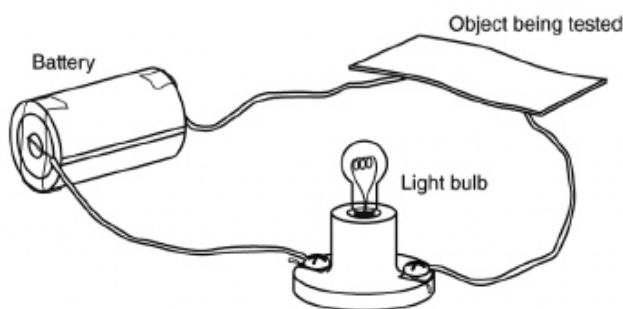


1. An effective scientific investigation should yield results that can be reproduced by others when they follow the same steps. Which process does this statement describe?
- A) hypothesizing
 - B) observation
 - C) repeated trials
 - D) replication

Correct answer(s): D

2. Brenda has just completed an investigation to determine the electrical conductivity of several objects. The set-up of her investigation is shown below.

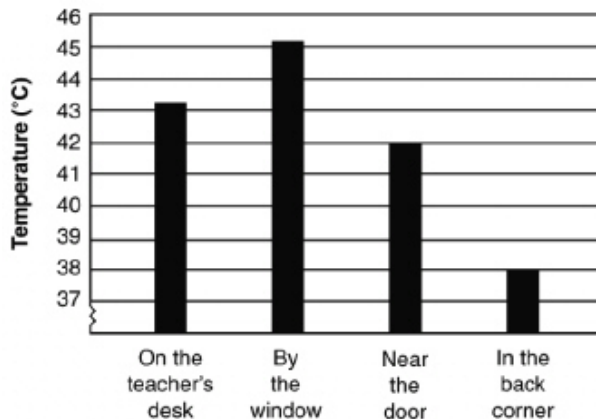


How could she use repetition to verify her results?

- A) Have someone else do the investigation again.
- B) Change the steps so the results support her prediction.
- C) Do the investigation again using a different type of battery.
- D) Carry out each trial three additional times.

Correct answer(s): D

3. Meagan recorded the temperatures of four different locations in the classroom. The graph below shows her results.

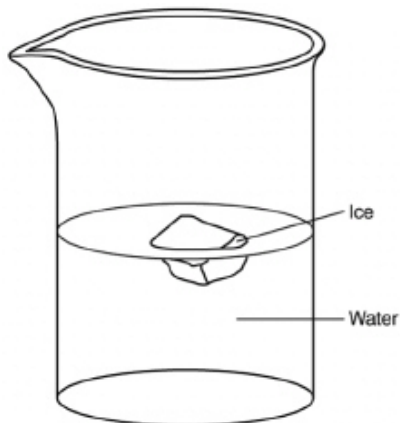


Which of the following descriptions is an example of repeated trials of this investigation?

- A) Deshawn takes all of the temperatures again.
- B) Meagan draws another copy of the graph.
- C) Meagan takes all of the temperatures again.
- D) Deshawn reviews Meagan's graph for errors.

Correct answer(s): C

4. Martin has just completed an investigation to test how the amount of liquid water in a container affects how quickly an ice cube melts.



Which of the following procedures would be a replication of Martin's investigation?

- A) Sandra repeats the investigation, but changes some of the conditions.
- B) Sandra repeats Martin's investigation following the same steps.
- C) Martin repeats the investigation, but changes some of the conditions.
- D) Martin repeats the investigation following his previous steps.

Correct answer(s): B

5. The following directions were taken from the procedures of four different investigations. Which set of directions includes repeated trials?
- A) Spray the plants with the acidic solutions once a day for five days.
 - B) Release the model car on a 20-centimeter ramp, a 40-centimeter ramp, and finally, a 60-centimeter ramp.
 - C) Mix the three solutions into separate 1-liter containers of water.
 - D) Conduct the frozen yogurt taste test four times with different groups of tasters.

Correct answer(s): D

6. How do replication and repeated trials compare?
- A) During both processes, the original investigator does the experiment again.
 - B) During replication, a different investigator does the experiment again. During repeated trials, the original investigator does the experiment again.
 - C) During replication, the original investigator does the experiment again. During repeated trials, a different investigator does the experiment again.
 - D) During both processes, a different investigator does the experiment again.

Correct answer(s): B

7. Scientific investigation have certain standards, including the ability to be replicated. Why should scientists be able to replicate an investigation?
- A) Replicating an investigation proves that the hypothesis was correct.
 - B) Other scientists need to verify the results.
 - C) A scientist might need to conduct multiple trials to ensure that results are accurate.
 - D) Other scientists need to review the method by which results were communicated.

Correct answer(s): B

8. Shawn wants to know how much television his family watches on an average day. He records the television watching habits of his own family for one day. How should Shawn use repeated trials to make sure his results are accurate?

- A) He should record how much his family watches for a few more days.
- B) He should encourage his family to watch less television.
- C) He should track the types of programs his family is watching.
- D) He should record the times that his family is watching television.

Correct answer(s): A

9. Catherine is a zoologist. She is studying the effects of vitamin supplements on giraffes. Which of the following statements **best** describes repeated trials related to Catherine's research?
- A) Administer the supplements and record observations daily.
 - B) Administer the supplements to ten giraffes for 30 days.
 - C) Administer supplements to half the giraffes at 9 a.m. and half at 6 p.m.
 - D) Administer a different type of supplement to each giraffe.

Correct answer(s): B

10. Miranda tested five brands of bubble gum to determine with which brand she could blow the biggest bubbles. After testing each brand, she asked three friends to also do the tests to see if they got the same results. Asking her friends to help is an example of which of the following?
- A) replication
 - B) prediction
 - C) repeated trials
 - D) conclusion

Correct answer(s): A

Done

Show/Hide Answers