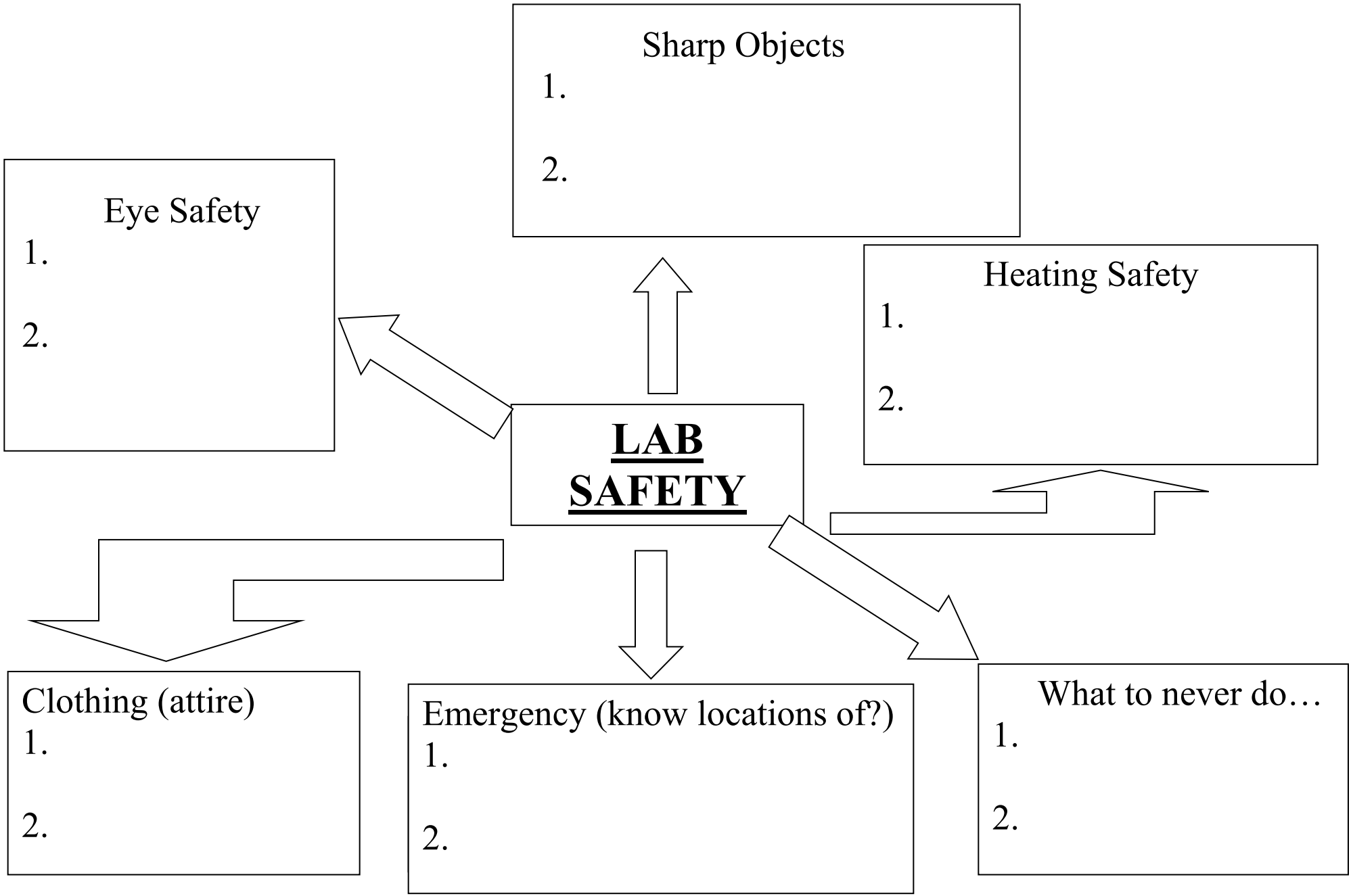
Name _____Period_____

# Station 1: Lab Safety Web Diagram

**Directions:** **Read the safety guidelines. List at least 2 examples of safety rules in the boxes below.**



# SpongeBob Safety Scenarios – what lab rule(s) were broken?

1.

2.

3.

4.

5.

# Station 2 – Independent vs dependent variables

1. What was the initial observation?

2. Control Group?

3. Independent (Manipulated) Variable

4. Dependent (Responding) Variable

5. What should Homer's conclusion be?

6. Control Group?

7. Independent (Manipulated) Variable

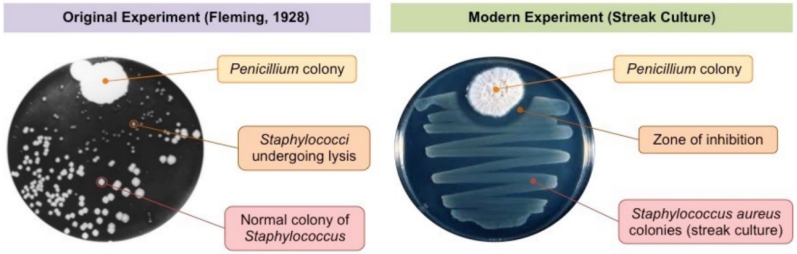
8. Dependent (Responding) Variable

9. What should Smithers conclusion be?

10. How could this experiment be improved upon?

11. Describe how Lisa would perform this experiment. Identify the control group, and the independent and dependent variables in your description.

# STATION 3 – Penicillin & Beriberi




1. State the question or problem that Fleming investigated.

2. What was Fleming's hypothesis?

3. How was the hypothesis tested?

4. This experiment lead to the development of what major medical advancement?

5. State the question or problem that Dr. Eijkman investigated.

6. What was the original hypothesis (if-then statement)?

7. What was the independent (manipulated) variable and the dependent (responding) variable?

8. Write a statement that summarizes the results of the experiment.

9. Was the hypothesis proven to be true or false?

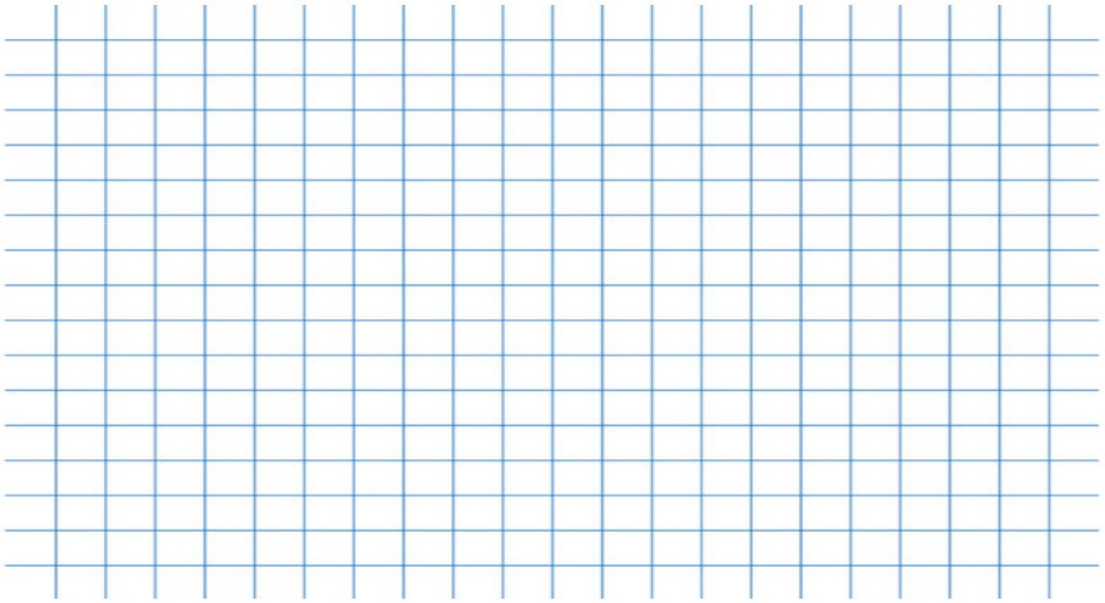
10. How would Dr. Eijkman test his new hypothesis?

# Station 4

1. Mouse experiment: Based on the data, what would you conclude about the drug? Did the drug work?

2. Cow Growth Rates: Graph the data on your answer sheet. Use a dotted line for Bessie and a straight line for Bertha. TITLE your graph and label BOTH axis with a title.

| Cow | Months of the Year | | | | |
|---|---|---|---|---|---|
| | April | May | June | July | Aug |
| Bessie | 100 lbs | 210 lbs | 260 lbs | 320 lbs | 400 lbs |
| Bertha | 100 lbs | 250 lbs | 290 lbs | 340 lbs | 400 lbs |



3. Both cows ended at the same weight, but did the experimental feed change the way they gained weight at all? Describe your conclusions about the experimental feed and explain why it is important that the experiment used twin cows.

# Station 5

**Town Populations**

1. According to the graph, which town grew the fastest?

2. Which town declined in population?

3. Which town had the smallest change in population?

4. What is the population of Forks in 2010?

**Plant Growth**

5. On Day 7, the plants kept in the sun for 3 hours were how tall? _____

6. On Day 7, the plants kept in the sun for 6 hours were how tall? _____

7. On Day 10, the plants kept in the sun for 9 hours were how tall? _____

8. On Day 11, the plant that was grown with 1 hour of sunlight was how tall? _____

9. Based on the graph, the plant grows best in what amount of sunlight? _____

**Worm Data**

10. What length of worm is most common? _____

11. What was the longest worm found?_____

12. How many worms were 6 cm long? _____

13. How many worms were 7.25 cm long?_____

14. The peak of the curve represents the [ longest worms / average worms / shortest worms]

**Station 6 -** Use the common laboratory equipment sheet to answer the following questions.

| Object Name | Used For | Draw a picture of object |
|---|---|---|
| | If I needed to pick up or hold a hot beaker during a lab | |
| | Mandatory for every lab. You will wear it to help protect your eyes from chemical splashes | |
| | If I needed a container to hold 50mL of boiling water | |
| | If I needed a small glass container to view a chemical reaction or to heat a small amount of a substance at high temperatures. (has many uses) | |
| | A device I can use to measure out 100 grams of salt (NaCl) | |
| | You will wear this to protect you and your clothes from hazardous or hot chemicals | |
| | If I needed to measure exactly 43mL of acid | |
| | If I needed a narrow-mouthed container to transport, heat or store substances. Conical Shape. Comes in many sizes. | |
| | If I needed to transfer a small amount (5 grams) of a solid chemical | |