
Scientist: _____

Date: _____ - _____ - _____ HR: _____

Zeig

QPOEE Quiz #1

+ _____

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Success Criteria

1. Identify and explain the steps of the scientific method (question and prediction):
2. Write a prediction that answers the investigation question and provide reasoning for the prediction using scientific knowledge.
3. Identify the independent variable and the dependent variable when given a scientifically testable question.

1. Which question(s) are testable? Please circle your answer(s). (1 pt)

a) Why do people smoke?

b) How does the size of a helicopter's blade length affect the speed and number of rotations?

c) Do larger or smaller seeds make prettier flowers?

2. Explain what makes a question testable or not. (list 2 or more) (2pts)

3. Write ONE testable question in the correct format that an ~~8th grader would be proud to use~~. (Remember to end your question with a question mark.) (2 pts)

4. Use the question to write a prediction including reasoning. (2 pts)

Question: How does caffeine affect energy levels in middle school students?

Prediction: If a middle school student has no caffeine in the morning,

then... _____.

This is because... _____.

Answers will vary.

5. An investigation is performed on plants to see how different liquids affect plant growth. Each plant in the experiment is given a different liquid; water, apple juice, or milk. Each plant has the same amount of soil, same amount of sunlight, and the same amount of liquid. (ALL questions, below, go along with this scenario.)

a. What is the independent variable?

(1 pt)

different liquids (water, apple juice, or milk)

b. What is the dependent variable?

(1 pt)

plant growth (height or lack of growth)

c. What are at least 2 controls?

(2 pts)

Amount of soil, sunlight, & liquid

d. Write a prediction for this investigation, below.

If _____ (Choose 1 liquid: water, apple juice, or milk)
is poured over a plant, then... _____

(1 pt)

Vocabulary - Match the correct definition to the vocabulary word.

(5 pts)

6. A Independent Variable

7. E Dependent Variable

8. D Controls

9. C Question

10. B Prediction

a. Describes the outcomes that the researcher expects to happen. It is written in the form "If...then..." and also includes reasoning based on scientific principles.

b. This is the main idea of the investigation. It asks how changing one variable affects another.

c. The variable that is being changed or altered by the scientist.

d. The variable that is being measure by the scientist.

e. These are the variables that are kept the same and not changed.