

NJ Classroom Close up Lesson Plan – The Apple Pie Tree **Submitted by Lisa Leonard, Half Day PREK Teacher**

SWBAT listen to and retell the story, The Apple Pie Tree by Zoe Hall.

AL.PK.9.3.3 - [*Indicator*] - Predict what will happen next based on prior experience and knowledge and test the prediction for accuracy (e.g., raising the height of the ramp to see if the ball will roll farther than when the ramp was lower).

AL.PK.9.4.2 - [*Indicator*] - Make connections between ideas, concepts, and subjects (e.g., children take pictures from a field trip or nature walk, and use them to write and illustrate classroom books).

AL.PK.9.4.1 - [*Indicator*] - Use prior knowledge to understand new experiences or a problem in a new context (e.g., after learning about snakes, children make comparisons when finding a worm on the playground).

SWBAT taste test three different colored apples.

SCI.PK.5.1.2 - [*Indicator*] - Observe, question, predict, and investigate materials, objects, and phenomena during classroom activities indoors and outdoors and during any longer-term investigations in progress. Seek answers to questions and test predictions using simple experiments or research media

SED.PK.0.1.3 - [*Indicator*] - Actively engage in activities and interactions with teachers and peers.

HE.PK.2.2 - [*Standard*] - Children begin to develop the knowledge and skills necessary to make nutritious food choices.

SWBAT work together to plant our own “Apple Pie Tree”

SCI.PK.5.3.3 - [*Indicator*] - Observe and describe how natural habitats provide for the basic needs of plants and animals with respect to shelter, food, water, air, and light (e.g., digging outside in the soil to investigate the kinds of animal life that live in and around the ground or replicating a natural habitat in a classroom terrarium).

SCI.PK.5.3.4 - [*Indicator*] - Observe and record change over time and cycles of change that affect living things (e.g., monitoring the life cycle of a plant, using children’s baby photographs to discuss human change and growth, using unit blocks to record the height of classroom plants).

SCI.PK.5.4.2 - [*Indicator*] - Explore the effects of sunlight on living and nonliving things (e.g., growing plants with and without sunlight, investigating shadows that occur when the sun’s light is blocked by objects).

Monarch Butterfly Life Cycle

Submitted by LISA BOYD, Full Day Preschool

Our Full Day Preschool students are raising Monarch Butterflies in classroom habitats. The students have been observing, making predictions, listening to stories and acting out the life cycle of the Monarch. We are tagging the butterflies this year for a program run by Monarch Watch and hope to hear from Monarch enthusiasts from Mexico in this collaborative effort. Nurse Aniski along with our PTA, have made it possible for us to certify the EJ garden as a Monarch Way Station with the Monarch Watch Organization. Donations of 3 varieties of Milkweed have been planted in various locations on the EJ premises. With this addition, we are hoping that the students can observe the entire life cycle as it occurs naturally. These hands on, cross curricular activities are both engaging and educational as science comes to life for our students. This project culminates in the successful hatching, tagging, and release of Monarchs into the E.J. garden. Preschool students share habitats and information with 1st grade classrooms. Using Journey North, Monarch Watch, and The National Wildlife Foundation sites we tag butterflies, record and contribute data about Monarch migration. Activities will include: Observing and maintaining habitats, making predictions, recording results, narrating ideas, coloring and painting, discussing and acting out the life cycle w/ props. Students use websites and interactive science games to understand the life cycle sequence, taking photographs of stages, recording progress, watching videos of metamorphosis, voting and naming butterflies.

The following N.J. Preschool Teaching and Learning Standards have been identified to be put into practice over the 2017-2018 school years in conjunction with the use of the EJ garden. The standards are enacted using hands on, developmentally appropriate activities to provide exposure and experiential learning.

Science

- Standard 5.1: Children develop inquiry skills.
- Standard 5.3: Children observe and investigate living things.
- Standard 5.5: Children gain experience in using technology.

Social/Emotional Development

- Standard 0.1: Children demonstrate self-confidence.
- Standard 0.4: Children exhibit positive interactions with other children and adults.
- Standard 0.5: Children exhibit pro-social behaviors.

Math

- Standard 4.1: Children demonstrate an understanding of numbers and numerical operations.
- Standard 4.2: Children develop knowledge of spatial concepts (e.g., shapes and measurement).
- Standard 4.3: Children understand patterns, relationships, and classification.
- Standard 4.4: Children use mathematical knowledge to represent, communicate, and solve problems in their environment.

Tuesday Oct. 3rd Visitation of Classroom #20:

Observe habitats, engage students to explain the project

Students act out life cycle

Students demonstrate life cycle through interactive game on Smart Board

<http://www.sheppardsoftware.com/science.htm>

In the Garden: Observe, name Monarch, and release tagged butterfly and ... Fly!!

Rah, Rah, Radishes!

Submitted by Jacqueline Ramilo & Mary Ellen Cook,
Kindergarten Teachers

Introduction: During the school year, our students plant and observe the growth of a variety of plants and vegetables out in the school garden. In Kindergarten we have Farming Fridays and incorporate the garden into our weekly activities and lessons throughout the year. The students enjoy harvesting and taste testing all of the delicious vegetables that they have planted.

SWBAT:

Listen to a story and practice their comprehension skills
Observe and categorize different vegetables and their different attributes
Log their observations into their Science Journals
Participate in a Radish Taste Testing

Objectives:

LA.K.SL.K.2 - Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

MA.K.K.MD.A.1 - Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.

SCI.K-LS1-1 - Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-2-ETS1-3.4 - Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

Materials:

Rah, Rah, Radishes! A Vegetable Chant By April Pulley Sayre

Science Journals

Pencils

Crayons

Magnifying glasses

Radish taste testing materials will be provided by Healthy Schools, Healthy Children

Procedure:

Motivation & Prior Knowledge: The lesson will begin with the students all seated on the rug and will be asked if they enjoy eating vegetables and which ones are their favorite.

Teacher Presentation or Modeling: Teacher will read Rah, Rah, Radishes. Throughout the story the children will observe the different types of vegetables, what they look like and their different attributes. Once the story is over, the children will have some time to discuss as a whole group what types of vegetables were seen in the story and what their favorite vegetable in the story may be. Then we will proceed to our school garden with

their Science journals to observe what new vegetables and fruits are growing. As the students enter the garden, they will place their journals and tool boxes at their tables and have a seat. Teachers will talk about the different vegetables we have growing in our garden and what can be found at each garden bed.

Guided Practice:

Students will then be called by table color to walk around with their magnifying glasses and observe the changes in the garden from the last time they were out there. They will then go back and log what they find in their journals. Teachers will be walking around the garden to observe each group at their table with their journals and offer assistance.

Closure:

After their journals are completed, teachers will walk to each table and ask the children what they logged/drew from their findings in their journals and then both classes will head back to a classroom to participate in a radish taste test as a whole group activity presented by Healthy Schools, Healthy Children Initiative.

Accommodations: Students of all learning and ability levels will be able to participate in all of the lesson components with various accommodations as needed.

Assessment: Evaluation will be based on teacher questioning throughout the lesson. Teachers will also assess the students on a one-to-one basis by how well they completed their individual journals.

Conclusion: Students are able to participate with hands on activities in a cross-curricular lesson which incorporates active learning strategies within alternative educational settings.

Cucumber Soup

Submitted by Mrs. Sarah Esarey, First Grade Teacher

Introduction: During the school year, the students plant and assist with the growth of a variety of plants and vegetables out in the school garden. There is a plethora of activities and lessons that take place throughout the year that incorporate the garden. During the harvesting season, there are many taste-tests that occur; however, with each taste testing there is always an activity that goes along with it.

Objectives:

Explore a problem and act as an engineer to come up with a solution to solve the problem;
Understand and explain the design process;
Listen to a story and comprehend;

Standards:

SCI.K-2.K-2-ETS1-1.1.2 - Define a simple problem that can be solved through the development of a new or improved object or tool.

SCI.K-2.K-2-ETS1-3.ETS1.C.1 - Because there is always more than one possible solution to a problem, it is useful to compare and test designs.

LA.1.RL.1.3 - Describe characters, settings, and major event(s) in a story, using key details.

LA.1.RL.1.9 - Compare and contrast the adventures and experiences of characters in stories.

Materials:

Cucumber Soup by Vickie Leigh Krudwig, illustrated by Craig McFarland Brown
Trays, Soil/Sand, Five (5) Cucumbers, Yarn, Scissors, Rubber Bands, Paper,
Q-Tips, Craft Sticks

Procedure: The students will begin the lesson by reading Cucumber Soup. Throughout the story the children will think, pair, and then share their ideas with one another. Once the story is over, the children will be introduced to a problem, similar to the problem that the ants had in the story (a cucumber stuck on an anthill). The children will be put into groups of 3-4 students. Then they will then be given their materials and will have to figure out a way to move the cucumber off of the anthill (a pile of soil/sand on a tray) without using their actual fingers to remove it. Students' skin may not come in contact with the cucumber at all. The children will use the design process to complete this task: Define a Problem, Plan and Build, Test and Improve, Redesign, and Communicate.

Accommodations: Students of all learning and ability levels will be able to participate in all of the lesson components with various accommodations as needed.

Assessment: As the children complete the task at hand, the teacher will be going step by step ensuring that everyone is completing the steps as instructed. Not all students will remove the cucumber from the anthill; however, the goal is to use each step in the design process and do the best that they can to find a solution to the problem.

Conclusion: The students will be engaged in story and then complete a hands-on lesson. This cross-curricular lesson will allow the teacher to assess the students in several ways while incorporating active learning strategies and alternative educational settings.

Second Grade CoCoRaHS Rain Gauge Introduction

Submitted by Mrs. Tracy Sherrier, Second Grade Teacher

Introduction: During the school year, the students will be responsible for watering our school garden, as well as, learn to read and collect precipitation data. In this lesson, the children will learn that plants need water to survive. They will explore both wet and dry soil, then compare and contrast the different types of soil, and be introduced to a rain gauge and its purposes. As participants in the Community Collaborative Rain, Hail & Snow Network (CoCoRaHS), students will learn how to use and read a rain gauge, they will see that weather and precipitation changes daily, and understand that their scientific measurements are being used by people all over the country.

SWBAT:

- Observe and describe different types of soil;
- Compare and contrast dry and wet soil;
- Identify what a rain gauge is;
- Read and collect precipitation data using the rain gauge;
- Use mathematical skills in order to read and record data.

Objectives:

- 2-ESS2-3** - [*Performance Expectation*] - Obtain information to identify where water is found on Earth and that it can be solid or liquid.
- K-ESS2-1** - [*Performance Expectation*] - Use and share observations of local weather conditions to describe patterns over time.
- 2-ESS1-1** - [*Performance Expectation*] - Use information from several sources to provide evidence that Earth events can occur quickly or slowly.
- SOC.6.1.4.A.CS11** - [*Content Statement*] - In an interconnected world, increased collaboration is needed by individuals, groups, and nations to solve global problems.
- SOC.6.1.4.C.18** - [*Cumulative Progress Indicator*] - Explain how the development of communications systems has led to increased collaboration and the spread of ideas throughout the United States and the world.
- MA.2.2.MD.A.1** - [*Standard*] - Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Materials:

- Computer, Epson Projector
- CoCoRaHS rain gauge, EJ School Garden, Soil (dry and damp)
- Two shallow buckets or containers, water or watering cans
- “Water, Weed, and Wait” by Edith Hope Vine and Angela Demos Halpin

Procedure: The students will begin the lesson in the classroom. Begin by discussing what plants need to survive; emphasize that like people, plants need water almost every day to survive. Ask how water is provided by nature (precipitation) and what gardeners need to do if it has not rained (water the plants). Explain that there are many tools gardeners use when they’re watering their plants, a watering can and their fingers. Clarify that gardeners use their fingers to test the soil and a watering can to bring water to the plants.

Proceed to the garden. Have the children sit in groups at the picnic tables. On each table, have one prepared container of damp soil and a container of dry soil. Tell the children that they will learn how to do a soil test to decide if the garden needs to be watered each day. Guide children in taking turns feeling the dry soil and the damp soil. Discuss how each type of soil feels and looks. Invite groups of children to carefully test the soil in various garden beds throughout the garden. If the garden beds need watering, demonstrate how to carefully water the plants by “drawing a circle” around the plants with the watering can as you pour the water out. Students can then retest the soil after it is watered with their fingers to feel the difference. Explain that the children will be in charge of watering the garden on a weekly basis with Mrs. Hattrich.

Explain the gardeners and farmers use one more important tool to decide how much they need to water their plants, a rain gauge. Locate and display the CoCoRaHS rain gauge in the garden (in front of the herb bed). Explain that a rain gauge is a tool used to measure the amount of precipitation (rain, snow, hail) over a set period of time. The teacher will then take the rain gauge apart and display the parts (the outer tube, inner tube, and funnel). Explain that citizens across the country are measuring precipitation using rain gauges and sharing it with scientists so that more accurate predictions about weather can be made. The community is known as CoCoRaHS (The Community of Collaborative Rain, Hail & Snow Network). Explain that the children will be responsible for measuring precipitation in the rain gauge on a daily basis before recess. A class discussion will then take place to answer any questions the children have about the rain gauge and their participation in CoCoRaHS.

Return to the classroom, display the CoCoRaHS website. Explore the maps to convey how many citizens participate in this organization and the data collected. Model entering precipitation data. Have the children move to the rug to read aloud “Water, Weed, and Wait” by Edith Hope Vine and Angela Demos Halpin. Discuss, answer questions, and make connections.

Accommodations: Students of all learning and ability levels will be able to participate in all of the lesson components with various accommodations as needed.

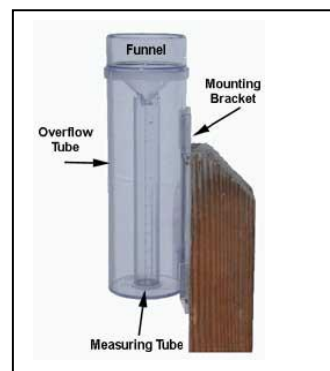
Conclusion: This is an introductory lesson about watering the garden, the CoCoRaHS rain gauge, and our participation with the organization. Watering the garden, checking the rain gauge, and inputting data will be an ongoing weekly/daily routine for the class throughout the year.

References/Resources: (specific links and lesson plans for educators)

The Community Collaborative Rain, Hail & Snow Network (CoCoRaHS) website

Growing Minds Farm to School “Garden Lesson: Introduction to Watering the Garden”

Rain gauge diagram:



Salsa Tasting and Skip Counting

SUBMITTED BY AMY FERRER, GRADE 2 TEACHER

Cross-Curricular Integration: Language Arts, Science, Math, and Spanish

SWBAT:

- Harvest vegetables from the school garden to use in making salsa.
- Listen to a story and make connections to real-life.
- Skip count by 2's, 5's, and 10's in English and Spanish.
- Learn new Spanish vocabulary: Abuela.

Materials:

- 3 colanders
- Peppers
- Tomatoes
- Cilantro
- 1 large jar of store-bought salsa
- 2 Bags of baked tortilla chips
- Kitchen knife
- Cutting board
- Mixing Bowl
- Large Spoon
- Paper bowls
- Napkins
- Hundreds Charts (1 per student)

Procedure:

1. Harvest peppers, tomatoes, and cilantro from school garden for salsa tasting.
2. Read aloud: Count on Pablo, by Barbara de Rubertis
 - a. Discuss title and the meanings of the word "count"
 - b. Discuss Spanish Vocabulary: Abuela- Grandmother
3. Connect with Math: skip counting by 2's, 5's, and 10's.
4. Teacher mixes chopped peppers, tomatoes, cilantro, and pre-made salsa in mixing bowl to create a fresher tasting salsa.
5. Distribute small bowls of salsa, napkins, and chips to students.
6. Students go to their seats and take a courtesy taste.
7. As students enjoy their salsa and chips, they will use their hundreds charts to skip count by 5's in Spanish.

Closure:

How does Pablo solve his problem in the story?

Studying Sunflowers In The Garden

Submitted by Megan Melega Grade 1 & Lisa Hattrich, Resource Teacher

SWBAT:

- Make a hypothesis
- Label parts of a sunflower
- Listen for specific information (from a book about sunflowers) in response to "what" questions.
- Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end.
- Participate in a song entitled "What's In The E.J. Garden?"
- Fill bird-feeders with sunflowers.

Standards-

1-LS1-1.LS1A.1 - (Disciplinary Core Idea)-ALL ORGANISMS HAVE EXTERNAL PARTS. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place and seek, find, and take in food, water and air. Plants also have different parts (root, stem, leaf, flower, fruit) that help them survive and grow.

-NJSLSA.SL1.- (Performance Expectation)- Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

-NJSLSA.SL4.- Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development and style are appropriate to task, purpose and audience.

-1.MD.A.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

PROCEDURE:

The class of first grade students will enter the garden. The students will listen to a non-fiction book about sunflowers and partake in labeling parts of an actual sample of a sunflower. They will then measure the labeled parts. The birds will be fed sunflower seeds and participate in a discussion about what they see. An example of this is discussing how tall the sunflowers are. An example of a question will be, "What do you think they are doing?" The results of this discussion will then be used in a teacher led song with this example: (Tall sunflowers looking down; that's in the E.J. garden.)

Materials: -Book entitled: How a Seed Grows Into A Sunflower by David Stewart
A Sunflower, tarp, easel for creating song lyrics, Sunflower seeds, birdfeeders

ACCOMMODATIONS: Students of all learning and ability levels will be able to participate in all of the lesson components with various accommodations as needed.

CONCLUSION: The students will be engaged in the variety of hands-on- lesson components. This cross-curricular lesson will allow the teacher to assess the students while incorporating learning strategies in a functional educational setting.
