

3.3 Community Ecology

Story Extension for This Lesson:

Go out and explore just like Sam and Alex did. Make notes about what's in your area.

Grade: 3

Strand: Growth and Changes in Plants

Big Ideas:

- Plants have distinct characteristics. (Overall expectations 2 and 3)
- Plants are the primary source of food for humans. (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

Inquiry Skills

Observing, Recording, Gathering Data, Classifying

Other 21st Century Skills

Improving ecological awareness

Specific Expectations:

2.2 observe and compare the parts of a variety of plants (e.g., roots of grass, carrot, dandelion; stem of cactus, carnation, tree; leaves of geranium, spider plant, pine tree)

2.5 use scientific inquiry/experimentation skills (see page 12), and knowledge acquired from previous investigations, to investigate a variety of ways in which plants meet their basic needs Sample guiding questions: How do plants meet their need for air, water, light, warmth, and space? What are different ways in which we can help plants meet their needs?

2.6 use appropriate science and technology vocabulary, including stem, leaf, root, pistil, stamen, flower, adaptation, and germination, in oral and written communication

3.2 identify the major parts of plants, including root, stem, flower, stamen, pistil, leaf, seed, and fruit, and describe how each contributes to the plant's survival within the plant's environment (e.g., the roots soak up food and water for the plant; the stem carries water and food to the rest of the plant; the leaves make food for the plant with help from the sun; the flowers grow fruit and seeds for new plants)

Instructions:

As a class, go outside and explore the area around the school grounds. Before you go outside, assemble the students in small groups of four or five and give them sections of the area to travel through. In their groups, and using the handout provided, the students are to investigate and make notes of the vegetation that is in the local area. Have them take or draw pictures to identify the species of plants.

Depending on where you go, you may want to have students focus on an area, or have them rotate through different sections. You may need to find a park or green space nearby and take a class field trip.

Through discussion based on the mind map, the class may come up with criteria other than the heading on the hand out.

The students need to complete the mind map and share the information with everyone so they can use the terminology and identify characteristics of plants.

Materials List:

- pencil
- paper
- camera
- digital device
- tablet or smartphone

Handouts:

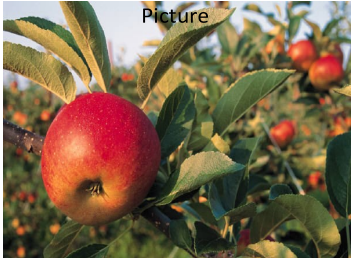
- Community Ecology
- students must identify key structures of the plant and some characteristics that make it a value to the local community.

Assessment Strategy:

The Learning Process - Using The Learning Process, have the students create questions on how to build and show the information about the plant(s) they choose.

Community Ecology

We are going outside. In your groups, you are to make notes, take pictures or video of the plants in the area around the school.

Plant name	Type Tree, bush, flower, weed	Flower colour	Type of Leaf (e.g. broad, lobed, needle)	Picture
Plant name Apple Tree	Type Tree, bush, flower, weed tree	Flower colour White, red, pink	Type of Leaf (e.g. broad, lobed, needle) oval	Picture 

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 to them during the process.)						
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!” – <i>Sharing Learning</i>	
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	