

Physics 9 Lab  
 July 4<sup>th</sup> Cannon

**Purpose:** To determine the velocity of the July 4<sup>th</sup> cannon ball using graphical methods.

**Procedure:**

1. Start a computer and open the Physics 9 folder on the desktop. Open the video folder and double click on the July 4<sup>th</sup> Cannon Movie.
2. Watch the movie at least one time all the way through.
3. Start the movie at the beginning and use arrow keys on the keyboard to bring the movie to the point where the cannon ball just comes out of the cannon.
4. You can move the video forward or backward one frame at a time using the keyboard arrow keys.
5. Record data for the cannon ball in the table below.
6. Show sample calculations for determining time below the table.
7. Graph the distance and time from your table.
8. Calculate the slope of the graph. Show the calculation in the calculation section below.

Frame Number	Time	Distance

**Calculations:**

Summary:

1. What did you learn about velocity?
2. What are your errors? (size and source)
3. What improvements could be made?

# Distance vs Time

