***Lesson Plans for the Week of: 12/5/16 Teacher: Hough Course: Chemistry Period: 9***

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| Elements of  a Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/  Focus/  Essential  Question | CH.2a;3c;4a  Test review | CH.2a,d;3c; 4a  --Conversion test  --identify specific portions of the periodic table | CH.2i; 3a,c,d  Identify Thomson as the discoverer of the electron and the developer of the plum pudding model | CH.3a,d  --define ion, cation, and anion  --identify what causes an ion and the categories of materials which become cations and anions  --deduce charges of ions in an ionic compound using only the chemical formula | CH.3a,d  --identify properties of ionic compounds  --Name binary ionic compounds |
| Lesson/Act.  Type of Presentation | Individual:  Students will practice mixed conversion problems in order to ensure that the convert properly, using the correct conversion factors at the correct time; additional MC questions about categories of matter  Whole group:  Go over results | Individual:  Test  After test:  Use textbook/internet to label the following regions of the periodic table: alkali group; alkaline earth metals group; halogens, noble gases, transition metals; metals, nonmetals, and metalloids | Whole group:  Go over the parts of the periodic table assigned in previous lesson  Demonstrate that static charges exist using 3M Magic Tape  Students develop hypothesis explaining the results of the tape experiment.  Whole group:  Concluding discussion to include the following:   1. atoms are not always neutral, as given in the Dalton model 2. Thomson discovered the electron 3. Thomson (1897) determined that + and - charges are involved with atoms; equal numbers of + and – charges in an atom yield a neutral atom 4. Diagram of Thomson model and how he determined that + and - charges are involved with atoms; model known as plum pudding model | Whole group:  Notes: define anion, cation  Determine if chemical formula is an ionic compound (M-MN)  Explain the pattern of ionic charges found on periodic table  Demostrate deducing the charges of ionis found in a formula unit-- Note that one particle of a compound has a charge of 0.  :  Show students how to write the formulas on the given periodic table  Individual:  Students write all given formulas on the periodic table  (#2 on worksheet)  Notes:  Define ion, cation, and anion  Summarize discussion that  metals tend to form cations; nonmetals tend to form anions  The fact that anions and cations have different charges causes them to attract, forming compounds called ionic compounds  The formula for an ionic compound gives the smallest particle of that substance and is called a formula unit. Remind students how the subscripts are utilized in a chemical formula. | Whole group:  Shortcut for yesterday’s lesson--connect charges of ions to the subscript in the molecular formula  Extension to yesterday’s lesson: Connect charges of ions to the columns of the periodic table using results of homework and #2 of U6 ws1  Notes: List properties of ionic compounds; illustrate conductivity of solutions using conductivity device  Note: explain the existence of a conductivity probe to quantitatively measure how well a substance conducts; this is opposite to the device I will use, which qualitatively determines whether or not a substance conducts  Demonstrate how to name binary ionic compounds  Individual:  Name binary ionic compounds binary ionic compounds |
| Evaluation | Teacher observation and results of student work |  |  | Teacher observation of student work on U6 ws1 | Student accuracy and questions |
| Extension/  Homework |  |  | Lesson about ions |  |  |

MATERIALS:

Monday: teacher-made worksheet

Tuesday: teacher-made test

Wednesday: whiteboards, markers; YouTube video at [https://www.youtube.com/ watch?v](https://www.youtube.com/%20watch?v)=JwdGFZA3WOs

Thursday: periodic table; U6 ws1 from Chemistry Modeling Curriculum

Friday: periodic table; U6 ws1 from Chemistry Modeling Curriculum; electrical conductivity device, beakers, water, salt, sugar, baking soda