

Name _____

Mass Estimation Detectives 2

Learning Objective: Students will be able to compare the mass of an unknown object to a known mass (a benchmark) and use reasoning to make a reasonable estimate.

Key Vocabulary: Mass, Estimate, Gram, Pan Balance, Heavier, Lighter, Digital Scale

Materials Needed:

- Pan balances (1 per group of 3-4 students)
- Digital scale
- A set of gram masses/cubes (e.g., 1g, 5g, 10g, 20g, 1 Kg cubes/weights)

Activity Procedure

Round 1:

1. Students take a benchmark weight around the room and try to find an object that contains the same mass.
2. They bring the object to the digital scale and find the actual mass of the object.
3. They record the actual mass on the data sheet.

Round 2:

1. Students take a benchmark weight around the room and try to find a different object that contains the same mass.
2. They compare the mass of the benchmark weight and the object on a pan balance.
3. They can swap out objects to find one that is the closest.
4. They bring the object to the digital scale and find the actual mass of the object.
5. They record the actual mass on the data sheet.

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Student Worksheet: Mass Estimation Detectives

Our Known Mass Clue: 1 gram, 5 grams, 10 grams, 20 grams, 1 Kg

Directions: Test each mystery object against your mass clue.

Round 1

Mass Clue	Object Selected	Mass of Selected Object	Difference in Mass
1 gram			
5 grams			
10 grams			
20 grams			
100 grams			
1Kg			

Round 2

Mass Clue	Object Selected	Mass of Selected Object	Difference in Mass
1 gram			
5 grams			
10 grams			
20 grams			
100 grams			
1Kg			