

**Station 1**

**C4 Identifies and makes qualitative and quantitative observations &  
C6 Identifies and makes inferences**

**A.** Cassie rolled over in her bed as she felt the sunlight hit her face. The beams were warming the back of her neck when she slowly realized that it was a Thursday, and she felt a little too good for a Thursday. Struggling to open her eyes, she looked up at the clock. "9:48," she shouted, "Holy cow!" Cassie jumped out of bed, threw on the first outfit that she grabbed, brushed her teeth in two swipes, threw her books into her backpack, and then ran out the door.

Make an inference about the story above:

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List the observations you made that lead you to this inference and circle if they are qualitative or quantitative:

1. \_\_\_\_\_ Qualitative or Quantitative
2. \_\_\_\_\_ Qualitative or Quantitative

Make an additional inference about the story above:

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List the observations you made that lead you to this inference and circle if they are qualitative or quantitative:

1. \_\_\_\_\_ Qualitative or Quantitative
2. \_\_\_\_\_ Qualitative or Quantitative



B.

Make an inference about the picture above:

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List the observations you made that lead you to this inference and circle if they are qualitative or quantitative:

1. \_\_\_\_\_ Qualitative or Quantitative

2. \_\_\_\_\_ Qualitative or Quantitative

Make an additional inference about the story above:

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List the observations you made that lead you to this inference and circle if they are qualitative or quantitative:

1. \_\_\_\_\_ Qualitative or Quantitative

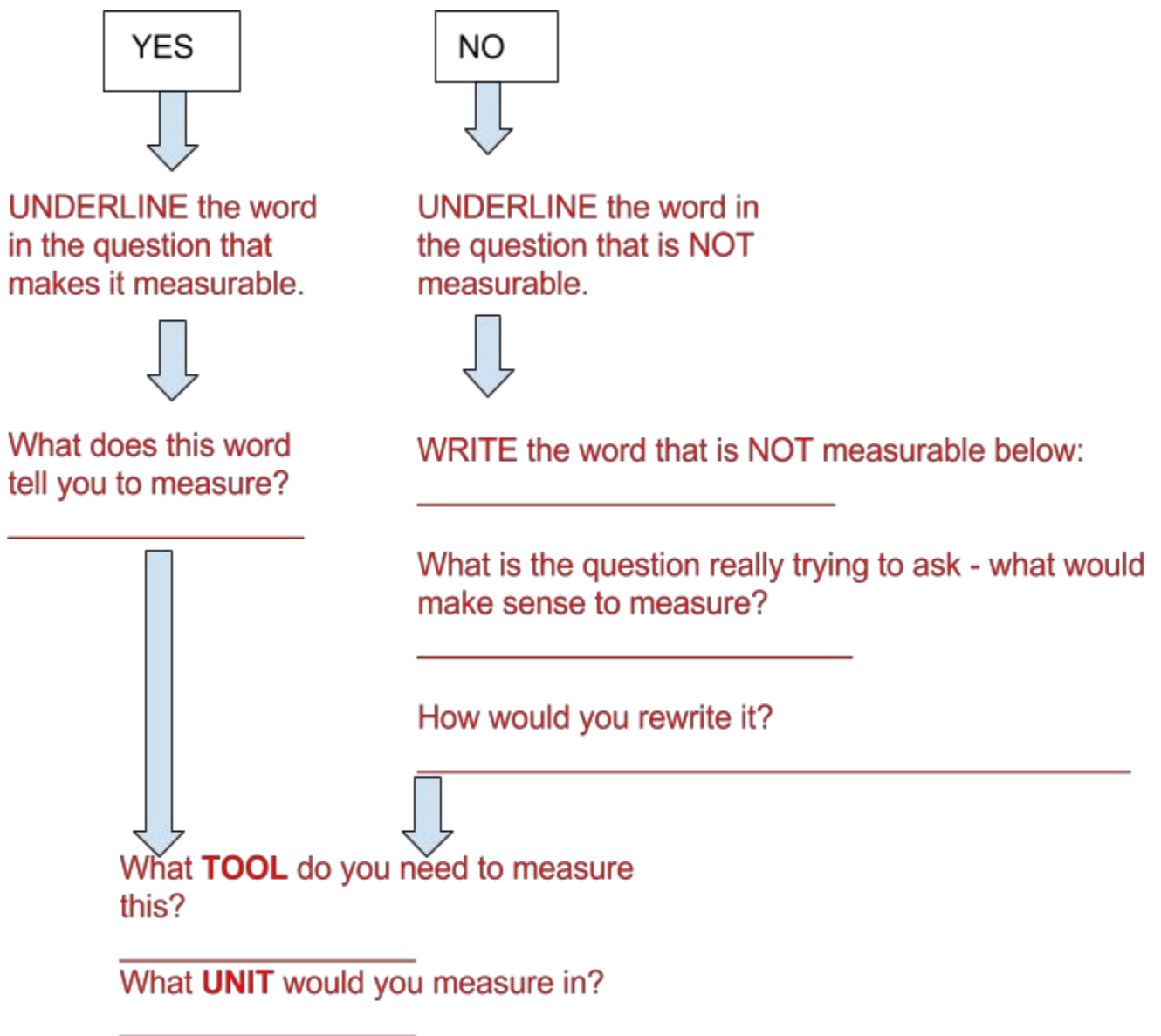
2. \_\_\_\_\_ Qualitative or Quantitative

1.

1) READ this question:

**QUESTION:** Are strawberries better if they are grown in a greenhouse?

2) CIRCLE if it is measurable:

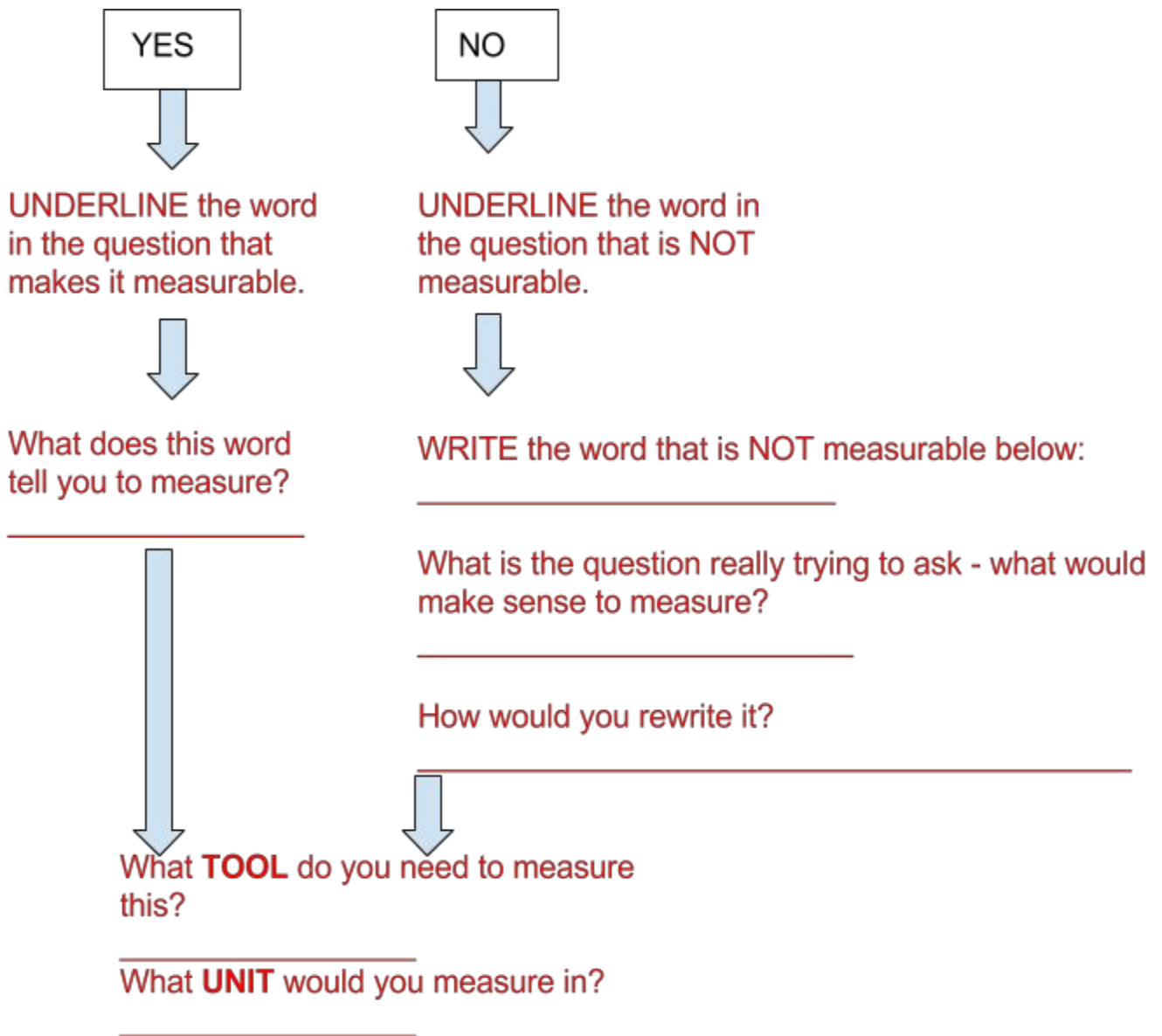


2.

1) READ this question:

**QUESTION:** Will a Mr. Bacon pig(electronic pig) race more amazingly with a high voltage battery?

2) CIRCLE if it is measurable:



**Station 3**

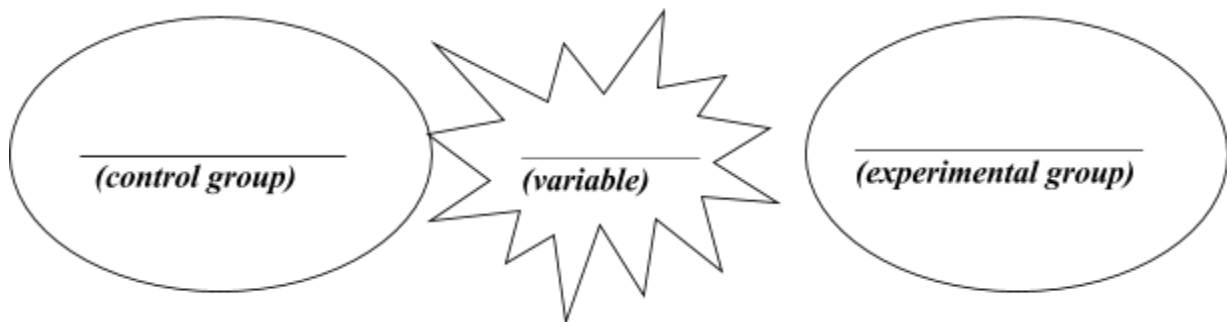
C.2 Identifies the groups in a controlled experiment

C.3 Identifies variables and constants in controlled experiments

**Directions:** Set up a controlled experiment using the questions that you made measurable above:

**Original QUESTION:** Are strawberries better if they are grown in a greenhouse?

**REWRITE:** \_\_\_\_\_



**Constants:**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_

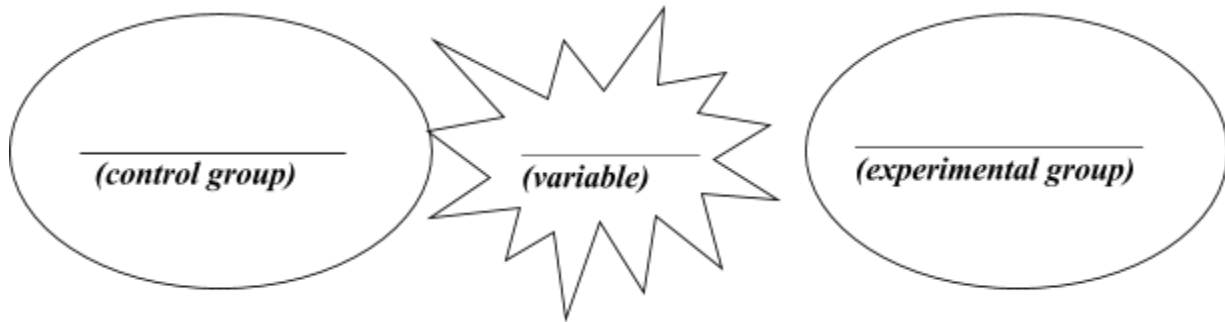
**Results:**

\_\_\_\_\_

**Directions:** Set up a controlled experiment using the questions that you made measurable above:

**Original QUESTION:** Will a Mr. Bacon pig(electronic pig) race more amazingly with a high voltage battery?

**REWRITE:** \_\_\_\_\_



**Constants:**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

**Results:**  
\_\_\_\_\_

**Station 4**

**C.8 Creates tables and graphs to display data and communicate results**

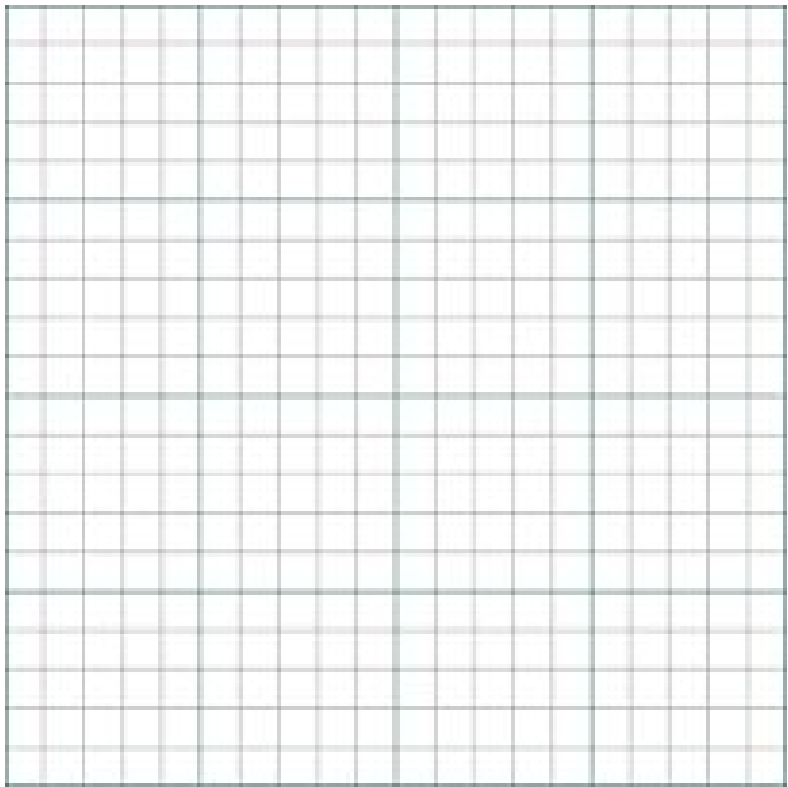
**Directions:** Create data tables with the results below.

1) **Question:** Does a turkey cook faster if it is stuffed?

**Results:** Turkey without stuffing cooked in 230 mins, turkey with stuffing cooked in 300 minutes.

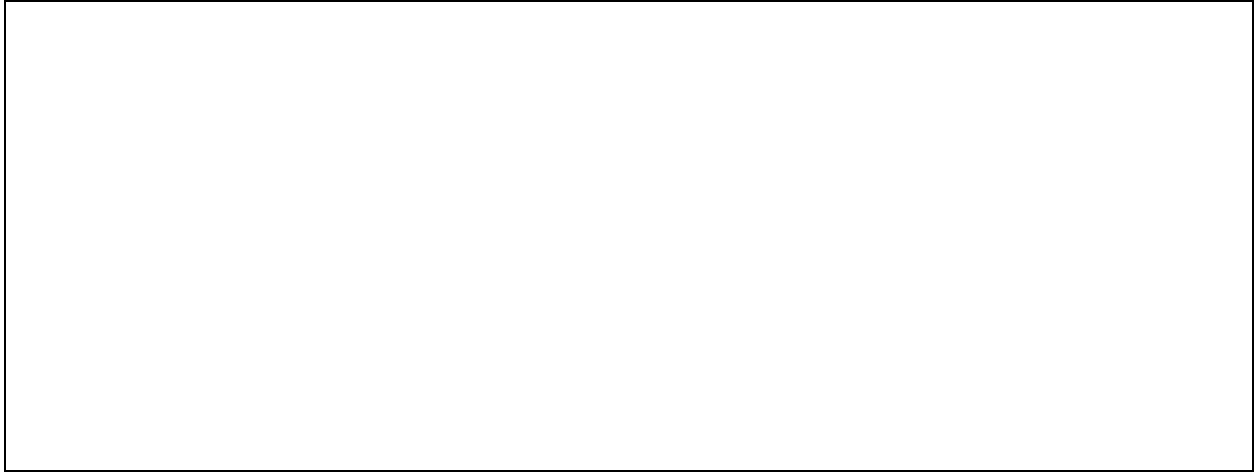


**Directions:** Using your data table create a bar graph below.

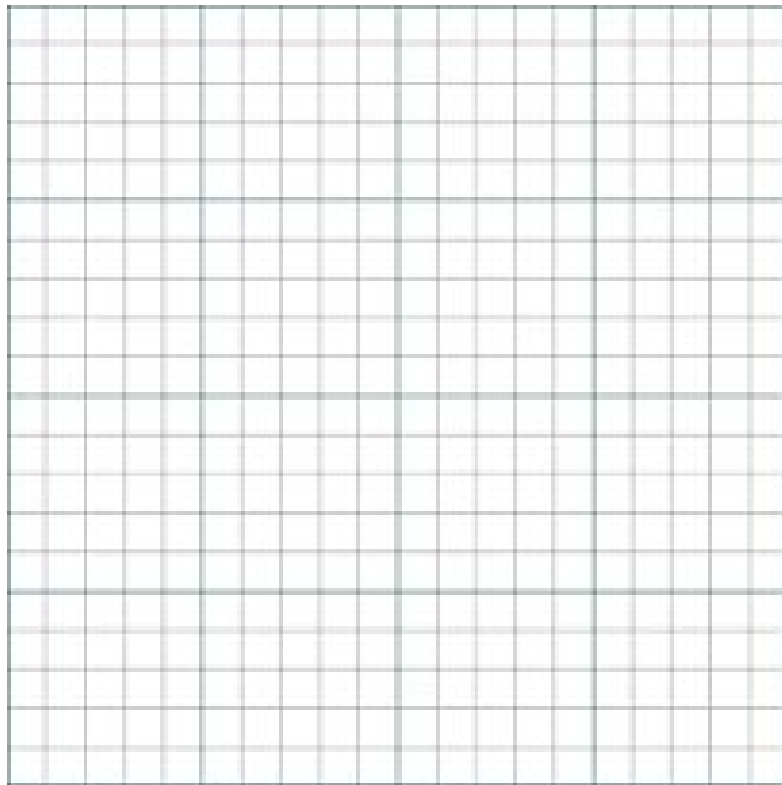


2) **Question:** Will my dog gain more mass if I feed him treats?

**Results:** A dog fed no treats gained 50g, and a dog fed treats gained 115g.



**Directions:** Using your data table create a bar graph below.





**DO THIS SECTION INDEPENDENTLY TO PRACTICE VOCAB & HYPOTHESIS**

***Scientific Method Review Packet***

**Part 1 - Steps in Order**

**Directions:** List the scientific method steps in order, record the ENTIRE STEP.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

- |                          |
|--------------------------|
| Plan & Perform Test      |
| Form your Hypothesis     |
| Draw a Conclusion        |
| Communicate Your Results |
| Ask a Question           |
| Organize results         |

**Part 2 – Definitions**

**A - Directions:** Match the letter that correctly describes each step.

- |                              |  |
|------------------------------|--|
| 1. ____ Plan & Perform Test  | a. Scientist designs and completes the experiment.   |
| 2. ____ Form your Hypothesis | b. Scientist writes their numbered data in a table they have created.                                  |
| 3. ____ Organize results     | c. Scientist wonders about the world around them and would like to find an answer.                     |
| 4. ____ Ask a Question       | d. Scientists predict the answer to what they are wondering about. This gives them something to prove. |

**B - Directions:** Match the letter that correctly describes each step.

1. \_\_\_\_ Qualitative Observations

2. \_\_\_\_ Quantitative Observations

3. \_\_\_\_ Variables

4. \_\_\_\_ Controlled Experiment

5. \_\_\_\_ Constants

6. \_\_\_\_ Control Group

7. \_\_\_\_ Experimental Group

8. \_\_\_\_ Inference

- A. The group in an experiment or study that does not receive treatment by the researchers
- B. Observations that cannot be measured. You use your 5 senses to help you describe qualities.
- C. The group in an experiment that receives the variable being tested.
- D. Observations that are measured using tools such as rulers, triple beam balances, graduated cylinders, thermometers, and timers.
- E. A test where the person conducting the test only changes one variable at a time.
- F. The one thing you change in a scientific experiment.
- G. A conclusion reached on the basis of evidence and reasoning.
- H. The parts of an experiment that remain the same.

### C.7 Formulates educated hypotheses

Directions: Watch this *5-Second DNews* video:

<https://www.youtube.com/watch?v=M2ETAOIPRLk>

Using what you have learned formulate a hypothesis for the experiment below.

(Helpful reminder: I think \_\_\_\_\_ because \_\_\_\_\_)

**Question:** If I follow the “5 second rule” when dropping food on the floor - will adding MORE MILK to my mashed potatoes make it have more bacteria when I pick it up from the floor?

**Hypothesis:** \_\_\_\_\_

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