

Unit 09: Solutions

Content Area: **Science**
Course(s): **Chemistry Accelerated**
Time Period: **Marking Period 4**
Length: **4 weeks**
Status: **Published**

Textbook Resources

Glencoe Science Chemistry Concepts and Applications

Chapter 13: Water and Its Solutions

Standards

SCI.9-12.HS-PS1-3	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.
SCI.9-12.HS-PS3-4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).
SCI.9-12.HS-PS1-5	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

Goals/Objectives

- How do things dissolve and how does dissolving change the properties of the individual components?
- Why is water so important and unique?

Content

- Concentration
- Dissociation
- Interparticle forces
- Polar v. nonpolar
- Solubility
- Solvation (hydration)

Skills

- • Describe and apply colligative properties

- • Describe how interparticle forces (namely hydrogen bonding) are the reason behind water's unique properties
- • Describe solvation
- • Describe the factors that affect solubility
- • Interpret solubility graphs
- • Qualitatively and quantitatively describe the concentration of a solution