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| **Investigation/Part** | **Focus Question** | **Writing Support** | **CCSS-ELA**  **NGSS** |
| Investigation 1: Part 1  Exploring Air | What is air? | 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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/) Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). |
| Investigation 1: Part 2  Air under Water | What is evidence that air is there? | 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.  Air takes up space. The evidence is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/) P  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) Recall information from experiences or gather information from provided sources to answer a question. |
| Investigation 1: Part 3  Parachutes | Focus: Technology Design  Use air to make a parachute fall slowly | After the investigation, have a class discussion about their parachute and wind resistance observations. 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 the parachute moving slowly to the floor. I think this is because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)   * [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 1: Part 4  Pushing on Air | What can you push with air? | 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.  Air is matter. I think this because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 1: Part 5  Air and Water Fountain | Focus on Systems: Draw and label a syringe and bottle system that can push air and 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.  Air is takes up space. I think this because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 1: Part 6  Balloon Rockets | How is a balloon rocket similar and different from a real rocket? | After the investigations, have a class discussion using the following frame to collect students thinking:  How is a balloon rocket different than a real rocket?  Balloon Rocket Real Rocket  How are the balloon rocket and the real rocket the same?  Use the following sentence stems to model writing a sentence using the information collected.  The balloon rocket and the real rocket both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The balloon rocket is different because the balloon rocket \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the real rocket \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the blank sentence stems to complete their own sentences in their science notebooks. (Sentence stems can be printed off and glued into notebook or written in by students.) | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
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| **FOSS includes a language extension project entitled *Create Meteorologist Tool Kits.* It is thoroughly described in the INTERDISCIPLINARY EXTENSIONS section at the end of the investigation. As students move through the kit investigations, they create an interactive book to take home.** | | | |
| Investigation 2: Part 1  Weather Calendars | How do scientists study the weather? | Focus students on how scientists record observations in journals by modeling a weather journal entry. | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/) |
| Investigation 2: Part 2  Measuring Temperature | What tools does a meteorologist use to study the weather? | Focus students on how scientists record observations in journals by modeling a weather journal entry for temperature.  **If making the tool kit, have students write about their thermometers using the sentence stem provided.**  **If I were a meteorologist, I would measure temperature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 2: Part 3  Watching Clouds | What are clouds made of? | After the investigations, have a class discussion using the following frame to collect students thinking:  How are all clouds the same?  How are clouds different?   |  |  |  | | --- | --- | --- | | Cirrus | Cumulus | Stratus | |  |  |  |   Students will likely provide observations using drawings. Model for them words the use of words they can use to describe their drawings. For example, wispy or rounded. Use the following sentence stems to model writing sentences using the information collected. Not all sentences stems need to be used.  I observed that clouds all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Cirrus clouds are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, whereas cumulus clouds are\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Cirrus clouds are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, whereas stratus clouds are\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Cumulus clouds are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, whereas stratus clouds are\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Consider modeling with one of the contrast stems, then leaving another contrast stem as a scaffold. Then have students use the blank sentence stems to complete their own sentences in their science notebooks. (Sentence stems can be printed off and glued into notebook or written in by students.)  **If making the tool kit, have students glue their *Cloud Types* sheet to the back of their temperature/thermometer page.** | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 2: Part 4  Measuring Rain | What causes rain to fall? | 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.  When it is going to rain, I observe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.)  **If making the tool kit, have students glue a *Rain-Gauge Picture* on a 3” x 8 “ piece of construction paper. Have them make a pocket page for their book. Have them write about how to measure rain using the sentence stem provided.**  **If I were a meteorologist, I would measure rain\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)   * [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
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| Investigation 3: Part 1  Bubbles in the Wind | How are bubbles evidence of wind direction? | Have students record bubble 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.  Bubbles can tell us \_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 3: Part 2 Wind Speed | What does and anemometer measure? | Focus students on how scientists record observations in journals by modeling a weather journal entry for wind speed.  **If making the tool kit, complete anemometer page as directed. Have students write about their anemometers using the sentence stem provided.**  **If I were a meteorologist, I would measure wind speed\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)   * [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 3: Part 3 Pinwheels | What is evidence of how strong the force of air or wind can be? | After the investigations, have a class discussion using the following frame to collect students thinking:  How are the pinwheel and the anemometer the same?  How is a pinwheel different than an anemometer?  Pinwheel Anemometer  Use the following sentence stems to model writing a sentence using the information collected.  The pinwheel and the anemometer both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The pinwheel different, because the pinwheel\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the anemometer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentences. Then have students use the blank sentence stems to complete their own sentences in their science notebooks. (Sentence stems can be printed off and glued into notebook or written in by students.) | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 3: Part 4 Wind Vanes | Which way does the wind usually blow at our school? | Focus students on how scientists record observations in journals by modeling a weather journal entry for wind direction.  **If making the tool kit, complete wind vane page as directed. Have students write about their wind vane using the sentence stem provided.**  **If I were a meteorologist, I would measure wind direction \_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | [CCSS.ELA-Literacy.W.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 3: Part 5 Kites | What is a good design for a kite? | Have students connect this activity to their past experiences by having them write to the prompt and sentence stem:  What weather instruments are helpful in flying a kite?  I think this because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
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| Investigation 4: Part 1  Weather Graphs | How do scientist share their data? | After the class discussion about the students’ data, model the use of the sentence stems, using the class data to support the claim.  The type of weather we had the most of was \_\_\_\_\_\_\_\_\_\_\_\_\_\_, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  The type of weather we had the least of was \_\_\_\_\_\_\_\_\_\_\_\_\_\_, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  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.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 4: Part 2  Comparing the Seasons | How are shadows evidence of the earth moving? | After the investigation, have a class discussion where students gather their observations from their science notebooks.   |  | | --- | | Where in the sky do you see the sun in the morning? | |  | | Where in the sky do you see the sun around noon? | |  | | Where in the sky do you see the sun in the late afternoon? | |  | | When do you not see the sun? | |  |   Model the use of the sentence stem, using the class data to support the claim.  The sun moves across the sky during the day. I think this because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  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.2.7](http://www.corestandards.org/ELA-Literacy/W/2/7/)  [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |
| Investigation 4: Part 3 The Night Sky | What might cause the shape of the moon “appear” to change from day to day? | After a class discussion of their night observation patterns, have students write to the following prompts:  Draw a picture of the objects you saw in the night sky and write a few words or sentences about those objects.  How does the Moon look different in the sky at different times during the month? | [CCSS.ELA-Literacy.W.2.8](http://www.corestandards.org/ELA-Literacy/W/2/8/) |