Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: 1 2 3 4

**Mitosis Mover-A Lesson on Cell Reproduction**

Directions: Go to the website below. Follow the on-screen directions and answer the questions.

<https://biomanbio.com/HTML5GamesandLabs/Genegames/mitosismoverpage.html>

1. In order to make new \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ must occur. During the cell cycle, \_\_\_\_\_\_\_\_\_\_ cell divides to form \_\_\_\_\_\_\_\_\_\_\_\_ daughter cells with exactly the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ DNA.
2. The cell cycle includes the following: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and cytokinesis.
3. Draw the picture on the screen:
4. Interphase happens before \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!
5. What happens during interphase?
6. What are the two uncoiled stringy pieces of DNA in the nucleus called? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. How many pieces of chromatin are found in a human cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Draw the cell on the screen below:
9. Before mitosis can occur, the DNA must \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (copy itself)!
10. Draw the cell on the screen below:
11. After interphase, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ will begin. Mitosis is an important part of cell division, which allows you to make more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. Making more cells is needed for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, development, and tissue repair (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_).
13. Mitosis ultimately results in the formation of two genetically identical daughter cells.
14. Mitosis is divided into 4 phases: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
15. Prophase: One important part of prophase is the the chromosomes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and become \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
16. Why does the chromosomes condense?
17. What do the chromosomes look like now? (Draw it)
18. How many chromosomes are in the cell? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
19. What is each half of the chromosome called? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    1. Is each half genetically identical or different? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
20. Could you move the chromosomes to opposite poles (sides) of the cell? \_\_\_\_\_\_\_\_\_\_\_\_\_
    1. Why couldn’t you?
21. What happens to the nucleus during prophase?
22. Draw the cell at the end of prophase.
23. Metaphase: What happens during metaphase?
24. Draw the cell at the end of metaphase.
25. Anaphase: What splits during anaphase? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
26. Draw the cell at the end of anaphase.
27. Telophase: In telophase, 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ daughter cells are being formed.
28. What is one thing that happens during telophase?
29. What forms around each set of chromosomes during telophase? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
30. Also during telophase, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ uncoil to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ again.
31. Draw the cell at the end of telophase.
32. Usually at the same time telophase occurs, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ also occurs!
33. Draw the cell at the end of cytokinesis.
34. What is the result of mitosis and cytokinesis?
35. Draw the 5 cells in the correct order.