**Vocabulary:** **Cell Division**



**Vocabulary**

* Cell division – the formation of two daughter cells from a single parent cell.
* Centriole – a cylindrical organelle in animal cells that is involved in cell division.
	+ Centrioles form spindle fibers which separate chromosomes during cell division.
* Centromere – the part of a chromosome where the chromatids are attached.
	+ During mitosis, spindle fibers attach to the chromosome at the centromere.



**Chromosome of identical chromatids attached at the centromere**

* Chromatid – One of two identical halves of a replicated chromosome.
* Chromatin – DNA strands in the nucleus during interphase.
	+ Chromatin stains dark, making it relatively easy to see. (The Greek root “chroma” means “color.”)
* Chromosome – a structure formed from condensed chromatin.
	+ Chromosomes consist of two identical chromatids attached at the centromere, giving them a characteristic “X” shape.
	+ Chromosomes occur in pairs. Human cells have 23 pairs of chromosomes, or 46 total chromosomes.
* Cytokinesis – the division of the cytoplasm of the cell to form two daughter cells.
* DNA – a molecule that carries genetic information.
	+ DNA stands for deoxyribonucleic acid.
* Interphase – the period in the cell cycle during which the cell grows, matures, and duplicates genetic information.
* Mitosis – the equal division of the chromosomes into two genetically identical daughter nuclei. Mitosis consists of four stages.
	+ During *prophase*, chromosomes form from condensed chromatin.
	+ During *metaphase*, the chromosomes line up along the center axis of the cell.
	+ During *anaphase*, the chromosomes split up and chromatids are pulled to opposite ends of the cell.
	+ During *telophase*, a new nuclear membrane forms around each set of chromatids.