

Name:

Student number/homeroom:

Date:

Assignment: Graham Cracker Mitosis Lab (adaptation of Oreo Mitosis Lab)

LO: Model mitosis.

SLE: Work collaboratively.



Graham cracker base for 1 cell.

Materials (per group of 4 students):

- 2 paper plates
- 6 half graham crackers (each with 2 subsections) = CELLS
 - Use each half as one cell (see picture above).
- Marshmallow fluff = CYTOPLASM
 - Please use this lightly so that we don't run out!
- 20 Good 'N Plenty or similar rod-shaped candies = CHROMOSOMES/CHROMATIDS
 - For this exercise, assume...
 - 1 Good 'N Plenty represents 1 nonreplicated chromosome or 1 chromatid of a replicated chromosome.
 - A normal Interphase cell has only 2 chromosomes.
 - Chromosomes are not condensed (and therefore not visible) during Interphase.
- 1 chocolate coin = NUCLEUS
 - Since the nuclear membrane dissolves during prophase, you can omit the nucleus from prophase and subsequent stages.
- Toothpick pieces = SPINDLE
- 2 rolls of Smarties = OTHER ORGANELLES

Guidelines:

1. Your group's goal is to create a physical model of the stages of the cell cycle. Include the following stages: Interphase, Mitosis (Prophase, Metaphase, Anaphase, Telophase) and Cytokinesis. Divide up the stages so that each group member has primary responsibility for 1-2 stages.
2. Use a half cracker (see picture above) as the base of each cell. Please go light on the fluff so that we don't run out! Note that the chromosomes are not condensed during Interphase, and thus cannot be seen easily.

(turn the page over)

3. Once you have completed a model of all 6 stages, please fill in the table below.

Stage		Summary of Events
Interphase		
Mitosis		
Cytokinesis		

4. When your group is ready for your instructor to view your model and ask you questions about it, let him know. If he is satisfied with your model and your explanation of it, he will initial your worksheet here:

5. Clean-up: eat what you want, but be careful of the toothpick pieces! Throw away the rest.

6. List your favorite IPMATC mnemonic (e.g., “In Private, My Amazing Teacher Cries”):

I = _____

P = _____

M = _____

A = _____

T = _____

C = _____