Scientific Method Quiz

Question 1: Which step of the Scientific Method uses the 5 senses?
a) Hypothesis
b) Observation
c) Experiment
d) Data

Question 2: A hypothesis is:
a) The final result of an experiment
b) A prediction written with If… then…
c) A temporary answer to the question
d) Information collected from the experiment

Question 3: A prediction should be written in which structure?
a) Do – Check – Act
b) What – Why – How
c) If … then …
d) Yes – No

Question 4: In which step does the scientist perform the actual test/experiment?
a) Data
b) Hypothesis
c) Observation
d) Experiment

Question 5: What is Data?
a) A hypothesis before the test
b) Results collected to compare with the hypothesis
c) Tools for observation
d) A prediction statement

Question 6 – Fill in the blanks: Put the steps of the Scientific Method in the correct order:
_____ Hypothesis _____ Experiment _____

Question 7 – Situation: A student notices: 'Sugar water attracts more ants than plain water.'
Write a Prediction using If … then ….

Fair Test, Variables, and Trials Quiz

Question 1: A Fair Test means:
a) Changing many variables at once
b) Changing only one variable, while keeping all other variables the same
c) Not controlling any variables
d) Doing the experiment only once

Question 2: Which variable is changed on purpose in an experiment?
a) Dependent variable
b) Independent variable
c) Control variable
d) Constant variable

Question 3: Which variable is the result or outcome that may change depending on the independent variable?
a) Dependent variable
b) Independent variable
c) Control variable
d) Constant

Question 4: Which variable stays the same in an experiment?
a) Independent variable
b) Control variable
c) Dependent variable
d) Random variable

Question 5: In the plant growth example:
- Independent variable = _____
- Dependent variable = _____
- Control variables = _____

Question 6: Why are trials important in experiments?
a) To make the experiment shorter
b) To test the hypothesis many times for accuracy
c) To change more variables at once
d) To skip the data collection

Question 7 – True/False:
1. Only one independent variable should be changed in a fair test. (T/F)
2. The dependent variable is the one we control directly. (T/F)
3. When trials consistently support the hypothesis, it can become a theory. (T/F)

Scientific Method

Hmm...my flashlight isn't working!?

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Replacing the batteries will make the flashlight bulb light up.

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No flashlight, this is not good
Why is my flashlight not working?

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IF Ireplace the batteries,
THEN the flashlight bulb will light up!

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Let's test our hypothesis with an experiment.

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Did the bulb in the flashlight light up?

No

Was our hypothesis correct?

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1) List the steps to the scientific method:

Step 1 _____

Step 2 _____

Step 3 _____

Step 4 _____

Step 5 _____

2) True of false: If your hypothesis is not correct, you can come up with a new hypothesis and repeat the steps.

True

3) Correctly identify the steps to the Scientific Method

I wanted to drive my motorbike to go to the store. So I got on my motorbike but then it did no start. I asked myself, "why is my motorbike not working?" I thought of all the possible reasons as to why it won't start. I thought to myself, replacing the battery will help start the motorbike In other words, if I replace the battery, then my motorbike will start. I replaced the battery for my motorbike. I tried starting my motorbike and it started.

3) Correctly identify the steps to the Scientific Method

Observation: _____

Hypothesis: _____

Prediction: _____

Experiment: _____

Data: _____

Practice with Variables

1. Hikers who wear light-weight boots can hike more hours that hikers who wear heavy boots.

Independent variable: _____

Dependent variable: _____

Control variables: _____

Practice with Variables

2. Sunflowers that get more water grow over six feet tall.

Independent variable: _____

Dependent variable: _____

Control variables: _____

Practice with Variables

3. Children who do their homework everyday get better grades.

Independent variable: _____

Dependent variable: _____

Control variables: _____

Practice with Variables

4. People who exercise everyday live longer.

Independent variable: _____

Dependent variable: _____

Control variables: _____

Practice with Variables

5. Puppies who don't have litter mates are heavier than puppies with litter mate

Independent variable: _____

Dependent variable: _____

Control variables: _____

2. Let's try to identify the variables in this Fair Test.

Independent variable: _____

Dependent variable: _____

Control variables: _____

Vocabulary

1	Observation	3	Whatyou think will happen in the experiment.
2	Hypothesis	1	Information we collect from the world around us.
3	Prediction	2	An idea or explanation that you test in an experiment.
4	Experiment	4	A test using observations and controlled variables.

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Vocabulary

1	Data	2	When you interpret the data and come to a conclusions.
2	Analysis	3	When a hypothesis has been tested many times and the evidence supports the hypothesis.
3	Theory	1	Information collected from the experiment.