

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Period: \_\_\_\_\_



**Biology: Mitosis Flip Book**

Mitosis is the process of cell reproduction that results in two cells, each with identical sets of chromosomes. There are four important stages during the cell division cycle: prophase, metaphase, anaphase, and telophase. Although we describe mitosis in stages, it is easier to understand as a continuous process. A flipbook is a small booklet of drawings that look like an animated cartoon when you quickly flip the pages. Your task is to create a flipbook that animates the process of mitosis in animal cells.

**Step 1:**

Identify important characteristics for each phase and sketch what it looks like.

Is When...

It looks like...

•Prophase

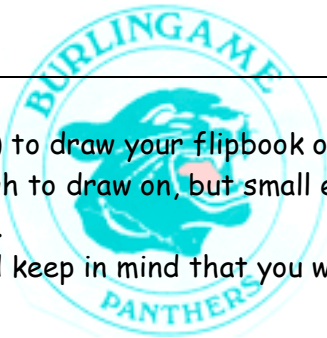
•Metaphase

•Anaphase

•Telophase

**Step 2.**

- Select paper (index cards work great) to draw your flipbook on.
- Cut the paper so that it is large enough to draw on, but small enough to make a good flipbook.
- Plan on at least 5 sketches per phase.
- All pages should be the same size, and keep in mind that you will bind the pages together.



**Step 3.**

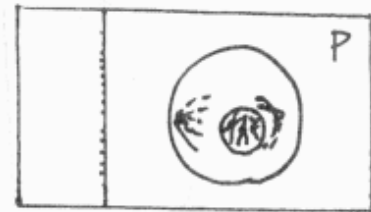
•Draw or sketch the step-by-step movement of cell division from one phase to the next.

*NOTE: You do not have to draw 23 pairs of chromosomes: Use 2N=4 or 2N=6.*

- The illustrations should create a smooth animation with very few skips or jumps.
- The following structures need to be included in the flipbook drawings:

- Cell membrane
- Nucleus (when present)
- Chromosomes
- Spindle fibers
- Centrioles

**2N = 4 in this example**



Notice the small changes!

**1/2" Space for staples**

**Phase label**

**Step 4.**

- Assemble your book, bind the pages together tightly, and label each 'phase' section of your book.
- Check your work using the rubric to make sure you have completed all of the criteria.

