Finding Speed

<u>Objective:</u> To learn how to calculate speed.

Research: Distance: the length of a path between two points. □Time: an interval separating regularly occurring events.

Research:

□Speed: the distance an object travels in a certain period of time without regard to direction. □<u>Calculating Speed:</u> speed (S) equals distance (D) divided by time (T). S=D/T

Activity

- □ Build a ramp with one book and a ruler.
- Place the meter stick so that the 0 cm mark is parallel to the end of the ramp ruler.
- Release the marble from the 15 cm mark of your ramp.
- Start the stopwatch when the marble reaches the table.



- 5) Stop the stopwatch when the marble reaches the 75 cm mark on the meter stick.
- 6) Record the time in table one.
- 7) Repeat using 2, 3, and 4 book high ramps.
- 8) Calculate the speed of the marble for each ramp height.

Data Table

# of books	distance	time (sec)	speed
(ramp height)			
1	75 cm	S	cm/s
2	75 cm	S	cm/s
3	75 cm	S	cm/s
4	75 cm	S	cm/s

Conclusions

To calculate speed, a student must measure the an object in motion moves and the it takes for the object to travel that distance

distance.

- How does the speed of the marble change as the height of the ramp increases?
- Do you think the average speed would be the same if the distance measurement was only 25 cm instead of 75 cm? Why or why not? (Disregard friction in your answer)