9/14/2012

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| Student Teaching: Fall 2012 | Jessica Stearns |

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| Thematic Unit: 1st Grade | Agriculture: Plants |

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Unit Goals

 This is a first grade Agriculture unit that specifically focuses on plants. Students will be learning everything from what makes a seed grow, the plant life cycle, parts of a plant, the story of Johnny Appleseed, and farming. Students will be able to apply this to their lives through living in a rural community. The main goals of this unit are below:

TSWBAT

1. Create a pattern using a series of seeds and leaves
2. Identify three essentials for a seed to grow
3. Identify the stages of the plant life cycle
4. Analyze and understand a bar graph
5. Identify plants and animals that may be seen at a farm
6. Evaluate the importance of a farmer to the community

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Overview

 Students will begin to understand plant life and how it impacts us. Through these lessons, students will be able to realize the steps it takes for a plant (vegetables and fruits) to make it to the dinner table starting from the seed stage. They will also develop a basic understanding of what community worker is relied upon to gather and take these food items to market.

 In order to accomplish these goals, students will be introduced to where a plant begins—at the seed stage. Students at this age are required by the state to understand how a plant grows and describe how they grow and change. After they understand what’s necessary for a plant to grow, they will progress to learning the life cycle and parts of a plant. Once they know this, they will be able to carry this information with them as they learn about farming and gathering crops to take to market.

 To ensure they fully understand this content, it will be reinforced through performance based assessment, such as the seed journals. The biggest reinforcer is through an educational field trip to a farm. Here they will have the opportunity to see what they have learned first-hand. This unit will provide students with an understanding of plant life and how a fruit or vegetable gets from a seed to the grocery store.

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Guiding Questions

1. What does a seed need to grow?
2. What are the different stages of a plant’s life?
3. What are the different parts of a plant?
4. What do the parts of a plant do to help it survive?
5. Who is Johnny Appleseed?
6. What is a bar graph?
7. How do you read a bar graph?
8. What is a pattern?
9. Can you make a pattern?
10. What does a farmer do?
11. What are things you can find on a farm?
12. How do we get our fruits and vegetables?

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Objectives/ State Standards

Objectives

TSWBAT

1. Create a pattern using a series of seeds and leaves
2. Identify three essentials for a seed to grow
3. Match the stage of the plant life cycle to the correct picture of the plant
4. Explain what a life cycle is
5. Identify the parts of a plant
6. Examine the importance of each part
7. Compare and contrast different types of apples
8. Analyze and understand a bar graph
9. Identify plants and animals that may be seen at a farm
10. Evaluate the importance of a farmer to the community

State Standards

1. **2.8.1.C:** Recognize, describe, extend, replicate and transfer number and geometric patterns.
2. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult plants.
3. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult.
4. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult plants.
5. **3.1.1.A5:** Identify and describe plant parts and their function.
6. **3.1.1.A5:** Identify and describe plant parts and their function.
7. **1.6.1.A:** Listen actively and respond to others in small and large group situations with appropriate questions and ideas
8. **2.6.1.C:** Describe data displayed in a diagram, graph or table.
9. **11.3.3.D:** Classify foods by food group within the food guide pyramid including the serving size and nutrient function within the body.
10. **11.3.3.A:** Know the production steps that a food travels from the farm to the consumer.

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Organizational Web

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Art

Plant pattern paper

Coloring/decorating Seed Journal

Vocabulary

Hypothesis

Seed, seedling, adult plant, flower

Leaf, flower, roots, bud, stem

Social Studies

The tale of Johnny Appleseed

Farming

Farm Field Trip

Math

Plant patterns

Apple bar graph

Measuring plants

Science

Plant beans, observe and make hypotheses

Plant Life Cycle, Parts of a plant, how a seed grows

Farming

Carnation and food coloring activity

Language Arts

Books: “How Does a Seed Grow”, “Jack and the Beanstalk”, “Johnny Appleseed”

Listening: Plant Life Cycle BrainPop video

Compare/Contrast apple types

Seed Journals

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Agriculture: Plants

Instructional Resources

**Initiating Activity- Planting Beans:** (same materials as lesson 1)

**Lesson 1- How Does a Seed Grow?:** plastic cups; soil; bean seeds; seed journals; seeds and leaves; solid color paper; glue; “How a Seed Grows” book from science kit

**Lesson 2- Plant Life Cycle:** BrainPop Plant life cycle video; Huge life cycle poster with attachable parts; “Jack and the Beanstalk”; white carnation; jar; food coloring; labels with cycle names; seed journals

**Lesson 3- Parts of a Plant:** BrainPop Parts of a plant video; carnation/jar experiment; labels with plant part names; seed journals

**Lesson 4- Johnny Appleseed:** “Johnny Appleseed” book; Chopped red, yellow, and green apples; blank bar graph poster; apple shaped pieces of paper; seed journal

**Lesson 5- Farming:** “Click, Clack, Moo: Cows that Type” by Doreen Cronin; letter from the cows; pictures of fruits and vegetables; down on the farm song; seed journal; favorite farm thing worksheet

**Culminating Activity- Farm Field Trip:** field trip; seed journal

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Initiating Activity

*Great Gardeners!*

This activity will promote students to think critically about what a plant needs to grow and survive. For this activity, you will need plastic cups, soil, bean seeds, black sharpie marker, and a sunny surface to place the seeds.

* Show students a bean seed. Ask them what they think it is
* Ask students what they think the steps are in planting a seed
* Explain to them that they are going to become expert gardeners and are going to plant their own bean seeds and observe (explain that word) them over the next week
* Read “How a Seed Grows” from science kit
* Split class into groups of 2 (or three if there is an aide in the room at the time) and take them step by step into planting their bean seeds
* Prompt students to give you answers on what a seed needs to grow (water, soil, sunlight)
* Make sure each cup has the students name written on it with a sharpie and put it onto a sunny shelf

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Agriculture: Plants

Name: \_Jess Stearns\_\_ Date: \_9/7/2012\_\_ Grade: \_1st \_

Subject/Topic: \_How does a seed grow?\_\_

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| **Objectives**: TSWBAT1. Create a pattern using a series of seeds and leaves
2. Identify three essentials for a seed to grow
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| **Standards**: 1. **2.8.1.C:** Recognize, describe, extend, replicate and transfer number and geometric patterns.
2. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult plants.
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| **Instructional Materials:** 1. Cups with holes at the bottom
2. Soil
3. Bean seeds
4. Seed journal
5. Seeds and leaves
6. Solid color paper
7. Glue
8. “How a Seed Grows” book from science kit

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| **Procedures:** PART I* Show students a bean seed. Ask them what they think it is and what they think the steps to planting a seed are
* Explain that they are going to become expert gardeners and are going to plant their very own bean seeds and observe (explaining what that is) them over the next week
* Read “How a Seed Grows”
* Split class into 2 groups (Mrs. Frye and I at a group) and take them step by step to plant their seeds
* Prompt students to give you answers on what a seed needs to grow (water, soil, sunlight)
* Make sure each cup has the students’ name written on it with sharpie and put on a sunny shelf
* Gather students back to desk and go over three things needed for seed to grow

PART II* Go over patterns and give a few examples
* Explain that they are to make a pattern with their leaves and seeds and glue them on their papers
* Hand each student bag of leaves and seeds along with a colored piece of paper
* Hand out seed journals and go over their first entry
* Ask if they know what a life cycle is and explain we’ll be learning about that on Monday
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| **Notes:** |

Agriculture: Plants

Name: \_Jess Stearns\_\_ Date: \_9/10/2012\_\_ Grade: \_1st \_

Subject/Topic: \_Plant Life Cycle

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| **Objectives**: TSWBAT1. Match the stage of the plant life cycle to the correct picture of the plant
2. Explain what a life cycle is
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| **Standards**: 1. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult.
2. **3.1.1.B1:** Grow plants from seed and describe how they grow and change. Compare to adult plants.
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| **Instructional Materials:** 1. BrainPop Plant Life Cycle video. Do game.
2. Huge Life cycle poster with attachable parts of the cycle (seed, seedling, young adult, adult/flowering)
3. “Jack and the Beanstalk” book
4. White carnation
5. Jar
6. Food coloring (red or blue)
7. Labels naming each part of the cycle for each student to use in seed journals
8. Seed journals
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| **Procedures:** * Ask for a reminder of what we did Friday. Refresh on what a seed needs to grow (water, soil, sun)
* Grab one of the plants, take it to each group, and have them make an observation to see if it changed at all since Friday
* Read Jack and the Beanstalk
* Watch “Plant Life Cycle” through BrainPop
* Direct attention to blank life cycle poster board and show them each of the attachable parts (seed, seedling, young adult, adult/flowering)
* Hand one part to each group and give them a minute to discuss where they think it goes
* Have a student from each group put it on the blank cycle board
* Ask if they think it’s correct/ what changes should be made
* Go through each of the steps
* Have them get out seed journals. Hand them labels and walk through the page. Allow to color
* Show them the carnation, jar of water and food coloring, Put food coloring and carnation in jar
* Ask them to make a HYPOTHESIS (explain and write on board) of what will happen
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| **Notes:** |

Agriculture: Plants

Name: \_Jess Stearns\_\_ Date: \_9/11/2012\_\_ Grade: \_1st \_

Subject/Topic: \_Parts of a Plant

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| **Objectives**: TSWBAT1. Identify the parts of a plant
2. Examine the importance of each part
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| **Standards**: 1. **3.1.1.A5:** Identify and describe plant parts and their function.
2. **3.1.1.A5:** Identify and describe plant parts and their function.
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| **Instructional Materials:** 1. BrainPop Parts of a Plant video. Do quiz.
2. Seed journal
3. Carnation/jar experiment
4. Labels with plant parts for each student’s seed journals
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| **Procedures:** * Show them carnation experiment. What happened? Why do you think it happened? Explain we’ll learn about it today
* Watch BrainPop Video.
* Do BrainPop quiz.
* Do BrainPop game
* After done, go over each part again
* Get out seed journals and hand out labels and do entry together
* Ask if anyone has ever heard of Johnny Appleseed and what kinds of apples are there (red , yellow, green)? Explain that we’ll be doing fun stuff with that tomorrow
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| **Notes:** |

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Agriculture: Plants

Name: \_Jess Stearns\_\_ Date: \_9/12/2012\_\_ Grade: \_1st \_

Subject/Topic: \_Johnny Appleseed

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| **Objectives**: TSWBAT1. Compare and contrast different types of apples
2. Analyze and understand a bar graph
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| **Standards**: 1. **1.6.1.A:** Listen actively and respond to others in small and large group situations with appropriate questions and ideas
2. **2.6.1.C:** Describe data displayed in a diagram, graph or table.
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| **Instructional Materials:** 1. “Johnny Appleseed” book
2. Chopped red, yellow, and green apples
3. Blank bar graph poster
4. Apple shaped pieces of paper for each kid
5. Seed journals
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| **Procedures:** * Ask if anyone knows Johnny Appleseed
* Read story. Explain that Johnny Appleseed is a real person, but the story is a tale..changes everytime someone tells it.
* Explain that we’ll have a special treat! Hand out one type of apple at a time
* After everyone tries them all, hand out apple paper and tell them to write their name on it
* Explain they will put their paper in the column of the their favorite apple type
* Call students by group to come up and stick apple to graph
* *Ask which is most/least popular type? How can you tell from looking at this?* (performance based assessment)
* Compare and contrast different apple types
* Complete seed journal entry
* Ask students if they can think of someone/a job that works with plants
* Explain that we’ll be talking about farmers tomorrow
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| **Notes:** |

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Agriculture: Plants

Name: \_Jess Stearns\_\_ Date: \_9/13/2012\_\_ Grade: \_1st \_

Subject/Topic: \_Farming

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| **Objectives**: TSWBAT1. Identify plants and animals that may be seen at a farm
2. Evaluate the importance of a farmer to the community
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| **Standards**: 1. **11.3.3.D:** Classify foods by food group within the food guide pyramid including the serving size and nutrient function within the body.
2. **11.3.3.A:** Know the production steps that a food travels from the farm to the consumer.
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| **Instructional Materials:** 1. “Click, Clack, Moo: Cows that Type” by Doreen Cronin
2. Letter to the first graders from the cows
3. Pictures of fruits and vegetables
4. Down on the farm song for children and kids at heart <http://www.youtube.com/watch?v=ojTh_drpwXo>
5. Favorite thing on a farm worksheet
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| **Procedures:** * Read Click, Clack, Moo
* Explain the coincidence that they got a letter from the cows the day we read this book
* Take pictures of fruits and vegetables. Students will identify each and guess where it came from to get into their home
* By the last picture, they should be guessing that a farmer grew it and sold it
* Ask what they think a farmer does? (grow crops, take care of animals)
* Show down on farm song ( <http://www.youtube.com/watch?v=ojTh_drpwXo> – down on the farm for children and kids at heart)
* Ask what kind of animals might you see at the farm
* Hand out and have students complete the favorite thing on the farm worksheet
* Go over and explain that farmers are an important worker in our community and that tomorrow we will be visiting a farm
* Seed journal entry
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| **Notes:** |

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Dear Fantastic First Graders,

 We, the cows on Farmer Brown’s farm, have heard that you boys and girls were learning about plants. We cows know all about plants! I bet you wonder how, don’t you?

 We have a game for you to guess how we know all about plants. We put pictures of different plants that are fruits and vegetables that could be in your home. Your job is to guess where they came from and how they got to your house. Good luck first graders!

Sincerely,

The Cows

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Culminating Activity

*A Trip to the Farm!*

 On Friday September 14th, the students will be taking a field trip. They will be going to Munnell Run Farm at the warehouse. The overall theme of the trip is how fruits and vegetables get from farm to market, along with how plants are grown. This will reinforce all of the lessons they have learned in the past week.

 They will be able to attend an agriculture lab and sample different types of vegetables, fruits and grains. Also, They will be able to pet different animals found on a farm. They will leave with a goodie bag and a “garden in a glove” where they plant seeds in a glove to take home and watch grow!

 Upon their return to school, students will complete their last seed journal entry which states, “One thing I learned about plants is…”. They will also draw a picture to accompany their writing.

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Assessment

I am pleased with the way the students met the objectives. There were several ways that I determined that they met them. First of all, there were several “kid quotes” that showed me that there was an understanding of the material. For example, on the day of my first lesson about how a seed grows, I asked the class, “I wonder where I should put our plants?” One student said outside so it can get fresh air and sun. Another said by the window so it gets sun. During my Johnny Appleseed lesson, the students were able to identify the stage of the life cycle that the apple tree in the illustrations was at. Another example is that after the unit was taught, a student was observing her bean plant. She got really excited and rushed over to show me the roots of her plant that you could now see through the clear plastic cup. At the 1st grade field trip, one of my students was able to correctly identify the stage of a plant when asked where no other class could yet!

 Another big indicator to whether or not students met the objectives was the seed journals. After going through and reading each entry (that corresponded with the lesson I had taught that day) I was able to see that students grasped what I was teaching and was able to apply that to the journal entry.

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