## WEEK OF Dec. 7 - 11, 2020

## GRAY

| CO                              | OURSE: 8th Grade ADV & GI   | EN Science  | TEACHER: Bette Cobb PERIODS: 5  |  |                             |  |
|---------------------------------|---|---|---|--|-----------------------------|--|
|                                 | OBJECTIVES  | ACTIVITIES  | MATERIALS   | HOMEWORK   | ASSESSMENT                  | STANDARDS  |
| M<br>O<br>N<br>1<br>2<br>-<br>7 | Define valence electrons and<br>describe how the columns on a<br>periodic table relate to them.<br>Utilize the periodic table to<br>determine the number of<br>valence electrons in an atom of<br>an element.<br>Determine if an atom is neutral<br>or electrically charged.<br>Describe how an ion is formed.<br>Differentiate between cations<br>and anions.<br>Utilize Lewis structures to show<br>ionic bonding.<br>Write ionic formulas and name<br>ionic compounds.<br>Describe polyatomic ions and<br>their charges. | GEN BR:<br>Complete valence<br>electrons questions<br>ADV BR:<br>Complete valence<br>electrons questions<br>Students will:<br>GEN: Watch video<br>What is an Ion? &<br>complete Is it an<br>Ion? worksheet;<br>watch Ionic<br>Bonding videos &<br>complete Bonding<br>Basics - Ionic; write<br>ionic formulas &<br>name ionic<br>compounds using<br>criss-cross method;<br>complete Writing<br>Ionic Formulas &<br>Naming<br>Compounds<br>worksheet.<br>ADV: Watch Ionic<br>Bonding Part 2 & 3<br>finish Bonding<br>Basics - Ionic;<br>Writing Ionic<br>Formulas &<br>Naming<br>Compounds; utilize<br>criss-cross method<br>to write formulas;<br>discuss properties<br>of ionic<br>compounds; watch<br>video of alkali<br>metals in water;<br>discuss polyatomic<br>ions & practice<br>naming & writing<br>of compounds with<br>them; introduce<br>Covalent Bonding. | Video - What is<br>an Ion? - Tyler<br>DeWitt<br>Is it an Ion?<br>Worksheet<br>Video -<br>Introduction to<br>Ionic Bonding -<br>Tyler Dewitt<br>Video - Ionic<br>Bonding Part 2 -<br>Tyler DeWitt<br>Video - Ionic<br>Bonding Part 3 -<br>Tyler DeWitt<br>Bonding Basics -<br>Ionic<br>Writing Ionic<br>Formulas &<br>Naming<br>Compounds<br>Video - Alkali<br>Metals in Water<br>Bonding Basics -<br>Covalent | Virtual<br>Assignment Due<br>Friday<br>Finish any<br>unfinished<br>classwork<br>ADV: Review<br>Polyatomic Ions<br>names &<br>formulas for quiz<br>Friday | Participation;<br>classwork | <ol> <li>Analyze patterns<br/>within the periodic<br/>table to construct<br/>models that illustrate<br/>the structure<br/>composition and<br/>characteristics of atoms<br/>and simple and<br/>complex molecules</li> <li>Plan and carry out<br/>investigations to<br/>generate evidence<br/>supporting the claim<br/>that one pure substance<br/>can be distinguished<br/>from another based on<br/>characteristic properties</li> </ol> |

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| W E D<br>1 2 -<br>9 | Utilize the criss-cross method to<br>write ionic formulas.<br>Name ionic compounds based<br>on their formula.<br>Describe covalent bonds and<br>what happens to valence<br>electrons in covalent bonds.<br>Differentiate between ionic and<br>covalent bonds.<br>Write and name covalent<br>compounds.<br>Discuss and differentiate<br>between polar and nonpolar<br>covalent bonds.<br>Describe how metallic bonds<br>form between metal atoms.<br>Describe properties of metallic<br>bonds.<br>Describe Hydrogen bonds. | GEN BR:<br>Complete ions<br>questions<br>ADV BR:<br>Complete ion<br>questions<br>Students will:<br>GEN: Review Ionic<br>bonding, writing<br>formulas, & naming<br>ionic compounds;<br>complete Ionic<br>Bonding Task<br>cards; complete<br>Ionic Bonding<br>Quiz; introduce<br>Covalent Bonding.<br>ADV: Complete<br>Checkpoint 3.1;<br>watch video - Ionic<br>vs. Molecular;<br>complete Bonding<br>Basics - Covalent;<br>complete Covalent<br>Bonding Guided<br>notes; complete<br>Naming Covalent<br>Compounds<br>practice; discuss<br>polar & nonpolar<br>covalent bonds;<br>discuss metallic<br>bonds & electron<br>pooling; describe<br>characteristics of<br>metallic bonds;<br>discuss Hydrogen<br>bonds. | Ionic Bonding<br>Task Cards<br>Ionic Bonding<br>Quiz<br>Video - Ionic vs.<br>Molecular - Tyler<br>DeWitt<br>Bonding Basics -<br>Covalent<br>Bonding Guided<br>notes | Virtual<br>Assignment Due<br>Friday<br>Finish any<br>unfinished<br>classwork<br>ADV: Review<br>Polyatomic Ions<br>names &<br>formulas for quiz<br>Friday | Participation;<br>classwork | <ol> <li>Analyze patterns<br/>within the periodic<br/>table to construct<br/>models that illustrate<br/>the structure<br/>composition and<br/>characteristics of atoms<br/>and simple and<br/>complex molecules</li> <li>Plan and carry out<br/>investigations to<br/>generate evidence<br/>supporting the claim<br/>that one pure substance<br/>can be distinguished<br/>from another based on<br/>characteristic properties</li> </ol> |
| F<br>R<br>I<br>1    | Describe covalent bonds and<br>what happens to valence<br>electrons in covalent bonds.<br>Differentiate between ionic and<br>covalent bonds.  | GEN BR:<br>Complete Lewis<br>Structure questions<br>ADV BR:<br>Complete Lewis   | Video - Ionic vs.<br>Molecular - Tyler<br>DeWitt<br>Bonding Basics -<br>Covalent  | Virtual<br>Assignment Due<br>Friday<br>Finish any<br>unfinished  | Participation;<br>classwork | 1. Analyze patterns<br>within the periodic<br>table to construct<br>models that illustrate<br>the structure<br>composition and   |
| 2<br>-              |   | Structure questions   | Covalent  | classwork  |                             | characteristics of atoms   |
| -<br>1              | Write and name covalent compounds.  | Students will:<br>GEN: Watch video  | Bonding Guided notes  |  |                             | and simple and complex molecules   |
| 1                   | Describe how metallic bonds form between metal atoms.   | - Ionic vs.<br>Molecular;<br>complete Bonding<br>Basics - Covalent;<br>complete Covalent<br>Bonding Guided  | Naming Covalent<br>Compounds<br>A+/E3 Unit 3<br>notes<br>A+/E3  |  |                             | 2. Plan and carry out<br>investigations to<br>generate evidence<br>supporting the claim<br>that one pure substance<br>can be distinguished   |
|                     | Describe properties of metallic bonds.  |   |   |  |                             |  |
|                     | Differentiate between ionic,  | notes; practice<br>naming & writing   | Polyatomic Ion<br>Quiz #1   |  |                             | from another based on  |
|                     |   | <b>I</b>  | ı   |  |                             |  |