



On the attached sheet are descriptions of the things that occur in the stages the cell cycle. The problem is that they are not listed in the correct order. You also have a page with pictures of cells in the different stages of the cell cycle; these are not in the correct order either.

Directions:

1. Cut out the Pictures and each of the descriptions. **DO NOT CUT OFF THE NUMBER ATTACHED TO EACH DESCRIPTION!!!** It will be used by your teacher for grading! Rearrange the descriptions and the pictures onto 6 different pages of your Cell Cycle Book.
2. You will be graded on neatness, accuracy, completeness and creativity.
3. Your book should include a Cover page with your name.
4. Each page should have the following:
  - A TITLE of the stage
  - The Descriptions of that stage with the numbers attached.
  - A picture of each stage COLORED! Pay close attention to color of chromosomes!!!!

**THIS RUBRIC MUST BE ATTACHED! Please staple to left corner, facing upright..**

<b>Cover page with title</b>	<b>Phase labels (IPMATC)</b>	<b>Pictures (IPMATC)</b>	<b>Descriptions 1 point each</b>	<b>Creativity</b>	<b>Rubric Attached</b>
<b>5 points</b> Title included and well done	<b>10 points</b> 6 labels in correct order	<b>10 points</b> 6 pictures in correct order and colored	<b>22 points</b> All 22 descriptions were with correct cell phase	<b>20 points</b> Extremely creative! Obvious extra effort was put into book! Very colorful	<b>3 points</b> Rubric attached and stapled to the top left corner facing upright
	<b>8 points</b> 4-5 labels in correct order	<b>8 points</b> 4-5 pictures in correct order and colored		<b>15 points</b> Above acceptable creativity and effort were displayed	
<b>3 points</b> Title included but poorly done	<b>5 points</b> 2-3 labels in correct order	<b>5 points</b> 2-3 pictures in correct order and colored	<b>1-21 points</b> _____ descriptions were with correct cell phase	<b>10 points</b> Acceptable creativity and effort were displayed	<b>2 points</b> Rubric stapled but not in correct position
	<b>2 points</b> 1 label in correct order	<b>2 points</b> 1 picture in correct order and colored		<b>5 points</b> Minimal creativity and effort were displayed	
<b>0 points</b> No title included	<b>0 points</b> Zero labels in correct order or not included	<b>0 points</b> Zero pictures in correct order or not included or colored	<b>0 points</b> Zero descriptions were included OR they were ALL incorrectly placed	<b>0 points</b> Little to no effort was put in put into creativity. No color used.	<b>0</b> No rubric attached

- 1. Proteins and Organelles are synthesized**
- 2. Cell membrane pinches.**
- 3. Spindle fibers are formed.**
- 4. Nucleolus reappears**
- 5. Chromosomes line up in the middle or equator of cell**
- 6. Cytokinesis begins**
- 7. Cell is growing**
- 8. Nucleolus disappears**
- 9. Ends with 2 cells called daughter cells**
- 10. Chromosomes moving away, along spindle fibers, until they reach opposite poles**
- 11. Nuclear membrane disappears**
- 12. Two new nuclear membranes reappear**
- 13. Centrioles replicate**
- 14. Cell is NOT dividing**
- 15. Chromosomes are no longer visible, become chromatin**
- 16. Daughter cells are identical**
- 17. Centrioles move to opposite poles**
- 18. Cytoplasm splits**
- 19. Chromatin condenses to form chromosomes**
- 20. Spindle fibers attach to centromeres of chromosomes**
- 21. Centromeres split allowing chromosomes to become chromatids**
- 22. Chromatin/DNA is replicated.**