4. How do you think a model rocket might help you understand a real rocket?

_____

_____

_____

_____

Models Help You Visualize Information (p. 21)

5. In Figure 15, how does using the spring toy as a model help you understand the behavior of sound waves?

_____

_____

_____

_____

6. When we picture things in our minds, we are creating models.

True or False? (Circle one.)

Models Are Just the Right Size (p. 22)

Decide whether a useful model for each of the following would be *larger* or *smaller* than the actual object, and write the appropriate answer in the space provided.

7. Mount Everest _____

8. a skyscraper _____

9. a computer chip _____

10. the moon _____

Models Build Scientific Knowledge (p. 22)

11. Models can be used as _____ to illustrate _____ and _____ investigations.

12. Place each of the following statements in the correct sequence to explain how engineers could use *Proteus* to develop a new technology by writing the appropriate number in the space provided.

_____ Build a full-size penguin boat.

_____ Discover what factors affect the model's efficiency.

_____ Conduct tests on the model.

13. Why do you think the model in Figure 19 might be useful for understanding atomic theory?

_____

_____

_____

_____

Models Can Save Time and Money (p. 23)

14. How can cyber crashes like the one in Figure 20 save time and money?

_____

_____

_____

_____

Review (p. 23)

Now that you've finished Section 3, review what you learned by answering the Review questions in your ScienceLog.

Section 4: Measurement and Safety in Physical Science (p. 24)

1. At one time, systems of measurement were based on objects that varied in size, such as body parts and grains of barley.

True or False? (Circle one.)

The International System of Units (p. 24)

2. Using SI units helps scientists _____ and _____ their results and observations.