and what is the independent variable?
4. Answer question 6 on page 21 in your book.