Physical Science Chapter 11 Notes Outline

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Motion – Pages 326-350**

11.1 Distance and Displacement

Choosing a Frame of Reference-

 **Frame of Reference-**

How Fast are you Moving?

 **Relative Motion-**

 Which Frame Should I Choose?

Measuring Distance-

 **Distance-**

Measuring Displacements-

Combining Displacements-

 **Vector-**

Displacement along a straight line-

 Displacement that isn’t along a straight path-

**SECTION QUESTIONS**

**1.) What is a frame of reference? How is it used to measure motion?**

**2.) How are distance and displacement similar and different?**

**3.) A girl who is watching an airplane fly tells her friend that the plane isn’t moving at all. Describe a frame of reference in which the girl’s description would be true.**

11.2 Speed and Velocity-

**Speed-**

 **Average Speed-**

 **Instantaneous Speed-**

Graphing Motion-

**Velocity-**

Combining Velocities-

**SECTION QUESTIONS**

**1.) What does velocity describe?**

**2.) An Olympic swimmer swims 50.0 meters in 23.1 seconds. What is her average speed?**

11.3 Acceleration-

What is acceleration?

 **Acceleration-**

Changes in Speed-

 **Free Fall-**

Changes in Direction-

 Changes in Speed and Direction-

 **Constant Acceleration-**

Calculating Acceleration-

Graphs of Accelerated Motion-

 Speed-Time Graphs-

 **Linear Graphs-**

Distance-Time Graphs-

 **Non-linear Graphs-**

Instantaneous Acceleration-

**SECTION QUESTIONS**

**1.) What is the equation for acceleration?**

**2.) A train moves from rest to a speed of 25 m/s in 30.0 seconds. What is the magnitude of its acceleration?**

**3.) A car traveling at a speed of 25 m/s increases its speed to 30.0 ms in 10.0 seconds. What is the magnitude of its acceleration?**