

BLACK BOX HYPOTHESIS TEST & Report Sheets

Introduction:

Scientific principles of observation, experimentation, and analysis are fundamental tools used to explain the processes and nature of the physical universe. In this activity your group will be given a black box (or mystery box), which contains one or two unknown items. Your group is to work together to determine what the most likely object(s) are inside the mystery box. The boxes each have an empty weight written on them (in grams), and there is an assortment of possible items for your group to examine. Scales are provided to determine the weights of the objects inside the boxes.

After initial observations of the mystery box (shaking, turning, sliding internally) and examination of the possible objects, write down a likely hypothesis for the identity of the object(s) in the box.

Hypothesis:

Methods:

Continue to weigh objects, examine box, and deduce what could be in your box.

Data/Results:

Weight of object(s) inside of box _____

Likely one or two objects? _____

Weight of objects available for examination:

	<u>Name of object</u>	<u>Weight</u>
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

Conclusion:

- 1) What is the most likely object(s) inside the mystery box?

- 2) Does this support your hypothesis or not?

- 3) What other types of test/experimentation devices could be used to determine the actual composition of the object(s) in the box?