

Strand: <b>8.3</b>	Standard: <b>8.3.1</b>	Episode 5	<b>Big Idea:</b> When given the right resources, plants grow.
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<b>Title:</b> How Does Your Garden Grow?	<b>Time:</b> 45 minutes	<b>CCCs</b> <u>Energy and Matter</u>	<b>Practices:</b> <b>Obtaining, evaluating and communicating information</b>
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### **Narrative of episode:**

Students will draw what they understand at this point about what plants need to grow. They will then read an article that will help them find some of the information about photosynthesis. They will finish by altering their original drawings to show what they understand differently.

### *Gather:*

Give students the model/diagram sheet. Have them draw what plants need to take in as well as what plants need to create in order to grow.

Explain to the students that they will be doing a “close read” of a short article called “How Does Your Garden Grow” to **obtain information** about plant growth.

**Teacher note:** A close reading is a 2nd or 3rd reading of the text. It is an intensive analysis of a text in order to come to terms with what it says, how it says it, and what it means. It is the process one goes through to find meaning of the text to understand a big idea or answer an essential question. Furthermore, looking closely at text will lead to stronger writing and an ability to communicate their newly found ideas, knowledge, or opinions. The determination of what type of close read depends on student need or what the text best reveals.

Students may read individually, in pairs or as a group. Students work in pairs or groups as they discuss and identify information from the article. Each student gets a copy of the article and a copy of the evaluation sheet. The article will be read three to four times depending on what you want to focus on in the article.

*(Teacher Note: An evaluation sheet is provided for this close read. If you would like your students to use a different evaluation method that is fine. The most important thing is that the students read the article more than once and focus on and obtain specific information from the article. The article has an informational text structure.)*

### *Reason:*

Then have the students read individually, in pairs or as a group and work through and answer the questions on the evaluation sheet as they read through each additional time. Each student gets a copy of the article and a copy of the reading guide.

At the end of the close read students will reflect on what they learned through this process.

Using the information they have learned have students go back to their original model they drew and make the necessary changes to their model diagram to make it accurate.

### *Communicate:*

Have students compare their models and discuss what is different about them and what changes they think need to be made.

They should be able to use this information as they design experiments and construct explanations in subsequent episodes.

<b>Assessment:</b>  The student reflection can be used as a formative assessment.  Use the students model diagram showing the flow of energy and matter in and out of the system during the process of photosynthesis as a way of identify where the students are at in their understanding of photosynthesis. The focus should be on the transfer of matter and the transfer of energy.	<b>Materials, resources, handouts, etc:</b>  <a href="#">Evaluation sheet</a> Article: <a href="#">How Does Your Garden Grow Plant growth model/diagram</a>
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