

Pickens High School Lesson Planning Template

Grade Level: 9					Teacher/Room: McCo 188 / y					Course(s)/ Period(s): Physical Science / 1, 2, 4					Week of: Mar 2-6, 2015				
Unit Vocabulary: strong force, radioactivity, alpha particle, transmutation, beta particle, gamma ray, half-life, gieger counter nuclear fusion nuclear fission critical mass tracer isotope New Vocab: covalent bond, ionic bond, nonpolar molecule, polar molecule, ion, molecule, chemical formula, polyatomic ions, octet rule, oxidation number																			
Instructional Strategies Used: direct instruction, Focused Learning, note-taking, flexible grouping, activating prior knowledge, Achieve 3000, hands-on manipulative activity																			
Day 1				Day 2				Day 3				Day 4				Day 5			
Common Core Standard(s): SPS1b. Compare and contrast ionic and covalent bonds in terms of electron movement. SPS2. Students will explore the nature of matter, its classifications, and its system for naming types of matter. b. Predict formulas for stable binary ionic compounds based on balance of charges. c. Use IUPAC nomenclature for transition between chemical names and chemical formulas of -binary ionic compounds (containing representative elements). -binary covalent compounds (i.e. carbon dioxide, carbon tetrachloride). ELPS 1 English language learners communicate for Social and Instructional purposes within the school setting. ELPS 4 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.				Common Core Standard(s) GPS SPS3. Students will distinguish the characteristics and components of radioactivity. a. Differentiate among alpha and beta particles and gamma radiation. b. Differentiate between fission and fusion. c. Explain the process half-life as related to radioactive decay. d. Describe nuclear energy, its practical application as an alternative energy source, and its potential problems. ELPS 1 English language learners communicate for Social and Instructional purposes within the school setting. ELPS 4 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.				Common Core Standard(s): SPS1b. Compare and contrast ionic and covalent bonds in terms of electron movement. SPS2. Students will explore the nature of matter, its classifications, and its system for naming types of matter. b. Predict formulas for stable binary ionic compounds based on balance of charges. c. Use IUPAC nomenclature for transition between chemical names and chemical formulas of -binary ionic compounds (containing representative elements). -binary covalent compounds (i.e. carbon dioxide, carbon tetrachloride). ELPS 1 English language learners communicate for Social and Instructional purposes within the school setting. ELPS 4 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.				Common Core Standard(s): SPS1b. Compare and contrast ionic and covalent bonds in terms of electron movement. SPS2. Students will explore the nature of matter, its classifications, and its system for naming types of matter. b. Predict formulas for stable binary ionic compounds based on balance of charges. c. Use IUPAC nomenclature for transition between chemical names and chemical formulas of -binary ionic compounds (containing representative elements). -binary covalent compounds (i.e. carbon dioxide, carbon tetrachloride). ELPS 1 English language learners communicate for Social and Instructional purposes within the school setting. ELPS 4 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.				Common Core Standard(s): SPS1b. Compare and contrast ionic and covalent bonds in terms of electron movement. SPS2. Students will explore the nature of matter, its classifications, and its system for naming types of matter. b. Predict formulas for stable binary ionic compounds based on balance of charges. c. Use IUPAC nomenclature for transition between chemical names and chemical formulas of -binary ionic compounds (containing representative elements). -binary covalent compounds (i.e. carbon dioxide, carbon tetrachloride). ELPS 1 English language learners communicate for Social and Instructional purposes within the school setting. ELPS 4 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.			
Essential Question: What makes the Blue Ridge Mountains blue?				Essential Question: What are the pros and cons of nuclear power?				Essential Question: How are electrons transferred to form compounds?				Essential Question: How are electrons transferred to form compounds?				Essential Question: What are the rules for writing chemical formulas and naming chemical compounds?			
Mini Lesson: <ul style="list-style-type: none"> • YouTube • http://www.youtube.com/watch?v=_M9khs87xQ 				Mini Lesson: <ul style="list-style-type: none"> • YouTube • http://www.youtube.com/watch?v=BCYrNU-7SfA 				Mini Lesson: <ul style="list-style-type: none"> • youtube 				Mini Lesson: <ul style="list-style-type: none"> • BrainPop 				Mini Lesson: <ul style="list-style-type: none"> • Nuclear Chemistry Quiz 			

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<p>8</p> <ul style="list-style-type: none"> • http://www.youtube.com/watch?v=BCYrNU-7SfA <p>Activating Strategies:</p> <ul style="list-style-type: none"> • kahoot.it <p>Lesson:</p> <ul style="list-style-type: none"> • 1. Metal/Nonmetal and Ionic/Covalent foldables (put in Chemistry Folder) • 2. Take Notes • 3. Atoms and Ions Packet <p>Resource/Materials:</p> <ul style="list-style-type: none"> • computer • LCD • worksheets 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> • show examples of project <p>Lesson:</p> <ul style="list-style-type: none"> • Room 355 Computer Lab to do Nuclear Power Project and Achieve 3000 <p>Resource/Materials:</p> <ul style="list-style-type: none"> • computer/LCD • handouts 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> • kahoot.it <p>Lesson:</p> <ul style="list-style-type: none"> • Molecule Maker Part 1 <p>Resource/Materials:</p> <ul style="list-style-type: none"> • computer/LCD • handouts 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> • Atomic Bonding Song http://www.youtube.com/watch?v=ljvX-RMv_lw • http://www.youtube.com/watch?v=BCYrNU-7SfA <p>Lesson:</p> <ul style="list-style-type: none"> • Molecule Maker Part 2 • note-taking worksheet <p>Resource/Materials:</p> <ul style="list-style-type: none"> • handouts • computer/LCD 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> • Quizlet <p>Lesson:</p> <ul style="list-style-type: none"> • ion chart • bonding with a classmate <p>Resource/Materials:</p> <ul style="list-style-type: none"> • handouts
<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> • Learning Focus <p>Grouping Strategy:</p> <ul style="list-style-type: none"> • <p>Assessment:</p> <ul style="list-style-type: none"> • worksheets 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> • technology, choice of product • alternate paper for ESOL students • Achieve3000 <p>Grouping Strategy:</p> <ul style="list-style-type: none"> • <p>Assessment:</p> <ul style="list-style-type: none"> • 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> • hands-on manipulative <p>Grouping Strategy:</p> <ul style="list-style-type: none"> • flexible grouping <p>Assessment:</p> <ul style="list-style-type: none"> • 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> • hands-on manipulative <p>Grouping Strategy:</p> <ul style="list-style-type: none"> • flexible grouping <p>Assessment:</p> <ul style="list-style-type: none"> • 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> • <p>Grouping Strategy:</p> <ul style="list-style-type: none"> • <p>Assessment:</p> <ul style="list-style-type: none"> • quiz
<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> Worksheet</p> <p><i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> Nuclear Power Project <i>Formative:</i></p> <p><i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> Molecule Making Kit Handout <i>Formative:</i></p> <p><i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> Molecule Making Kit Handout <i>Formative:</i></p> <p><i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> quiz <i>Formative:</i></p> <p><i>Summative:</i> <i>Performance Based:</i></p>
<p>Homework: finish worksheets</p>	<p>Homework: finish project</p>	<p>Homework: new vocab</p>	<p>Homework: study for quiz</p>	<p>Homework: finish activity handout</p>

Resources and Reflective Notes:

<http://jbjones.iweb.bsu.edu/portfolio/resources/Artifacts-&-Rationales/IonicBondingCardGame.pdf>
http://www.nthurston.k12.wa.us/cms/lib/WA01001371/Centricity/Domain/728/IS%20Chemical%20Bonding_coker.pdf
 ion speed dating activity