

Bell Work Week 4 August 29th

Scientists conduct many types of scientific investigations. Their efforts often include fieldwork, surveys, models, and experiments. **Which statement about scientific investigations is true?**

- A. They rarely involve the collection of data under controlled condition
- B. They follow exactly the same steps because there is only one scientific method.
- C. They include multiple trials to increase the consistency of the data that are collected.
- D. Their primary focus seldom includes comparing or describing the unregulated world.

Cindy predicts that plastic foam insulates cold drinks better than metal or ceramic materials do. To test the hypothesis, she fills cups made from these materials with equal amounts of cold water. She records the temperature of the water in each cup, using scientific thermometers, every 10 minutes until the water reaches room temperature. **Which of these conditions must be the same for this experiment to be valid?**

- A. the thermometer that is in each cup
- B. the starting temperature of the water in each cup
- C. the ending temperature of the water in each cup
- D. the material that makes up each cup

Juan, a biologist, notices that a particular group of humming birds leaves during the colder winter months and returns during the warmer spring months. Juan hypothesizes that the birds fly south to locations with warmer weather and blooming flowers during the winter months. **Which procedure should Juan use to test his hypothesis?**

- A. Survey northern and southern residents about the birds in their areas.
- B. Observe the direction the birds fly when they depart in the winter.
- C. Tag the hummingbirds with transmitters and track their movement.
- D. Set up observation posts in the south to verify the time of year that birds arrive

Ana is in charge of studying how air quality affects the respiratory health of the citizens in her state. **Which testable statement does she investigate?**

- A. The quality of the air varies throughout the state.
- B. Air quality in her state is worse than it is in other states.
- C. Air quality has a relationship to respiratory problems.
- D. Air quality is worsening due to increasing population and industrialization

Which phrase best defines science?

- A. study of living organisms
- B. observational study of Earth
- C. discussion of feelings and thoughts
- D. systematic study of natural events and conditions