

TEACHER NOTES AND ANSWERS

Section 5.2

Chromosome structure

A chromosome is one long continuous thread of DNA. DNA wraps around proteins called histones. DNA and histones form chromatin, which looks like spaghetti, during interphase. Chromosomes condense tightly for mitosis. Because they are duplicated, they look like an X.

1. interphase: copies DNA, grows, duplicates organelles
2. prophase: chromosomes condense, nuclear envelope breaks down, spindle fibers form
3. metaphase: spindle fibers align chromosomes along the cell equator
4. anaphase: chromatids separate to opposite sides of cell
5. telophase: nuclear membranes start to form around chromosomes, chromosomes begin to uncoil, spindle fibers fall apart
6. cytokinesis: divides the cytoplasm between two daughter cells

Section 2: Mitosis and Cytokinesis

PowerNotes

Chromosome structure:

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Cell Cycle in Detail

Identify the steps below and list the major events of each step.

