

3.9 Bringing It All Together

Grade: 3

Strand: Growth and Changes in Plants

Big Ideas:

- Plants have distinct characteristics. (Overall expectations 2 and 3)
- There are similarities and differences among various types of plants. (Overall expectation 2)
- Plants are the primary source of food for humans. (Overall expectation 1)
- Humans need to protect plants and their habitats. (Overall expectation 1)
- Plants are important to the planet. (Overall expectation 1)

Overall Expectations:

1. assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats
2. investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow
3. demonstrate an understanding that plants grow and change and have distinct characteristics

Inquiry Skills:

Evaluating, Explaining, Teaching

Specific Expectations:

- 1.1** assess ways in which plants are important to humans and other living things, taking different points of view into consideration (e.g., the point of view of home builders, gardeners, nursery owners, vegetarians), and suggest ways in which humans can protect plants
- 1.2** assess the impact of different human activities on plants, and list personal actions they can engage in to minimize harmful effects and enhance good effects
- 3.3** describe the changes that different plants undergo in their life cycles
- 3.5** describe ways in which humans from various cultures, including Aboriginal people, use plants for food, shelter, medicine, and clothing
- 3.8** identify examples of environmental conditions that may threaten plant and animal survival

Instructions:

In small groups (two to three students) students will choose one of the activities listed in the handout "Wrapping It All Up", then decide which one they would like to work on. Their final product should explain the issues related to the development and alteration of plants as it relates to the issues of the forest in the story.

Materials List:

- experts
- computer
- reference books
- pencils or pens
- Learning Process Sheet

Assessment Strategy:

Use The Learning Process to guide students to learn how to research, define and assess the right solutions to the challenge.

Begin the investigation by asking the students to consider what they believe is the main idea of the assignment. This creates an opportunity for the students to take charge of their learning. The students will create their own main topic sentence. This can be done using The Learning Process Sheet. The student can write down the "Big Idea" and then conference with the teacher about whether or not this is accurate. On The Learning Process sheet there is room for the student to write down any new information or suggestions that come up during the conference. Once the student has the correct concept, they are ready to move forward.

From the teacher's perspective, you could level (grade) the depth of their understanding of the big idea from the content of their conversation. This process is repeated at each of the four stages of The Learning Process: Introduction; Searching; Outline; and Ta Da. In this way, the teacher has observed the thinking of the students throughout the process of creation and can identify the actual learning of the student. Each stage can receive a level (grade), which the student can see and improve upon, or move forward (if the work is only defined as Level 2 work quality, does the child accept that or want to do better?).

Handouts:

- Wrapping It All Up

Wrapping it All Up

You have learned so much during our journey through the plant world. Now you can teach others. In small groups (2-3) choose one, just one, of the activities below and design, construct show to the class .

1. Design a game that examines the lifecycle of a plant.

Your game must have game pieces (e.g. dice, player pieces, cards etc.) and the board must represent the plant and/or it's life cycle. You must represent all of the stages of plant growth, health, and interaction with the environment.

2. Create a comic books story about the loss of plants = loss of soil (fertile land) and what happens to the rest of the biome.

Your comic needs to focus on the importance of soil loss, and the affects that are the result of it. Talk about how the plants, and animals are affected and what is the global impact.

3. Film a Crash Course Kids style video, that explain how plant biology has had an effect on medicine, health care, and/or genetics.

Your video must include information on how humans have used plants as natural medicines, and created new medicines. It should discuss the benefits of natural methods used by indigenous people across the world.

The Learning Process

Inquiry Process: **Introduce** – *What is the BIG idea?*

Traits

- Where should I look?
- Draw and write ideas down
- Works with groups to create a plan
- Main (“Big”) Ideas
- Completed a meeting about Main (“Big”) Ideas

Step 1: *The BIG Question*

Step 3: *Meeting Notes*

Level:

Excellence = 4, Better = 3, Okay = 2, Needs work = 1

Inquiry Process: **Search** – *Developing Questions, Searching for Information and Answers*

Traits

- Listens, talks, views, and reads
- Uses the Q-chart
- Works with teams
- Completed a meeting to improve questions

Guiding Questions (One (1) guiding questions from each column and each row.)

	Is/Is not	Do\Did(not)	Can (not)	Would/Should	Will	Might/Could
Who						
What						
Where						
When						
How						
Why						

Write out the completed questions in full. (You may change these or add new ones.)

Who	
What	
Where	
When	
How	
Why	

Step 3: *Meeting Notes*

Level:

Excellence = 4, Better = 3, Okay = 2, Needs work = 1

Inquiry Process: **Outline** – *Intensify research, Synthesize Information, Connect Knowledge*

Traits

- Engages in deeper reading and researching: Books, articles, and websites.
- Checks sources, are they truthful
- **Joins information**
- Cooperates
- Use appropriate technology
- Completed a meeting with teacher about notes

Step 3: Conference Notes

Level:

Excellence = 4, Better = 3, Okay = 2, Needs work = 1

Inquiry Process: **“Ta Da!”** – *Sharing Learning*

Traits

- Completed a meeting
- Demonstrates their thinking
- **Teaching others**
- Reflects upon **the learning process**
- Works well and sharing with teams to complete project

Step 3: Conference Notes

Level:

Excellence = 4, Better = 3, Okay = 2, Needs work = 1