

**Unit 1** *continued***Nature of Science**

7. A student learns about the special characteristics of water in biology class. She knows that water will rise through a narrow tube through capillary action. Which of the following experiments would demonstrate that water has this ability?
- A placing a bouquet of white carnations in water containing blue dye and noting that after a time, the flowers turn blue
  - B filling a container to the very top with water and noting that after the water is placed in freezing conditions, the ice has expanded above the brim of the container
  - C heating an identical mass of water and metal to the same temperature and noting that after a time, the metal has cooled faster than the water has
  - D taking the pH of water and finding that it is exactly neutral
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8. Which of the following would be an appropriate safety procedure when working in the laboratory?
- A wearing safety goggles when pouring an acidic substance
  - B tasting a chemical to determine if it is metallic
  - C placing a microscope near the edge of the table to get a better view
  - D taking shortcuts in a laboratory procedure to save time
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9. Jonathan marked off a square-meter area on a rocky beach. He then counted the number of sea urchins, starfish, and mussels living in the area. He wants to show the results of his investigation in a visual display. Which of the following is the BEST way for Jonathan to compare the numbers of different animals on the beach?
- A a concept map
  - B a flow chart
  - C a line graph
  - D a bar graph
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10. A biologist wanted to determine why there was a decline in the number of salamanders. Based on his observations, he suggested that acid rain might be responsible. What would scientists call his suggestion?
- A a conclusion
  - B a hypothesis
  - C a theory
  - D a scientific "truth"
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