



Elaborate: Take a Note

Plants Module

Use this guide to provide students with the opportunity to further develop the science processing skills demonstrated in the online Take a Note activity.

This teacher support document can be completed in conjunction with the online Take a Note.

Why science processing skills?

The purpose of the Take a Note activity is to provide students with the opportunity to apply and extend their scientific reasoning and processing skills while utilizing formal definitions and explanations. Teaching scientific reasoning and processing skills in the early elementary classroom is often overlooked. Students need to have exposure and practice with making and recording accurate observations and building communication skills. In the Take a Note Activity, students will have the opportunity to read and interpret information in a variety of formats, such as data tables, graphs, pictures, charts, and analogies. Incorporating these skills into a digital format where they are heavily scaffolded makes them more accessible for early learners.

In this activity, students will conduct an experiment to determine the effect of different factors on the plants being tested. They will need to decide which factor(s) are the controls and which are the variables. Once controls and variable are determined, the experiment should be modified by changing the variable. To provide additional instructional support, embedded mini lesson “Teach me about factors!” is included for review or clarification.

Reveal student knowledge and understanding

Use the following questions during the activity to encourage your students to think about what they now know about plants. These questions are designed to reveal student knowledge of the concepts. Incorrect responses or misunderstandings should be addressed and corrected at this time.

- Use the following questions while the students are engaged in the activity:
 - What are factors in an experiment?
 - Explain the difference between a control and a variable.
 - Why do we only change one variable in an experiment?
 - What important part of an experiment is the control?
 - Why is it important to collect data while conducting an experiment or investigation?

Enhancing the skill

To enhance the scientific processing skills presented in this activity, it is important to provide students with the opportunity to make real life observations, discuss those observations with their peers, share their ideas, and finally, summarize their experience.

Use the format and suggested activity below to further enhance scientific processing skills.

- **Do:** Provide students with the opportunity to work with their peers.
- **Discuss:** Encourage students to exchange ideas while within their groups.
- **Communicate:** Help students to share observations and findings with the class.
- **Collaborate:** Provide students with the opportunity to summarize their experience and draw conclusions through a closing activity or discussion.



Suggested extension activity: Have students work with a partner and conduct a simple experiment with lima bean seeds. Students will place a lima bean into a sandwich size ziploc bag with a damp, folded paper towel. The bag, bean, and paper towels are the controls. The variable in this investigation will be the amount of light the seeds receive. Place some of the planted seeds in a bright window, some in a spot in the room that only receives ambient light, and place some in a closet or other area where they receive little or no light. After a few days, have students compare their results. Have students discuss how the amount of light, as the variable, affected the seeds.