Grade 3 Science Life Unit (3.L.2)

Decision 1: What will students learn in this unit?

Standards Addressed:

<table>
<thead>
<tr>
<th>Science</th>
<th>RI.3.1</th>
<th>RI.3.4</th>
<th>RI.3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.L.2</td>
<td>Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.</td>
<td>Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic of subject area.</td>
<td>Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading Informational Text</th>
<th>Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI.3.1</td>
<td>W.3.1</td>
</tr>
<tr>
<td>RI.3.4</td>
<td>W.3.2</td>
</tr>
<tr>
<td>RI.3.5</td>
<td>W.3.4</td>
</tr>
<tr>
<td>RI.3.1</td>
<td>W.3.5</td>
</tr>
<tr>
<td>RI.3.4</td>
<td>W.3.7</td>
</tr>
<tr>
<td>RI.3.5</td>
<td>W.3.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technology</th>
<th>3.TT.1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use technology tools and skills to reinforce classroom concepts and activities.</td>
</tr>
</tbody>
</table>

What do I want my students to **KNOW**, **UNDERSTAND** and be able to **DO** at the end of this unit?

<table>
<thead>
<tr>
<th>Know</th>
<th>Understand</th>
<th>Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can remember the function of the roots, stem, leaves, and flowers.</td>
<td>Understand how plants survive in their environments.</td>
<td>I will draw a picture of a plant and name the parts.</td>
</tr>
<tr>
<td>I can compare how plants react to different amounts of light, water, and nutrients.</td>
<td></td>
<td>• I will describe what each part does.</td>
</tr>
<tr>
<td>I can give examples of the stages of a plant’s life cycle.</td>
<td></td>
<td>I will observe plants growing with normal amounts of light, water, and nutrients and record my observations.</td>
</tr>
<tr>
<td>I can compare the different types of soil.</td>
<td></td>
<td>• I will observe plants growing with too much or too little light, water, and nutrients and record my observations.</td>
</tr>
<tr>
<td>I can compare how plants grow in different soil types.</td>
<td></td>
<td>• I will compare the differences in my observations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I will make a graphic organizer to illustrate and describe the stages of a plant’s life.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I will observe and describe the texture of different kinds of soil.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I will list the things that make up soil.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I will observe and record how much water different kinds of soil hold.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I will observe plants growing in different soil types and record my observations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• I will compare the differences in my observations.</td>
</tr>
</tbody>
</table>
Decision 2: Assessment

Plan for how students will indicate learning and understanding of the concepts in the unit. How will you assess learning?

Possibilities/options:
- Pre-assessment
- Short answer tests or quizzes
- Student logs, journals and informal writing
- Lab activities
- Formal writing assignments
- Informal or formal student Interviews, conferences, observations etc.

Describe the performance, product, or project that will be the culminating activity for the unit.

The student’s assignment for the Culminating Activity includes:
- **Unit** essential question or “I Can” statement for the culminating activity.
- A thorough **description** of the activity including steps or task **analysis** in completing the culminating activity.
- A copy(ies) of the rubric(s) you will use to assess the culminating activity or any other aspects of the unit.
**Decision 2: Assessments – Rubric Reminders:**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Resources</td>
</tr>
<tr>
<td>Written Campaign</td>
<td>Many incomplete sentences with many mistakes in spelling, punctuation or grammar making it difficult to read.</td>
</tr>
<tr>
<td>Speech: Conventions</td>
<td></td>
</tr>
<tr>
<td>Written Campaign</td>
<td>Almost no details which make it difficult for the audience to understand the information.</td>
</tr>
<tr>
<td>Speech: Content</td>
<td></td>
</tr>
<tr>
<td>Oral Presentation</td>
<td>The audience did not understand the speaker and read the entire presentation.</td>
</tr>
</tbody>
</table>

**What does each number or adjective in your scale mean?**

- **1 (Weak):** Resources not listed.
- **2 (Sufficient):** One resource listed.
- **3 (Proficient):** Two resources listed.
- **4 (Exemplary):** Three or more resources listed.

For more information, see the *Decision 2 - Assessment: Rubric Reminders*.
**Decision 3: Student Learning Map**

**Key Learning Targets:**

| 3.L.2 Understand how plants survive in their environments. |

**Concept:**  
**3.L.2.1** Students will know the names and functions of major plant parts (i.e., roots, leaves, stems, flowers).

| Concept:  
**3.L.2.2** Students will explain how environmental conditions can affect how a plant grows and survives.  
**3.L.2.3** Students will be able to describe the life cycle of a seed plant. |

**Lesson EQ(s):**  
**I can label the parts of a plant and tell what they do.** (Two lessons.)  
**I can compare how plants react to different amounts of light, water, and nutrients.**  
**I can give examples of the stages of a plant’s life cycle.**

**Vocabulary:**  
**Seed**  
**Roots**  
**Stem**  
**Leaves**  
**Flower**  
**Seedling**  

**Vocabulary:**  
**Drought**  
**Environment**  
**Germinate**  
**Survive**

**Vocabulary:**  
**Life cycle**  
**Seedling**  
**Mature**  
**Flowering**  
**Pollination**
### Concept:

**3.L.2.4.**

Students will understand how soil (i.e., sand, clay, humus) affect plant growth and survival.

### Lesson EQ(s):

I can compare the different types of soil (i.e., sand, clay, humus).
I can compare how plants grow in different soil types.

### Vocabulary:

Soil  
Sand  
Clay  
Humus  
Texture  
Retention  
Absorb
Decision 4: Launch Activities

Hooks and Links

Develops student interest and links prior knowledge. Provides the Student Learning Map and the key vocabulary to students.

Guiding Questions:
1. How are you going to get students engaged?
2. How are you going to develop student interest and link their prior knowledge?
3. How are you going to start the Student Learning Map of the unit with students?
4. How are you going to preview key vocabulary with students?
Decision 5: Acquisition Lesson One

Language Objective(s), where appropriate:
I will draw a picture of a plant and name the parts.
I will describe what each part does through words, motions, and songs.
ELD Level 2-5.

Lesson Essential Question(s) or “I Can” Statement(s):
3.L.2.1.
I can label the parts of a plant and tell what they do.

Activating Strategies: (Learners Mentally Active)
- What do you know? SW (“students will”) be given a blank graphic organizer of a plant (this is a pre-assessment). SW will be given three minutes to label the parts.
- When time is up, SW compare their labeled plant with their neighbors.

Acceleration/Previewing: (key vocabulary)
Seed  Roots
Stem  Leaves
Flower  Seedling

Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)
- TW (“teacher will”) show completed and accurately labeled plant.
- TW make up hand motions to go with each plant part.
- TW teach these hand motions to the class.
- SW pair up and “teach” each other the plant parts using the decided upon hand motions.
- TW introduce what each part of the plant is responsible for:
  - Roots: absorb nutrients
  - Stems: provide support
  - Leaves: synthesize food
  - Flowers: attract pollinators and produce seeds for reproduction
- TW read book: From Seed to Plant by Gail Gibbons.

Distributed Guided Practice/Summarizing Prompts: (prompts designed to Initiate Periodic Practice or Summarizing)

Summarizing Strategies: Learn Summarize and Answer Essential Questions
- Sing: Plant Parts (sung to the tune of Wheels on the Bus).

Lesson Resources
From Seed to Plant by Gail Gibbons
Plant Song (sung to Wheels on the Bus)
Plant Parts
[INSERT PLANTS PARTS page with answers here.]
Teaching with Songs
(http://teachingwithsongs.blogspot.com/2009/05/plant-parts.html)

Plant Parts
(to the tune of *The Wheels on the Bus*)

The roots on a plant are underground,
Underground, underground.
The roots on a plant are underground.
Roots are part of a plant.

The stem on a plant holds up the leaves,
Up the leaves, up the leaves.
The stem on a plant holds up the leaves.
Stems are part of a plant.

The leaves on a plant are making food,
Making food, making food.
The leaves on a plant are making food.
Leaves are part of a plant.

The flowers on a plant are growing seeds,
Growing seeds, growing seeds.
The flowers on a plant are growing seeds.
Flowers are part of a plant.

Source unknown. Posted by Megan Gregory, 5:11 am, Wednesday, May 20, 2009
**Decision 5: Acquisition Lesson Two**

**Language Objective(s), where appropriate:**
- I will create and use a tree map to take notes.
- I will use my tree map to write a paragraph to describe the parts of a plant and their functions. (ELD Level 4-5.)

**Lesson Essential Question(s) or “I Can” Statement(s):**

3.L.2.1
I can label the parts of a plant and tell what they do.

**Activating Strategies: (Learners Mentally Active)**

- Mix/Freeze group: TW hand out cards, some are vocabulary words and others are definitions. SW find their match.
- TW post a blank graphic of a plant.
- Student pairs will place their word and definition on the graphic while telling the class how they know they are right.

**Vocabulary:**

<table>
<thead>
<tr>
<th>Seed</th>
<th>Roots</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem</td>
<td>Leaves</td>
</tr>
<tr>
<td>Flower</td>
<td>Seedling</td>
</tr>
<tr>
<td>Function</td>
<td>Paragraph</td>
</tr>
<tr>
<td>Tree Map</td>
<td></td>
</tr>
</tbody>
</table>

**Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)**

- TW show: “How parts of a plant reproduce” from Discovery Streaming.
  
  - Optional: TW introduce: Journey North: The Tulip Project
  - John Murphy is a great resource for this. He is from the Bullington Center.
  - [http://www.learner.org/jnorth/tulip](http://www.learner.org/jnorth/tulip)

- Together class will create a tree map (see attached).
- Each student will write on his/her own tree map.

**Summarizing Strategies: Learners Summarize and Answer Essential Questions**

SW do parts of plant written response using the rubric and their tree map.

**Lesson Resources**

- Journey North: [http://www.learner.org/jnorth/tulip](http://www.learner.org/jnorth/tulip)
- Blank Tree Map
- Rubric for Parts of a Plant written response. (Can use with Tops and Bottoms from Scott Foresman.)
<table>
<thead>
<tr>
<th>Flower</th>
<th>Leaves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Stem</td>
<td>Roots</td>
</tr>
<tr>
<td>Attracts pollinators.</td>
<td>Takes in air and light for a plant to make food.</td>
</tr>
<tr>
<td>Carries water from the roots to other parts of the plant.</td>
<td>Holds a plant in the ground.</td>
</tr>
<tr>
<td>Forms seeds and fruit.</td>
<td>Takes in water and minerals.</td>
</tr>
</tbody>
</table>
Tree Map for Classifying and Grouping Main Idea, Supporting Ideas, and Details
Name___________________________________________

Rubric for Parts of a Plant Writing Assignment

Content:

Names:  1. Flower _____ 2. Attracts pollinators _______ 3. Forms seeds and fruit ______
Names:  4. Leaves ____ 5. Takes in air and light ______

Excellent understanding:

• Mentions that leaves use air and light to make food ______
• Mentions that the stem supports the plant ______
• Mentions the fruit as part of the plant ______

Parts of the seed goes with the multiple choice part of the test and seed sorting assessment for a total of 18 items.

Writing Rubric for Informational Writing Parts of a Plant.

<table>
<thead>
<tr>
<th>Rubric Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indents paragraph</td>
<td>5 pts.</td>
</tr>
<tr>
<td>Begins sentences with capitals</td>
<td>15 pts.</td>
</tr>
<tr>
<td>Uses ending punctuation</td>
<td>15 pts.</td>
</tr>
<tr>
<td>Topic sentence</td>
<td>10 pts.</td>
</tr>
<tr>
<td>Writes sentences to give detail</td>
<td>15 pts.</td>
</tr>
<tr>
<td>No sentence fragments or run-on sentences</td>
<td>15 pts.</td>
</tr>
<tr>
<td>Spell “word wall” words correctly</td>
<td>10 pts.</td>
</tr>
<tr>
<td>Ending sentence</td>
<td>10 pts.</td>
</tr>
<tr>
<td>Writes neatly and spaces words</td>
<td>5 pts.</td>
</tr>
</tbody>
</table>
Decision 5: Acquisition Lesson Three

Language Objective(s), where appropriate:

- I will follow the scientific process.
- I will write in my science journal.

ELD Level 2-3

Lesson Essential Question(s) or “I Can” Statement(s):

3.L.2.2
I can compare how plants react to different amounts of light, water, and nutrients.

Activating Strategies: (Learners Mentally Active)

TW ask questions and listen to student predictions:

- What do you think would happen if we planted these seeds and then put it in the closet?
- What do you think would happen if we planted these seeds and then put it in the window?
- What do you think would happen if we planted these seeds and then didn’t water them?

Acceleration/Previewing: (key vocabulary)

- drought
- germinate
- environment
- survive
- scientific process

Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

TW say, “We need to figure out what all plants need to grow.”

TW introduce the experiment that will use the scientific process to discover what conditions plants need in order to grow.

TW introduce the scientific process with this song (tune of 10 Little Indians):

- Title, question, scientific process
- Hypothesis, materials, scientific process
- Procedures, results, scientific process
- Conclusion that is all!

Teacher and students will follow the scientific process together.

Materials needed:

- Four cups labeled A, B, C, and D.
- Soil for each cup.
- Rye seeds
- Water

Cups A and B will be placed in the window and watered daily.

Cups C and D will be placed in the closet with no light, but watered daily.
Cups E and F will be placed in the window with no water.
SW observe cups daily and record observations on graphic organizer for two weeks.

***After two weeks, T and SW need to meet together for a mini-lesson to discuss their results and their conclusions. SW need to write a response paragraph drawing a conclusion that shows how the conditions affected plant growth.***

Distributed Guided Practice/Summarizing Prompts: (prompts designed to Initiate Periodic Practice or Summarizing)

**Summarizing Strategies: Learners Summarize and Answer Essential Questions**

SW make and record predictions about the experiment in their science journals.

**Lesson Resources**

- Scientific Process Song
- Graphic Organizer used for journal
# Plant Experiment

<table>
<thead>
<tr>
<th>Date</th>
<th>Water and Light Specimen A and B</th>
<th>No Light Specimen C and D</th>
<th>No Water Specimen E and F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day ____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day ____</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day ____</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Decision 5 - Acquisition Lesson Planning*
## Decision 5: Acquisition Lesson Four

### Language Objective(s), where appropriate:

- I will work with a partner to make a poster that shows the life cycle of a bean plant.
- I will describe each part of the bean plant.

ELD 4-5

### Lesson Essential Question(s) or “I Can” Statement(s):

3.L.2.3  
I can give examples of the stages of a plant’s life cycle.

### Activating Strategies: (Learners Mentally Active)

- Turn and Talk: What is a life cycle?  
- What has a life cycle?

**Acceleration/Previewing:** (key vocabulary)

- life cycle
- seedling
- mature
- flowering
- pollination

### Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

***This lesson needs at least two or more class sessions to complete.***

- Show “How Plants Grow” video from Discovery Streaming (about 20 minutes long).
- TW give students a list of “look fors” during the video.
- Read and answer questions from worksheet: Plant Life Cycles.
- Put students into groups. Each student will represent one part of the life cycle. Students will then act out the life cycle of a bean.

**Distributed Guided Practice/Summarizing Prompts:** (prompts designed to Initiate Periodic Practice or Summarizing)

### Summarizing Strategies: Learners Summarize and Answer Essential Questions

As an assessment . . . student pairs will work together to create a poster that shows the life cycle of a bean plant. SW cut apart pictures and arrange them in a circle on large paper. Next to each picture, they will describe what each picture represents. Posters can be colored and decorated.

### Lesson Resources

- “How Plants Grow” video from Discovery Streaming.
- Plant Life Cycles worksheet one copy per student.
- Bean life cycle pictures one copy per pair.
- Large paper, glue sticks, crayons.

During computer lab time, students can explore the “Great Plant Escape.”

[http://urbanext.illinois.edu/gpe/index.cfm](http://urbanext.illinois.edu/gpe/index.cfm)
[INSERT BEAN LIFE CYCLE HERE.]
[INSERT PLANT LIFE CYCLE WORKSHEET HERE.]
[INSERT PLANT LIFE CYCLE WITH ANSWERS HERE.]
**Decision 5: Acquisition Lesson Five**

**Language Objective(s), where appropriate:**

<table>
<thead>
<tr>
<th>I will observe soil samples and record my observations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELD 2-4</td>
</tr>
</tbody>
</table>

**Lesson Essential Question(s) or “I Can” Statement(s):**

<table>
<thead>
<tr>
<th>3.L.2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can compare the different types of soil (sand, clay, humus).</td>
</tr>
</tbody>
</table>

**Activating Strategies: (Learners Mentally Active)**

| Watch “Getting to Know Soil” on Discovery Streaming (23 minutes long). Teacher may just want to show certain segments. |

**Acceleration/Previewing: (key vocabulary)**

<table>
<thead>
<tr>
<th>Soil</th>
<th>Humus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>Texture</td>
</tr>
<tr>
<td>Clay</td>
<td>Retention</td>
</tr>
<tr>
<td>Absorb</td>
<td></td>
</tr>
</tbody>
</table>

**Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)**

Before you teach this lesson, you need to ask each student to bring in a soil sample from home. You will need it for this lesson.

Before you teach this lesson the teacher needs to get a soil sample from the playground (do this at recess the day before.)

This lesson will need more than one session.

- SW work in teams to observe soil samples.
- SW fill out “Looking at Soil” chart as they work together in table groups. (Each SW be responsible for their own writing.)

OPTIONAL: Arrange for Laurie Brokaw (Henderson County Soil and Water Education Coordinator) to come to your class or grade level to do her AMAZING lesson on the soil types.

If you don’t have Laurie come to your class, then you will need to find examples of humus, sand, and clay for your class to observe. You can then do the components of soil worksheet.

**Summarizing Strategies: Learners Summarize and Answer Essential Questions**

<table>
<thead>
<tr>
<th>Power Point: Soil, SOL 3.7: Suffolk Public Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Google above.</td>
</tr>
<tr>
<td>SW take notes as they watch the power point on Soil: A natural Resource worksheet/chart.</td>
</tr>
</tbody>
</table>

**Lesson Resources**

- Student soil samples
- Potting soil
- Playground soil
- Hand lens for each child or pair.
- Comic strip paper or anything with print on it.
- *Looking at Soil* Worksheet one copy for each student.
- Laurie Brokaw (Henderson County Soil and Water Education Coordinator)
- Components of soil worksheet if you don’t have Laurie come to your class.
- *Soil: A Natural Resource* worksheet/chart (goes with summarizer).
You are going to be given a hand lens. Use the comic strip paper to help you learn the proper way to use your lens with your teacher’s directions.

Now, using your hand lens to help you, you will be making OBSERVATIONS of a sample of soil. Write down what you observe using 3 of your senses.

<table>
<thead>
<tr>
<th></th>
<th>Potting Soil</th>
<th>Student Soil</th>
<th>Playground Soil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What do you see?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size of particles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other matter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What does the soil feel like?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gritty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smooth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rough</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mushy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wet</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What does the soil smell like?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotten</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dirty</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the back of this paper, write a sentence telling what you observed about each type of soil.
Potting Soil:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Student Soil:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

Playground Soil:

______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Using the soil samples you have been given, write your observations:

Leaf
1. Using your hand lens, what do you observe about the leaf?

2. What do you think happens to all the leaves that die and fall off of the trees?

3. What do you think a dead leaf has to do with the components of soil?

Humus
4. How does the humus feel?

5. Does anything in the humus look like anything you have seen before?

6. What do you think humus might have once been?

7. Could rotting leaves be a part of the humus?

Sand
8. How does the sand feel?

9. Observe the sand with your HAND LENS. What do you see?
Clay

10. How does the clay feel? __________________________________________

11. Using your HAND LENS, what do you observe about the clay?

________________________________

12. What did you observe in the humus and the piece of leaf that you did not observe in the clay or sand?

________________________________

13. Where do you think humus comes from? ________________________________

14. Where do you think sand and clay come from? ___________________________

MIX ALL OF THE “COMPONENTS” TOGETHER.

15. What does your mixture look and feel like? _____________________________

16. So what are the basic components of soil? _____________________________

17. How do you think soil is formed?

________________________________
<table>
<thead>
<tr>
<th>Why is Soil important?</th>
<th>How is Soil created?</th>
<th>What are Nutrients?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What makes up Soil?</td>
<td>3 Layers of Soil:</td>
<td>What is Topsoil?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is Humus?</td>
<td>What is Clay?</td>
<td>What is Sand?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is Silt?</td>
<td>How can Soil be conserved?</td>
<td>Review:</td>
</tr>
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</tbody>
</table>
## Decision 5: Acquisition Lesson Six

### Language Objective(s), where appropriate:

<table>
<thead>
<tr>
<th>Language Objective(s)</th>
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### Lesson Essential Question(s) or “I Can” Statement(s):

<table>
<thead>
<tr>
<th>Essential Question(s) or “I Can” Statement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.L.2.4 I can compare how plants grow in different soil types.</td>
</tr>
</tbody>
</table>

### Activating Strategies: (Learners Mentally Active)

- Make a Wordle word splash (go to [www.wordle.net](http://www.wordle.net)).
- SW tell you all they know about soil.
- Predict which soil you think will be best to support plant growth.

### Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)

#### Experiment:
As a class, prepare three containers:
- One container of humus.
- One container of sand.
- One container of clay.

Plant the rye seeds and water.

Class will observe together. TW assign teams of students to be responsible for reporting observations back to the class. These teams will work together to record results on class chart. (Observe for two weeks.)

### Summarizing Strategies: Learners Summarize and Answer Essential Questions

#### Assessment:
SW create a triple Venn diagram that shows the similarities and differences between the results of the above experiment. SW also write a paragraph explaining the results of the experiment.

### Lesson Resources

- [www.wordle.net](http://www.wordle.net)
- Three containers
- Sand, humus, and clay enough for each container
- Rye grass seeds
- TW need to make a large class chart for recording class observations of seed growth.
- Triple Venn Diagram worksheet (one copy for each student)
[INSERT VENN DIAGRAM HERE.]
**Decision 5: Acquisition Lesson Seven**

**Language Objective(s), where appropriate:**

**Lesson Essential Question(s) or “I Can” Statement(s):**

I can research, write, and explain the special parts of a plant and their functions in order for the plant to survive. (Using Big 6 Steps.)

**Activating Strategies: (Learners Mentally Active)**

Divide students into four stations by offering four choices of snacks (i.e., fruit, chips, candy, veggies). Allow students to brainstorm ways to convince the other groups that their choice is the best.

**Teaching Strategies: (Explain and Model Collaborative Pairs; Distributed Guided Practice; Distributed Summarizing; Graphic Organizers)**

- Watch short segments of a few campaign speeches. Identify similarities in the speeches.
- Have students choose one of the five plant parts.
- **R.A.F.T.** Writing: take on the role of that plant part to write a campaign speech to convince the other plant parts why they are the most important part of the plant.
  - **Raft:** plant part
  - **Audience:** other plant parts
  - **Format:** campaign speech
  - **Topic:** Why I should be voted the most important plant part.
- Introduce rubric to students.

**Summarizing Strategies: Learners Summarize and Answer Essential Questions**

After all presentations are given, students will write one phrase on each bumper sticker which identifies the most important function of that plant part.

Example: Sensational Stems – We will hold you up!

**Lesson Resources**

- Rubric
- Campaign Bumper Sticker page
- Visual Presentation Materials (optional)
- Activating Strategy Snacks (optional)
- Computer Access (research component)
- Media Center Access (research component)
Campaign Bumper Stickers

Roots Rock

Fabulous Flowers

Super Seeds

Sensational Stems

Luscious Leaves
Decision 6: Extending Thinking Activities

Include extending activities for several lessons in the essential units.

<table>
<thead>
<tr>
<th>Cause/Effect</th>
<th>Compare/Contrast</th>
<th>Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification</td>
<td>Induction</td>
<td>Analyzing Perspective</td>
</tr>
<tr>
<td>Error Analysis</td>
<td>Abstracting</td>
<td>Evaluation</td>
</tr>
<tr>
<td>Classifying</td>
<td>Constructing Support</td>
<td>Writing Prompt</td>
</tr>
</tbody>
</table>
**Decision 7: Differentiating the Unit**

What accommodations will you make in order to meet the varied interests, learning styles, and ability levels of all students?

<table>
<thead>
<tr>
<th>choice menus</th>
<th>compacting</th>
<th>grouping</th>
</tr>
</thead>
<tbody>
<tr>
<td>seating</td>
<td>visual, auditory, kinesthetic activities</td>
<td>scaffolding</td>
</tr>
<tr>
<td>real world meaning</td>
<td>interests</td>
<td></td>
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</tbody>
</table>
Decision 8: Unit Calendar

Determine the most viable sequence for the experiences, activities, and lesson and create a timeline.

Before teaching this unit, Teacher should read through all the lessons and determine the viable sequence of experiences and lessons based on available time in conjunction with school schedules. Lessons are seasonal and some may require extended time for observing plant growth and follow-up.
Decision 9: Resources and Research

Provide graphic organizers, links, book titles, websites, etc. that provide support for teaching this unit.

Embedded in lessons.

Provide ideas about how to integrate Big 6 or Super 3 research framework.

Integrated in culminating writing activity.
**Unit Designers:**

**Date:** 01-22-13

<table>
<thead>
<tr>
<th>Name</th>
<th>School</th>
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<tbody>
<tr>
<td>Elizabeth Holley</td>
<td>MAR</td>
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<tr>
<td>Kim Corn</td>
<td>HIL</td>
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<tr>
<td>Becky LedBetter</td>
<td>CCS</td>
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<tr>
<td>Sara Webb</td>
<td>FLE</td>
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