WONDER PLANTS

Lesson Objective

To create awareness about specialty crops in Mississippi.

Learner Objective

Students will learn about specialty crops such as fruits, flowers, nuts, andvegetables.

Educational Outcomes

1. The students will be able to identify common fruits, nuts, flowers, and vegetables grown in Mississippi.
2. The students will be able to identify the uses of common fruits, nuts, flowers, and vegetables grown in Mississippi.

Core Concept Areas

Science, art, oral and written communication, reading

Materials Needed

Interest Approach: Plastic or fresh vegetables, fruits, nuts, and flowers (as suggested in the activity), large paper bag or fabric shopping bag, blindfold

FARMtivity 1: Vegetables, fruits, flowers, and nuts listed in the Interest Approach.

FARMtivity 2: Sweet potatoes, scraps of lace, ribbon, fabric, paper, googly eyes, glue, markers

FARMtivity 3: Plastic food service gloves (thin), cotton balls, seeds, apples, permanent markers, water bottles, tape

FARMcabulary

Specialty Crops – Fruits, vegetables, tree nuts, dried fruits, horticulture, nursery crops (including floriculture), and sweet potatoes.

Vegetables – Plants or parts of a plant used as food.

Horticulture – Art or practice of garden cultivation and management.

Floriculture – Cultivation of flowers.

Pollinate – Process of taking pollen from one plant to another to produce new plant seeds.

FARMfacts

This lesson is about specialty crops grown in Mississippi. **Specialty crops** are fruits and **vegetables**, tree nuts, dried fruits, **horticulture**, nursery crops (including **floriculture**), and sweet potatoes.

The commercial horticultural industry in Mississippi includes a variety of vegetables, melons, potatoes, fruits, tree nuts, berries, nurseries, greenhouses, floriculture, sod, and Christmas tree farms. In 2022, these crops had a $111 million production value.

Mississippi is the third-largest, sweet potato-producing state in the U.S. Over 29,000 acres of sweet potatoes were harvested in 2022. The sweet potato is a root. The plant grows above ground, but the vegetable grows underground.

Specialty crops are also important to many homeowners and gardeners. Many people have gardens and orchards that supply their families with vegetables, fruits, and nuts. Others enjoy the beauty of flowers and shrubbery planted in their yards.

This lesson will introduce the students to growing plants and the elements necessary for growth and development.

Beekeeping and honey are also considered a part of the horticulture industry. Bees are necessary to **pollinate** many of our horticulture and agronomic crops.

Interest Approach

Materials needed

- Vegetables – carrots, green peppers, tomatoes, broccoli, green beans, etc. (fresh or plastic)
- Fruits – apples, oranges, bananas, grapes, pears, peaches, strawberries, etc. (fresh or plastic)
- Nuts – peanuts, pecans, almonds, and walnuts in the shell
- Flowers – roses, daisies, carnations, magnolias, mums, etc. (silk or plastic)
  (*There should be enough items for each student to have one item.*)
- Large paper bag or fabric shopping bag

Put the items in the bag and have one student at a time come to the front of the classroom. Have each student reach in the bag with their eyes closed, pick out an item, and show it to the class. The student should identify the item from touch, smell, or clues given by the other students. Have each student return to their desk and hold onto the item chosen. Each student should have an item to be used in the next activity.

Explain that all these items are considered horticultural products. Horticulture is growing plants like fruits, flowers, nuts, and vegetables. Most of these plants supply us with food that adds nutrients to our diets. The flowers and other decorative plants like shrubs provide us with beauty to enjoy.

FARMtivity 1: Our Class Garden

Materials needed

Item selected by each student in the Interest Approach.

Have students research the item they selected and make a poster about the item. The poster should include the following:

- Name and picture of the item.
- Illustrate the other parts of the poster with drawings or pictures representing the following:
    - Where the item is grown (Mississippi, South America, Hawaii, California, etc.)
    - What the item is used for.
    - Nutritional value, if applicable.

When they bring their posters to class, have each student give an oral report about the item selected. Display the posters around the room, grouping them by fruits, nuts, flowers, and vegetables.

FARMtivity 2: My Sweet Potato Pal

Materials needed

- One sweet potato per student
- Assorted scraps of lace, ribbon, fabric, paper, googly eyes, and other decorative items
- Markers
- Glue

Procedure

Have students decorate their sweet potatoes as a favorite cartoon character, athlete, singer, hero, animal, etc. Once the sweet potatoes are decorated, the students should write stories about *A Day in the Life of My Sweet Potato Pal*.

Once this has been done, have students do show-and-tell presentations about their creations.

FARMtivity 3: Gardening Hands

Materials needed

- Plastic food handler gloves (1 per student)
- Cotton balls (5 per student)
- Seeds (5 different types) (e.g., tomato, watermelon, butter bean, squash, marigold, zinnia)
- Permanent markers
- Spray water bottle
- Tape

Procedure

- Place seeds in small bowls or on paper plates with labels identifying what the seeds are.
- Set out the gloves, cotton balls, seeds, markers, and tape on a table.
- Have students look at the seeds and compare the differences in the different seeds—shapes, sizes, colors, textures, etc.
- Have students plant the seeds as follows:
    - The students should use markers to label the seed name on each finger of the glove.
    - Place a different seed in each of the five fingers of the glove.
    - Place a cotton ball on top of the seed in each finger and add a few drops of water.
    - Tape the glove closed and tape in a sunny window.
    - Allow the garden gloves to hang in the sun for several days until the seeds sprout.
    - The students should monitor seed growth and record the activity on the *Gardening Hands* worksheet.
    - When sprouts get several inches tall, they must be transplanted into small pots to continue growing. At this point, the plants can be taken home to be planted, or they can be planted in pots in the classroom for continued observation.

References

4-H. (2021). *Garden in a Glove*.

Mississippi State University Division of Agriculture, Forestry, and Veterinary Medicine. (2022). *2022 Mississippi Ag Fact Book.*

Gardening Hands Worksheet

1. Name of Seeds:
    - Seed 1 –
    - Seed 2 –
    - Seed 3 –
    - Seed 4 –
    - Seed 5 –
2. Date all seeds were planted:
    - Seed 1 –
    - Seed 2 –
    - Seed 3 –
    - Seed 4 –
    - Seed 5 –
3. Date sprout first appears:
    - Plant 1 –
    - Plant 2 –
    - Plant 3 –
    - Plant 4 –
    - Plant 5 –
4. Date when leaves develop:
    - Plant 1 –
    - Plant 2 –
    - Plant 3 –
    - Plant 4 –
    - Plant 5 –
5. Date when the plant is 3 inches tall:
    - Plant 1 –
    - Plant 2 –
    - Plant 3 –
    - Plant 4 –
    - Plant 5 –
6. Date when the plant is transplanted into a pot:
    - Plant 1 –
    - Plant 2 –
    - Plant 3 –
    - Plant 4 –
    - Plant 5 –

Use this space to write down some observation notes for each step of the growing process.

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