# **Ch. 23 Cell Division**

**Notes**

Essential Question: How are mitosis and meiosis the same and different?

1. Cell Division
   1. Functions
      1. Growth
      2. Repair
      3. reproduction
2. Cell cycle – regular sequence of growth and division in cells
   1. Three phases
      1. Interphase- cells get ready to split
      2. Mitosis (asexual reproduction)
         1. Nucleus divides into 2 new nuclei
         2. 1 copy of DNA goes to each daughter cell
            1. Daughter cells = the cells formed when 1 cell divides
            2. Four phases

Prophase

Metaphase

Anaphase

Telophase

* + 1. Cytokinesis
       1. Cytoplasm divides
       2. Each daughter cell has a complete pair of chromosomes

Parent cells

Daughter Cells - two of each chromosome

Daughter Cells – “diploid” two of each chromosome

1. Meiosis (sexual reproduction)
   1. About
      1. A type of cell division that makes 4 cells
      2. Each cell made has ½ the number of chromosomes as parent cell
      3. Happens in ovaries (female) and testes (male)
      4. Produces gametes (sex cells: eggs and sperm)
      5. Consists of 2 cell divisions

First division

First division

Second division