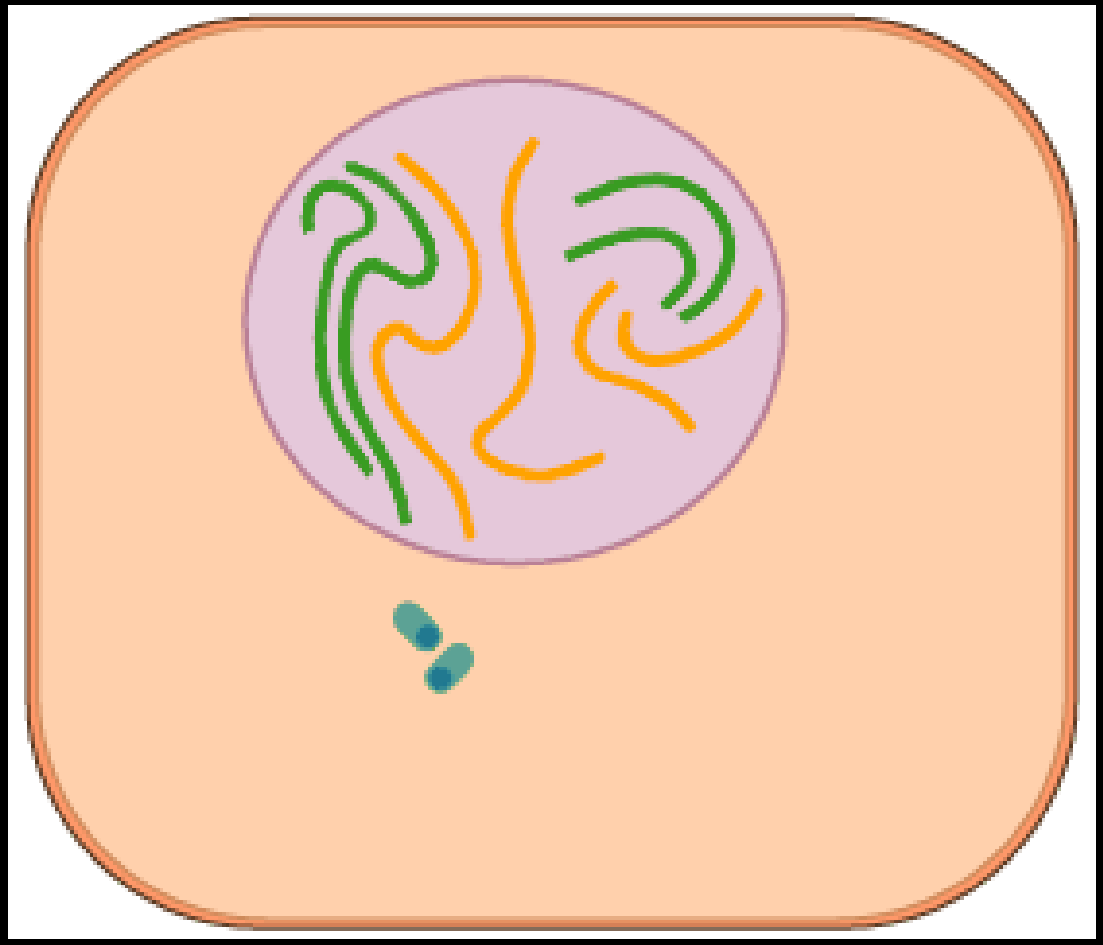
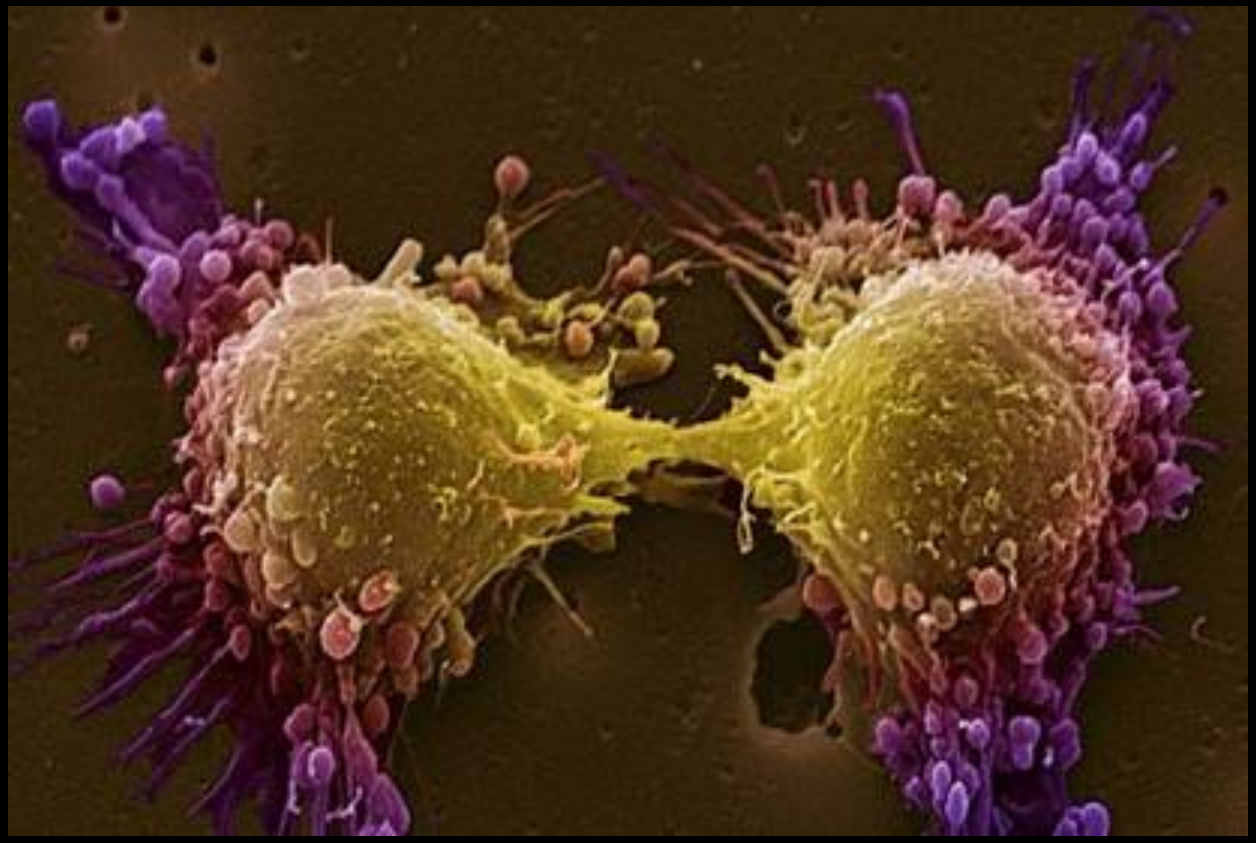
Cell Cycle



Learning Objectives

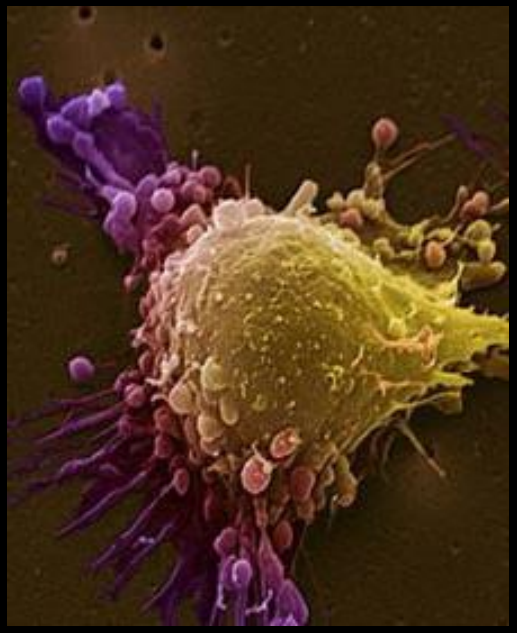
- Describe what happens during interphase and mitosis of the cell cycle

What is the Cell Cycle?

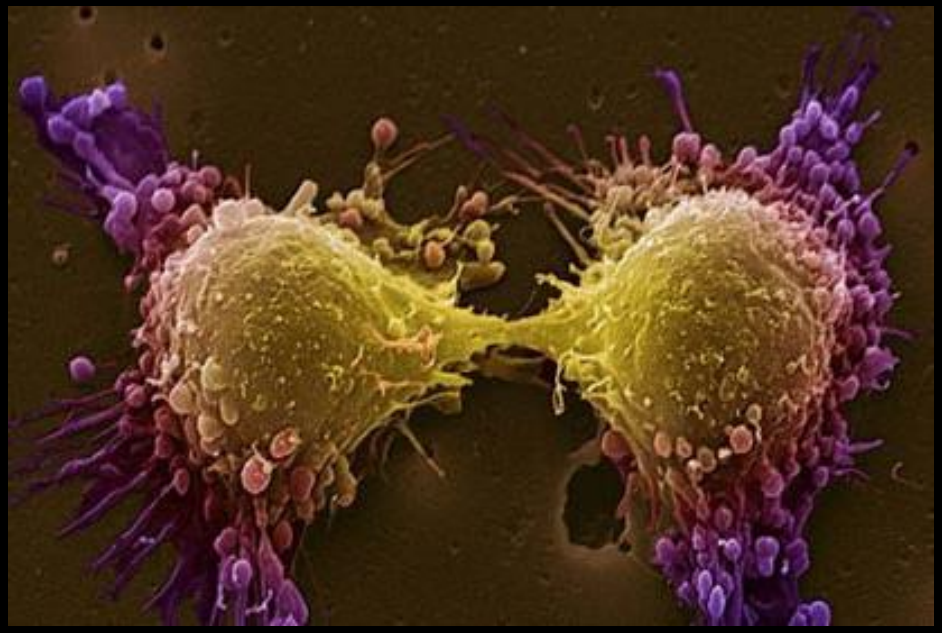


A cycle of stages that a cell goes through to make more cells

Purpose of The Cell Cycle



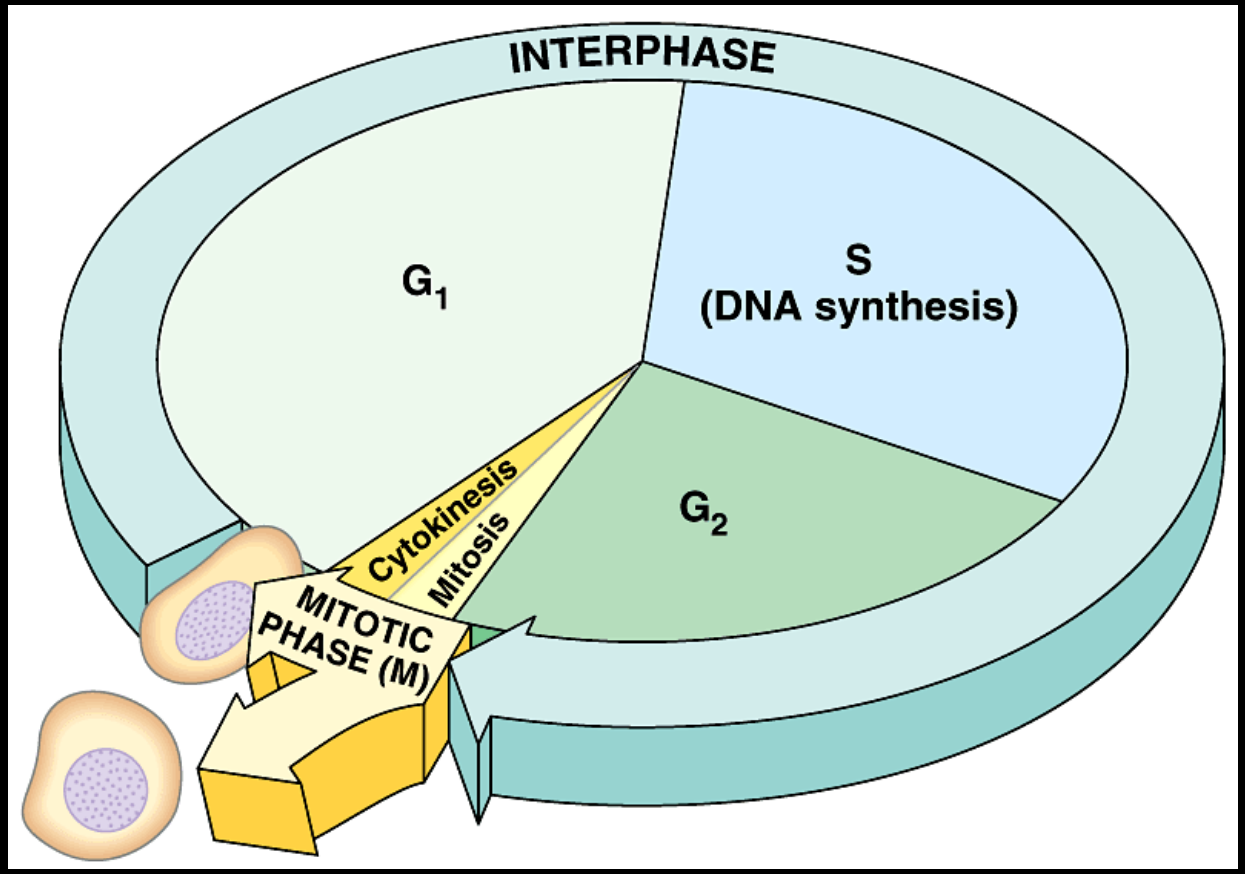
Parent



Identical Daughter Cells

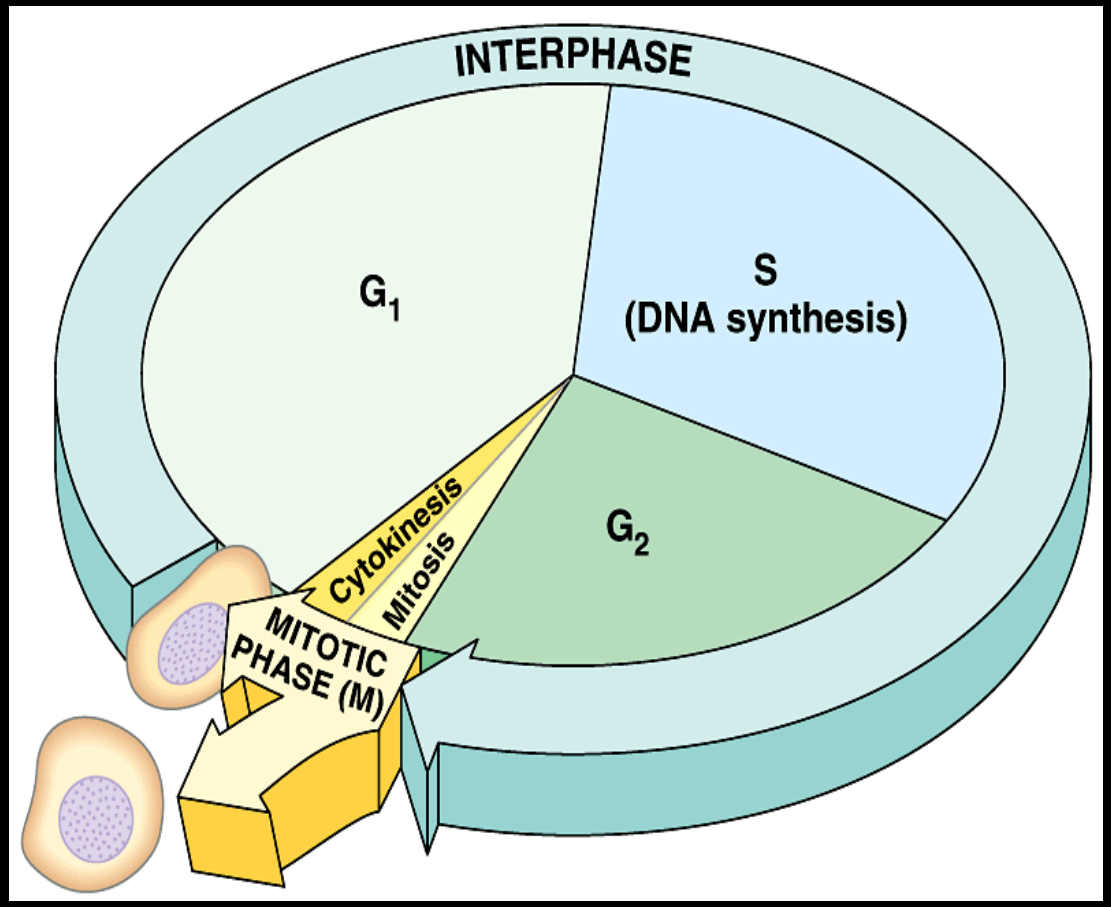
Purpose - to replicate each parent cell to form two identical daughter cells.

2 Stages of the Cell Cycle



Stage 1 = Interphase
Stage 2 = Mitotic phase

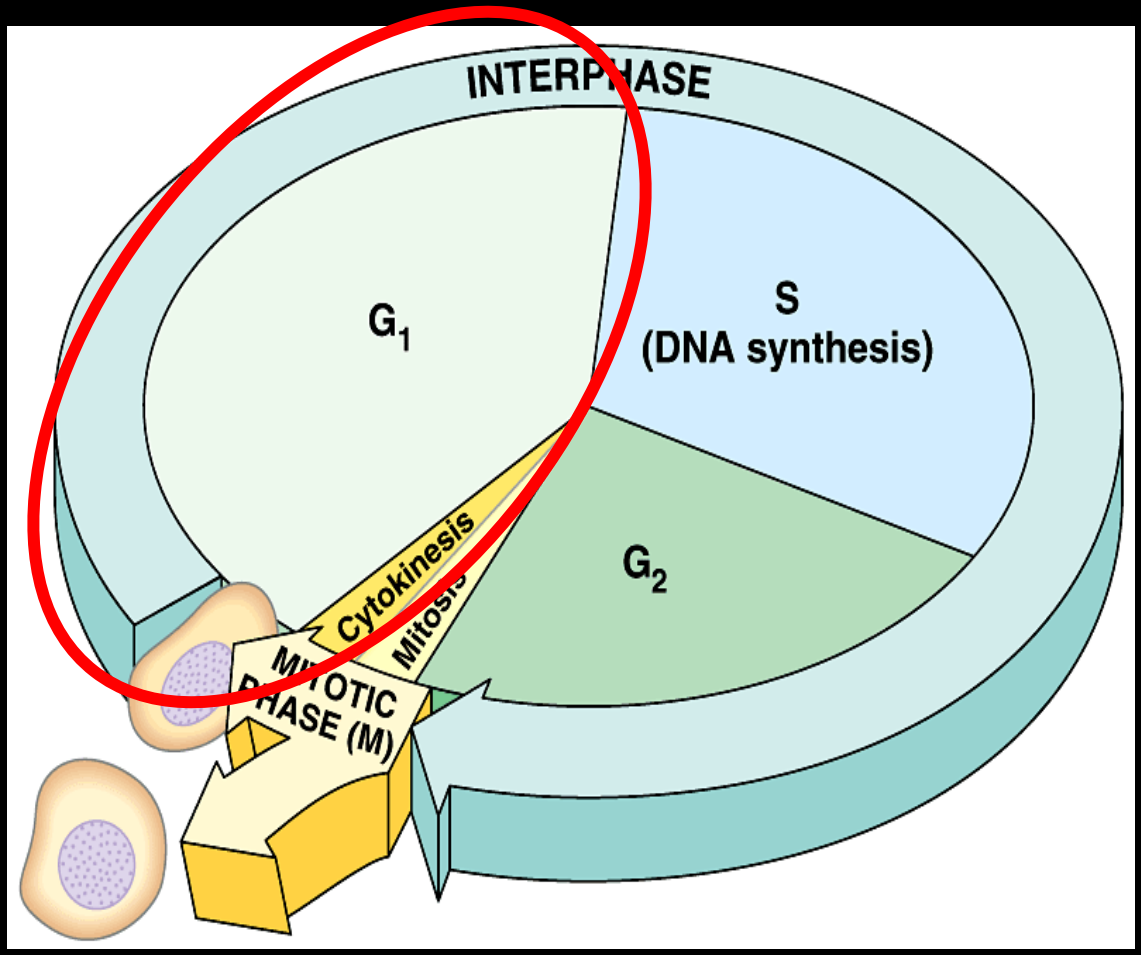
Interphase



Three parts: G1, S and G2 phases.

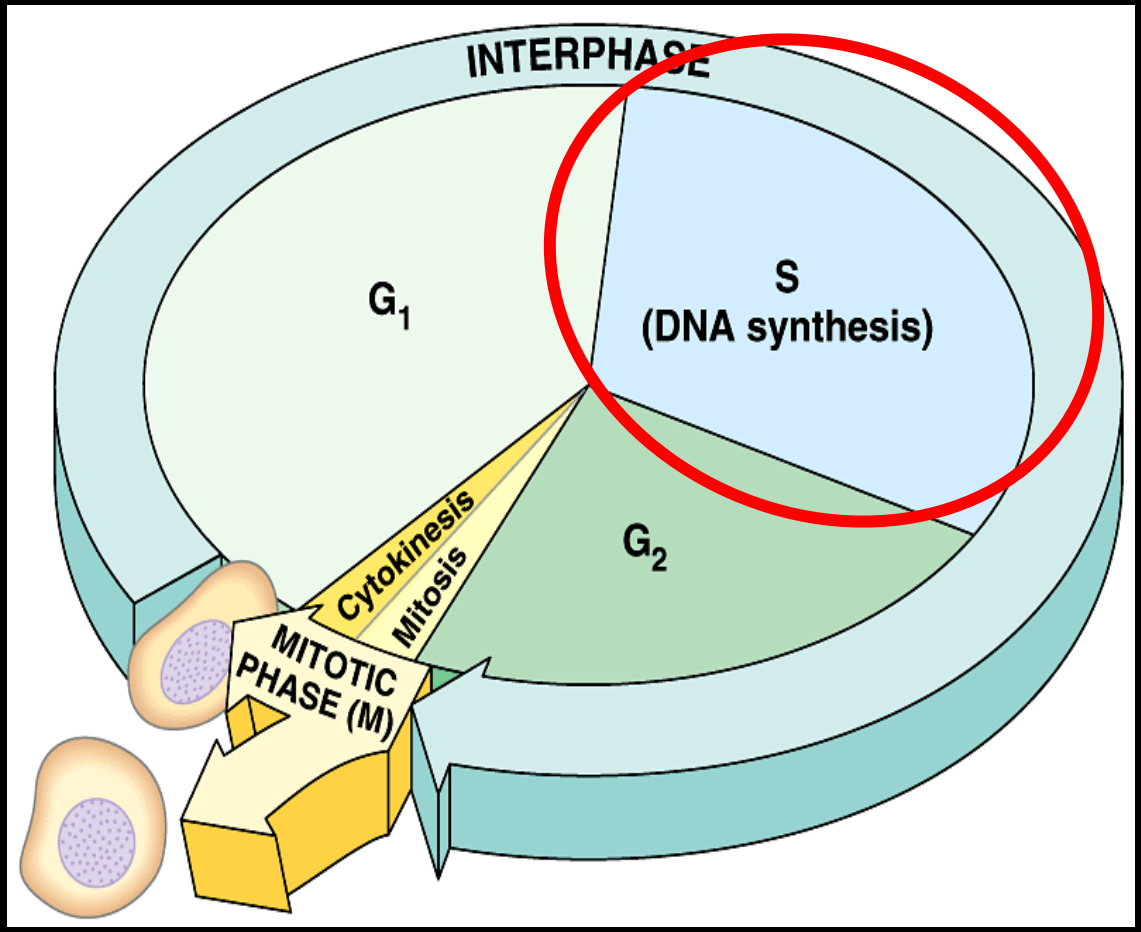
90% of a cell's time is spent in interphase.

G1 Phase



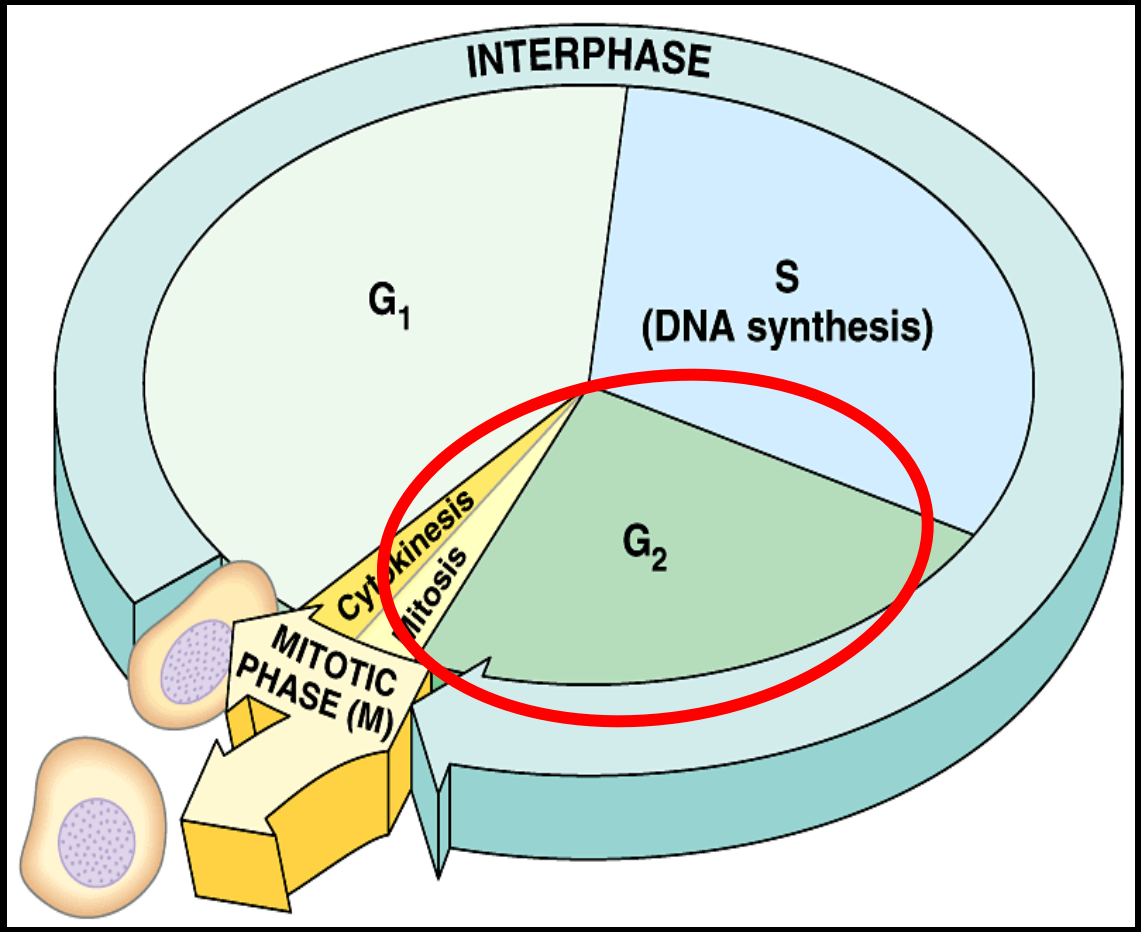
G1 phase - Cells grow and replicate organelles.

S Phase



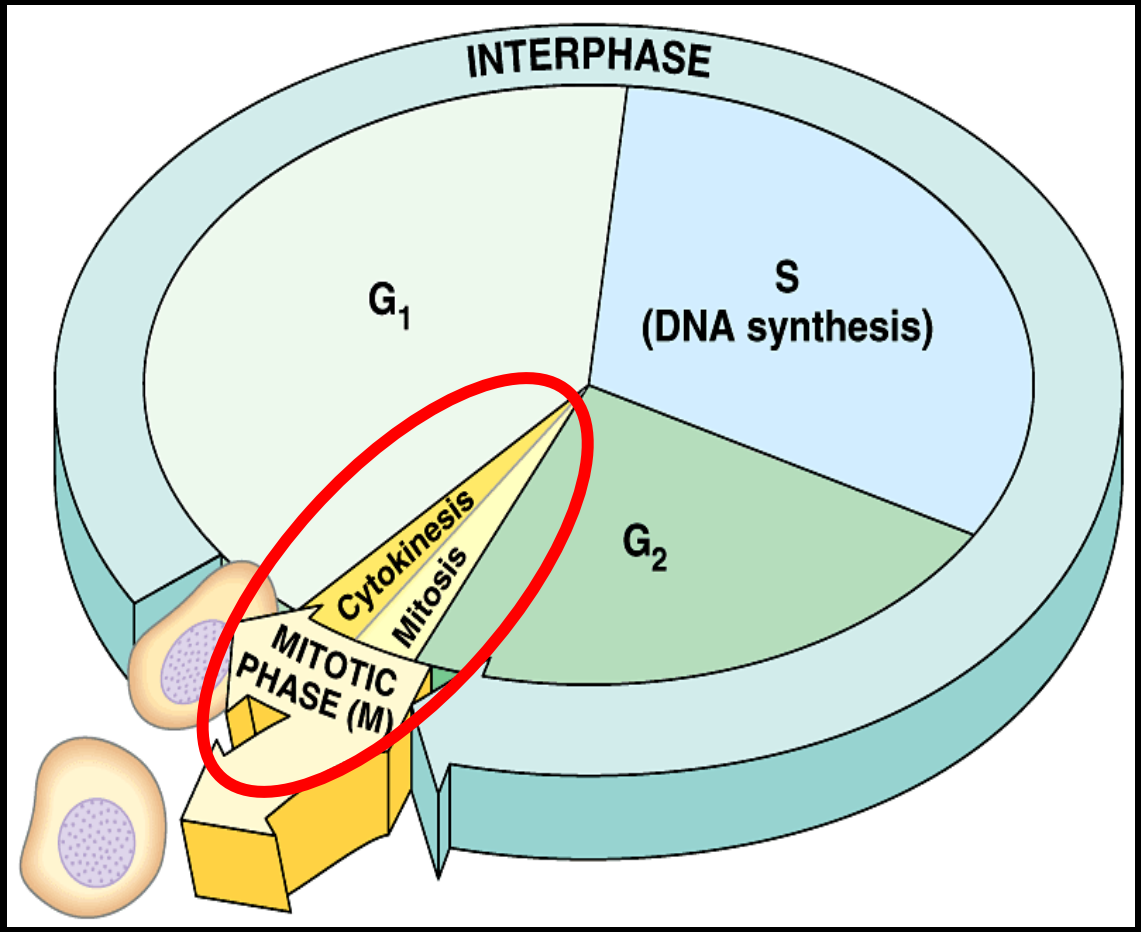
S phase - DNA synthesis occurs and chromosomes are replicated.

G2 Phase



G2 phase - additional cell growth and preparation for mitosis.

Mitotic phase (M phase)



Mitotic phase – consists of mitosis and cytokinesis

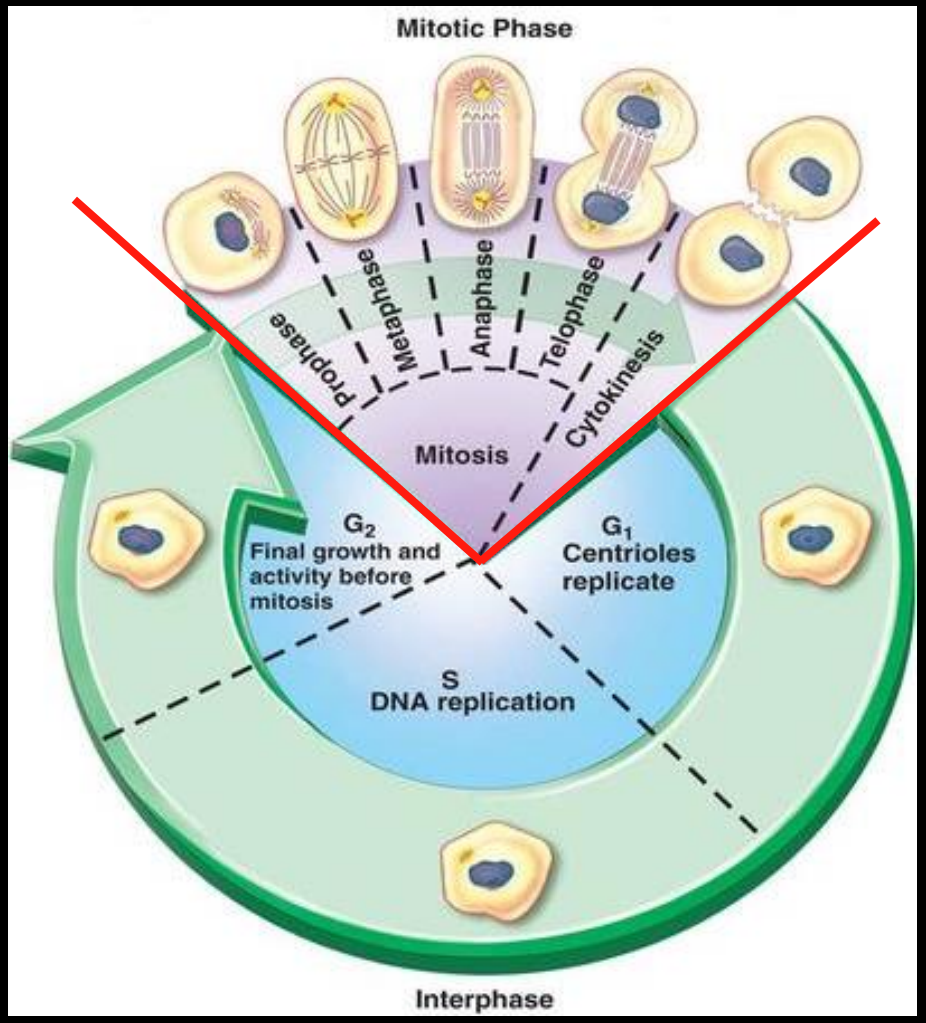
YouTube Video

Interphase

YouTube
The Cell Cycle

Stop Here

Mitotic phase (M phase)



Mitosis - division of the cell nucleus

Cytokinesis - division of the cytoplasm

Functions of Cell Division

1. Reproduction - formation of an organism, increasing the population.

2. Growth - development of multicellular organisms.

3. Repair - repair and renew cells that die from normal wear or damage.