

Classification of Matter

How do atoms combine to make different types of matter?

Why?

Look at the things in this room. They are all matter. That matter may be pure or it may be a mixture. Can you tell by looking at it? What if you looked at it under a microscope? Then could you tell? Something that looks pure may not really be pure. It depends on what type of particles an object or substance is made of. In this activity we will explore how the smallest chemical units of matter determine whether something is classified as an element, a compound, or a mixture.

Model 1 — Atoms, Particles, and Molecules

A
R
atom
8 particles

B
T & RSq & R

C
?

D
?
molecule
chemical bond

E
RSq
molecule
atoms

F
Sq₂
chemical bond
molecule

G
?

H
TSq₂R
5 particles

I
SqR₃ & TSq
chemical bond
5 particles