Meiosis 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.

___ *Card 1:* **The Cover:** Put the underlined title: The Phases of Meiosis, along with your name, date, and period. Also put a colored picture of a cell.
___ Make a flip card on each of the following phases of Mitosis:
___ *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.
___ *Card 2:* **Interphase:** The time before meiosis. 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 meiosis.
- The DNA replicates, or copies itself.
- The cell grows and makes structures to use during the rest of the cell cycle.

___ *Card 3:* **Prophase 1:**

- This is the first phase of meiosis.
- 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.
- The nuclear membrane breaks down.
- The centrioles are moving to opposite ends of the cell.
- The nuclear membrane is completely gone.
- The chromosomes have doubled, and are moving toward the middle.
- The centrioles are a little further apart.

___ *Card 4:* **Metaphase 1:**

- The centromere attaches the chromatids to the spindle fibers.
- Similar chromosomes pair up with one another, forming *homologous chromosome pairs*.
- Tension applied by the spindle fibers aligns all chromosomes with their homologous partner at the center of the cell.

___ *Card 5:* **Anaphase 1:**

- The homologous chromosomes separate, the spindle fibers shorten, and the chromosomes are pulled apart and begin moving to the cell poles.
- The spindle fibers are getting shorter.
- The daughter chromosomes arrive at the poles (opposite ends of the cell).

___ *Card 6:* **Telophase 1:**

- The nuclear membrane forms around the chromosomes.
- The spindle fibers that have pulled them apart disappear.
- The cell membrance is beginning to pinch the cytoplasm (pinocytosis).
- The middle of the 'cell' cleaves the cell into two cells.
- The paired chromatids are still joined.
- Each cell contains one member of each homologous chromosome pair.

___ *Card 7:* **Prophase 2:**

- Each cell contains one member of each homologous chromosome pair. The chromosomes are not copied again between the 2 cell divisions.

___ *Card 8:* **Metaphase 2:**

- 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 9:* **Anaphase 2:**

- The chromatids separate, the spindle fibers shorten, and the chromatids are pulled apart and begin moving to the cell poles.
- The spindle fibers are getting shorter.
- The chromatids arrive at the poles (opposite ends of the cell).

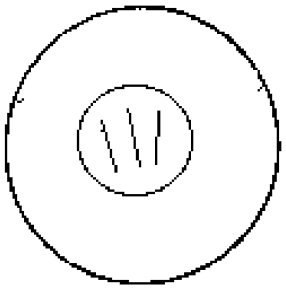
___ *Card 10:* **Telophase 2:**

- 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).
- The middle of the 'cell' cleaves the cell into two cells.
- The result: Four new cells have formed from the original single cell. Each new cell has half the number of chromosomes present in the original cell.

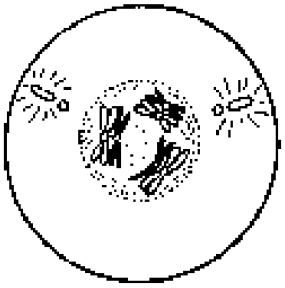
The Phases of Meiosis

Name
Date
Period

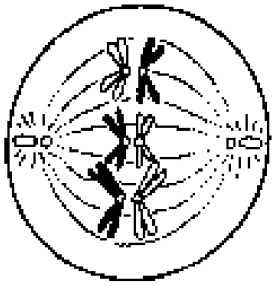
Interphase



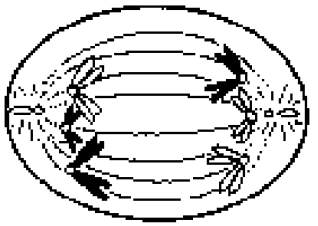
Prophase 1



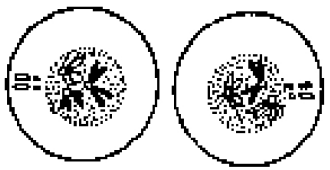
Metaphase 1



Anaphase 1



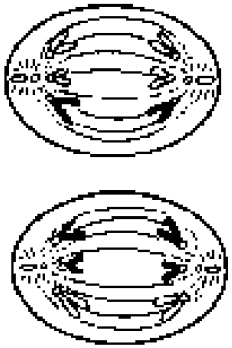
Telophase 1



Prophase 2

Metaphase 2

Anaphase 2



Telophase 2