

Class Components	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
<p>1. Mastery Objective: Recognize that elements with the same number of protons may not have the same charges GLE 2</p> <p>2. Describe ions and define them in terms of the number of protons and their charges GLE 3</p>	How are atoms and Elements Related?	<p>What determines an elements chemistry?</p> <p>How does the periodic table relate plan</p> <p>How do ions form?</p>	<p>How are Ionic Bonds Named?</p> <p>What are properties of ionic compounds?</p> <p>What are Lewis Structures?</p>	<p>How are atoms held together in Covalent Bonds?</p> <p>What are properties of Molecular Compounds?</p> <p>What is a Partial Charge?</p>	<p>Experimental: Does sugar react differently in organic solutions than in inorganic solutions? Variables: Temperature, dissolution rate, diffusion rate</p>	<p>Computational: Calculate the rate of diffusion of glucose in water and methanol and in different temperatures of water and methanol Calculate the solvation of glucose in water vs. methanol Calculate the RMSF of glucose in water vs methanol</p>
Engage	How are fireworks made?	Video Clip: Bill Nye (Sodium Chloride)- The video shows the properties of Sodium and Chlorine alone and then together in table salt	N/A	Geckos use covalent bonds to stick to surfaces and climb!	Research: How do bonds affect the rate of dissolution of materials How does temperature affect bonds?	What is theoretical chemistry
Explore	Look at the Periodic Table, What do you already know about it?	Show students a list of common ionic bonded elements. Ask them to look at the periodic table and determine why they bond?	Students will examine the Lewis Structures next to the Electron Cloud structure and try to make connections	Students will examine the bonds in water and determine how it affects its properties	N/A	Using Gaussian View to build ionic and molecular compounds

Explain	Power Point/ Color Periodic Table	PowerPoint/ Learn to make ions and ionic bonds	PP/ Naming and Drawing Lewis Structures of Ionic Compounds	PP/ Naming and Drawing Lewis Structures of Molecular Compounds	Begin Lab Report/ design experiment	How do simulations work?
Elaborate	Draw Structures of common atoms: C, O, Na, Cl, N etc..	Draw common ionic Bonds	Draw ionic bonds with Lewis /Naming compounds	Draw molecular bonds with Lewis /Naming compounds	Perform lab experiment	Examine graphs and begin computational lab report
Evaluate	Exit ticket Focus: Drawing structures using the periodic table	Exit ticket Focus: Making ionic bonded molecules using the periodic table	Exit ticket Focus: Drawing Lewis Structures and Naming Compounds	Exit ticket Focus: Drawing Lewis Structures and Naming Compounds	Exit ticket Focus: Data collection	Comparison lab report: Computational data vs. experimental data

Science Lesson Plan

Bibliography: Prentice Hall Interactive Science, Louisiana