

3.0 Various Props for demonstrating atoms, molecules, bonding, mole, chemical formulas

Description: Use of objects to visualize concepts of the mole, atomic structure, counting by weighing

Materials:

Mole box (located on the top shelf of the alcove)

2" red ball

Mole of sulfur and mole of sodium bicarbonate (NaHCO_3) in Erlenmeyer flasks

Coffee and aspirin containers

Jar of rice, beakers, different sized balls for count by weighing exercise

Procedure:

1. The mole box is a visual aid that represents a volume of one mole of air.
2. The moles of sulfur and sodium bicarbonate give an idea of the relative amounts of different materials in a mole.
3. The jar of rice and beakers containing different size balls is an exercise that demonstrates why chemists count by weight. It is impractical to count individual rice grains in a jar – there are too many. It is better to weigh the total amount.

Discussion: None

Safety: None

Disposal: None

References:

1. Bee Botch