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SDRO Lesson 5: Cell Cycle

Purpose: To study the parts of the cell cycle

Guiding Questions: How do multicellular organisms grow and repair their bodies?

NGSS: **DCI:** LS.1.B - Growth and Development
Practices: Develop and use models,; Obtain, Evaluate, and Communicate Information

Cells in multicellular organisms go through a process known as the cell cycle. The cell cycle simply refers to the different stages of a cell's life. Not all cells go through this process. There are 3 parts to the cell cycle (and mitosis is further divided into sub-phases).

Definitions:

- 1. Interphase:

- 2. Mitosis:

- 3. Cytokinesis:

And a few technicalities on genetic material.

Deoxyribonucleic Acid: (DNA) the genetic material in a cell

Chromatin: DNA with proteins that condense to form chromosomes; uncoiled chromosomes

Chromosome: condensed chromatin, formed in pairs; each half of the pair is given to the new cells

Chromatid: half a chromosome

Now that we know the basic parts of the cell cycle, we will examine mitosis more closely. On the following pages, we will model the different phases of mitosis, take pictures of your model, and write a short description of what happens in each phase. Use pages 86-91 in SDRO to help you write your descriptions.

Name

Period

Date

Interphase

Picture of phase



Description:

Name

Period

Date

Mitosis: Prophase

Picture of phase



Description:

Name

Period

Date

Mitosis: Metaphase

Picture of phase



Description:

Name

Period

Date

Mitosis: Anaphase

Picture of phase



Description:

Name

Period

Date

Mitosis: Telophase (Beginning of Cytokinesis)

Picture of phase



Description:

Name

Period

Date

End of Cytokinesis and Beginning of Interphase

Picture of phase



Description: