

Comparing Molecular and Ionic Compounds

Station #1: Observe the substances and complete the following table:

Substance (name and formula)	State @ room temperature	Melting point (°C)	Boiling point (°C)	Smell

Note: Wave your hand over the top of the beaker containing the substance and record if you smell anything and the intensity of the smell.

Station #2: Observe the substances and complete the following table.

Substance (name and formula)	State @ room temperature	Melting point (°C)	Boiling point (°C)	Smell

Station #3:

1. Half fill the large well of the spot plate with water.
2. Place two scoops of the substance into the well with a wooden splint. Stir until dissolved.
3. Place the conductivity probe into the solution and record the results.

Substance (name and formula)	Conductivity

Station #4:

1. Half fill wells 1,2,3,4,5 with water in a spot plate.
2. Place one scoop/three drops of each substance into separate wells.
3. Record how easily the substance dissolves in water.

Substance (name and formula)	Solubility

Follow Up Questions:

1. a) What are some properties of ionic compounds and their solutions?
b) What are some properties of molecular compounds and solutions?
2. a) Think of a possible reason why most ionic compounds dissolve in water?
b) Think of a possible reason molecular compounds melt/boil at lower temperatures than ionic compounds