

Name _____

Modeling Mitosis

Problem: To demonstrate that cells repeatedly divide to make more cells for growth and repair.

Background Information: Mitosis is a process of cell division which results in the production of two daughter cells from a single parent cell. **The daughter cells are identical to one another and to the original parent cell.** There are 5 phases of mitosis: interphase, prophase, metaphase, anaphase, telophase; followed by cytokinesis.

Materials:

6 chocolate cream filled cookies	Ice cream sprinkles
Map pencils	

Procedure:

- Twist the cookies apart very carefully so that you have 5 sides with cream on them, and 5 sides without cream.
- The cookie & cream will represent a cell; the ice cream sprinkles will represent chromosome pairs.
- Use the cookie and the sprinkles to make models of the following phases of cell mitosis:
 - Interphase
 - Prophase
 - Metaphase
 - Anaphase
 - Telophase
 - Cytokinesis
- Use different colors of sprinkles to represent different chromosome pairs.
- Have your teacher check your models.
- Diagram & label your models in the data section.

Teacher Initials



Data:

Phase of Mitosis	Diagram	Description
Interphase		
Prophase		
Metaphase		
Anaphase		
Telophase		
Cytokinesis		

Questions & Conclusions:

1. List & describe 3 limitations of this model:

1 _____

2 _____

3 _____

2. Mitosis occurs by in a step by step sequence. Predict what would happen if a step was missed or the sequence got out of order. Explain your answer.
