Name

Hour

Teacher

Potential Energy Lab Report

## Introduction

In paragraph form discuss the following:

* Restate the lab question and your hypothesis
* Discuss any important background information
* Define potential and kinetic energy

## Materials and Methods

* Provide a bulleted list of all the materials needed for the lab

In paragraph form discuss the following:

* state all variables (manipulated, responding and controlled),
* discuss the number of trials conducted in the experiment
* give a numbered step-by-step description of the activities to be done in order to gather the information needed to achieve the purpose of the experimentation. (This needs to be detailed and precise so another person can repeat the experiment exactly).
* Include any equations you used in your calculations.
* All units need to be in METRIC.

## Results

Table 1: Data table illustrating drop height, GPE, bounce height and average bounce height.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Mass of ball in kg= |  | Bounce Height (cm) | | | | |  |
| Drop Height (cm) | Gravitational Potential Energy (GPE) | Drop 1 | Drop 2 | Drop 3 | Drop 4 | Drop 5 | Average Bounce Height (cm) |
| 40 |  |  |  |  |  |  |  |
| 50 |  |  |  |  |  |  |  |
| 60 |  |  |  |  |  |  |  |
| 70 |  |  |  |  |  |  |  |
| 80 |  |  |  |  |  |  |  |
| 90 |  |  |  |  |  |  |  |
| 100 |  |  |  |  |  |  |  |

Figure 1: Drop height vs. average bounce height.

## Discussion

In paragraph form discuss the following:

* What was the purpose of the experiment and was it achieved?
* Describe the relationship between drop height and bounce height
* Compare your gravitational potential energy to your bounce height for each trial describe the relationship between GPE and bounce height
* What are the variables that affect gravitational potential energy of an object?
* As the ball falls towards the ground, which type of energy is increasing and which type of energy is decreasing?
* At all points while the ball is in the air, what is its acceleration?
* Restate your hypothesis and construct a conclusion.
* Remember a good conclusion uses all the available evidence and does not contain opinion.
  + Cite specific results and observations from the experiment and tie them to your conclusions.
* Recommend ways to correct problems that may have led to discrepancies or outliers.
* Recommend any practical way of improving the experiment.