

Lesson: Sprigging Agriculture, Food, and Natural Resources Grades 9-12

Lesson Length: Two to three class periods (depending on length of class periods)

Material:

- Sprig samples
- Soil samples

Suggested Course Alignment:

- > Principles of Agriculture, Food, and Natural Resources
 - TEKS:
 - 10(A): Identify the components and properties of soils
 - 11(B): Discuss and apply plan germination, growth, and development
 - 11(D): Identify plants of important to agriculture, food, and natural resources
- Advanced Plant and Soil Science
 - TEKS:
 - 2(A): Demonstrate safe practices during field and lab investigations [lab observations]
 - 6(A): Explain the importance and interrelationship of soil and plants
 - 6(B): Practice soil and plant evaluation as it applies to agricultural and urban settings
 - 9(B): Evaluate the properties and nature of soils
 - 10(A): Summarize methods of land use and management
 - 18(A): Describe the growth and development of major crops

Engage: (This could be used as an introduction the day before the remaining activities are completed.)

Watch the sprigging video series from Texas Farm Bureau. Encourage students to take notes and pay close attention to the words on the screen while watching the videos.

- Coastal Sprigging | Part 1 <u>https://vimeo.com/454134309</u>
- Coastal Sprigging | Part 2 <u>https://vimeo.com/454759877</u>
- Coastal Sprigging | Part 3 <u>https://vimeo.com/455828102</u>

Explore:

Show sprig examples if you have them available (preferably coastal to correlate with the video, but other types would be great as well).



- Break students into groups (the fewer groups, the better).
- > Have students research other types of plants/grasses that are often sprigged.
 - Through this research, students might also learn what plants ARE NOT sprigged but rather planted from seed.
 - Once the groups research, have each group write the key points the group learned on a large sticky note where the class can see; the group will present what they learned to the class. (*Note: See example of large sticky notes <u>here</u>)

Explain:

Students should critically listen as their peers present and take notes that will be used to ask questions at the end of each presentation. The idea is that students will engage in discussion through asking questions, providing answers, and presenting additional points for consideration, etc.

Elaborate:

- > Ask students to consider these questions:
 - How does land preparation affect the soil that ultimately contributes to the success of the sprigging process?
 - What soil types are best for sprigging?
- Show soil samples and have students make suggestions and predictions of how and why they think certain spoil types are best for helping sprigs grow.
- > Use the below graphic to refresh students on soil texture and soil particle sizes.
- Challenge students to connect what they predict and suggest from their observations to what they learned in their research earlier in the lesson.
- Ask the students questions that help them think deeper about the above questions and soil samples. Provide additional information and reasoning.

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	SAND Large Particles < 2 mm to 0.05 mm	The relative sizes of sand, silt, and clay particles.
	Medium Particles < 0.05 mm to 0.002 mm	
C.S	CLAY Large Particles < 0.002 m	CLAY



Evaluate:

- Have students assess what they knew about sprigging before and what they know now. They can also write down questions that they still have. The goal of this exercise is to make students aware of what they are learning and what they still want to know. You can follow this short exercise with a quick Q&A session where you help answer questions that students still have. (*Note: Students can use the below chart for this exercise.)
- End this lesson by asking three questions that you (the instructor) want to use to evaluate students' understanding of the material.



KNEW	LEARNED	WANT TO KNOW