Foxford Learning Plan

YEAR 13 - Unit 3 Aim E

Diffusion of molecules

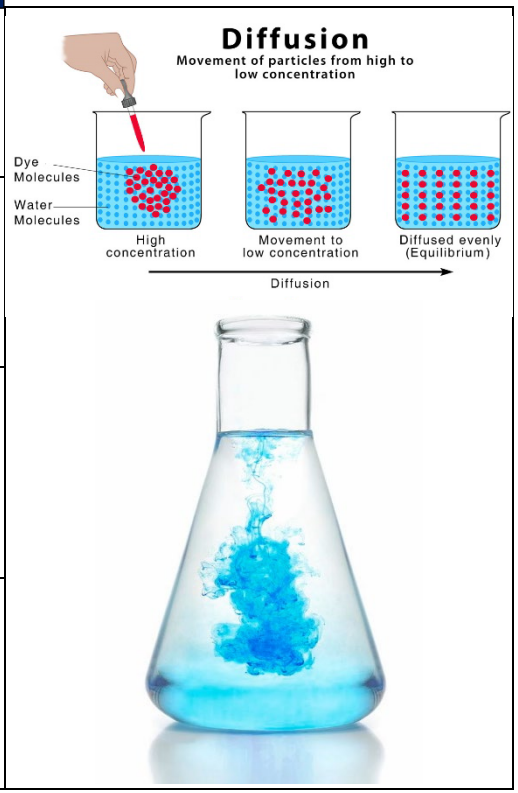
Summer 1

Key Vocabulary

Diffusion	The net movement of molecules from an area of high concentration to an area of low concentration
Concentration gradient	A difference in the concentration of a substance across a distance
Dynamic equilibrium	There is continuous movement of particles but no overall change
Semi-permeable membrane	A membrane that allows some molecules to pass through but not others
Hypertonic solution	Having a higher concentration than a comparison solution
Hypotonic solution	Having a lower concentration than a comparison solution
Isotonic solution	Both solutions have the same concentration of solutes
Solute	A dissolved substance in a solution present in smaller amount than the solvent
Solvent	A substance that dissolves a solute, resulting in a solution, they are usually a liquid

Over the course of the topic, I will be able to:

Key Skills	Demonstrate knowledge and understanding of scientific concepts, procedures, processes and techniques and their application in a practical investigative context
	Interpret and analyse qualitative and quantitative scientific information to make reasoned judgements and draw conclusions based on evidence in a practical investigative context
	Evaluate practical investigative procedures used and their effect on the qualitative and quantitative scientific information obtained to make reasoned judgements
	Be able to make connections between different scientific concepts, procedures, processes and techniques to make a hypothesis and write a plan for a practical investigation



I will understand how to:

Describe the random movement of molecules in liquids and gases.

Explain that diffusion takes place along a concentration gradient until dynamic equilibrium is reached.

Suggest how the following factors affect the rate of diffusion:

- Concentration gradient
- Shape and size of molecules
- Temperature
- Distance
- Surface area