Meiosis Flip Book

Your task is to create an 'index card' flip movie that shows the following 'basic' steps of Meiosis:

___ 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 membrane 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.