

Grade: 1

Topic: PrePreserve

Class Title: Fruitful Investigations

Class Overview: Students will understand that the desert is a viable ecosystem for plant life to grow and thrive.

Learning Objectives:

- Define desert
- Set expectations and goals for teaching garden program
- Have fun!

School Standards:

- ✓ CCSS.ELA-LITERACY.W.1.5: With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.
- ✓ K-2- ETSI-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Agenda:

Background

- This year we're going to be embarking a special project to learn about and help grow a garden in the desert. Brainstorm with your students some factors that make a place into a desert. Deserts compose four percent of the world, and are defined as any area where the rain is less than ten inches per year. The desert we live in is called the Mojave and is very dry. We receive around four inches of rain per year. What are some of the reasons it may be difficult to grow a garden in the desert?
- This teaching garden project will partner with the Springs Preserve. Ask your students to define "spring." How is a spring different from other bodies of water? Thousands of years ago, we had springs here in Las Vegas. People and animals would stop here to take advantage of the water. We know from fossils that animals like the woolly mammoth even visited our springs!

Activity:

- Throughout our garden project, you will be making observations in your Springs Preserve Journal. We'll start today by completing the first page. What things would be cool to learn about? What would your dream

garden include? Fill out the first page and share together as a class. What are your expectations for this garden adventure together?

Materials/logistics:

- Springs Preserve Journal

Grade: 1

Topic: Garden Science

Class Title: Grow the Rainbow

Class Overview: Students will identify that different foods provide different levels of nutrition, and categorize foods according to their color.

Learning Objectives:

- Define nutrition
- Understand the importance of variety in the diet
- Calculate sort fruits and vegetables into categories
- Have fun!

School Standards:

- ✓ S5P1. Obtain, evaluate, and communicate information to explain the differences between a physical change and a chemical change
- ✓ Health 1.2.2: Identify basic anatomy (i.e. eyes, nose, ears, teeth etc.)

Agenda:

Background

- Begin by asking your students some background questions. What color is their favorite food? How many different colors have they eaten so far today? Do you think a watermelon and a watermelon candy do the same thing for your body? What about an orange soda and an orange juice?
- Different colored foods have different nutrients and help your body in different ways. Here are some examples:
 - Red: Good for your heart and memory
 - Orange: Good for your eyesight and preventing colds
 - Yellow: Good for your muscles
 - Green: Keeps your bones and teeth strong
 - Blue/Purple: Keeps your bladder strong, helps your body when it gets older
- Continue brainstorming with your students. What would happen to a student if he or she only ate one color for the rest of his or her life? Can your students think of any fruits or vegetables that are multiple colors? (For example, apples can be yellow, green, or red and grapes can be red or green.)

Activity

- Break the students into groups and provide each group with crayons or markers of a single color (i.e. red crayons for one group, green crayons for another.) How many fruits and vegetables can they draw that match their color?
- Have each student complete the matching worksheet in their journal. Connect each fruit or vegetable to the body part that it will strengthen.

Extension

- Have each group sit in a single file line. The object of this activity is to compete in a relay race that will sort fruits and vegetables by color. Provide each group with a bag full of fruits and vegetables—either real, fake, or pictures. Each student must pull an object at random, run or walk (depending on the space) to the designated side of the room, and place it in the box or hula hoop marked with the correct color written as a word. To advance this activity, have the boxes or hula hoop marked with the body part that this fruit or vegetable will strengthen.
- Create a rainbow fruit kabob. Provide each student with a skewer and provide pre-sliced pieces of fruits such as bananas, strawberries, blueberries, or honeydew for the students to create their own edible fruit rainbows.

Materials/logistics:

- Markers and crayons
- Springs Preserve Journals

Grade:1

Topic: STEM for Stems

Class Title: The Graph Is Always Greener

Class Overview: Students will explore the function of the stem for the growth and survival of the plant.

Learning Objectives:

- Identify three functions of a stem
- Create a graph
- Write using descriptive statements
- Have fun!

School Standards:

- ✓ CCSS.MATH.CONTENT.1.MD.A.1: Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- ✓ K-2- ETSI-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Agenda:

Background

- Today, we'll be studying two types of stems. We'll learn about the stems of a plant by applying STEM which stands for science, technology, engineering and math.
- A plant's stem has three purposes: to hold the plant up, to transport water and nutrients, and to connect the leaves to the roots.

Activity

- Begin by taking a walk around the schoolyard with your class. How many different types of stems can you find? What do all the stems have that is the same? What do stems have that is different?
- For the science portion of STEM, the class will observe a famous stem at work—that of a celery plant. As a class or in groups, place a celery stalk in a jar of water, and place a few drops of food coloring in the water. You should be able to see the water being transported up the stem. For the math portion of STEM, each day measure how far the color has traveled up the stalk. Does it stay at the same rate or slow down? Create a graph of how far the color has traveled each day.

- For the Engineering section of STEM, brainstorm with students about ways people transport water from one place to another. How is it similar from plants? How is it different? Explore the concepts of irrigation with your students and how they apply to the garden.

Materials/logistics:

- Springs Preserve Journal
- Celery
- Jars
- Food coloring
- Rulers

Grade: 1

Topic: PostPreserve

Class Title: Growing the Future

Class Overview: Students will identify key benefits of a garden and share that information with the public.

Learning Objectives:

- Comprehend the benefits of gardens
- Share knowledge to promote environmental awareness
- Define agriculture
- Develop writing skills
- Have fun!

School Standards:

- ✓ CCSS.ELA-LITERACY.W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question

Agenda:

Background

- Review with the students what you have learned about gardens throughout the project. What are some good things that come from plants? What are the reasons that people plant gardens?
- What is agriculture? How is that different from a garden? What kind of crops might be grown here in Nevada? Answers may include alfalfa, barley, wheat, and mint. What are some of the challenges of growing plants, either agriculturally or in a garden, here in Nevada? What are some of the advantages?

Activity

- Have each student create a card for someone they love with a seed packet taped to the inside. Each card should include a how-to sequence of planting the seeds, and a reason why gardens are beneficial. Remind your students of sequence words such as first, next, after, and finally. What other phrases go in a card? Answers might include “Dear (Name)”, the date, and the signature “sincerely.”
- Fill out the final section of the Springs Preserve Journals.

Materials/logistics:

- Markers and crayons
- Student journals
- Seed Packets
- Construction paper