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| **Investigation/Part** | **Focus Question** | **Writing Support** | **CCSS-ELA**  **NGSS** |
| Investigation 1: Part 1  Brassica Seeds | What do scientists write about? | Have students complete the pre-assessment by having them draw a plant they have seen, and label any parts they know.  On the facing page in their science notebook, have them write (or dictate) how new plants start. | [CCSS.ELA-Literacy.W.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/) With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. |
| Investigation 1: Part 2  Planting Brassica | What evidence would show that seeds are alive? | Have students answer the focus question in their science journal, either as a labeled diagram or in writing. | [CCSS.ELA-Literacy.W.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/) |
| Investigation 1: Part 3  Observing Brassica Growth | What parts are needed to make a whole flowering plant? | Using a Brassica plant grown for this purpose, model for students how to complete the data table below.   |  |  |  | | --- | --- | --- | | Day # |  |  | | Date |  |  | | Illustration |  |  | | Height |  |  | | Growth |  |  | | New plant parts and changes |  |  |   Demonstrate how to complete the following sentence stems referring to the data posted.  On day \_\_\_\_, I observed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  I also noticed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  On day \_\_\_, the plant has the following parts:\_\_\_\_\_\_\_\_\_\_\_\_. | [CCSS.ELA-Literacy.W.1.2](http://www.corestandards.org/ELA-Literacy/W/1/2/) Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.  [**NGSS 1-LS3-1**](http://www.nextgenscience.org/1ls3-heredity-inheritance-variation-traits)Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. |
| **The video entitled *Plants* in *Writing in Science in Action* , by Betsy Rupp-Fulwieler shows a teacher conducting classroom discussions and modeling writing with scaffolds. It is an excellent demonstration of supporting students in gathering excellent observations, discussing the observations scientifically, and writing about what they observed.** | | | |
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| Investigation 2: Part 1  Lawns | What are the needs of plants? | After the investigations, have a class discussion using the following frame to collect students thinking:  How are Brassica and Grass different?  Brassica Grass  How are Brassica and grass the same?  Use the following sentence stem to model writing a sentence using the information collected.  Brassica and grass both need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_to grow.  Remove the model sentence. Then have students use the slightly different blank sentence stem to complete their own sentences in their science notebooks. (Sentence stems can be printed off and glued into notebook or written in by students.) Have students complete the following sentence stem:  Plants need \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to grow. | [CCSS.ELA-Literacy.W.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/) |
| Investigation 2: Part 2  Mowing the Lawn | Do all plants grow back after being cut? | After mowing the lawns and observing regrowth, 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 think \_\_\_\_\_\_\_\_\_\_\_\_\_would make a better lawn, 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.) | [CCSS.ELA-Literacy.W.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/) |
| Investigation 2: Part 3  Wheat | Do plants need soil to live? | Have the students write a story of what it is like to be a plant. For the story, have them choose one of their growing plants and name it. Ask them to write from their plant’s perspective, telling all about how it was planted, what it needs to grow, what its parts are, and what it does.  A variety of sentence stems can be provided to support this writing. As always, the teacher should model the use of the stems and remove the model when students write on their own.  Here are some sample stems that may be used:  I am a \_\_\_\_\_\_\_\_\_\_\_\_plant named\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  I was planted \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Then, I was provided with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so I could grow.  I have \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that help me\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | * [CCSS.ELA-Literacy.W.1.3](http://www.corestandards.org/ELA-Literacy/W/1/3/) Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure. |
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| Investigation 3: Part 1  Rooting Stem Cuttings | Is the seed the only part from which new plants can grow? | Students should record dates, day and observations about their cuttings.  Use the following sentence stem to model writing a sentence using the information collected.  Roots formed on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentence. Then have students use the blank sentence stem 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.1.2](http://www.corestandards.org/ELA-Literacy/W/1/2/) |
| Investigation 3: Part 2 New Plants from Cuttings | What will keep our new plant alive? | Provide students with some good websites picturing house plants, agricultural plants, or other plants for students to compare to their classroom plants. Have student record collected observations and information in their notebook. | * [CCSS.ELA-Literacy.W.1.7](http://www.corestandards.org/ELA-Literacy/W/1/7/) Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). |
| Investigation 3: Part 3 Spuds | How will we know if a potato is a root or stem? | After the investigation, have a class discussion about the potato plant parts. Have students refer to their notebook observations. Use the data chart to display their observations.   |  |  |  |  | | --- | --- | --- | --- | | **Plant Name** | **Potato** | **Grass** | **Brassica** | | **Leaf Diagram** |  |  |  | | **Leaf Description** |  |  |  | | **Stem Diagram** |  |  |  | | **Stem Description** |  |  |  |   Use some of the following sentence stem to model writing a sentence using the information collected.  I observed that potato leaves are different than grass leaves, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  I observed that potato leaves are different than Brassica leaves, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  I observed that potato stems are different than grass stems, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  I observed that potato stems are different than Brassica stems, because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.  Remove the model sentence. Then have students use a blank sentence stem 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.1.2](http://www.corestandards.org/ELA-Literacy/W/1/2/) |
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| Investigation 4: Part 1  Bulbs | Are bulbs alive? How do you know? | Students can draw their observations into their science notebooks and add labels or dictate a sentence.   |  |  |  | | --- | --- | --- | | Day # |  |  | | Date |  |  | | Illustration |  |  |   After a class discussion about their observations, have students write to this sentence stem.  Bulbs are alive, because I observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. | [CCSS.ELA-Literacy.W.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/) |
| Investigation 4: Part 2  Planting Roots | Will roots produce a new plant like a stem? | After the investigation, have a class discussion where students gather their observations from their science notebooks. Display their evidence in a table on the board.   |  | | --- | | What evidence do we have that plants can grow from seeds? | |  | | What evidence do we have that plants can grow from stems? | |  | | What evidence do we have that plants can grow from bulbs? | |  | | What evidence do we have that plants can grow from roots? | |  |   Model the use of the sentence stem, using the class data to support the claim.  Plants can grow from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 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.1.8](http://www.corestandards.org/ELA-Literacy/W/1/8/)  [**NGSS 1-LS3-1**](http://www.nextgenscience.org/1ls3-heredity-inheritance-variation-traits)Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. |