**Lesson Cycle**

**Lesson Title/Topic:** What’s the Matter?

**Concept:** Matter – Solids, Liquids and Gases

**Standards/Rationale: 3rd Grade TEKS 112.14 (b) (5) (B)** – describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container;

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| **Learning Target:** | **Assessment:** |
| Student will identify and categorize solid, liquid and gas on “fruit loop project” with 80% accuracy. | Complete Fruit Loop Project |

**Materials:** multiple solid-liquid-gas items, projector, matter images for Inside-Outside Circle activity, fruit loops, construction paper, glue, markers, worksheet w/ matter images, scissors

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| **Lesson Cycle:** **(Direct instruction)** |

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| **The teacher will:** | **The student will:** |
| **Focus/Mental Set**   * Arrange students in groups of 4 at each table. * Place multiple items/pictures at each table that represent solids, liquids and gases. * Ask each group to classify each item/picture in a group. (Do not tell them how to group or what categories are. Let them decipher how to group items and see what they come up with.) * Let each group explain their choice of grouping. * Ask students to now try and group items based on what they feel are solids, liquids and gases. This is based on what they *may* already know. (It’s ok to make mistakes and debate each other’s idea, as long as students stay respectful of one another.) * Let each group explain their new choice of grouping. Why did they select certain item as solids? Why did they select certain items as liquids? Why did they select certain items as gases? * Apply the knowledge students already know and applied in the demonstration. Explain we will be learning more details about the types of matter. Matter is EVERYWHERE. Everything is made of matter, in the form of solid, liquid or gas. How do we know the difference of each? | * Group in 4’s and wait for teacher instruction. * Discuss and interact with group. Determine best group for sample items. * Explain category choices with class. * Discuss and group examples. * Explain category choices with class. |
| **Teacher Input:**   * Start fun music video- Matter Chatter:   <https://www.youtube.com/watch?v=C33WdI64FiY>   * Allow students to move, wiggle, dance and have fun with song. After each verse that defines a type of matter, PAUSE the video. Have students FREEZE. Ask if they can come up with examples? * Explain to student we will demonstrate the difference between each type of matter-solid, liquid, gas. Matter is made up of particles so tiny we can’t see them. They are only seen with a microscope. * Tell students to stand up. They will each represent these tiny particles. (Make sure classroom door is closed.) * Demonstrate a SOLID. Have students stand very tightly together, wrapping their arms around one another, squeezing together as close as possible.   Explain-You are like a solid, particles packed so tightly to form a shape that cannot move. Show students example such as a solid wooden block.   * Demonstrate a LIQUID. Have students spread out but holding hands. Explain-You are like a liquid, particles have movement but, limited movement. Show example such as a half-filled water bottle. The water can move inside container. Liquid takes the shape of its container. * Demonstrate a GAS. Have students spread out as far as they can from one another, where no one is touching. Explain-You are like a gas, particles moving freely, floating around in the air. Show a filled balloon with oxygen and pop it. Gas is contained inside the balloon until it is popped. When it pops, particles float freely. In fact, most gases are invisible. * Open the classroom door. Repeat these 3 activities. When, GAS is demonstrated let some students “float” out the door. Relate this to the balloon that popped and the oxygen escaped the balloon. | * Watch video.   Move and wiggle to song!  Have fun but, listen!   * Freeze when instructed and give examples. * Stand, move and demonstrate solid.      * Stand, move and demonstrate liquid. * Stand, move and demonstrate gas. * Stand, move and demonstrate all types of matter together. |
| **Guided Practice:**   * Organize students in 2 circles for “Inside-Out Circle” cooperative learning. * Students will rotate and be facing new partners as the activity continues. * Place image on projector. * Ask *inside* circle to identify solid, liquid or gas. Ask *outside* circle to explain why? What qualifies this as such? Show multiple images for practice. * Ask *outside* circle to identify solid, liquid or gas. Ask *inside* circle to explain why? What qualifies this as such? Show multiple images for practice. * Observing students. Are they grasping concept of matter? Stop and discuss deeper as needed. * Have students return to tables and hand out construction paper, glue and Fruit Loops for Matter project. * Have students draw 3 boxes labeling each as SOLID, LIQUID and GAS. * Explain to glue fruit loops within each box representing particles. * Observe if students are placing fruit loops close together for SOLID, fewer fruit loops spread a little further for LIQUID and a very small amount of fruit loops for GAS. * Monitor class and provide verbal feedback. | * Participate in “Inside-Outside Circle” activity. * Work on fruit loop project. |
| **Independent Practice:**   * Provide worksheet with multiple images. Have student cut out images and glue underneath appropriate fruit loop box labeled SOLID, LIQUID and GAS. | * Add appropriate images to fruit loop project. |
| **Closure:**   * Ask student to write one interesting thing they learned about matter today. | * Turn in as exit ticket. |

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| **Options:** |  |
| ***Enrichment:*** | ***Reteach:*** |

**Modifications/Correctives:**

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| **Special Education – Orthopedic Impairment (wheelchair)**  Accommodations   * Plenty of space will be left in between desks and tables. * Walkways will remain clear.   Modifications   * Student will have access to participate during matter demonstration with other students. However, student will not be “required” to do full length of demonstration.   **504 Plan – Anxiety Disorder**  Accommodations   * Student will sit near teacher. Student will be encouraged but not “required” to participate in group activities. He/she may work alone instead. * Student may observe others during matter demonstration. * Student will write answers on dry erase board and stay seated.   **504 Plan – Diabetes**  Accommodations   * Student is allowed restroom breaks at any time. * Daily schedule for snack, juice and medication will be followed according to parent/doctor. * Student will be provided with silent, vibrating wristband for notification. |  |

**References:**