

Grade	10-12
Unit of Study	Unit 8: Solutions and Intermolecular Forces
Length of Unit	2 weeks
Sample Essential Questions	Sample Corresponding Big Ideas
How are dilute and concentrated different?	Concentrated means “strong”; there will be a large amount of solute dissolved in a relatively small amount of solvent. Dilute means “weak”; there will be a small amount of solute dissolved in a relatively large amount of solvent.
How can we use the make up of particles to make predictions about physical properties?	A particle's polarity, size, and hydrogen bonding potential is an indicator of its relative melting point, boiling point, and vapor pressure.

Missouri Learning Standards	
Priority Standard(s)	Supporting Standard(s)
I can explain how forces and interactions between particles affect the behavior and properties of matter.	9-12.PS1.A.3

Unit 8 Sequence			
MLS	Topic(s)	Learning Targets	Academic Vocabulary
PS1.A.3	Concentration and Dilutions	I can create a stock solution and perform a serial dilution to attain a solution of low concentration.	Molarity Dilution
	Intermolecular Forces	I can predict the relative strength of physical properties based on intermolecular forces. I can evaluate the compatibility of solutes with solvents.	Intramolecular Forces Intermolecular Forces Dispersion Dipole-Dipole Interactions Hydrogen Bonding Miscibility

MLS	Learning Activities	
PS1.A.3	Serial Dilution Lab	Must Do ▾
	Evaporation of Solvents IMF Lab	Must Do ▾

Assessments		
MLS	Description or Location	Rubric/Location
PS1.A.3	Unit 8 Test	Paper

Additional Resources
Phet, OpenStax, Javalab