

Units 11 - Solutions

Content Area: **Language Arts Literacy**
Course(s): **Chemistry CP**
Time Period: **June**
Length: **6 weeks**
Status: **Published**

Transfer Skills

Consequences of the Break-Up: Solutions

Enduring Understandings

The concentration of a solution determines if it is an acid or base.

Math formulas can be used to determine the acidity and alkalinity of a solution.

The pH affects the properties and behavior of solutions.

Essential Questions

How can you quantify the concentration of a solution?

How are colligative properties useful?

Content

Solute, solvent, saturated, supersaturated, unsaturated, molarity, molality, mole fraction, colligative properties, vapor pressure

Skills

Identify what factors affect how fast a substance dissolves.

Describe the equilibrium in a saturated solution.

Determine the factors that affect the solubility of a substance.

Calculate the molarity of a solution.

Determine the three colligative properties of solutions.

Resources

Standards

SCI.9-12.5.1.12.A.1	Refine interrelationships among concepts and patterns of evidence found in different central scientific explanations.
SCI.9-12.5.1.12.A.2	Develop and use mathematical, physical, and computational tools to build evidence-based models and to pose theories.
SCI.9-12.5.1.12.B.1	Design investigations, collect evidence, analyze data, and evaluate evidence to determine measures of central tendencies, causal/correlational relationships, and anomalous data.
SCI.9-12.5.1.12.B.4	Develop quality controls to examine data sets and to examine evidence as a means of generating and reviewing explanations.
SCI.9-12.5.1.12.C.1	Reflect on and revise understandings as new evidence emerges.
SCI.9-12.5.2.12.A.5	Describe the process by which solutes dissolve in solvents.
SCI.9-12.5.2.12.A.6	Relate the pH scale to the concentrations of various acids and bases.
SCI.9-12.5.2.12.C.1	Use the kinetic molecular theory to describe and explain the properties of solids, liquids, and gases.