

Engage: Time to Make a New Cell!

THE ACTIVITY

1. Consider **cytokinesis** to happen at 12:00 on your “Cell Cycle Clock”. (*Please note: the “times” listed on the clock do **not** represent the actual times for each of the phases shown.*)
2. Label the pie sections of your clock: gap 1 (G1), S phase, gap 2 (G2), prophase, metaphase, anaphase, telophase
3. Label the outside rim of the pie/clock with “**interphase**” and “**mitosis**”.
4. Paste the Cell “Clock” and Cell Cycle Phases table into your notebook.

FOLLOW UP QUESTIONS

Answer the following questions in your notebook using complete sentences.

1. During which stage does the cell replicate the DNA? When it replicates the DNA, are there twice as many chromosomes?
2. If a particular animal has 28 chromosomes in its body cells, list how many chromosomes it would have during each of the stages of the cell cycle.
3. List how many sister chromatids there are in each chromosome during each stage of the cell cycle?
4. What would happen to the number of chromosomes in the daughter cells if the cell did not replicate its DNA during the cell cycle?
5. Two types of tissue do not continue going through the cell cycle. Which types of tissues are these?

Cell Cycle Phases

Phase	Starting "Time"	Ending "Time"	What occurs during this phase
Interphase			
Gap 1			
Synthesis			
Gap 2			
Mitosis			
Prophase			
Metaphase			
Anaphase			
Telophase			
Cytokinesis			

Cell Cycle "Clock"

