

Name: _____ Date: _____ Period: _____

Cell Cycle Control Game Worksheet

DIRECTIONS:

- Go to the following website: http://nobelprize.org/educational_games/medicine/2001/cellcycle.html
- Click on the cell(s) and watch what happens
- After you watch the cells, click "ENTER" to get into the game.
- Answer the following questions using the website.

1. When do cells divide?
2. How many cells are replaced in our bodies each minute? _____

Click the arrow to continue.

3. Cells divide at different rates.
 - a. Skin cells divide _____.
 - b. Liver cells divide _____.
 - c. Bone marrow cells divide _____.
 - d. Stomach and intestine lining cells divide _____.

Click the arrow to continue.

4. When a cell dies, what happens?

Click the arrow to continue.

5. What are the 2 key molecules that control and coordinate the cell cycle?
 - a. _____ and _____.

Click the arrow to continue. "Enter" the "CELL CYCLE CONTROLS SYSTEMS" by clicking on the door.

6. The cell has is in the G1 phase. Read the information on the control screen to the LEFT and select the event that must occur in G1 of the cell cycle.
7. Click the correct activity on the website to proceed. Put a "1" on the line below next to the correct activity.
 - a. Cell destruction ____
 - b. Cell growth ____
 - c. Cell division ____
 - d. Chromosome replication ____
 - e. Chromosome duplication ____
8. Read the information on the RIGHT screen. What 2 things must occur in order for the cell to proceed into the S phase in Checkpoint 1? a. _____ b. _____
9. Check if the cell has grown enough by clicking on the "CELL SIZE." How big did the cell size increase during the 1st checkpoint? _____%
10. Check if the cell has DNA damage by clicking on "GENETIC MATERIAL." Was there DNA damage found? ___ YES ___ NO
11. The cell has now proceeded into the S phase. Read the information on the control screen to the LEFT and select the event that must occur in S of the cell cycle.
12. Click the correct activity on the website to proceed. Put a "2" on the line below next to the correct activity.
 - a. Cell destruction ____
 - b. Cell growth ____
 - c. Cell division ____
 - d. Chromosome replication ____
 - e. Chromosome duplication ____
13. The cell has now proceeded into the G2 phase. Read the information on the control screen to the LEFT and select the event that must occur in G2 of the cell cycle.