

Mitosis Flip Book

Your task is to create an 'index card' flip movie that shows the following 'basic' steps of Mitosis. **Be sure to follow the directions EXACTLY!!! : YES FOLKS, EXACTLY!**
The cards are to be vertical. They are to EXACTLY copy the drawing/name on 1 side, and EXACTLY copy the information PRINTED NEATLY on the back side.
DO NOT ADD MORE, DO NOT LEAVE INFO OFF.

On the front side of each card: Label the step with the appropriate title (Interphase, Prophase, etc...) at the top of the card, and draw a colored picture of the phase at the bottom of the card.

On the back of each card: Write the title and description of what happens in each stage (copy the titles and descriptions EXACTLY as they are listed below). **Hand draw** and color each cell picture neatly and accurately. Make each cell the 'same' size and color.

Make a flip card on each of the following phases of Mitosis:

___ **Card 1: The Cover:** Put the underlined title: The Phases of Mitosis, along with your name, date, and period. Also put a colored picture of a cell. You may draw any cell.

___ **Card 2: Interphase:** The time before mitosis. The cells may appear inactive during this stage, but they are quite the opposite:

- This is the longest period of the complete cell cycle.
- The cells enlarge, preparing for mitosis.
- The DNA replicates, or copies itself.
- The cell grows and makes structures to use during the rest of the cell cycle.

___ **Card 3: Early Prophase:** During this first mitotic stage:

- The chromatin in the nucleus condenses and becomes visible chromosomes. Each replicated (copied) chromosome is made of two chromatids, both with the same genetic information.
- Spindle fibers begin to form around the centrioles.

___ **Card 4: Middle Prophase:**

- The nuclear membrane breaks down.
- The centrioles are moving to opposite ends of the cell.

___ **Card 5: Late Prophase:**

- The nuclear membrane is completely gone.
- The chromosomes have doubled, and are moving toward the middle.
- The centrioles are a little further apart.

___ **Card 6: Metaphase:** The 'middle' phase:

- The centromere attaches the chromatids to the spindle fibers.
- Tension applied by the spindle fibers aligns all chromosomes at the center of the cell.

___ **Card 7: Anaphase:**

- The chromatids (daughter chromosomes) separate, the spindle fibers shorten, and the chromatids are pulled apart and begin moving to the cell poles.

___ **Card 8: Late Anaphase:**

- The spindle fibers are getting shorter.
- The daughter chromosomes arrive at the poles (opposite ends of the cell).

___ **Card 9: Telophase:**

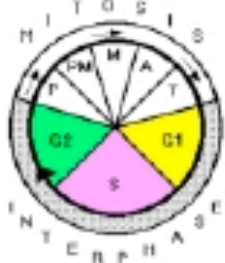
- The nuclear membrane forms around the chromosomes.
- The spindle fibers that have pulled them apart disappear.
- The cell membrane is beginning to pinch the cytoplasm (pinocytosis).

___ **Card 10: Late Telophase/Cytokinesis:**

- The middle of the 'cell' cleaves the cell into two cells.
- The chromosomes thicken and become longer.

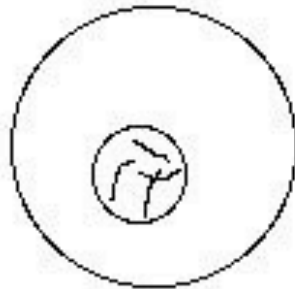
The result is two identical daughter cells that are also identical to the original parent cell.

The Phases of Mitosis

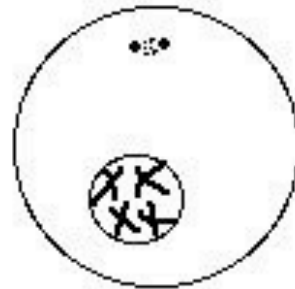


Name _____
Date _____
Period _____

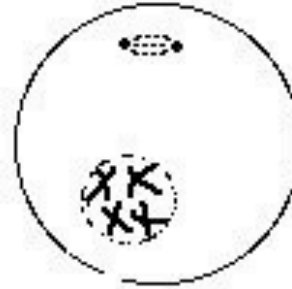
Interphase



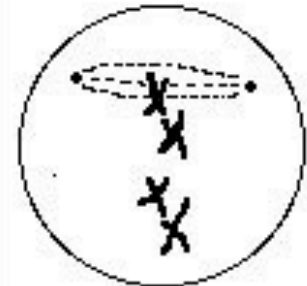
Early Prophase



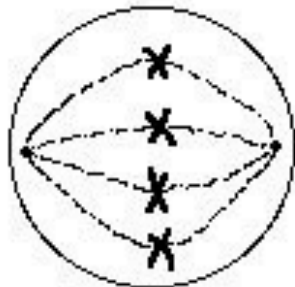
Middle Prophase



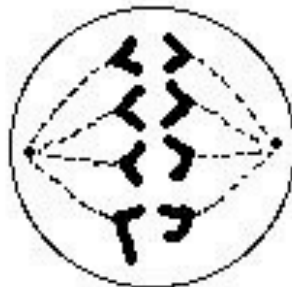
Late Prophase



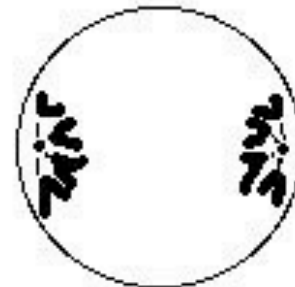
Metaphase



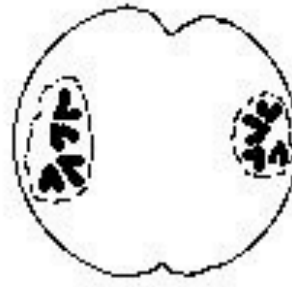
Anaphase



Late Anaphase



Telophase



Late Telophase/ Cytokinesis

