Mitosis

1. End goal: two identical cells
2. Steps
   1. Starts with the Cell cycle in Interphase
      1. G1- this is where everything but DNA is replicated
      2. S phase- the DNA is replicated
      3. G2- is the proofreading step
         1. If a cell is not correct, the cell tries to fix itself. But if it is beyond repair it performs apoptosis, this is when a cell kills itself.
   2. Then mitosis begins with Propahse
      1. The chromosomes condense
      2. Nuclear membrane dissolves
      3. Spindle apparatus sets up
   3. Metaphase
      1. The chromosomes line up in the middle, each having two sister chromatids
   4. Anaphase
      1. Cell elongates
      2. The sisters split and are pulled to opposite ends of the cell by the spindle fibers
   5. Telophase
      1. Sister chromatids end up at opposite ends of the poles
      2. Chromosomes become less condensed
      3. Spindle disappears
      4. The nuclear membrane forms around the two groups of chromosomes separately
   6. Cytokines is
      1. This is the final step, the separating of the two identical cells.