

PhysiXplore Session 2 – Conservation of Energy

Materials:

1. Atwood machine apparatus
2. Cart
3. Track
4. Motion sensor
5. Meterstick
6. Textbooks

Procedure:

1. Set up the Atwood machine by stacking textbooks and placing the track. Put the motion sensor at the end of the track
2. Measure the initial height (including textbooks & the thickness of the track)
3. Release the cart from the top of the track and start the motion sensor as soon as you let it go
4. Recording the final velocity as the cart hits the end of the track by using velocity-time graph
5. Repeat the experiment 3 times
6. Calculating the average final velocity
7. Repeat steps 2-6 but change the initial height (use different number of textbooks for each trail)

Comparing experimental & theoretical value:

1. Calculating the theoretical final velocity
2. Compare it with the experimental results from the procedure
3. Is it bigger/smaller?