Motion Notes

- Physics begins with a discussion of motion
  - Motion is a change in the position of an object over time
- Determining if an object is in motion depends on a **reference point**
  - Reference point-a fixed object that can be used to determine if an object is moving
    - Examples:
      - Street signs are reference points for a moving car
      - Classrooms are reference points for students moving through a hallway

Describing Motion

- We can use a variety of words to describe motion
  - Fast, slow, stopped, speeding up, slowing down etc
- In Physics we need to measure many different things related to motion
- There are 2 types of measurements:
  - Scalar quantaties-are described only by a **number and unit**
    - Measure things like:
      - Size-3m tall
      - Distance-14Km away
      - Mass-5Kg
  - Vector quantaties-are described by the **number, unit and direction**
    - Measure things like:
      - Velocity-15Km/hr North
      - Acceleration-17 m/s^2 South
      - Force-27N East
  - Both vector and scaler quantaties are important when studying motion