Name: _____ Date: _____ Period: ___

Unit 1 Concept Map Week # ___

1.The _____ Method is an → organized way of providing an explanation about the natural world

First, scientists make

2. _____ which can be → 3. _____ → Description made by using one of the senses

2. _____ which can be → 4. _____ → 5. Description that involves _____

Then, scientists make

6. _____ that are → 7. logical interpretations of _____

Which lead to

Testable Questions that must →
8. Not be _____ or _____
Not ask for an _____
Require measurements
Be answered through observation or _____

Then, scientists conduct a

Controlled Experiment with →
9. _____ variable or what you choose to change
10. _____ variable or what you measure
Control which is for 11. _____

Then scientists

Collect and Analyze Data displayed in →
Data tables
Graphs → 3 types →
12. _____ graph: compares categories
13. _____ graph: for continuous independent variable
Pie graph: shows parts of a whole

All must have →
14. _____: that includes both variables

And finally

19. Draw _____ → 20. Supported by _____

15. Axes: the independent variable on the ___-axis and the dependent variable on the ___-axis

16. _____: that include _____ like meters or seconds

17. _____: when appropriate

18. _____: with even intervals and appropriate spacing

Unit 1 Assessment- Practice Questions

Directions: Identify the following statements as qualitative, quantitative, or inference.

1. The turtles in the pond like to sit in the sun. _____
2. The six turtles in the pond are in the sun. _____
3. The turtles in the pond sit quietly in the sun. _____

Directions: Use the data table to answer questions 4-7.

Organism	Column A	Column B	Column C
Goat	4 limbs	Over 2 meters in length	white fur
Chicken	2 limbs	Under 2 meters in length	white, black, and brown feathers
Donkey	4 limbs	Over 2 meters in length	brown fur
Rooster	2 limbs	Under 2 meters in length	black, red, and white feathers

4. Which column(s) represent qualitative data? _____
5. Which column(s) represent quantitative data? _____
6. Which of the following statements is an inference based on the table?
   a. The goat and donkey are larger in length than the chicken and rooster.
   b. The donkeys were the easiest organisms to collect data on.
   c. The goats and chickens can be white in color.
   d. The rooster is the only organism with a red body.

7. From the data table, a scientists wants to conduct an experiment on a chicken. Which of the following is a testable question?
   a. Do chickens prefer to be black or brown?
   b. Why do chickens have 2 limbs?
   c. How does the color of the feathers affect the chickens ability to avoid predators?
   d. Can the size of the chicken affect the speed at which they can run?

Directions: Use the data table and answer questions 8-11.

An experiment was conducted to determine the effect of fertilizer on the growth of plants. Scientists used fertilizer on Location A, but did not use fertilizer on Location B.

	Initial (cm)	Day 1 (cm)	Day 2 (cm)	Day 3 (cm)	Day 4 (cm)	Day 5 (cm)
Location A	5	5.6	5. 9	6.3	6. 5	6.8
Location B	5	5.8	6.1	6.2	6.8	7.9

8. What is the independent variable? _____
9. What is the dependent variable? _____
10. What is the purpose of Location A? _____
11. What type of graph is most appropriate for the data? _____