Cell Growth and Reproduction

Title: **LEARNING TARGETS**

cell division

chromosomes
+
chromatin

Cell Growth and Reproduction

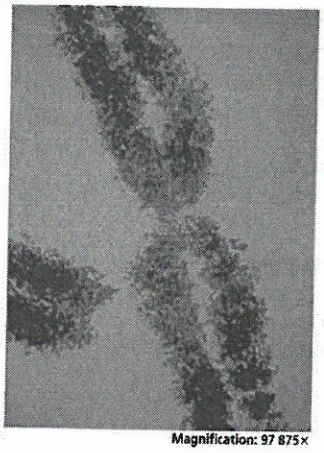
Title: **LEARNING TARGETS**

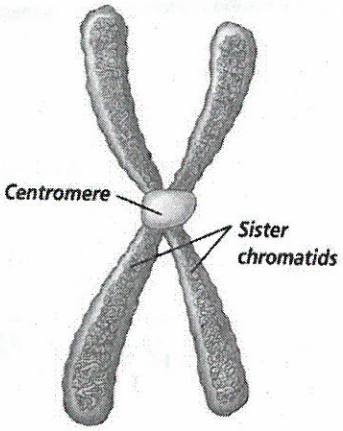
Right now, many of the cells in our body are growing, dividing, and dying. Old cells on the soles of your feet and on the palms of your hands are bing shed and replaced, cuts and bruises are healing, and your intestines are producing millions of new cells each second. New cells are produced as tadpoles become frogs, and as an ivy vine grows and wraps around a garden trellis. All organisms grow and change; worn-out tissues are repaired or are replaced by newly produced cells.

Cell division is the process by which new cells are produced from one cell. It results in two cells that are identical to the original, parent cell.

Chromosomes
+
chromatin

Cell Growth and Reproduction





Fully Coiled Chromosome

Chromosomes are cell structures that carry the genetic material that is copied and passed from generation to generation of cells

For most of a cell's lifetime, chromosomes exist as chromatin.

Chromatin is the long, tangled strands of DNA wrapped around proteins found in the eukaryotic cell nucleus during interphase

Before the cell can divide, the long strands of chromatin must be reorganized, just as you would coil a long strand of rope before storing it. As the nucleus begins to divide, chromosomes take on a different structure in which the chromatin becomes tightly packed.