

# 6<sup>th</sup> Grade Science

## Blizzard Bag #3

## Experiment Review

Name \_\_\_\_\_

Due Date \_\_\_\_\_

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1. A wildlife researcher wants to know how a species of fox behaves in its natural habitat. The researcher should

- A. perform an experiment on the foxes.
  - B. observe the foxes in their environment.
  - C. observe the foxes in a laboratory.
  - D. make a model of the foxes and their habitat.
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2. Austin is interested in learning about mice. Which of the following is a scientific question that he could ask?

- A. Are mice that eat cheese prettier than mice that eat peanut butter?
  - B. Is it ethical to own a pet mouse?
  - C. Do mice grow faster when they eat cheese or when they eat peanut butter?
  - D. Do big mice make better pets than small mice?
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3. Maria wants to determine which type of disinfectant kills the most bacteria.

Which of the following is the best way for Maria to determine this?

- A. Ask ten different companies that make disinfectants which type is best.
  - B. Interview ten different people to determine which type of disinfectant they prefer.
  - C. Put the same amount and species of bacteria on ten identical plates, and add a different disinfectant to each plate.
  - D. Put the same amount and species of bacteria on ten identical plates, and add ten different kinds of disinfectant to each plate.
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4. A scientist wants to determine which fertilizer is more effective—Fertilizer X or Fertilizer Y. The best way for her to proceed would be to design an experiment with

- A. group with no fertilizer.
- B. two groups of plants—a group fertilized by X and a control group with no fertilizer.
- C. two groups of plants—a group fertilized by Y and a control group with no fertilizer.
- D. three groups of plants—a group fertilized by X, a group fertilized by both X and Y, and a control group with no fertilizer.

5. Katy has to do a science project that involves making a model. Which of the following questions would she answer with a model?

- A. Which type of bug can move the fastest?
- B. What type of tree is the prettiest?
- C. How does a volcano's lava flow affect the plants and objects in its path?
- D. How fast can different plant species grow?

6. Anna is conducting an experiment to determine how weather affects cell phone reception. She is trying to decide the best way to conduct her experiment in order to collect meaningful data.

Which of the following experiments would help Anna collect the best data?

- A. Test a cell phone's reception in one location with clear weather and in another location with rainy weather.
- B. Test different cell phones in different locations on days with rainy weather.
- C. Test different cell phones in different locations on days with clear weather.
- D. Test a cell phone's reception in the exact same location under various atmospheric conditions.

7. A good question to use for a scientific investigation should be testable, and it should be connected to science concepts.

Casey wants to do a scientific investigation about light. Which of the following questions would be best to use to guide his scientific investigation?

- A. Which type of light bulb is easiest to catch?
  - B. What color of light is the prettiest?
  - C. Which type of light bulb burns the longest?
  - D. Which type of light bulb is preferred by moms?
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8. Two companies make baseballs, and each claims that its ball goes farther. Which would be the best scientific evidence to decide which ball goes farther?

- A. using each of the baseballs during a game and recording the results
  - B. asking 25 different baseball players which ball they think goes further
  - C. reviewing the test data that each company has reported on their product
  - D. hitting each ball with the same force and measuring how far each goes
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9. Mario believes he has found the reason that some things glow in the dark while others do not. What is the most important thing he will need to do before his theory will be accepted by other scientists?

- A. Write a book promoting his theory.
  - B. Create a petition and ask everyone who believes in his theory to sign it.
  - C. Develop tests and experiments that can be repeated to prove his theory.
  - D. Develop an on-line survey so people can vote on the accuracy of his theory.
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10. Julian designs an experiment to see how well different liquids lubricate wooden surfaces. He sets up a number of identical wooden ramps and prepares to slide identical wooden blocks down them. He will time how long it takes each block to reach the end of the ramp. He covers one ramp with water, the second with motor oil, and the third with corn syrup.

What can Julian use as a control group for the experiment?

- A. a second set of ramps covered with water, oil, and syrup respectively
- B. a block that drops straight down instead of sliding down a ramp

C. a ramp with no friction on its surface

D. a ramp with no liquid on it

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