Solubility

The solubility of a substance is a measure of how much of it can be dissolved in a solvent (see page 40). Usually, the higher the temperature it is heated to, the higher its solubility. Solubility is measured in grams per solute per 100 grams of solvent (g/100 g).

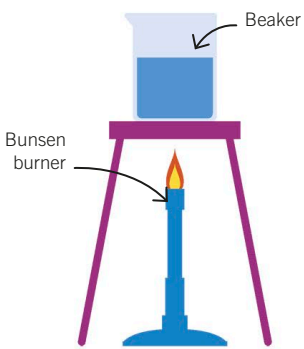
Key Facts

- ✓ **Solubility is a measure of how much solute will dissolve in a solvent.**
- ✓ **The solubility of most solids increases as you raise the temperature.**
- ✓ **You can measure solubility by evaporating the solvent away from a solution and measuring the mass of the remaining solute.**

Mass stays the same
A solution's mass is the same as the combined mass of the solute and solvent before it has been dissolved.

Different temperatures, different rates
The higher the temperature, the more solvent can be dissolved in a solute. You can conduct a simple experiment by varying the temperature and measuring the mass of salt dissolved in water. You should keep the mass of water and number of stirs the same.

10g of salt dissolved in water



Water temperature at 50°F (10°C)

50g of salt dissolved in water

Water temperature at 68°F (20°C)

100g of salt dissolved in water

Water temperature at 86°F (30°C)