

Chapter 1 The Science of Biology

Section Review 1-4

Reviewing Key Concepts

Short Answer *On the lines provided, answer the following questions.*

- 1. What system of measurement is universal among scientists?

- 2. What are the two main types of electron microscopes?

Identification *On the lines provided, identify each description as light microscope, electron microscope, or both.*

- _____ 3. can be used to view living samples

- _____ 4. can be equipped to produce real-time images of movements of cells

- _____ 5. used to view dead and preserved cells

- _____ 6. can produce 3-D images of the surfaces of objects

Reviewing Key Skills

- 7. **Inferring** If a scientist wanted to study cell responses under varying environmental conditions, what laboratory technique would be appropriate to use? Explain your answer.

- 8. **Evaluating** If each scientist used a different system of measurement and invented his or her own tools of measurement, what problems might arise?

- 9. **Comparing and Contrasting** Cell fractionation and light microscopy can be used to study various organelles. What types of information could each technique provide?

- 10. **Calculating** Which value is greater, 10,000 centimeters or 1 kilometer? Explain your answer.

