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| **Lesson Plan:**  |

**Prescribed learning outcomes:**

**C1** use modern atomic theory to describe the structure and components of atoms and molecules

**C2** use the periodic table to compare the characteristics and atomic structure of elements

**C3** write and interpret chemical symbols of elements and formulae of ionic compounds

**C4** describe changes in the properties of matter

**MOD Learning objectives**

1. Write chemical formulae of ionic compounds, metal and non-metals, with their appropriate subscripts
2. Write the proper chemical name, given a chemical formulae of an ionic compound between a metal and a non-metal
3. Provide an example of a chemical and physical change and justify their choice
4. Identify a chemical or physical change as endothermic or exothermic and justify their choice
5. Use the Kinetic Molecular Theory to explain how added/removed heat from a substance changes the motion of particles inside the substance
6. Explain how the motion of the particles inside a substance affects the spacing between particles and the total volume the substance takes up
7. Draw Bohr models of neutral atoms from Hydrogen to Calcium

**Learning objectives**

1. Use the trends in the periodic table to predict the properties of elements with respect to their group (alkali, alkaline, halogens, noble gas, metal, non-metal, and metalloids)
2. Use KMT to explain state changes using concepts of temperature and density in your explanation
3. Categorize natural and artificial processes as physical and chemical changes (ex. state changes)
4. Use the periodic table to describe and calculate the make-up of atoms, including the number of protons, neutrons, and electrons
5. Draw Bohr models of the first 20 elements in their neutral and ionic form
6. Explain the formation of ions using the stable configuration of noble gasses
7. Recognize and correct mistakes in chemical formulas of ionic compounds
8. Draw Bohr models for ionic compounds written in their chemical formulas
9. Construct ionic compounds from at least 2 different elements

**Material and equipment needed**

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| powerpoint | notes | activity sheet | Bohr model for Blade/Don |  |

**Assessment Plan:**

**Formative -** Activity sheets

**Hook and Introduction**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 8:40-8:50 | * Toys with Bohr models
 | * Show students how to use white board to make Bohr models
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**Development**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 8:50-9:50 | * Station problems
 | * Stations: **Bohr models**, chemical formulae (Y), chemical naming (Y), **physical/chemical changes, KMT**
* Students spend 30mins at each station - pick up activity sheet from table, use learning aids (if available) to help them, can do extension questions if they have time
* Hand in today's activity sheets
* Use groups from last class
* If students who haven't interviewed arrive, interview them if Blade/Donavon haven't showed up
* Teacher will assist groups until Blade and Donavon arrives - they will receive a short lesson on Bohr Models
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**Closure**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 9:50-9:55 | * Clean up
 | * Write an example of an endothermic chemical change. What happens to the spacing between particles when you add heat? Are these particles moving slow or fast?
* Quiz next class, Tues. Review next Thursday. Unit test Tues after Easter holidays
 | Exit Slip |

HW:

Physical and Chemical changes + KMT