

# Moving Man - Distance vs. Time Graphs

## Student Pages

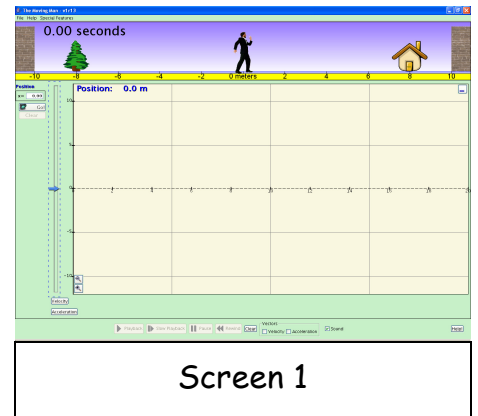
**Background** – Graphs are not just an evil thing your teacher makes you create, they are a means of communication. In this activity you will learn to speak and read “graph”.

**Learning Goals** – The students will:

- Develop a general knowledge of distance time graphs.
  - What a graph of a person standing still would look like
  - What a graph of a person moving away from an observer would look like.
  - What a graph of a person moving towards an observer would look like.
  - How differences in speed appear on the graph

**Procedure** – do the following activity using this web site  
<http://www.colorado.edu/physics/phet/simulations-base.html>  
Then click on “The Moving Man”

1. **Getting started.** After “Moving Man” is open leave the position graph open but close all of the other graphs, velocity and acceleration. Your screen should look like screen 1.
2. **Making observations.** By either clicking on the man or the slider cause the man to move back and forth and observe what shows up on the graph. Using the axes provided below make a sketch of the graph that is produced by each action described next to each axis.



Screen 1

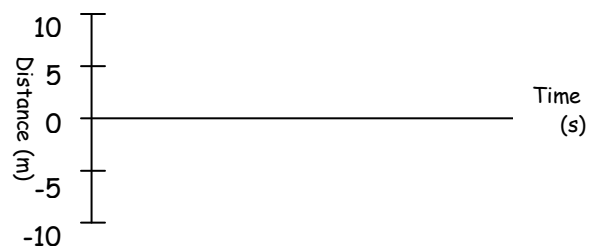
A man moving from 0m to 10m at a slow steady pace.



A man moving from 0m to 10m at a fast pace.

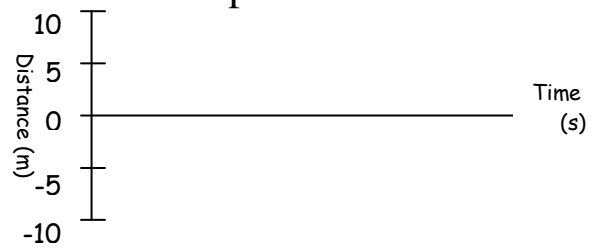


A man standing still at 4m.



## Moving Man - Distance vs. Time Graphs

A man moving from 0m to 10m at a slow steady pace, then moving back to 0m at a fast pace.



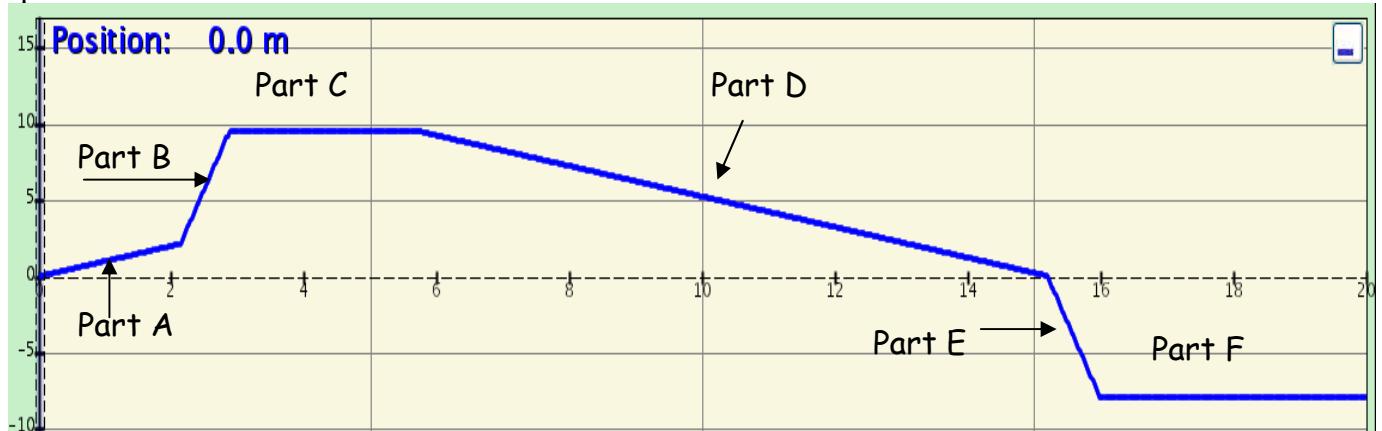
A man moving from 0m to 5m at a slow steady pace, then moving back to 0m at a slow steady pace.



A man moving from 0m to -10m at a slow steady pace.



Apply what you learned. Look at the graph below and for the different parts of the graph that are marked write a statement about what is happening. Be sure to include the direction of motion and the speed of motion.



Part	Description of direction and speed
A	
B	
C	
D	
E	
F	