**Chapter 19.1**

**The Scientific Revolution**

1. Development of Scientific Thinking
   1. Medieval science based on classics, especially Aristotle
   2. Aristotle first proposed the idea that the earth was at the center of the universe: **geocentric theory** (300s BC)
   3. **Scientific Revolution:** (1500s) new way of looking at the world based on observation and questioning
2. Astronomy
   1. **Copernicus-** came up with the **heliocentric theory-** idea that the earth goes around the sun (1500s)
   2. **Kepler**- used math to support heliocentric theory and that planets orbit the sun in an oval pattern called an ellipse
   3. **Galileo Galilei**
      1. Invented the telescope, proved heliocentric theory
      2. Catholic Church forced him to say he disagreed with Copernicus
3. **Scientific Method-** step-by-step procedure of investigating and experimentation to prove a theory
   1. **Francis Bacon-** English writer who encouraged scientists to use scientific experimentation to gain knowledge by using the scientific method
   2. **Descartes**- Emphasized knowledge gained only from personal experience and logic
   3. **Sir Isaac Newton-** “Father of Physics”
      1. Developed Calculus
      2. Law of gravity- all objects attracted to each other
4. Other important scientists
   1. Andreas Vesalius- made drawings of anatomy
   2. Robert Boyle- father of chemistry
   3. Celsius- created a better temperature scale