

Skills Worksheet

Directed Reading

Section: Cell Reproduction

Read each question, and write your answer in the space provided.

1. Why do cells reproduce in a growing organism?

2. Why do cells reproduce in an adult organism?

3. Why is there a limit on cell size? Give two reasons.

4. Tell how genes and chromosomes are related.

5. How is genetic material organized in a prokaryotic cell?

6. What makes it challenging to package genetic material in eukaryotic cells?

Directed Reading *continued*

7. What is chromatin?

Define or describe each term. Relate each to the structure of the eukaryotic chromosome.

8. DNA _____

9. histone _____

10. histone core _____

11. nucleosome _____

12. nucleosome cord _____

13. looped domain _____

14. chromatid _____

Read each question, and write your answer in the space provided.

15. Why do chromosomes become more condensed during cell reproduction?

Directed Reading *continued*

16. What are sister chromatids? What happens to them during cell division?

Study the following steps of cell division in prokaryotes. Determine the order in which the steps take place. Write the number of each step in the space provided.

_____ 17. A new cell wall forms around the new membrane, pushing inward.

_____ 18. The cytoplasm divides and the cell grows, doubling in size.

_____ 19. A new cell membrane forms between the two DNA copies.

_____ 20. The cell is pinched into two independent cells.

_____ 21. The cell develops a squeezed part in the middle.

_____ 22. DNA is copied.