

Objective 2:

Notes 2/16/11

Matter “moves” when an unbalanced force (push or pull) is applied.

We see or feel it moving when we **compare** it to another object that is moving differently or not at all. This is called a “point of reference”.

Research question: What determines the “speed” an object is moving?

Fast is _____

Slow is _____

Activity: Walk, jog, run!

Walk, Jog, Run...

Name: _____

Objective 2

Materials:

1. 10 meter track marked with 5m middle line
2. Stop watch (t)
3. Walker, jogger, runner person
4. Notebook/paper

What to do:

1. Set up track with 1.5m before and after space to allow for acceleration and deceleration
2. Have students walk, jog or run the track while team-mate keeps track of time with the stopwatch (5m and then 10m)
3. Chart and discuss data – make a graph.

Data collection:

Motion= change in _____	Distance 5 meters	Time for 5 meters	Speed for 5-m (m/s)	Distance (m)	Time (10m) (seconds)	Speed for 10-m (m/s)
Walk	5m			10m		
Jog	5m			10m		
Run	5m			10m		

Anchor activity for Energy Skatepark and Forces/Motion Unit

Data interpretation:

Graph each motion with a different color or symbol.

- _____ is the **independent variable** and _____ is the **dependent variable**.
- The slope of the line – amount of change in distance per unit time- is the speed!!! Cool, huh!

Aha... Write three good questions you can create from looking at your graph.

- What is a linear relationship? Does the speed of walking, jogging, or running show a linear relationship? Explain using the definition you found for this question.
Graphing distance versus time relationship - Speed is a function of distance per unit time!!