

PHYSICS LABORATORY: Energy Loss

Background Information and Purpose

When work is done on an object against gravity, that object gains gravitational potential energy. When the object is dropped, it naturally falls back down towards the center of the Earth due to the (nearly constant) force of gravity upon it. If the object is a ball, and assuming the ground to be hard, it will usually bounce upwards after impact. Eventually, after a number of bounces, the ball will come to rest. This means that the initial amount of gravitational potential energy has been transferred to another form of energy, and a certain fraction of the initial gravitational potential energy is lost in each bounce.

The purpose of this lab is to establish a relationship between the number of times a ball bounces and the energy loss of the ball.

You will investigate balls made of 3 different materials and compare this relationships between them.

Remember:

- 1. Refer to the 'Physics Lab Report Guide' before submitting your report.**
- 2. Attach the 'Physics Lab Report Rubric' as a cover page to your paper copy.**
- 3. Turn in a paper copy to Mr Smith AND upload your report electronically.**

You will be marked on Data Collection and Processing (DCP) and Conclusion and Evaluation (CE) for this lab.