

Pickens High School Lesson Planning Template

Grade Level: 9		McCo		Teacher/Room: 188 / y		Course(s)/ Period(s): Physical Science / 1, 2, 4		Week of: Feb 23-27, 2015			
Unit Vocabulary: 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): 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): 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 happens when a radioactive material decays?		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: What are the rules for writing chemical formulas and naming chemical compounds?			
Mini Lesson: <ul style="list-style-type: none">Explain how to use Achieve 3000		Mini Lesson: <ul style="list-style-type: none">YouTubehttp://www.youtube.com/watch?v=_M9khs87xQ8		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>Activating Strategies:</p> <ul style="list-style-type: none"> show how to use Gizmo <p>Lesson:</p> <ul style="list-style-type: none"> Media Center Computer Lab to do Gizmo and Achieve 3000 <p>Resource/Materials:</p> <ul style="list-style-type: none"> computer LCD worksheets 	<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 handouts 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> show examples of project <p>Lesson:</p> <ul style="list-style-type: none"> Media Center Computer Lab to do Nuclear Power Project and Achieve 3000 <p>Resource/Materials:</p> <ul style="list-style-type: none"> computer lab handouts 	<p>Activating Strategies:</p> <ul style="list-style-type: none"> Atomic Bonding Song http://www.youtube.com/watch?v=ljvX-RMv_lw <p>Lesson:</p> <ul style="list-style-type: none"> Molecule Maker Part 1 <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"> Achieve 3000 alternate paper for ESOL students <p><i>Grouping Strategy:</i></p> <ul style="list-style-type: none"> <p><i>Assessment:</i></p> <ul style="list-style-type: none"> worksheets 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> Learning Focus <p><i>Grouping Strategy:</i></p> <ul style="list-style-type: none"> <p><i>Assessment:</i></p> <ul style="list-style-type: none"> 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> technology, choice of product alternate paper for ESOL students <p><i>Grouping Strategy:</i></p> <ul style="list-style-type: none"> <p><i>Assessment:</i></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><i>Grouping Strategy:</i></p> <ul style="list-style-type: none"> flexible grouping <p><i>Assessment:</i></p> <ul style="list-style-type: none"> Molecule Making Kit Handout 	<p>Differentiation: <i>Content/Process/Product:</i></p> <ul style="list-style-type: none"> <p><i>Grouping Strategy:</i></p> <ul style="list-style-type: none"> flexible grouping <p><i>Assessment:</i></p> <ul style="list-style-type: none"> quiz
<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> Explore Learning Worksheet <i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> worksheets <i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> Nuclear Power Project <i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> Molecule Making Kit Handout <i>Summative:</i> <i>Performance Based:</i></p>	<p>Assessment : <i>Pre-Test:</i> <i>Post-Test:</i> <i>Formative:</i> quiz <i>Summative:</i> <i>Performance Based:</i></p>
<p>Homework: finish Gizmo</p>	<p>Homework: new vocab</p>	<p>Homework: finish project</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