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| **Lesson Plan:** |

**Prescribed learning outcomes:**

**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 KMT to explain state changes using concepts of temperature and density in your explanation

**Material and equipment needed**

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| powerpoint | notes | activity sheet |  |  |  |

**Assessment Plan:**

**Formative -** self-assessment on learning, brainstorming on genetics

**Hook and Introduction**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 8:40-8:50 | * Check in with students * Go over what we're doing today | * Have music on while class comes in * Blow a balloon and tell the class the balloon will go in the freezer. Ask them to predict what is going to happen |  |

**Development**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 8:50-9:10 | * Powerpoint notes with PhET simulation | * KMT notes and simulation |  |
| 9:10-9:50 | * Meeting with students individually | * Have students start on activity sheet while interviews are in progress * Have homework posted on the powerpoint * Donavon and Blade will come in late. Students who are regularly late will need more attention * Regular students:  What is your goal for this course? How do you think you're doing right now? What could you do to change that? What could I do to change that? How could you ask for help? Where could you get help? Show them the assignments they need to hand in and go over their quiz. Last comments. * Modified program, have special aids teacher listen in: What have you learned so far? Similar questions as above. * When done, assemble the students from this program and show them the card game. Teach them the card game and encourage the special aids teacher to play with them during their skills block. * Will meet the rest on the next day if not enough time |  |

**Closure**

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| **Time** | **Activity** | **Teaching notes** | **Assessment** |
| 9:50-9:55 | * Balloon KMT Exit Slip | * Take the balloon out of the freezer. Exit slip - hand in before you leave. * Question: what happened to the air particles inside the balloon? Why? * Other questions: What happened? Why? What happened to the air particles before and after? Spacing between particles? Total volume these particles occupy? What would happen if we heat the balloon up instead? | Exit Slip |

HW:

pg 27 - 4, 5, 7, 8, 10, 12, 14, 16