Identifying Variables in Scientific Experiments

Name: _____

Matching: Draw a line matching the term with the definition.

1. Conclusion ●
2. Constant ●
3. Control group ●
4. Dependent variable ●
5. Empirical evidence ●
6. Hypothesis ●
7. Independent variable ●

- The single factor/thing being changed by an experimenter in an experiment.
- A factor that is purposely kept that same in an experiment.
- A group in a scientific experiment that serves as a reference for comparison
- A factor being measured or observed... it's usually the data being collected.
- Evidence based on observations or experiments
- An educated guess that can be tested scientifically through experiments
- A statement that tells what an investigation showed, based on observations and data.



Angel wanted to know if the length of length of socks would affect his time in the 40 yard dash. He picked his favorite pair of running shoes and conducted an experiment?

8. Write a possible hypothesis for experiment.

9. What would the independent variable be in this experiment?

10. What would the dependent variable be in this experiment?

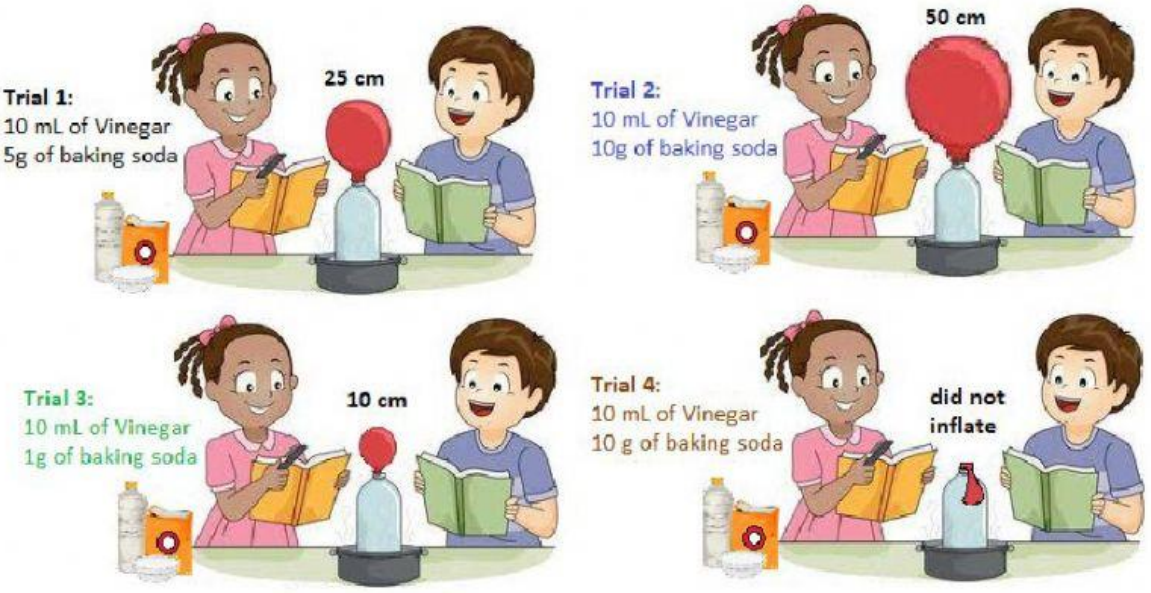
11. Why would it be a good idea for Angel to run the 40 yard dash without socks?

LIVEWORKSHEETS

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Tonya and Dylan were doing an experiment to see what happens when baking soda and vinegar are mixed together in a *"closed system"*. Look at the pictures of the investigation to answer the questions below.



12. What was the testable problem of the experiment?

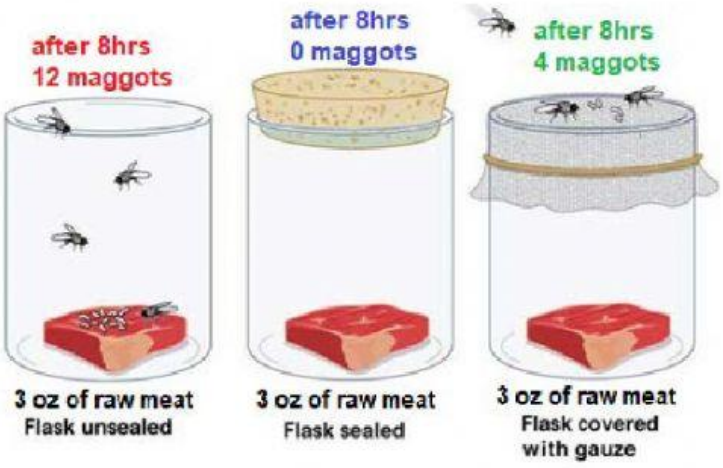
13. What was the independent (test) variable?

14. What was the dependent (outcome) variable?

15. What was the control (control group)?

16. What were 3 constants?

17. Write a conclusion for the experiment?



Francisco did an experiment to find out if flies can only produce maggots when they come in contact with meat. Look at the picture of his experiment to answer the questions.

18. What was the independent (test) variable?

19. What was the dependent (outcome) variable?

20. What was the control?

*21. Draw (write) a conclusion from the empirical evidence given in the photo.

LIVEWORKSHEETS