



Name: _____ Date: _____

Ch 11.1 and 11.2 Reading Guide

Case Study: Will stem cells change the future of healing? (p 337)

1. What did Gurdon's work reveal about adult cells? _____
2. What types of illnesses could regenerative medicine treat? _____
3. What are the possible risks of using stem cells? _____



11.1 Cell Growth, Division, and Reproduction

4. Cells divide because as they grow larger, they become less _____
5. The rate at which exchanges take place in the cell depends on the _____ of the cell.
6. What is the surface area of a cube that is 2 cm x 2 cm x 2 cm? _____ (Fig 11-1)
7. The process by which a cell divides into two new daughter cells is called cell _____
8. _____ reproduction creates genetically identical offspring from a single parent.
9. Sexual reproduction involves the fusion of two reproductive cells from two parents.
10. What is an advantage of asexual reproduction? _____
11. What is an advantage of sexual reproduction? _____

11.2 The Process of Cell Division

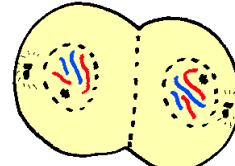
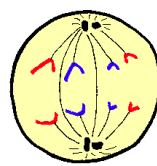
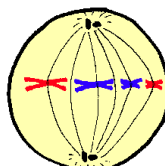
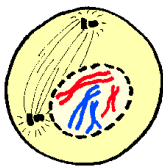
12. Genetic information is bundled into packages of DNA called _____
13. What is the shape of a prokaryote chromosome? _____
14. The complex of DNA and protein in eukaryote cells is called _____

The Cell Cycle

15. During the cell cycle, a cell grows and prepares for _____
16. What are the three phases of interphase? _____
17. During which phase does DNA replicate? _____
18. What is the "M" phase named for? _____

Mitosis

19. The first phase of mitosis is _____
20. Sister chromatids are held together by a _____
21. What structures move to opposite ends of the cell? _____
22. Plants organize _____ directly in the centrosome region.
23. During phase _____ do chromosomes line up along the equator? _____
24. During what phase do sister chromatids separate? _____
25. What is the final phase of mitosis? _____
26. _____ is the process where one cell becomes two cells.
27. In plants, a new cell _____ forms to separate the new cells.
28. Label the phases:



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