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| Force and Motion Little Science Thinkers Unit 6 | | | | | | | |
| Kindergarten   April 29-May 3, 2019 | | | | | | | |
| **Standards:**  K-PS2-1: Plan and conduct and investigation to compare the effects of different strengths or different direction of pushes and pulls on the motion of an object  K-PS2-2: Analyze the data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. | | | | Focus Skills:  \* Investigate how force and gravity affect the motion of an object.  \* Investigate how a marble moves using different ramps.  \* Investigate how simple machines work. | | | |
| Materials Needed for Marble and Ramp Experiment: Marble, pool noodle (12” section cut into 2 semi circle ramps), wooden blocks, piece of felt or rug, paper cups, tape measure, Marble and Ramp Experiment Booklet. | | | | | |  | |
|  | Monday (4.29) | Tuesday (4.30) | Wednesday (5.1) | | Thursday (5.2) | | Friday (5.3) |
| Learning Target | We can explain how gravity affects motion. | We can conduct an experiment to learn how a marble moves using different ramps. | We can explain what a simple machine is. | | We can investigate Simple Machines  **Simple Machines Stations Materials needed:**  > Lever: pink erasers and popsicle sticks to create a lever and fulcrum; assorted small objects of different sizes, shapes, and weights.  \*Students will use their own lever and fulcrum to lift different objects.  >Wheel and Axle: buttons, pipe cleaners, straws cut into 1/4ths., construction paper, cotton balls, tape scissors.  \* Students will use their materials to build a car to carry a cotton ball.  > Wedge: plastic trays, playdoh, plastic knives, unsharpened pencils, paper and cardboard cut into wedge shapes, small garden shovel, push pins, nails  \* Students will use various tools to cut playdoh  >Pulley: 2 chairs turned back to back and a broomstick; tape a plastic baggie to the end of a long string of yarn and use objects of different sizes and weights.  \* Students will use the pulley system to lift objects of different weights and sizes.  >Incline Plane: hard cover books, blocks, rulers, long pieces of yarn, objects of different sizes and weights.  \* Students will create an incline plane using yarn to pull objects on the incline plane.  > Screw: jars and bottles of different sizes and shapes, pompoms, nuts and bolts  \* Students will investigate when a screw is properly fastened and when it is not.  \*Students will record their findings in their Simple machines Stations Booklet.  Students will complete 3 stations each day. | | |
| Science | Force and Motion Lesson 5:  \* Introduce the learning target, display the guiding question: “What is gravity? What are some examples of gravity?” on chart paper and ask students to share their ideas.  \* Read and discuss Gravity (Display PP on Activeboard)  \* Revisit guiding question and record student responses.  Investigation:  \* Students will investigate the properties of objects affect the way they move.(color, size, shape, weight, and texture) and record their results on a recording sheet.  \*Students will share their results with the class and the teacher will record the results on an anchor chart.  \* Students will complete Activity Page 6.5 | Force and Motion Lesson 6:  \* Revisit previous anchor chart about what scientists do:    Marbles and Ramps Experiment:  \* Students will use the materials listed above to see how different ramps affect eh force and motion of the marble.  \* Students will make predictions about how the marble moves and record their predictions in their experiment booklet.  \* Students will record their results as they move the marble on high and low ramps in their experiment booklet.  *This activity can be done on small groups or as a whole class,. Students will need guidance from the teacher to set up the ramps before moving the marbles.*  \* Students will complete Activity Page 6.6 | Force and Motion Lesson 7:  Introduce the learning target and display the guiding questions: “What is a simple Machine?” and “How do we use simple machines?” on chart paper.  \*Read and discuss Simple Machines (display PP on Activeboard)  \* Revisit guiding questions and record student responses.  \*Students will help to create an anchor chart using pictures of different simple machines.    \*Students will use pictures from the PP displayed on the ActiveBoard to determine the type of simple machine each object is.  \*Students will complete Activity page 6.7 | |