Grade 3
Plant Life

By Vanessa Barraza
Introduction
Instructional Unit Introduction

Title: Plant Life
Grade Level: Third Grade
Target Group: Mainstream class with integrated ELL students

Source of Written Reading Materials:


Source of Lessons:
Barraza, V. My ideas and my interpretation of the ideas presented by Hall, McCaslin and Life Lab Science Program.


Goals:
- I want my students to know that the roots supply water and nutrients to plants.
- I want my students to know that the stem carries water and nutrients to the plant.
- I want my students to know that the leaves use water, sun and air to produce food for the plant.
- I want my students to know how to identify the roots, stem and leaves of a plant.
Lesson 1
<table>
<thead>
<tr>
<th>Content Objective</th>
<th>Language Objective</th>
<th>Performance Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify what a root is.</td>
<td>1. In whole class discussion, students will read text and orally describe what a root is in response to questions by the teacher.</td>
<td>Level 5: Students will describe what a root is by orally participating in whole class discussion using complete sentences. Level 4: Students will describe what a root is by orally participating in whole class discussion using phrases and short sentences. Level 3: Students will describe what a root is by orally participating in whole class discussion using sentence starters. Level 2: Students will describe what a root is by orally participating in whole class discussion using one or two word responses. Level 1: Students will describe what a root is by orally participating in whole class discussion repeating short phrases provided by the teacher.</td>
</tr>
<tr>
<td>2. Explain the different types of roots.</td>
<td>2a. In small groups, students will orally discuss the various types of roots. 2b. In writing, students will draw and describe the differences and similarities in the root samples provided.</td>
<td></td>
</tr>
<tr>
<td>3. Describe how roots provide nutrients to plants.</td>
<td>3. In writing, students will describe how the nutrients are carried from the roots to the plant by completing a fill in the blank worksheet.</td>
<td></td>
</tr>
<tr>
<td><strong>Domain &amp; Topic</strong></td>
<td><strong>Level 5</strong></td>
<td><strong>Level 4</strong></td>
</tr>
<tr>
<td>Speaking – Describe a root.</td>
<td>Students will draw and label the root samples provided. Students will describe 2 similarities and 2 differences in the root samples using complete sentences.</td>
<td>Students will draw and label the root samples provided. Students will describe 2 similarities and 2 differences in the root samples using short sentences.</td>
</tr>
<tr>
<td>Writing – Describe the roots samples.</td>
<td>Students will describe how roots carry nutrients from the soil to the plant by completing a fill in the blank worksheet without a word bank.</td>
<td>Students will describe how roots carry nutrients from the soil to the plant by completing a fill in the blank worksheet with a word bank.</td>
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<tr>
<td>Reading and Writing – Describe how the root carries nutrients.</td>
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<td></td>
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</tbody>
</table>
Vanessa Barraza  
FLA 518 - Dr. Verplaetse  

Plant Life – Lesson 2: Roots  

Functional Chart – Advanced Beginner - Intermediate  

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Expressions</th>
<th>Vocabulary</th>
<th>Grammar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe</td>
<td>What is a root and what does it do?</td>
<td>A root _______.</td>
<td>takes in water. grows underground. takes in nutrients stores food for plants.</td>
<td>Verbs</td>
</tr>
<tr>
<td>Identify/Compare</td>
<td>Similarities/differences</td>
<td>• Some roots are _______.</td>
<td>long short thin thick eaten</td>
<td>Adjectives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Other roots are _______.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>• They are the same because they both are _______.</td>
<td></td>
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<td></td>
<td></td>
<td>• They are different because one is _______ and</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>the other is _______.</td>
<td></td>
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</tbody>
</table>
Lesson Plan
Lesson 2 - Roots

Essential Question: What is a root?

Time: 30 minutes

Warm up/Review:
The teacher will show the students a picture of a plant and will review each part of the plant that was taught the previous class. Students will raise their hands and participate in whole class discussion and the teacher will write the responses on the board. (1 minute)

Modifications: Level 1-3 student will use sentence starters, word banks, and pictures that were provided to them the previous lesson.

Introduction:
The teacher will show the students a plant with its roots exposed and ask the students “How do you think the plants receive nutrients from the soil?” The teacher will write the responses on the board. (2 minutes)

Modifications:
• Level 3 and 2 students will choose from the 3 choices given by the teacher (leaves, stem or roots).
• Level 1 students will point to the part of the plant.

Major Activities:
1. The teacher will instruct the students to silently read page A9 in their textbooks (4 minutes).

Modifications:
• Level 5 and level 4 students will read directly from the book (page 7).
• Level 3 students will receive a copy of the text with key facts underlined (page 8).
• Level 2 and level 1 students will receive a hand out with simplified text (page 9).

2. The teacher will then lead the class in a discussion regarding the text. The teacher will ask the following questions: Where does a root grow? What does a root do for the plant? How does the root bring nutrients from the soil to the plant? (6 minutes)

Modifications:
• Level 5 students will be expected to answer in complete sentences.
• Level 4 students respond in shorts phrases and sentences.
• Level 3 students will be given sentence starters, which they will use to participate in whole class discussion (See the functional chart on page 3).
• Level 2 students will respond using one or two words provided by the teacher (grows underground, takes water, takes nutrients, holds the plant, stores food).
• Level 1 students will repeat phrases given by the teacher (The root grows underground. The root gives the plant nutrients from the soil. The root takes in water from the soil.)

3. After discussing the text, the students will complete “the roots” activity. The teacher will divide the class into groups of four. Each group will be given a carrot, an asparagus and a bean (with roots attached). The teacher will explain to the students that all of the root samples are vegetables we eat. The teacher will introduce the names of the vegetables and write them on the board. The teacher will take a quick poll and ask the students to raise their hands if they have eaten carrots, asparagus and beans. After the introduction of the vegetables, each group is to need to take the roots samples and compare and contrast the roots of the various vegetables. The students will have 3 minutes to discuss. The teacher will provide instructions orally and also in writing on the board. After the students have had time to discuss, they will work on comparing and contrasting individually. (8 minutes total)

Modifications:
• Level 5 students will draw and label the 3 samples provided and describe in complete sentences 2 similarities and 2 differences (in their notebooks).
• Level 4 students will do the same as level 5, except they will describe the 2 similarities and 2 differences in shorts sentences (in their notebooks).
• Level 3 students will select, draw and label 2 of the roots samples provided. They will describe 2 similarities and 2 differences using a graphic organizer (page 10) along with sentence starters (see the functional chart on page 3 for sentence starters).
• Level 2 students will describe 1 similarity and 1 difference in the two roots samples provided using a graphic organizer (page 11) with sentence starters and a word bank (a carrot and bean root has been pre-selected for this activity).
• Level 1 students will describe 1 similarity and 1 difference between the two root samples provided using a graphic organizer (page 12), with pictures and a word bank (a carrot and bean root has been pre-selected for this activity).
• **See the functional chart on page 3 for the sentence starters and word bank.

4. Students will complete “the roots” worksheet (page 13) to identify the various types of roots and their purposes. (5 minutes)

 Modifications:
• Level 5 students will not have a word bank (no modification) (page 13).
• Level 4 students will have a word bank (page 14).
• Level 3 students will have a word bank and text clues underlined (page 15).
• Level 2 students will have simplified text, and text clues underlined (page 16).
• Level 1 students will match pictures (page 17).

Closure
Students will identify at least 2 job functions roots have and describe the different types of roots, and explain how roots provide nutrients to plants. This will be done using the graphic organizer on page 18. (4 minutes)

Modifications:
• Level 5 and 4 students will have a graphic organizer and will use their textbook (page 18).
• Level 3 students will have a graphic organizer with sentence starters (page 19).
• Level 2 students will have a graphic organizer with sentence starters and a word bank (page 20).
• Level 1 students will have a graphic organizer with sentences and pictures (page 21).

*Bolded text refers to original lesson plan.
Parts of Plants

Like animals and all other living things, plants are made of cells (scllz). A cell is the smallest and most basic unit of a living thing. Plant cells have stiff walls that support the plant and give it shape.

Plants cannot move from place to place to find food and water like animals can. So how do plants meet their needs? They have parts that help them get the things they need to stay alive.

Almost all plants have three parts. Each part does a job that helps the plant live. A root takes in water and nutrients and provides support for the plant. A stem holds up the leaves and carries water and nutrients through the plant. A leaf collects sunlight and gases from the air. It uses them to make food for the plant.

The zebra plant is unusual because it has leaves patterned like zebra fur. What features does it have in common with other plants?

Roots

You usually don’t see the roots of a plant. The roots of most plants grow underground. The most important job of roots is to take in water and nutrients from the soil. Roots have tiny hairlike parts that help them do this.

The roots of most plants also have another job. Roots are needed to hold the plant in place in the soil and to help it stand up. Tall trees have huge roots that help keep them from tipping over. Roots of grasses help hold them in place.

Sometimes, roots store food for the plant. The carrots you eat are actually roots. They contain many nutrients that they store for use by the whole carrot plant. Radishes, turnips, beets, and some other vegetables that people eat are also roots.

If page A8 ended after the first paragraph, what would be a better heading for that page?

Root hairs viewed through a microscope

Carrots are roots. They have tiny hairlike parts, called root hairs, that help take in water and nutrients from soil.
Parts of Plants

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Level 2 & Level 1

Parts of Plants

Like animals and all other living things, plants are made of cells (cells). A cell is the smallest and most basic unit of a living thing. Plant cells have stiff walls that support the plant and give it shape.

Plants cannot move from place to place to find food and water like animals can. So how do plants meet their needs? They have parts that help them get the things they need to stay alive.

Almost all plants have three parts. Each part does a job that helps the plant live. A stem holds up the leaves and carries water and nutrients through the plant. A leaf collects sunlight and gases from the air. It uses them to make food for the plant.

Roots

You usually don't see the roots of a plant. The roots of most plants grow underground. The most important job of roots is to take in water and nutrients from the soil. Roots have tiny hairlike parts that help them do this.

The roots of most plants also have another job. Roots are needed to hold the plant in place in the soil and to help it stand up. Tall trees have huge roots that help keep them from tipping over. Roots of grasses help hold them in place.

Sometimes, roots store food for the plant. The carrots you eat are actually roots. They contain many nutrients that they store for use by the whole carrot plant. Radishes, turnips, beets, and some other vegetables that people eat are also roots.

Roots...

- grow underground.
- take in water from the soil.
- take in nutrients from the soil.
- hold the plant in the soil.
- help the plant stand up.
- sometimes store food.

Root hairs viewed through a microscope

Root hairs are tiny hairlike roots that help take in nutrients from soil.
Roots Activity
Level 3

Name: ____________________________ Date: ________________

How are they different?
1. ____________________________
2. ____________________________

How are they the same?
1. ____________________________
2. ____________________________

How are they different?
1. ____________________________
2. ____________________________
Roots Activity
Level 2

Name: ____________________________ Date: ________________

Bean

Some roots are ________.
   a. short
   b. long

Some roots are ________.
   a. thick
   b. thin

They are the same because they are both ________.
   a. short
   b. long
   c. thick
   d. thin

Carrot

Some roots are ________.
   a. short
   b. long

Some roots are ________.
   a. thick
   b. thin
Roots Activity
Level 1

Name:______________________________  Date:________________

How are they the same?
- long
- short
- thick
- thin

long or short
thick or thin

long or short
thick or thin
Name ____________________________

**Roots**

Roots hold a plant in place. Plants need water and minerals. Roots take water and minerals from the soil to feed the plant. Roots help get food to the rest of the plant. Some plants store food in their roots. Carrots and beets are two types of roots that we eat.

Choose words to fill in the blanks:

1. Some plants store ____________ in their roots.

2. Roots take ____________ and ____________ from the soil to feed the plant.

3. Roots ____________ the plant in place.

4. A ____________ is a root that we eat.

**Extra:** Draw a root that you eat.
Roots hold a plant in place. Plants need water and minerals. Roots take water and minerals from the soil to feed the plant. Roots help get food to the rest of the plant. Some plants store food in their roots. Carrots and beets are two types of roots that we eat.

Choose words to fill in the blanks:

1. Some plants store _____________ in their roots.

2. Roots take _____________ and _____________ from the soil to feed the plant.

3. Roots _____________ the plant in place.

4. A _____________ is a root that we eat.

Extra: Draw a root that you eat.
Roots

Roots hold a plant in place. Plants need water and minerals. Roots take water and minerals from the soil to feed the plant. Roots help get food to the rest of the plant. Some plants store food in their roots. Carrots and beets are two types of roots that we eat.

Carrot
Bean
Asparagus
Beet

Choose words to fill in the blanks:

1. Some plants store ______________ in their roots.

2. Roots take ______________ and ______________ from the soil to feed the plant.

3. Roots ______________ the plant in place.

4. A ______________ is a root that we eat.

Extra: Draw a root that you eat.
Name ______________________________

Roots

Roots hold a **plant** in place. Roots take **water and minerals** from the soil to feed the plant. Plants store food in their **roots**. A **carrot** is a root we eat.

---

Complete the following sentences using the underlined text above.

1. Plants store food in their __________.
2. Roots take __________ from the soil.
3. Roots hold up the __________.
4. A __________ is a root we eat.
Roots hold a plant in place. Roots take water and minerals from the soil to feed the plant. Plants store food in their roots. A carrot is a root we eat.

Draw a line from the sentence to the picture the underlined word:

1. Plants store food in their roots.

2. Roots take water from the soil.

3. Roots hold up the plant.

4. A carrot is a root we eat.
Closure Activity
Mainstream, Level 5 & Level 4

Name: ___________________________  Date: _______________

Plant Life – Roots

Roots

What is it?

What does it do?

What are some examples?
Closure Activity
Level 3

Name: ___________________________ Date: ___________________

Plant Life – Roots

Roots

What is it?
A root is a tiny hair-like part of a _______ that help them _______.

What does it do?
A root takes in _______ from the soil to feed the _______.
A root takes in _______ from the soil to feed the _______.

What are some examples?
Some examples are
____________________
____________________
Closure Activity
Level 2
Name: _________________________ Date: ___________

Plant Life – Roots

Roots

What is it?
A root is a tiny hair-like part of a _________ that help them _________.

Word Bank:
grow plant

What does it do?
A root takes in _________ from the soil to feed the _________.

A root takes in _________ from the soil to feed the _________.

Word Bank:
water plant nutrients

What are some examples?
Some examples are
____________________
____________________
____________________

Word Bank:
apples beans carrots
Level 1

Name: ___________________________  Date: __________

Plant Life – Roots

Roots

What is it?

A _______ helps the plant grow.

What does it do?

Roots take _______ from the soil.

What is an example?

__________

Word Bank:

water  carrot  root
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July 12, 2013  
Narrative - Plant Life: Roots

Narrative

In creating the lesson on plant life, I collected materials and lesson ideas from lessons that I use with my Spanish students along with ideas from online sources. I made sure that the objectives were clear and that the activities and worksheets the students were provided with, helped to achieve those objectives.

After creating the initial lesson, I learned about the various modifications that needed to be made for ELLs. I believe the activities in this lesson allow for negotiation of meaning by creating opportunities for all levels of ELLs to interact with other students and the teacher. I created sentence starters, provided students with word banks, graphic organizers, modified text and underlined key phrases. I also added visuals to the worksheets to allow for level 1 students to understand what the lesson was about.

This was a challenging task, mainly because I am not a mainstream classroom teacher. In addition, my Spanish classes are 20 minutes in length so many of the activities covered in this class period would take much longer to cover than just one class. Overall, I felt like the modifications made from the original lesson were abundant and will allow various levels of ELLs to comprehend the lesson.
Lesson 2
### Content Objective
1. Describe a stem.
2. Identify the different types of stems and their purpose.
3. Explain how stems provide nutrients to plants.

### Language Objective
1. In whole class discussion, students will read text and orally describe what a stem is in response to questions by the teacher.
2a. In small groups, students will orally discuss the different types of stems.
2b. In writing, students describe the different types of stems and their purpose by completing a worksheet.
3. In writing, students will explain how the stem carries nutrients to the plant by writing in their notebooks.

<table>
<thead>
<tr>
<th>Domain &amp; Topic</th>
<th>Level 5</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking – Describe a stem.</td>
<td>Students will describe what a stem is by orally participating in whole class discussion using complete sentences.</td>
<td>Students will describe what a stem is by orally participating in whole class discussion using phrases and short sentences.</td>
<td>Students will describe what a stem is by orally participating in whole class discussion using sentence starters.</td>
<td>Students will describe what a stem is by orally participating in whole class discussion using one or two word responses.</td>
<td>Students will describe what a stem is by orally participating in whole class discussion repeating short phrases provided by the teacher.</td>
</tr>
<tr>
<td>Reading and Writing – Identify the different types of stems and their purpose.</td>
<td>Students will describe the various types of stems and their purpose by completing a fill in the blank worksheet.</td>
<td>Students will describe the various types of stems and their purpose by completing a matching worksheet.</td>
<td>Students will describe the various types of stems and their purpose by completing a matching worksheet with text clues underlined.</td>
<td>Students will describe the various types of stems and their purpose by completing a worksheet with simplified text and pictures. Students will match the sentence to the picture by drawing lines.</td>
<td>Students will describe the various types of stems and their purpose by completing a worksheet with simplified text and pictures. Students will match the sentence to the picture by drawing lines.</td>
</tr>
<tr>
<td>Writing – Explain the how the stem carries nutrients to the plant.</td>
<td>Students will explain how the stem carries nutrients to the plants in their notebooks using complete sentences.</td>
<td>Students will explain how the stem carries nutrients to the plants in their notebooks using short sentences.</td>
<td>Students will explain how the stem carries nutrients to the plants in their notebooks using sentence starters.</td>
<td>Students will explain how the stem carries nutrients to the plants in their notebooks using sentence starters and a word bank.</td>
<td>Students will explain how the stem carries nutrients to the plants by gluing sentence strips with pictures in their notebooks.</td>
</tr>
<tr>
<td>Function</td>
<td>Situation</td>
<td>Expressions</td>
<td>Vocabulary</td>
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<td></td>
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</tr>
<tr>
<td>Describe</td>
<td>What is a stem and what does it do?</td>
<td>A stem __________.</td>
<td>has small tubes. carries water. carries nutrients. holds up the leaves. can store food. can be a tree trunk. can be long and thin.</td>
<td>Verbs</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Helping verbs</td>
<td></td>
</tr>
<tr>
<td>Sequence</td>
<td>How does the stem carry nutrients to the plant?</td>
<td>1 __ the stem 2 __.</td>
<td>1 – First 1 – Then 1 – Lastly 2 – absorbs the nutrients and water from the roots. 2 – the stem carries the nutrients and water through the tubes. 2 – the helps the plant to grow.</td>
<td>Use of transitions</td>
<td></td>
</tr>
<tr>
<td>Predict</td>
<td>What will happen to the celery and carnation?</td>
<td>The __ will turn __.  The __ will not turn __.</td>
<td>3 – celery 3 – carnation 4 – blue 4 – red</td>
<td>Nouns Adjectives</td>
<td></td>
</tr>
</tbody>
</table>
Lesson Plan

Lesson 3 – Stems

Essential Question: What is a stem?

Time: 30 minutes

Warm up/Review:
The teacher will show the students a picture of a tree and a picture of a celery. The teacher will ask the students if they think these two items have something in common. The students will give a thumbs up or a thumbs down. The teacher will ask the student if they know what a stem is. The students will give the teacher a thumbs up if they know and a thumbs down if they do not know what a stem is. (3 minutes)

Introduction:
The teacher will tell the students that both the tree and the celery both have stems and that is what they have in common. The teacher will ask the students what they think the stem does for plants, trees and vegetables like a celery. The teacher will write the responses on the board. (2 minutes)

Major Activities:
1. The teacher will instruct the students to silently read page A10 in the textbook. (5 minutes)

Modifications:
• Level 5 and level 4 students will read directly from the textbook (page 6).
• Level 3 students will receive a copy of the text with key facts underlined (page 7).
• Level 2 and level 1 students will receive a handout with simplified text (page 8).

2. The teacher will then lead the class in a discussion regarding the text. The teacher will speak in a pace appropriate for all levels. The teacher will ask the following questions: What is a stem? What does it look like? Why is the stem an important part of the plant? (4 minutes)

Modifications:
• Level 5 students will be expected to answer in complete sentences.
• Level 4 students will respond in short phrases and sentences.
• Level 3 students will be given sentence starters, which they will use to participate in whole class discussion. (See the functional chart on page 2.)
• Level 2 students will respond using one or two word phrases provided by the teacher (carries nutrients, carries water, small tubes, long, thin, stores food).
• Level 1 students will repeat phrases given by the teacher (A stem is a tube that
carries water. A stem has tubes that are long and thin. A stem stores food.

3. After discussing the text, the students will complete “the stem” activity. The teacher will explain to the students that celery is an example of a vegetable we eat that has a stem. The teacher will tell the students that the celery has many tubes in the stem and the carnation has one tube, and both are visible. The teacher will explain and demonstrate to the students that they will be doing an experiment. The students will be broken up into groups of 3. Each group will be given 2 celery stalks and 2 carnation flowers. They will also receive 2 cups of water. One cup will have water with red food coloring and the other will have blue food coloring. The students will place the celery stalks in the blue cup and the carnations in the red cup and make a prediction about what will happen by tomorrow. They will write this prediction in their notebooks. (6 minutes)

Modifications:
- Level 5 students will write their prediction in their notebooks using complete sentences.
- Level 4 students will write their prediction in their notebooks using short phrases.
- Level 3 students will write their prediction in their notebooks using sentence starters. (See the functional chart on page 2 for sentence starters.)
- Level 2 students will write their prediction in their notebooks using sentence starters with a word bank. (See page 9.)
- Level 1 students will write their prediction in their notebooks by gluing the picture of the celery & carnation and coloring it the color they think it will turn. (See page 9.)

4. Students will complete the “stem” worksheet (page 10) to identify the various types of stems and their purposes. (4 minutes)

Modifications:
- Level 5 students will fill in the blank with no modifications (page 10).
- Level 4 students will match the sentences (page 11).
- Level 3 students will match the sentences with text clues underlined (page 12).
- Level 2 students will match the sentences with text clues underlined and simplified text (page 13).
- Level 1 students will match pictures (page 14).

Closure:
Students will explain in their notebooks how the stem carries water and nutrients to the plant. The teacher will give the students 4 minutes to work on this. The teacher will then split the class back into the original group of 3. The teacher will hand out an envelope with 3 strips of paper to the group and ask them to place it on order (see page 16). The teacher will give the students 2 minutes to complete this
activity. The teacher will then ask the students to hold up their papers in the correct order. The teacher will then evaluate if everyone has it in the correct order. (6 minutes)

Modifications:
• Level 5 students will write in complete sentences in their notebooks.
• Level 4 students will write short sentences in their notebooks.
• Level 3 students will use sentence starters to write in their notebooks. (See the functional chart on page 2.)
• Level 2 students will use sentence starters with a word bank to write in their notebooks. (See the functional chart on page 2.)
• Level 1 students will be given sentence strips with pictures, which they will glue into their notebook in the correct order. (See page 15.)

Homework: Students will collect leaves from their yards or the park, only picking up leaves that have fallen.

* Bolded text refers to the original lesson plan.
Stems

The stems of many plants are long and thin. They contain small tubes. These tubes carry water and nutrients throughout the plant. The stems hold up the leaves. This allows the leaves to collect sunlight.

Some stems, such as the stems of sugar cane, can store food. In a cactus plant, the stems store water. Tree trunks are also stems. Celery stalks and asparagus are examples of stems eaten by people.

Leaves

Leaves grow out of the stem of a plant. Most plants have many leaves. The leaf is the part of the plant that makes food. Leaves take in sunlight and air, and use them to make sugar. The sugar is food for the plant.

Leaves usually grow near the top of the plant so they can take in a lot of sunlight. Different types of plants usually have differently shaped leaves. The spines on a cactus are leaves. So are the needles of a pine tree. You might eat the leaves of some plants, such as lettuce, spinach, or cabbage.

Text Structure

Look back at the last three heads in this lesson. What are the three parts of a plant?
Stems

The stems of many plants are long and thin. They contain small tubes. These tubes carry water and nutrients throughout the plant. The stems hold up the leaves. This allows the leaves to collect sunlight. Some stems, such as the stems of sugar cane, can store food. In a cactus plant, the stems store water. Tree trunks are also stems. Celery stalks and asparagus are examples of stems eaten by people.

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TEXT STRUCTURE: Look back at the last three heads in this lesson. What are the three parts of a plant?
Level 2 & Level 1

Stems
The stems of many plants are long and thin. They contain small tubes. These tubes carry water and nutrients throughout the plant. The stems hold up the leaves. This allows the leaves to collect sunlight. Some stems, such as the stems of sugar cane, can store food. In a cactus plant, the stems store water. Tree trunks are also stems. Celery stalks and asparagus are examples of stems eaten by people.

Leaves
Leaves grow out of the stem of a plant. Most plants have many leaves. The leaf is the part of the plant that makes food. Leaves take in sunlight and air, and use them to make sugar. The sugar is food for the plant.
Leaves usually grow near the top of the plant so they can take in a lot of sunlight. Different types of plants usually have differently shaped leaves. The spines on a cactus are leaves. So are the needles of a pine tree. You might eat the leaves of some vegetables, such as lettuce, spinach, or cabbage. This Japanese maple leaf is divided into sections called lobes.

This Japanese maple bonsai (bahn SY) is a tiny form of a full-size tree. It has roots, stems, and leaves, just like a large tree.

Stems can be long and thin.
The stem has small tubes.
The tubes carry water.
The tubes carry nutrients.
The stem holds up the leaves.
The stem can store food.
The stem can store water.

This plant is called a ponytail palm. Its leaves are long and narrow.
Stem Activity Modifications

Level 2

1. The celery will turn ____________.
2. The celery will not turn ____________.
3. The carnation will turn ____________.
4. The carnation will not turn ____________.

Stem Activity Modifications

Level 1

http://www.eduplace.com/parents/hmsc/1/a/activities/act_1a1.shtml
http://www.thecolor.com/Print/PrintPicture2_nkdp2abofneqnlkjfx0t1bar_Carnation-coloring.aspx
Stems

Stems hold up the leaves and flowers of a plant. Stems have little tubes that take water and food to the rest of the plant. Grass, flowers, and vines have soft stems. Trees have one hard, woody stem called a trunk. Most stems grow up.

Complete the following sentences.

1. Most stems ____________________________

2. Stems have tubes that ____________________________

3. Stems hold up ____________________________

4. Trees have a stem ____________________________

Extra: Draw a plant with a trunk on the back of this paper.
**Stems**

Stems hold up the leaves and flowers of a plant. Stems have little tubes that take water and food to the rest of the plant. Grass, flowers, and vines have soft stems. Trees have one hard, woody stem called a *trunk*. Most stems grow up.

---

**Match:**

1. Most stems
   - the leaves and flowers.

2. Stems have tubes that
   - called a *trunk*.

3. Stems hold up
   - grow up.

4. Trees have a stem
   - carry water and food.

---

**Extra:** Draw a plant with a trunk on the back of this paper.
**Stems**

Stems hold up the leaves and flowers of a plant. Stems have little tubes that take water and food to the rest of the plant. Grass, flowers, and vines have soft stems. Trees have one hard, woody stem called a **trunk**. Most stems grow up.

**Match:**

1. Most stems ________ the leaves and flowers.
2. Stems have tubes that ________ called a **trunk**.
3. Stems hold up ________ grow up.
4. Trees have a stem ________ carry water and food.

**Extra:** Draw a plant with a trunk on the back of this paper.
Stems

Stems hold up the **leaves** and **flowers**. Stems have **tubes** that carry **water** and **food**.

Trees have a stem called a **trunk**. Most stems **grow up**.

---

**Match:**

1. Most stems ___ leaves.
2. Stems have tubes that carry ___ trunk.
3. Stems hold up the ___ grow.
4. Trees have a stem called a ___ water.

**Extra:** Draw a plant with a trunk on the back of this paper.
Stems

Stems hold up the leaves and flowers. Stems have tubes that carry water and food.

Trees have a stem called a trunk. Most stems grow up.

Match:

1. Most stems
2. Stems have tubes that carry
3. Stems hold up the
4. Trees have a stem called a

Extra: Draw a plant with a trunk on the back of this paper.
Stems - Closure
Level 1

Cut along the dotted line and glue it into your notebook in the correct order.

---

Then the stem carries the nutrients through the tubes.

---

Lastly the stem helps the plant to grow.

---

First the stem absorbs the nutrients and water from the roots.

---

http://www.windowtothegarden.com/theplant.html
Closure Sentence Strips

Then the stem carries the nutrients and water through the tubes.

Lastly the stem helps the plant to grow.

First the stem absorbs the nutrients and water from the roots.
Narrative

In creating the lesson on stems, I used the resources that I currently use with my Spanish students. In modifying this lesson I tried to use as many visuals as possible. This includes pictures, demonstrations and written word on the board and in their notebooks. This will allow learners in all levels to have the opportunity to negotiate meaning and therefore comprehend the lesson. I made use of sentence starters, simplified text and group work. It is very important to give students the opportunity to work with their peers and this lesson allows many opportunities for that. I also included independent work with support.

I also used various methods to assess the students. The first was to use a thumbs up/thumbs down approach. This is a quick and easy way to assess for understanding. Another method I used towards the end of the lesson was the sentence strips. By putting the students in groups, they were given the opportunity to negotiate meaning and also by using the “timeline” approach, other students were able to check their answers. Overall, this lesson provided various methods for the students to gain understanding of the topic on stems. In addition, there were a variety of activities to practice and also to assess.
Lesson 3
Vanessa Barraza  
FLA 518 - Dr. Verplaetse  

Plant Life – Lesson 3 Leaves  

<table>
<thead>
<tr>
<th>Content Objective</th>
<th>Language Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe the function of leaves.</td>
<td>1a. In whole class discussion, students will read text and orally describe the function of a leaf in response to questions by the teacher.</td>
</tr>
<tr>
<td>2. Explain how leaves produce food.</td>
<td>1b. In small groups, students will orally discuss the function of leaves.</td>
</tr>
<tr>
<td>3. Identify the 3 main components the leaves need to make food.</td>
<td>2. In writing, students will explain how leaves produce food using a graphic organizer.</td>
</tr>
<tr>
<td></td>
<td>3. In writing, students will identify the 3 main components leaves need to make food by completing a worksheet.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain &amp; Topic</th>
<th>Level 5</th>
<th>Level 4</th>
<th>Level 3</th>
<th>Level 2</th>
<th>Level 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaking – Describe the function of leaves.</td>
<td>Students will describe the function of leaves by orally participating in whole class discussion using complete sentences.</td>
<td>Students will describe the function of leaves by orally participating in whole class discussion using phrases and short sentences.</td>
<td>Students will describe the function of leaves by orally participating in whole class and small group discussion using sentence starters.</td>
<td>Students will describe the function of leaves by orally participating in whole class using one or two word responses.</td>
<td>Students will describe the function of leaves by orally participating in whole class discussion repeating short phrases provided by the teacher.</td>
</tr>
<tr>
<td>Writing – Explain how leaves produce food.</td>
<td>Students will explain how leaves produce food by using a graphic organizer and writing in complete sentences.</td>
<td>Students will explain how leaves produce food by using a graphic organizer and using short sentences.</td>
<td>Students will explain how leaves produce food by using a graphic organizer and using sentence starters with a word bank.</td>
<td>Students will explain how leaves produce food by using a graphic organizer with pictures and a word bank.</td>
<td>Students will explain how leaves produce food by using a graphic organizer with pictures and a word bank.</td>
</tr>
<tr>
<td>Writing – Identify the 3 main components the leaves need to make food.</td>
<td>Students will identify the 3 main components the leaves need to make food by completing a worksheet.</td>
<td>Students will identify the 3 main components the leaves need to make food by completing a worksheet with sentence starters.</td>
<td>Students will identify the 3 main components the leaves need to make food by completing a worksheet sentence starters and a word bank.</td>
<td>Students will identify the 3 main components the leaves need to make food by completing a worksheet with a word bank, text clues underlined.</td>
<td>Students will identify the 3 main components the leaves need to make food by completing a worksheet with matching pictures.</td>
</tr>
</tbody>
</table>
### Plant Life – Grade 3
### Functional Chart – Advanced Beginner - Intermediate
### Lesson 4 - Leaves

<table>
<thead>
<tr>
<th>Function</th>
<th>Situation</th>
<th>Expressions</th>
<th>Vocabulary</th>
<th>Grammar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe</td>
<td>What are leaves?</td>
<td>Leaves _______.</td>
<td>make food for the plant. grow out of the stem of a plant. grow near the top of a plant. can be many different shapes. can be large. can be small. can be eaten.</td>
<td>Verbs Helping verbs</td>
</tr>
<tr>
<td>Sequence</td>
<td>Explain how leaves produce food.</td>
<td>1 leaves 2 __.</td>
<td>1 – First 1 – Then 1 – Lastly 2 – take in the water and nutrients from the stem. 2 – take in gases from the air. 2 – take in sunlight 2 – the leaves makes sugar for the plant.</td>
<td>Use of transitions</td>
</tr>
<tr>
<td>Identify</td>
<td>Identify the 3 main components leaves need to make food.</td>
<td>Leaves need __.</td>
<td>water from the soil. gas from the air. sunlight from the sun.</td>
<td>Prepositions Nouns</td>
</tr>
</tbody>
</table>
Lesson Plan
Lesson 3 – Stems

Essential Question: What are leaves?

Time: 30 minutes

Warm up/Review:
The teacher will ask the students to open up their notebooks to their predictions from the prior lesson. The teacher will ask for student volunteers to read their predictions. After hearing a few responses, the teacher will uncover the experiments and ask the students what the results were for the celery and carnation. **The students will write down the results in their notebooks** and share with a neighbor. (3 minutes)

Modifications:
*Level 1-3 students will use sentence starters, word banks, and pictures that were provided to them the previous lesson.*

Introduction:
The teacher will take a carnation from one of the cups and ask the students if they know what (pointing to the leaves) this is called? After a few responses, write the word “Leaves” on the board. The teacher will ask the students what they know about leaves. The teacher will write the ideas on the board under the “K” box. The teacher will ask the student what they want to learn about leaves. The teacher will write the ideas on the board under the “W” box. After the teacher completes the first two portions of the chart, the teacher will explain that leaves help feed the plant and also produces oxygen/air for us to breath. The teacher will explain to the students that oxygen is the scientific term for the air we breath in. (5 minutes)

Modifications:
*For Level 1-3 students, the teacher will ask those student yes or no questions. For example, do you think all leaves are the same size? Do you think all leaves are green? What do you think would happen if plants did not have leaves, would they live or die?*

Major Activities:
1. The teacher will instruct the students to **read pages A11-A12 in their textbooks.** (5 minutes)

   Modifications:
   • *Level 5 and level 4 students will read directly from the textbook (page 6 & 7).*
   • *Level 3 students will receive a copy of the text with key facts underlined (page 8 & 9).*
• Level 2 and level 1 students will receive a hand out with simplified text (page 10 & 11).

2. The teacher will then lead the class in a discussion regarding the text. The teacher will also hand out a t-chart graphic organizer for the students to fill out as the teacher discusses the text. The teacher will speak in a pace appropriate for all level in the class. The teacher will ask the following questions: What are leaves? What part of the plant to leaves grow in? What do leaves look like, describe it. (5 minutes)

Modifications:
For text:
• Level 5 students will be expected to answer in complete sentences.
• Level 4 students will respond in short phrases and sentences.
• Level 3 students will be given sentence starters, which they will use to participate in whole class discussion. (See the functional chart on page 2.)
• Level 2 students will respond using one or two word phrases provided by the teacher (provides food, the top part, green, large, small).
• Level 1 students will repeat phrases give by the teacher (Leaves provide food to the plant, leaves grow near the top, leaves can be green, leaves can be large, leaves can be small.)

For t-chart:
• Level 5 students will use a blank t-chart, writing in complete sentences (see page 12).
• Level 4 students will use a blank t-chart, writing in short sentences (see page 12).
• Level 3 students will use a t-chart with sentence starters (see page 13).
• Level 2 students will use a t-chart with sentence starters and a word bank (see page 14).
• Level 1 students will use a t-chart with pictures and a word bank (see page 15).

3. The teacher will then split the class into pairs. The teacher will ask the students to take out the leaves that were brought from home. Each student will use a magnify glass to take a closer look at the details of the leaves. The students will discuss their findings. The teacher will then ask the class as a whole to share their findings. (5 minutes)

Modifications:
• Level 1-3 will use the modification provided to them in activity 2 (sentence starters, phrases and the t-chart)

4. Students will complete the “leaves” worksheet. Students will identify the 3 major components needed for plants to produce food. They will also draw the part of the plant that makes food. (5 minutes)
Modifications:
- Level 5 students will complete the worksheet using complete sentences (page 16).
- Level 4 students will complete the worksheet using sentence starters (page 17).
- Level 3 students will complete the worksheet using sentence starters and a word bank (page 18).
- Level 2 students will complete the worksheet using sentence starters and a word bank and text clues underlined (page 19).
- Level 1 students will complete the worksheet by matching pictures (page 20).

Closure:
The teacher will review the answers to the leaves worksheet and write them on the board. This will allow the students to check their answers. The teacher will then refer to the KWL chart on the board and read through the “K” box and put a check mark next to the statements that were true. The teacher will then move on to the “W” box and do the same. Lastly, the teacher will fill in the “L” box by asking the students to share one thing they learned today. The teacher will write them on the board. (3 minutes)

Modifications:
- The teacher will underline key phrases on the board.
- Level 1-3 students will use their worksheets, sentence starters and t-charts to fill in the “L” box.

**Assessment:**
Students will be assessed the following class. They will be given a worksheet in which they will need to identify: 1. What is a plant? 2. What do plants need to live? 3. Label a diagram of a plant? 4. Explain what each part of the plant does.

Modifications:
- Level 5 & Level 4 students will have no modifications (page 21).
- Level 3 students will have sentence starters with a word bank (page 22).
- Level 2 & Level 1 students will match pictures, and completes sentences using a word bank (page 23).

*Bolded text refers to the original lesson plan.
Stems

The stems of many plants are long and thin. They contain small tubes. These tubes carry water and nutrients throughout the plant. The stems hold up the leaves. This allows the leaves to collect sunlight.

Some stems, such as the stems of sugar cane, can store food. In a cactus plant, the stems store water. Tree trunks are also stems. Celery stalks and asparagus are examples of stems eaten by people.

Leaves

Leaves grow out of the stem of a plant. Most plants have many leaves. The leaf is the part of the plant that makes food. Leaves take in sunlight and air, and use them to make sugar. The sugar is food for the plant.

Leaves usually grow near the top of the plant so they can take in a lot of sunlight. Different types of plants usually have differently shaped leaves. The spines on a cactus are leaves. So are the needles of a pine tree. You might eat the leaves of some plants, such as lettuce, spinach, or cabbage.

TEXT STRUCTURE Look back at the last three heads in this lesson. What are the three parts of a plant?
How Plants Meet Needs

The roots, stems, and leaves of a plant are all connected. They work together to help the plant meet its needs. To live and grow, a plant must meet its needs. Roots take in water and nutrients from soil. Stems carry the water and nutrients to the leaves and other parts of the plant. Leaves use sunlight, water, and air to make sugar.

Air Leaves take in gases from the air. Some of the gases are used to make food.

Water Roots take in water from the soil. Plants use water to make food. Water helps hold the plant upright.

Nutrients Roots take in nutrients from the soil. Plants use these nutrients to live and grow.
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Water Roots take in water from the soil. Plants use water to make food. Water helps hold the plant upright.

Air Leaves take in gases from the air. Some of the gases are used to make food.

Sunlight Leaves take in sunlight, which the plant uses to make food.

Lesson Wrap-Up

Visual Summary

Plants need air, water, sunlight, and nutrients to live.

Plants have roots, stems, and leaves and are made of cells.

The roots, stems, and leaves of a plant work together to help the plant meet its needs.

Review

Q MAIN IDEA How does a plant meet its needs?
Q VOCABULARY What is the job of roots?
Q READING SKILL: Text Structure Which heading would most likely have information about root structure: Parts of Plants or Needs of Plants?
Q CRITICAL THINKING: Synthesize Describe how stems and leaves of a plant work to help the plant live.
Q INQUIRY SKILL: Observe Suppose a plant has plenty of light, soil, and air. Its leaves are turning brown and dry. Which of its needs is not being met?
Q TEST PREP The main job of leaves is to
A. hold up the plant.
B. make food for the plant.
C. take in water and nutrients.
D. store food for the plant.

MATH Add It Up A rabbit eats 2 celery stalks, 3 carrots, 3 radishes, 1 turnip, and 1 head of lettuce. How many vegetables does the rabbit eat in all? How many of the vegetables eaten are roots?

HEALTH Make a Poster Native Americans used the bark of willow trees as a pain medicine. Today, chemicals found in willow bark are used to make aspirin. Many modern medicines come from parts of plants. Make a poster listing some common modern medicines. Include drawings of the plants they are made from.

Technology

Visit www.eduplace.com/scp to find out more about the needs of plants.
**Stems**

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**TEXT STRUCTURE** Look back at the last three heads in this lesson. What are the three parts of a plant?
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Lesson Wrap-Up

Visual Summary

Plants need air, water, sunlight, and nutrients to live.

Plants have roots, stems, and leaves and are made of cells.

The roots, stems, and leaves of a plant work together to help the plant meet its needs.

Review

1. MAIN IDEA: How does a plant meet its needs?
2. VOCABULARY: What is the job of roots?
3. READING SKILL: Text Structure: Which heading would most likely have information about root structure: Parts of Plants or Needs of Plants?
4. CRITICAL THINKING: Synthesize: Describe how stems and leaves of a plant work to help the plant live.
5. INQUIRY SKILL: Observe: Suppose a plant has plenty of light, soil, and air. Its leaves are turning brown and dry. Which of its needs is being met?

The root, stem and leaves are connected. They work together to feed the plant.

Leaves use sunlight, water and air to make sugar.
<table>
<thead>
<tr>
<th>Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Description of leaves</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>B. Name 3 things leaves need to make food.</td>
</tr>
<tr>
<td>4.</td>
</tr>
<tr>
<td>5.</td>
</tr>
<tr>
<td>6.</td>
</tr>
<tr>
<td>C. How do leaves use those elements to make food?</td>
</tr>
<tr>
<td>7.</td>
</tr>
<tr>
<td>8.</td>
</tr>
<tr>
<td>9.</td>
</tr>
<tr>
<td>10.</td>
</tr>
<tr>
<td>A. Description of leaves</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
</tr>
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<td>C. How do leaves use those elements to make food?</td>
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<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
# T-Chart – Level 2

## Leaves

| A. Description of leaves | 1. Leaves are connected to the _________________  
|                         | 2. Leaves grow near the _________________  
|                         | 3. Leaves can be _________________________  

| B. Name 3 things leaves need to make food. | 4. Leaves need _________________________  
|                                           | 5. Leaves need _________________________  
|                                           | 6. Leaves need _________________________  

| C. How do leaves use those elements to make food? | 7. First, it takes in __________.  
|                                                  | 8. Then, it takes in __________.  
|                                                  | 9. Then, it takes in __________.  
|                                                  | 10. Finally, it turns it into __________.  

**Word Bank**

- a. stem  
- b. big or small  
- c. top  
- d. sugar  
- e. sunlight  
- f. air  
- g. water
### T-Chart – Level 1

**Leaves**

<table>
<thead>
<tr>
<th>A. Description of leaves</th>
<th>1. Leaves are connected to the ________</th>
<th>![Leaf connected to stem]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Leaves grow near the ________</td>
<td>![Leaf near the ground]</td>
</tr>
<tr>
<td></td>
<td>3. Leaves can be ________</td>
<td>![Leaf types]</td>
</tr>
<tr>
<td>B. Name 3 things leaves need to make food.</td>
<td>4. Leaves need ________</td>
<td>![Leaves need sunlight]</td>
</tr>
<tr>
<td></td>
<td>5. Leaves need ________</td>
<td>![Leaves need air]</td>
</tr>
<tr>
<td></td>
<td>6. Leaves need ________</td>
<td>![Leaves need water]</td>
</tr>
<tr>
<td>C. How to leaves make food?</td>
<td>7. First, it takes in ________</td>
<td>![Leaves absorb sunlight]</td>
</tr>
<tr>
<td></td>
<td>8. Then, it takes in ________</td>
<td>![Leaves absorb air]</td>
</tr>
<tr>
<td></td>
<td>9. Then, it takes in ________</td>
<td>![Leaves absorb water]</td>
</tr>
<tr>
<td></td>
<td>10. Finally, it turns it into ________</td>
<td>![Leaves turn into sugar]</td>
</tr>
</tbody>
</table>

**Word Bank**

- a. stem
- b. big or small
- c. top
- d. sugar
- e. sunlight
- f. air
- g. water
A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

Plants also help us. We get food from plants. Plants also make oxygen for us to breathe.

What do plants use to make food?

1. 

2. 

3. 

4. 

Draw the part of the plant that can make food.

Extra: See how many kinds of leaves you can find.
Leaves

A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

Plants also help us. We get food from plants. Plants also make oxygen for us to breathe.

What do plants use to make food?

1. Plants use

2. Plants use

3. Plants use

4. Plants use

Draw the part of the plant that can make food.

Extra: See how many kinds of leaves you can find.
Teacher: You may wish to introduce these terms: photosynthesis, carbon dioxide, chlorophyll.

Name ______________________

**Leaves**

A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

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What do plants use to make food?

1. Plants use ______________________

2. Plants use ______________________

3. Plants use ______________________

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Draw the part of the plant that can make food.

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A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

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**What do plants use to make food?**

1. Plants use ____________

2. Plants use ____________

3. Plants use ____________

4. Plants use ____________

**Draw the part of the plant that can make food.**

**Extra:** See how many kinds of leaves you can find.
A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

Plants also help us. We get food from plants. Plants also make oxygen for us to breathe.

What do plants use to make food?

1. Plants use the _____ part of the leaves.  
   a. air

2. Plants use _____ from the soil.  
   b. sunlight

3. Plants use gas from the ____ ____.  
   c. water

4. Plants use ____ ____ to make its food.  
   d. green

Draw the part of the plant that can make food.
How Do Plants Use Their Parts?

Main Idea: Plants use their parts to meet their basic needs.

Write answers to the questions on the lines below.

1. What is a plant?

2. What do plants need to live?

Label the diagram below and use it to answer question 7.

3. ___________________

4. ___________________

5. ___________________

6. ___________________

7. Explain what each part of the plant does.

---

Study Guide
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How Do Plants Use Their Parts?

Main Idea Plants use their parts to meet their basic needs.

Write answers to the questions on the lines below.

1. What is a plant?
   A plant is a living thing that grows in the Word Bank:
   a. stem
   b. leaf
   c. air
   d. roots
   e. cells
   f. water & land
   g. water
   h. sunlight

2. What do plants need to live?
   Plants need __________, __________ & __________.

   Label the diagram below and use it to answer question 7.

   3. __________
   4. __________
   5. __________
   6. __________

7. Explain what each part of the plant does.
   The ________ takes in sunlight.
   The ________ is the smallest unit in a plant.
   The ________ absorbs water & nutrients.
   The ________ carries the water & nutrients to the leaves.
Assessment – Level 2 & Level 1

How do plants use their parts?

Complete the following sentences using the following choices: water, air, sunlight.

1. A plant is a living thing that grows in the _______ or on land.

2. Plants need ________, ________, & ________ to live.

Match the statements below to the correct part of the plant identified as numbers, 3-6.

a. The leaves takes in sunlight. ________

b. The cell is the smallest unit in plant. ________

c. The roots absorbs water and nutrients. ________

d. The stem carries the water and the nutrients to the leaves. ________
In creating the lesson on leaves I used resources from by Spanish classes and I also used materials from the textbook. In modifying this lesson, I incorporated multiple opportunities for students to work in pairs and also to work independently. I also used the KWL chart. I decided to use one KWL chart for the whole class and post it on the board opposed to having each student create their own. The reason for this is that it would allow all students to be able to participate because the teacher simplified the questions for yes/no responses, and short phrases the student could repeat. I also tried using a t-chart for students to write their responses after the reading as the class is discussion the text. I also spoke in a slower pace and also wrote the information on the board. This allows the ELL in the classroom to have multiple opportunities to practice speaking and also have a listening guide.

In addition, I also provided a final assessment for the students. Throughout the lesson there were several points in which the students were quickly assessed, but a formal assessment will be done after the lesson on leaves. The assessment was also modified for various levels. I think this lesson uses multiple strategies in which students of all levels can participate and also acquire knowledge on the topic of leaves.
Checklists
Write the page numbers and any other identifying features to identify those parts of your lessons that employ the following strategies.

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### Grammar and Functions Checklist

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Title: Plant Life

Grade Level: Third Grade

Target Group: Mainstream class with integrated ELL students

Source of Written Reading Materials:


Source of Lessons:
Barraza, V. My ideas and my interpretation of the ideas presented by Hall, McCaslin and Life Lab Science Program.


Goals:
- I want my students to know that the roots supply water and nutrients to plants.
- I want my students to know that the stem carries water and nutrients to the plant.
- I want my students to know that the leaves use water, sun and air to produce food for the plant.
- I want my students to know how to identify the roots, stem and leaves of a plant.
Lesson Plan

Lesson 2 - Roots

Learning Objective: Students learn about the many functions of roots. This includes how they get water and nutrients from the soil to the plant.

Essential Question: What is a root?

Time: 30 minutes

Major Activities:

• Discuss what students think roots are, what they do for the plant and how. (3 minutes)
• Read page A9 in the text book and discuss. (10 minutes)
• Students will complete “the roots” activity. Students will be broken up into groups of four. They will be given a carrot, an asparagus and a bean (with roots). They will trace the roots and describe each root. They will also classify and identify their differences and similarities. (8 minutes)
• Students will complete “the roots” worksheet to identify the various types of roots and their purposes. (5 minutes)
• Review – Students will identify the purpose of the roots, and how they obtain nutrients from the soil. (4 minutes)
Parts of Plants

Like animals and all other living things, plants are made of cells. A cell is the smallest and most basic unit of a living thing. Plant cells have stiff walls that support the plant and give it shape. Plants cannot move from place to place to find food and water like animals can. So how do plants meet their needs? They have parts that help them get the things they need to stay alive.

Almost all plants have three parts. Each part does a job that helps the plant live. A root takes in water and nutrients and provides support for the plant. A stem holds up the leaves and carries water and nutrients through the plant. A leaf collects sunlight and gases from the air. It uses them to make food for the plant.

The zebra plant is unusual because it has leaves patterned like zebra fur. What features does it have in common with other plants?

Roots

You usually don’t see the roots of a plant. The roots of most plants grow underground. The most important job of roots is to take in water and nutrients from the soil. Roots have tiny hairlike parts that help them do this.

The roots of most plants also have another job. Roots are needed to hold the plant in place in the soil and to help it stand up. Tall trees have huge roots that help keep them from tipping over. Roots of grasses help hold them in place.

Sometimes, roots store food for the plant. The carrots you eat are actually roots. They contain many nutrients that they store for use by the whole carrot plant. Radishes, turnips, beets, and some other vegetables that people eat are also roots.

If page A8 ended after the first paragraph, what would be a better heading for that page?

Carrots are roots. They have tiny hairlike parts, called root hairs, that help take in water and nutrients from soil.
Name ________________________

**Roots**

Roots hold a plant in place. Plants need water and minerals. Roots take water and minerals from the soil to feed the plant. Roots help get food to the rest of the plant. Some plants store food in their roots. Carrots and beets are two types of roots that we eat.

![Diagram of plants with roots]

**Choose words to fill in the blanks:**

1. Some plants store _______________ in their roots.

2. Roots take _______________ and _______________ from the soil to feed the plant.

3. Roots _______________ the plant in place.

4. A _______________ is a root that we eat.

**Extra:** Draw a root that you eat.

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Lesson Plan

Lesson 3 – Stems & Leaves 1

Learning Objective: Students learn about the functions of leaves and stems including how stems transport materials from the roots to the leaves, and how leaves gather sunlight to make food.

Essential Question: What is a stem?

Time: 30 minutes

Major Activities:

• Discuss what students think the stem does for the plant. (4 minutes)
• Read page A10 in the textbook and discuss. (10 minutes)
• Students will complete “the stem” activity. Students will be broken up into groups of 3. Each group will be given 2 celery stalks and 2 carnation flowers. They will also receive two cups of water with food coloring. They will place the celery stalk and flower in each color and make a prediction about what will happen by tomorrow. They will write this prediction in their notebooks. (6 minutes)
• Students will complete the “stem” worksheet to identify the various types of stems and their purposes. (6 minutes)
• Review – Students will identify the purpose of the stem, and how they obtain nutrients from the soil. (4 minutes)

*Homework: Students will collect leaves from their yards or the park, only picking up leaves that have fallen.
Leaves

Leaves grow out of the stem of a plant. Most plants have many leaves. The leaf is the part of the plant that makes food. Leaves take in sunlight and air, and use them to make sugar. The sugar is food for the plant.

Leaves usually grow near the top of the plant, so they can take in a lot of sunlight. Different types of plants usually have differently shaped leaves. The spines on a cactus are leaves. So are the needles of a pine tree. You might eat the leaves of some plants, such as lettuce, spinach, or cabbage.

Look back at the last three heath in this lesson. What are the three parts of a plant?
Stems

Stems hold up the leaves and flowers of a plant. Stems have little tubes that take water and food to the rest of the plant. Grass, flowers, and vines have soft stems. Trees have one hard, woody stem called a trunk. Most stems grow up.

Strawberry stems grow along the ground.

Potato stems grow under the ground.

Match:

1. Most stems
2. Stems have tubes that
3. Stems hold up
4. Trees have a stem

the leaves and flowers.
called a trunk.
grow up.
carry water and food.

Extra: Draw a plant with a trunk on the back of this paper.
Lesson Plan

Lesson 4 – Stems & Leaves 2

Learning Objective: Students learn about the functions of leaves and stems including how stems transport materials from the roots to the leaves, and how leaves gather sunlight to make food.

Essential Question: What is a leaf?

Time: 30 minutes

Major Activities:

- Review the function of the stem. Students will observe their celery stalk and carnation and write in their notebooks the outcome of their experiment. Students will share their observations. (5 minutes)
- Ask the students what else the plant needs in order to survive besides water. Discuss the purpose of the leaves. (3 minutes.)
- Read page A11-A12 in the textbook and discuss. (8 minutes)
- We will discuss as a class the various leaves that were brought in from home. Each student will use a magnifying glass to take a closer look at the details of the leaves. (6 minutes)
- Students will complete the “leaves” worksheet. Students will identify the purpose of leaves and the four major components needed to produce food. (4)
- Review – Students will label the various parts of the plants. (4 minutes)
How Plants Meet Needs

The roots, stems, and leaves of a plant are all connected. They work together to help the plant meet its needs. To live and grow, a plant must meet its needs. Roots take in water and nutrients from soil. Stems carry the water and nutrients to the leaves and other parts of the plant. Leaves use sunlight, water, and air to make sugar.

**Visual Summary**

- Plants need air, water, sunlight, and nutrients to live.
- Plants have roots, stems, and leaves and are made of cells.
- The roots, stems, and leaves of a plant work together to help the plant meet its needs.

**Links for Home and School**

**Math Add It Up**

A rabbit eats 2 celery stalks, 2 carrots, 3 radishes, 1 turnip, and 1 head of lettuce. How many vegetables does the rabbit eat in all? How many of the vegetables eaten are roots?

**Health Make a Poster**

Native Americans used the bark of willow trees as a pain medicine. Today, chemicals found in willow bark are used to make aspirin. Many modern medicines come from parts of plants. Make a poster listing some common modern medicines. Include drawings of the plants they are made from.

**Review**

1. **Main Idea** How does a plant meet its needs?
2. **Vocabulary** What is the job of roots?
3. **Reading Skill** Text Structure Which heading would most likely have information about root structure: Parts of Plants or Needs of Plants?
4. **Critical Thinking** Synthesize Describe how stems and leaves of a plant work together to help the plant live.
5. **Inquiry Skill** Observe Suppose a plant has plenty of light, soil, and air. Its leaves are turning brown and dry. Which of its needs is not being met?

**Test Prep**

The main job of leaves is to _____.
A. hold up the plant.
B. make food for the plant.
C. take in water and nutrients.
D. store food for the plant.

**Technology**

Visit www.eduplace.com/mep to find out more about the needs of plants.
A plant can make its own food. The plant uses the green part of its leaves, water from the soil, gas from the air, and sunlight to make its food.

Plants also help us. We get food from plants. Plants also make oxygen for us to breathe.

What do plants use to make food?

1. ________________________________

2. ________________________________

3. ________________________________

4. ________________________________

Draw the part of the plant that can make food.

Extra: See how many kinds of leaves you can find.
Name the Parts of the Plants

branch  flower  fruit  leaf  root  stem  trunk

Extra: Color the plants.
How Do Plants Use Their Parts?

Main Idea Plants use their parts to meet their basic needs.

Write answers to the questions on the lines below.

1. What is a plant?

2. What do plants need to live?

Label the diagram below and use it to answer question 7.

3. __________

4. __________

5. __________

6. __________

7. Explain what each part of the plant does.