DISTANCE VS. TIME LAB

Materials:

Papers

Pencils

Motion detector

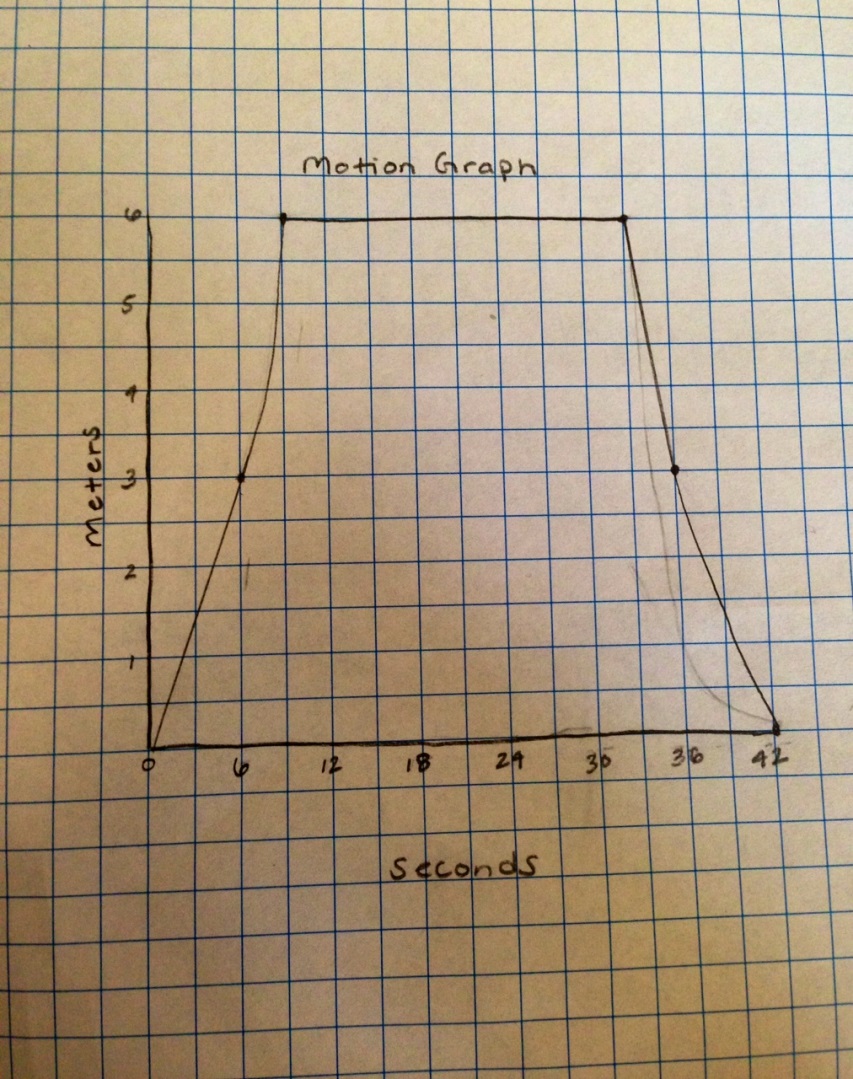
Procedure:

Develop a position vs. time story that describes a body in motion. Then create a position vs. time graph to illustrate the story, including the directions for following the story underneath.

Steps of the story:

1. Start walking to the bathroom 3 meters: 6 seconds
2. Accelerate to arrive in time to pee 3 meters: 3 seconds
3. Go to the bathroom 0 meters : 24 seconds
4. Run back 3 meters: 3 seconds
5. Walk back the rest of the way 3 meters: 6 seconds

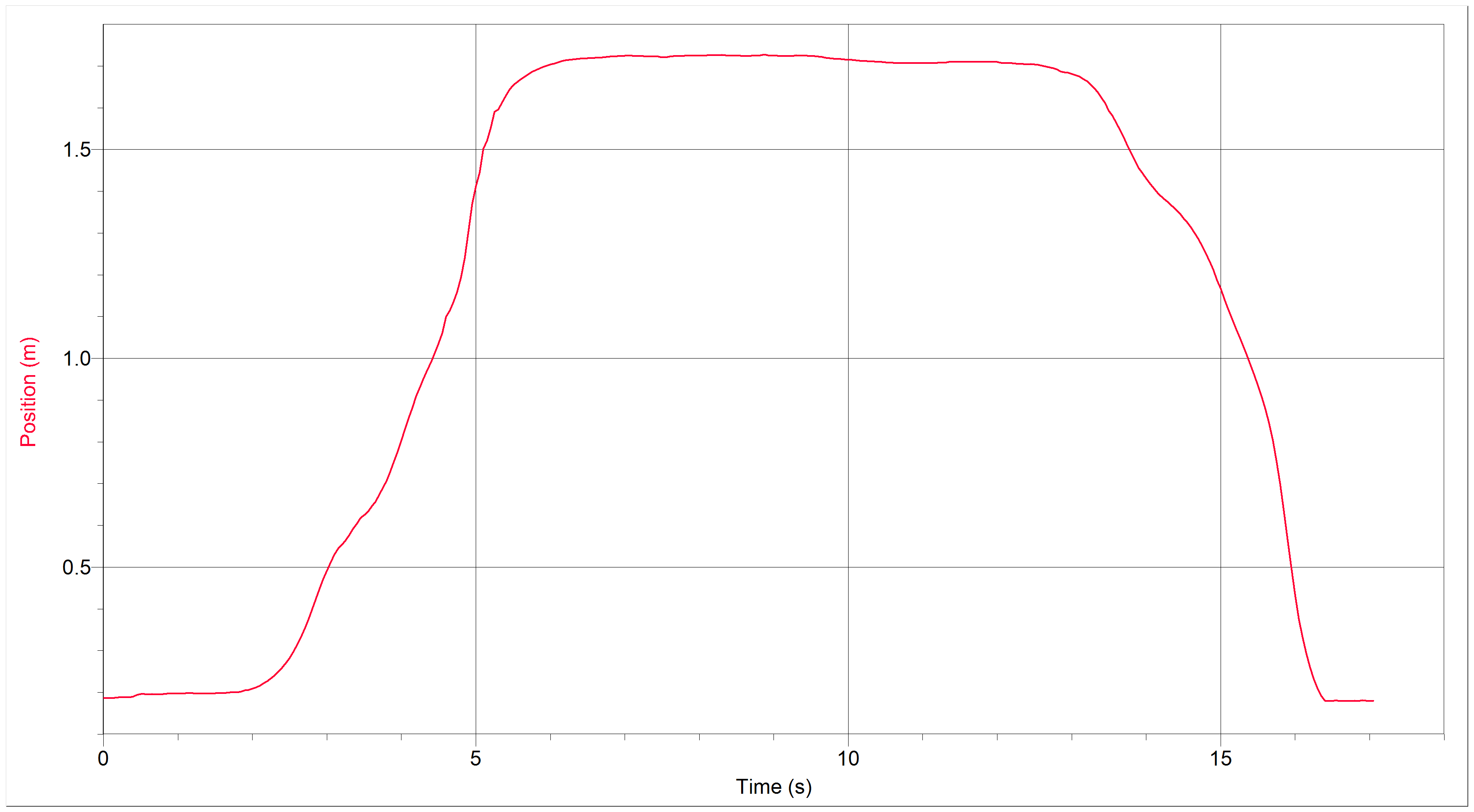
Graph:



Using the motion detector:

Using the motion detector act out the story at a scale of 1/3 what the story tells and then show the graph it creates.

Graph:



Data Analysis:

They were roughly the same but due to human error during the production of the motion detector graph.

Conclusion:

This lab introduced us to how we use the motion detector and how to accurately read a displacement vs. time graph. We also succeeded in closely matching our motion graph with the one we drew showing the expected resulting graph.