

Can You Identify Energy Transformations Lab

Name:

Date:

Period:

Energy cannot be created or destroyed. However, energy can be transformed from one type into another type, and energy can be transferred from one object to another object. In this lab, you will transform gravitational potential energy into kinetic energy as well as transfer energy from one object to another object.

Before you can draw valid conclusions from any scientific experiment, you must analyze the results of that experiment. This means you must look for patterns in the results.

Directions: After receiving directions from Mr. Eck, follow the procedure in order as it appears below. Be sure that you are recording your average distances on the chart below in the correct columns. Once you have your data, answer the closure questions on the back of this lab handout.

Procedure:

1. Pull the pendulum back until the bottom of the washer is 15 cm from the floor. Release the pendulum. Measure and record the distance the box moves in the chart provided below. Repeat two more times.
2. Repeat step 1 using pendulum heights of 30 cm and 45 cm.
3. Repeat steps 1 and 2 with two washers then three washers

Height (cm)	Avg. Distance (cm) 1 washer	Avg. Distance (cm) 2 washers	Avg. Distance (cm) 3 washers
15 cm			
30cm			
45cm			

Closure Questions:

1. How does the gravitational potential energy depend on the pendulum's weight and height?
2. How does the distance the box travels depend on the initial gravitational potential energy?
3. Does the pendulum do work on the box? Explain your answer.
4. What energy transformation occurred that causes the box to stop moving?