|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Investigation/Part** | **Focus Question** | **Writing Support** | | **CCSS-ELA**  **NGSS** |
| Investigation 1: Part 1  Looking at Water | Do all liquids behave like water? | After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stem, using the class data to support the claim.  I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentence. Then have students use the sentence stem to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  Conduct short research projects that build knowledge about a topic. [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.  [**NGSS 2-PS1-1**](http://www.nextgenscience.org/2ps1-matter-interactions)  Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. |
| Investigation 1: Part 2  Surface Tension | How does soap and salt affect surface tension? | After the investigation, have a class discussion about the students’ predictions and what was actually observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  At first I thought\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  But now I think\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,  because I observed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 1: Part 3  Water in a Slope | How does the size of a drop affect its motion on a slope? | After the investigation, have a class discussion about their water and slope observations. Have students refer to their notebooks to recall predictions and generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  The larger the drop of water on a slope, the faster/slower the drop flows down the slope.  The evidence for this is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  The higher the slope, the faster/slower the drop of water flows down the slope.  The evidence for this is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/)  [**NGSS 2-ESS2-1**](http://www.nextgenscience.org/2ess2-earth-systems)  Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.\* |
|  | | | | |
| Investigation 2: Part 1  Build a Thermometer | How does heat energy change water? | After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  When the thermometer system was heated, I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  When the thermometer system was cooled, I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 2: Part 2  Sinking and Floating Water | How does heat energy change water? | After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  Cold water is \_\_\_\_\_\_\_\_\_dense than hot water.  The evidence is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Therefore, I think that heating water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.2c](http://www.corestandards.org/ELA-Literacy/W/3/2/c/)  Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information.  [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  Provide a concluding statement or section.  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 2: Part 3  Water as Ice | How do we change liquids to solids? | After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  Ice was \_\_\_\_\_\_\_\_\_ dense than the water, because \_\_\_\_\_\_\_\_\_\_.  But, the water melting from the ice cube was \_\_\_\_\_\_\_\_\_\_\_\_\_\_  dense than the water, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Therefore, ice is \_\_\_\_\_\_\_\_\_\_\_ than liquid water.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.2c](http://www.corestandards.org/ELA-Literacy/W/3/2/c/)  [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
|  | | | | |
| Investigation 3: Part 1  Evaporation | How is an observation different than an inference? | Have students record observations in their science notebooks. After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stems, using the class data to support the claim.  The paper towel in an open container weighed \_\_\_\_\_\_\_ than the paper towel in the closed container.  It can be inferred that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | | [CCSS.ELA-Literacy.W.3.2c](http://www.corestandards.org/ELA-Literacy/W/3/2/c/)  [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 3: Part 2 Evaporation Locations | Where does water go when it evaporates? | After a class discussion of their observation patterns, have students write to the following prompts:  Where would you put a towel if you wanted it to dry quickly?  I think this because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 3: Part 3 Surface Area | How does surface area affect evaporation? | After a class discussion of their observation patterns, have students write to the following prompts:  Would you spread out or wad up a towel if you wanted it to dry quickly?  I think this because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | | [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) |
| Investigation 3: Part 4 Condensation | How do we know water is part of the air? | Have students record observations in their science notebooks. After the investigation, have a class discussion about what was observed. Have students refer to their notebooks to generate observations to share and write on the board. Model the use of the sentence stem, using the class data to support the claim.  Water that forms on the outside of a cup of ice water comes from \_\_\_\_\_\_\_\_ because I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentence. Then have students use the sentence stem to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.)  Then, have students write to the following prompt:  What roles do evaporation and condensation play in the world-wide recycling of water? | | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/)  [CCSS.ELA-Literacy.W.3.2a](http://www.corestandards.org/ELA-Literacy/W/3/2/a/)  Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.  [CCSS.ELA-Literacy.W.3.2b](http://www.corestandards.org/ELA-Literacy/W/3/2/b/)  Develop the topic with facts, definitions, and details.  [CCSS.ELA-Literacy.W.3.2c](http://www.corestandards.org/ELA-Literacy/W/3/2/c/)  [CCSS.ELA-Literacy.W.3.2d](http://www.corestandards.org/ELA-Literacy/W/3/2/d/)  [**NGSS 2-ESS2-3.**](http://www.nextgenscience.org/2ess2-earth-systems)  Obtain information to identify where water is found on Earth and that it can be solid or liquid. |
|  | | | | |
| Investigation 4: Part 1  Water in Earth materials | What holds more water, gravel or soil? | After the class discussion about the students’ data, model the use of the sentence stems, using the class data to support the claim.  When water is poured into gravel, I observed \_\_\_\_\_\_\_\_\_\_\_\_\_.  When water is poured into soil, I observed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the sentence stems to complete their own sentences in their science notebooks referring to their own observations. (Sentence stems can be printed off and glued into notebook or written in by students.) | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) | |
| Investigation 4: Part 2  Comparing the Seasons | Focus: Technological Design  Make a water wheel that can lift a weight. | After designing and testing their water wheels, have students write to describe to younger students:  How does a waterwheel work? | [CCSS.ELA-Literacy.W.3.4](http://www.corestandards.org/ELA-Literacy/W/3/4/)  With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.  [**K-2-ETS1-1.**](http://www.nextgenscience.org/k-2ets1-engineering-design)  Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.  [**K-2-ETS1-2.**](http://www.nextgenscience.org/k-2ets1-engineering-design)Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.  [**K-2-ETS1-3**](http://www.nextgenscience.org/k-2ets1-engineering-design)Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. | |
| Investigation 4: Part 3 Water from Home | Use evidence to describe how people affect the water quality in our community. | Have students find out about their local water supply. Where does it come from? Where is it stored? How is water treated? The local water utility is a good place to start this information search. Have students prepare an illustrated report for presentation. | [CCSS.ELA-Literacy.W.3.4](http://www.corestandards.org/ELA-Literacy/W/3/4/)  With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.  [CCSS.ELA-Literacy.W.3.5](http://www.corestandards.org/ELA-Literacy/W/3/5/)  With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.  [CCSS.ELA-Literacy.W.3.6](http://www.corestandards.org/ELA-Literacy/W/3/6/)  With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.  [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) | |
| Investigation 4: Part 4  Choosing your Own Investigation | Design an investigation to learn about water. | Students prepare for their presentations by writing to the following prompts:  1. What were you trying to find out?  2. What materials or references did you need to do your project?  3. What procedure did you follow to complete your project?  4. What did you learn from doing your project? | [CCSS.ELA-Literacy.W.3.7](http://www.corestandards.org/ELA-Literacy/W/3/7/)  [CCSS.ELA-Literacy.W.3.8](http://www.corestandards.org/ELA-Literacy/W/3/8/) | |