Name	Partner(s)	Date
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Physics 9 Lab Space Shuttle Launch

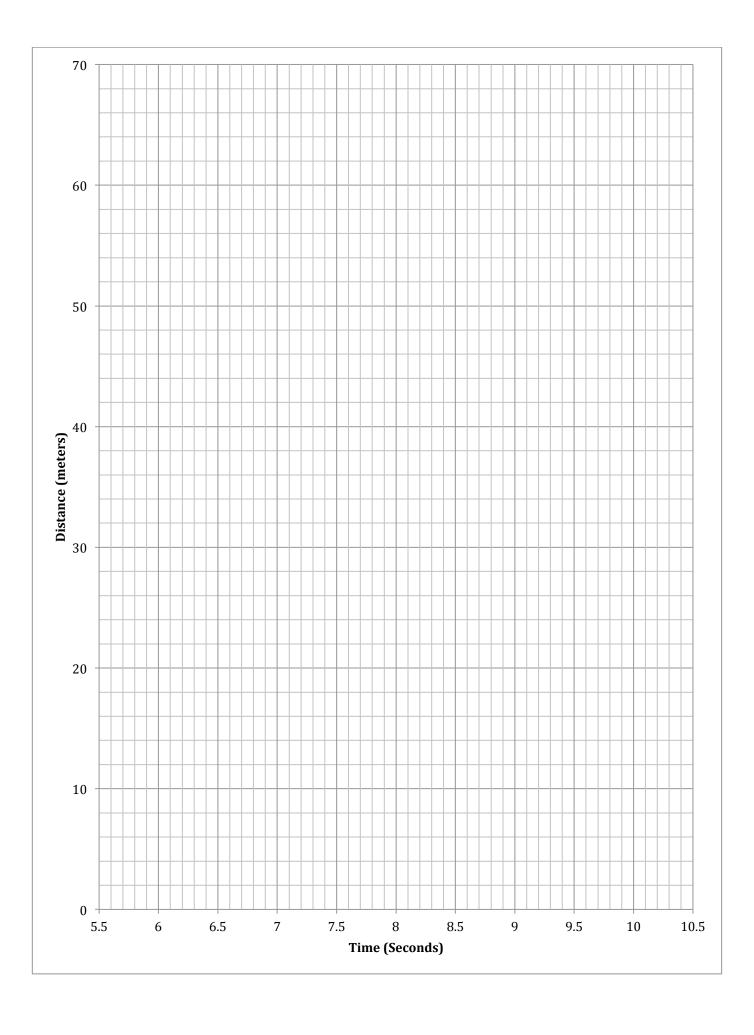
Purpose: To determine the velocity of the acceleration of the Space Shuttle Endeavor as it launches using graphical methods.

Procedure:

- 1. Start a computer and open the Physics 9 folder on the desktop. Open the video folder and double click on the Space Shuttle Launch 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 Endeavor just comes begins to move.
- 4. You can move the video forward or backward one frame at a time using the keyboard arrow keys.
- 5. Record data for Endeavor in the table below. You don't need data for every frame but you must have **at least** 20 data points.
- 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 velocity graph. Show the calculation in the calculation section below.

Frame #	Time	Distance

Frame #	Time	Distance



	Calculations:
1.	Calculate the velocity at the beginning (about 6.5 seconds)

2. Calculate the velocity at the end (about 9 seconds)

3. Calculate the acceleration

Summary:

- 1. From your previous lab, describe velocity (use math!)
- 2. From this lab, what did you learn about acceleration?
- 3. What is the acceleration? How did you find this?
- 4. What are your errors? (size and source)
- 5. What improvements could be made?