

Relations in the Metric System

Instructions

Materials:

Double pan balance scale

1 plastic cube with the volume of 1000 cm^3 (10cm x 10cm x 10cm)

1 Liter Volumetric flask

1 kg Metal Weight

Set Up:

1. Fill the volumetric flask with colored water to the 1 L mark
2. Place the empty cube on the pan
3. Counterbalance the weight of the empty plastic cube with a small beaker of water

Demo Procedure:

1. Carefully pour 1000 mL of water from the volumetric flask into the plastic cube.
2. Point out that the scale is tilted toward the heavier pan that is holding the cube, filled with 1 liter of water.
3. As you lowered the 1 kg metal weight onto the other pan, the scale is balanced because the 1 liter of water is now balanced by the 1 kg metal weight.