

LEARNING WITH *Sweetpotatoes*



Mini-Lesson

Agriculture Education, Horticulture: Plant Identification

Grades 9-12

Mini-Lesson Focus:

- Types of plants
- Plant Identification

About Horticulture

The root word “hort” means garden, and the word “culture” means to “till in the ground.” The word horticulture encompasses all that is covered in caring for plants. From ornamental plants and vegetables, it is important that the care they need is provided, but first identification and knowledge of the plant is required in providing the best care.

Procedures:

1. Say, “Did you know there are multiple varieties of *Ipomoea batatas*? That is the scientific name of the sweetpotato plant. There are multiple kinds of sweetpotatoes, including ornamental sweetpotatoes and vegetable sweetpotatoes.”
2. Ask the question, “Why are there different kinds and how did this happen?” Allow students time to discuss the difference between ornamental plants versus vegetable plants. Provide response to the question after student discussion, “Ornamental sweetpotatoes are grown for their attractive foliage, while other varieties are grown for their delicious and healthy roots. Another key point to remember is even though ornamental varieties may not provide the culinary qualities the general public is looking for in taste, color and other attributes, it still can be eaten. It is an edible root just like its vegetable variety.”
3. Say, “In North Carolina, the Covington sweetpotato is mostly grown and used because of all its desirable attributes and characteristics.” Ask students, “Why do these things matter? Who do they matter to?” *Most students will reply with answers like farmers, consumers, supermarkets, etc. All of these answers are correct. Have students expand on why this is so.*
4. Ask, “Why is this important?” Open deeper discussion with posing questions like, “Do we have a name? Did we originate from a family?” All living things do. Understanding classification helps us to better care for plants’ needs.
5. Say, “Now we are going to work on how to identify and classify these plants.” Hold up a picture or actual vegetable sweetpotato and ornamental sweetpotato.

Ask students to identify the plant's common name, the scientific name, common pests and insects attracted to the plant, and the origin of the plant. See below:

- The plant common name: sweetpotato
 - The scientific name: *Ipomoea batatas*
 - Family: Convolvulaceae
 - Common pests and insects attracted to the plant: stink bugs
 - The origin of the plant: The crop originated in either Central or South America and was later introduced to the southeastern United States and grown by Native Americans.
6. More information can be found in the [NC Sweetpotato Ag Mag.](#)
 7. Other classification information can be found here:
http://bioweb.uwlax.edu/bio203/2011/keesler_cole/classification.htm

Extension Activities:

1. Classification Activity: Have students research or search different plants around the schoolyard, within textbooks, or select a few pictures online. After collection of plant images, use various resources (search engines, plant ID apps, books) to identify each plant and conduct additional research to provide the following information:
 - a. The Common name of the plant
 - b. The scientific name of the plant
 - c. Family
 - d. Common pests and insects attracted to the plant
 - e. The origin of the plant
2. Careers in Plant and Soil Science: Students will visit a number of approved sites to learn more about the careers related to plant science and what steps they would take to turn their passion into a career.
 - a. Visit the [Science Societies Career Center](#) and [Seed Your Future](#) to view career profiles connected to horticulture:

Subset of Standards:

[NCCTE.AU10.03.00](#) - Understand the plant industry.

[NCCTE.AU10.03.01](#) - Remember careers in the plant industry.

[NCCTE.AU10.03.03](#) - Understand basic horticultural (ornamental, fruit, and vegetable) and agronomic principles and practices.

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