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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 objectK-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 |