Name:

Mitosis Flipbook

One way that organisms grow, repair and reproduce is through the cell cycle. The purpose of this activity is to represent the cell through its life cycle. A template will be provided but you are welcome to complete this activity in any way you choose as long as you have the following:

- A Title page
- At least 15 pages
- A title at the beginning of each new phase
    - A brief description of the stage is required on the back of this page. Include main events from the phase.
- The following labelled on at least 3 drawings
    - Centrioles
    - Nucleus
    - Nuclear membrane
    - Chromosomes
    - Sister chromatids
    - Cytoplasm
    - Cell membrane
    - Spindle fiber
    - Centromere
- Final product stapled together so it represents a "flipbook"

Your flipbook should represent a cell with 4 chromosomes in total. To help identify, each chromosome should be a different colour.

You will be marked on the following:

	Fully Meeting (FM)	Meeting (M)	Minamally Meeting (MM)	Not Yet Meeting (NYM)
The stages of mitosis were properly depicted	All stages were properly depicted	1 or two errors were spotted	More than two errors within the stages	Booklet does not make sense
The stages of mitosis were placed in the proper order	Correct order			Incorrect order
The booklet and images were neat and showed that effort and care was used	Great effort	Effort is shown through most of the project	Minimal effort was shown	No effort was shown
All labels were present	Present	Missing 1	Missing 2	Missing more than 2
The project was handed in on time	Handed in on time			Not handed in on time

Materials

- Scissors
- Glue
- Pencil crayons
- Stapler
- Textbook or classroom notes

Name:

Procedure

1. Carefully study the phases of mitosis until you are familiar with the changes in each.

2. Using one index card/piece of paper per stage, draw a picture showing the different stages on mitosis. Make each drawing the same size.

3. Lay out the cards in the correct sequence, and place a few blank cards between them totaling **at least** 15 cards. Using your imagination, draw what must happen between those stages for one scene to look like the next. Use as many cards as you need to complete all of the intermediate steps that would occur. Each card's scene should lead smoothly to the next and should change just a little from the previous one. Remember that more than one action occurs in the cell at a time. the more cards you use, the slower the action will seem to go, and the fewer you use, the faster it will go. Keep in mind that the stages of interphase, prophase, and telophase are the slowest stages, while metaphase and anaphase occur more quickly.

4. Check to make sure that the action is smooth and that there are no big jumps from one scene to the next. Return to step 3 and keep drawing if needed. 5. Make a title card for your flipbook making sure your name is on it. Stack the cards and staple the cards together. If it is too thick to staple, glue the cards together one at a time, and clamp it with clothespins or binder clips to let it dry thoroughly.