

Analyzing Elements of the Scientific Method

Read the following statements and then answer the questions.

1. You have just bought an old-fashioned clock that runs by weights on chains and a pendulum.
2. To get the clock to run, you pull the weights up and start the pendulum swinging. Your watch says 4:00 so you set the clock to this time.
3. Several hours later, you return with a friend to look at Your clock. According to your watch it is 8:05, but the clock reads 8:15.
4. After determining that there is nothing wrong with your watch, your friend asks, "What do you think caused the clock to pin time?"
5. You watch the clock for a few minutes and then propose, "I think that if the pendulum swings too quickly, it makes the clock run fast."
6. You continue, "I also think that if the length of the pendulum were increased, the pendulum would swing more slowly and the clock would run on time."
7. Furthermore," you say, "to test my explanation, I will suspend strings of three different lengths and tie a washer to the end of each. Then, I will swing each length of string from a 45° angle and time how quickly each swings."

Questions

- A. In which statement is a prediction made? _____
- B. Which statement states a problem? _____
- C. In which statement is an experiment described? _____
- D. Which statement contains a hypothesis? _____
- E. Which statements contain data? _____
- F. Which statement describes observations? _____

NAME _____ DATE _____ CLASS _____

Following Directions

1. Read all of the following directions before you do anything.
2. Print your name, last name first then your first name and middle initial (if you have one), at the top of this page.
3. Draw a line through the word "all" in direction 1.
4. Underline the word "directions" in direction 1.
5. In direction 2, circle the words "your first name."
6. In direction 3, place an "X" in front of the word "through."
7. Cross out the numbers of the even-numbered directions above.
8. In direction 7, cross out the word "above" and write the word "below" above it.
9. Write "Following directions is easy" under your name at the top of this page.
10. In direction 9, add the following sentence after the word "page." "That's what you think!"
11. Draw a square in the upper right-hand corner of this page.
12. Draw a triangle in the lower left-hand corner of this page.
13. Place a circle in the center of the square.
14. Place an "X" in the center of the triangle.
15. Now that you have read all the directions as instructed in direction 1. follow directions 2 and 16 only.
16. Please do not give away what this test is about by saying anything or doing anything to alert your classmates. If you have reached this direction, make believe you are still writing. See how many of your classmates really know how to follow directions.