**River Valley High School**

**2015 Year 3 RVIP Physics Class**

**Class Activity 2**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: 3 ( ) Index Number \_\_\_\_\_**

**Topic: Kinematics**

**Back ground knowledge: (From your notes)**

1. **Displacement** is the distance measured in a straight line (or linear distance) and in a specified direction. Displacement is a vector quantity.
2. **Velocity** is the rate of change of displacement. It is a speed in a specified direction. It tells us the magnitude and direction that the object is moving.
3. **Acceleration** is defined as the rate of change of velocity. When an object accelerates with an acceleration of 4.0 m s-2 it means its velocity is increasing by 4.0 m s-1 for every 1.0 s.

**Task**:

1. In group of 3 to 4, devise a plan to capture a video of a person walking in a straight line with a constant acceleration of 0.50 m/s2 as **accurate** as possible for 5.0 seconds. Present your plan with the class.

You are allowed to use the following materials to complete the task.

1. Measuring Tape
2. Stop watch
3. Masking tape
4. Software Tracker
5. You are to trace the motion using Tracker and find out how the captured motion is represented in a velocity-time graph.
6. You are to use the software Tracker to find the actual average acceleration of the walking person captured in the video.