

Unit 2: Mitosis
PowerPoint Questions

Cellular Division

1. From where do new cells arise?
2. Why does the body constantly make new cells?
3. Why must each new cell get a complete copy of the original cell's DNA?
4. Copying DNA is known as _____.
5. The original cell that divides is called the _____ cell, while the two, new identical cells are called _____ cells.

Chromosomes

6. About how many chromosomes are in the body cell of eukaryotes?
7. How many chromosomes are in a human body cell?
8. What makes up each chromosome?
9. Chromosomes can only be seen when a cell is _____.
10. What are duplicated (doubled) chromosomes called?
11. What holds chromatids together?
12. The presence of which chromosome determines the sex of the child?

Cell Reproduction

13. What is asexual reproduction found in bacteria?

Prokaryotic Cell Division

14. Name a prokaryote that reproduces by binary fission.
15. What forms to divide the 2 new bacterial cells?

Cell Cycle

16. Name the 5 phases of the cell cycle.
17. What is the longest phase of the cell cycle? _____ the shortest phase?
18. Which phase has 3 stages & name them?
19. Which phase has 4 stages & name them?
20. When is DNA copied?
21. What does a cell make during the G₂ stage right before mitosis?

Mitosis

22. What part of a cell actually divides during mitosis?
23. In which type of cell does mitosis occur --- prokaryote or eukaryote? Explain why.
24. Name a type of cell that doesn't undergo mitosis.
25. Name, in order, the four stages of mitosis.

26. Why do chromosomes become visible during prophase?
27. What happens to chromosomes during metaphase?
28. During metaphase, where do chromosomes line up & what MOVES them there?
29. What happens to sister chromatids during anaphase?
30. What pulls sister chromatids apart during anaphase?
31. Where are chromatids located during telophase?
32. What disassembles in telophase?
33. What reforms around each set of sister chromatids during telophase?
34. What organelle reappears inside the nucleus?
35. During telophase as the chromosomes uncoil, they reappear as _____.
36. What process or phase follows telophase?
37. What divides during cytokinesis?
38. Explain how cytokinesis occurs in plants.
39. Explain how cytokinesis occurs in animals.
40. What is the first thing the daughter cells must do following cytokinesis?
41. If the parent cell has a chromosome number of $2n = 6$, what will be the chromosome number of the daughter cells?
42. Eukaryotic cells before and after mitosis are _____ or $2n$.
43. What happens if mitosis is NOT controlled?
44. What are oncogenes?