



CHAPTER 1: INTRODUCTION TO PHYSICS



Extra Info

Scientific Method

You can carry out a simple scientific experiment in your school sports room.

Investigative Question: Which type of ball has the best bounce?

Hypothesis: _____

Materials:

- Metre sticks
- Sports balls of various types

Procedure:

1. Choose a ball. Hold the ball in front of the metre stick at a height of 100 cm.
2. Drop the ball from its initial height.
3. Observe how high it will bounce upwards.
4. Record the height of bounce.
5. Repeat steps 2 - 4 for two more trials.
6. Calculate the average height of bounce of the three trials.
7. Repeat the procedure by reducing the height of drop, by 20 cm each time, until 20 cm.
8. Repeat the experiment using different types of balls.

Variables:

- What is the independent variable?
- What is the dependent variable?
- What are the controlled (fixed) variables?

Data

Type of ball: _____

Height of drop (in cm)	Height of bounce (in cm)			Average height of bounce (in cm)
	Trial 1	Trial 2	Trial 3	
100				
80				
60				
40				
20				

Type of ball: _____

Height of drop (in cm)	Height of bounce (in cm)			Average height of bounce (in cm)
	Trial 1	Trial 2	Trial 3	
100				
80				
60				
40				
20				

Type of ball: _____

Height of drop (in cm)	Height of bounce (in cm)			Average height of bounce (in cm)
	Trial 1	Trial 2	Trial 3	
100				
80				
60				
40				
20				

Analysis: (Present your information from the data tables into graphic form)

Conclusion: (Finish these sentences.) : My hypothesis was / was not (circle one)
supported because _____

I learned _____