

Game 4M3: Weight

Strand: Measures

Strand Unit: Weight

Curriculum Objectives Covered:

- Estimate, compare, measure and record the weight of a wide variety of objects using appropriate metric units (kg, g) and selecting suitable instruments of measurement.
- Rename units of weight in kg and g.
- Rename units of weight using decimal or fraction form.
- Solve and complete practical tasks and problems involving the addition, subtraction, multiplication and simple division of units of weight (kg and g).

Name: “Guesstimation”

Aim: To estimate the weights of various classroom objects and then measure the actual weights. Guess as close as possible to win.

Activity Area: Classroom

Duration: 30 minutes

Resources:

- Whiteboard.
- A selection of everyday objects (one for each child in the class - see grid).
- Paper and pencils for teams to work out answers.
- Kitchen scales, bathroom scales and spring balances for each team.

Set Up:

1. Before the game, the children should be reminded of the weights of a kilogram and a gram. They should be given, for example, a bag of sugar to hold, to feel the weight of 1kg, and a thumbtack to feel the weight of 1g.
2. The class should be split into equal sized teams of approximately 5 children per team.
3. The teacher projects/draws up the following type of grid onto the whiteboard. The list of objects should be relevant to the classroom environment.

Objects	Estimate	Rename estimate in kgs and gs	Actual weight	Rename weight in fractions <u>or</u> decimals (to 2 places)	Difference
Example: Weight of school bag	1250g	1kg 250g	1kg 750g	1 $\frac{3}{4}$ kg	500g
Weight of 5 mugs					
Weight of a dictionary					
Weight of 20 copies					
Weight of a stapler					
Weight of 5 plates					
Weight of 10 pencils					
Weight of your lunch					
Weight of a desk					
Weight of a saucer					
Weight of tissues					
Weight of pencil case					
Weight of a CD player					
Weight of a potato					
Weight of a globe					
Weight of maths book					
Weight of your shoes					
Weight of a milk carton					
Weight of 50 straws					
Weight of a DVD					
Weight of a child					
Weight of a notebook					
Weight of a cup					
Weight of an adult					
Weight of a chair					

Start Playing:

1. Each team is allocated 5 objects from the list (or an amount equal to the number of players in the team).
2. Each team must come up with measurement estimates for their 5 objects. Although teams can confer, the players on each team should be responsible for estimating the weight of 1 object each. It should be explained to the children that the winning team will be the team that estimates most accurately.
3. When the children are happy with their estimates, they should write them up on the whiteboard in the appropriate space on the grid.
4. Each child should also rename the unit of weight in the adjacent space on the whiteboard e.g. 1kg 250g = 1250g.
5. Only after a team has filled in its estimates on the whiteboard should it collect some weighing scales. The teams should choose suitable forms of weighing scales. They can choose from a selection of bathroom scales, kitchen scales and spring balances.
6. The teams now use the weighing scales to measure the objects accurately.
7. As before, the measurements are then filled in on the grid on the whiteboard, with the teacher checking to make sure the measurement is accurate each time, and working with the children where necessary.
8. The children then go back to their teams.
9. Using the paper and pencils, each child must work out the difference between the estimate and the actual weight of his/her object, by taking the smaller measurement from the bigger measurement.
10. The child then writes up his/her answer into the classroom grid.
11. When all of the answers are written up in the 'Difference' column, the teacher goes through the answers on the whiteboard to ensure that they are correct.
12. The teacher explains that the smaller the difference, the closer that person was to guessing the actual weight of his/her object.
13. Finally, the measurements in the 'Difference' column for the 5 objects of each team are added together.
14. The winning team is the team with the smallest answer i.e. the smallest combined difference between the estimates and the measurements of their allocated objects.

Further activity:

1. The children can now generate their own multiplication and simple division questions for each other using dice.
2. The children should use the measurements in the 'Actual Perimeter' column to multiply, and then divide, by the numbers they roll on the die.