



Lesson Plan (LP)	Author: Hannah McTier
Course: General Horticulture & Plant Science (01.46100)	
LP Title: The Sexual Propagation of Squash	
Estimated Time: 45 minutes	
Grade Level: 9 th – 12 th Grade	

Materials, Supplies, Equipment, References, and Other Resources:
<p>Materials: whiteboard with dry erase markers, Smartboard with projector, newspaper, permanent markers, plastic sandwich bags or glass jars with lids, paper plates, kitchen knife, several hardened summer squash (reach out to local farmer – they all throw these over-ripened squash away), access to sink and water</p> <p>References: https://www.georgiaffa.org/curriculum2/topic.aspx?ID=6&TID=4 , https://homeguides.sfgate.com/save-own-yellow-squash-seeds-104470.html , http://blog.seedsavers.org/blog/zucchini-tips , https://www.gardeningknowhow.com/edible/vegetables/squash/squash-seed-harvesting.htm</p>
Standards:
<p>AG-GHPS-5 Discuss the importance of sexual reproduction in plants.</p> <p>5.1 Examine the importance of plant propagation.</p> <p>5.2 Compare and contrast sexual and asexual propagation.</p>
Essential Questions/Objectives:
<p>The student will be able to...</p> <ol style="list-style-type: none"> 1. Examine the importance of plant propagation by participating in the interest approach class discussion and seed saving activity. 2. Compare and Contrast sexual and asexual propagation by participating in the interest approach class discussion.



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 **45 min**

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Accommodations

For students with disabilities, the instructor should refer to the individual student's IEP to insure the accommodations specified in the IEP are being provided within the classroom setting. Instructors should familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation within any given instructional activity or requirement.

Interest Approach**Estimated Time:** 10 minutes

Write the following on the board: sexual propagation vs asexual propagation. Instruct the students to discuss in pairs or small groups what they think each of the phrases means and the differences between the two. After 2 or 3 minutes of discussion, have a few volunteers share out some of their conclusions and make a list on the board of the correct answers. Leave the list on the board for the remainder of the class period. Before moving into the lesson, be sure to stress to students that summer squash plants undergo sexual propagation (AKA have to be planted with seed) and that the students will be engaging in a seed saving activity today which is the first true step that must be taken before planting can occur.

Learning Activity 1**Estimated Time:** 30 minutes**Instructor
Directions/Materials/
Teaching Procedure****Brief Content Outline***Squash Seed Saving Activity*

Plan ahead to have enough hardened summer squash – they must harden on the plant, not after being picked so store bought won't work
Have all materials prepped
Monitor safe knife usage
Walk around class to monitor and help when needed

*Try engaging the students in deeper discussion on sexual vs asexual propagation as they work to save seeds

Pass out the hardened yellow squash and zucchini to pairs or small groups of students, depending on the number of squash you have. Pass out newspaper and instruct the students to cover their desks with the paper to make for easy clean-up. Pass out a paper plate to each small group and a small plastic bag/glass jar and lid with a permanent marker.

Instruct the students to write the date, source, and type of squash they have on their paper plates and plastic bags/glass jar and lid.

Review knife safety and allow the students to slice their squash open long ways (the teacher can do this if they are worried about safety). Have the students scoop out all of the seed they can and avoid the fruits' flesh as much as possible.

Wash all of the flesh from the seeds and place them in a single layer on each of the appropriately labeled paper plates. Leave them for a week to completely dry out before placing them into their plastic bags/glass jars for storage in a cool, dry place.

*Consider using this seed in The Needs of Squash Seeds or Vertical Farming with Squash lesson plans that were released alongside this lesson plan


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Summary (Reflection)**Estimated Time:** 5 minutes

Erase the board if the information from the interest approach is still written on it. Have the students write down in their own words the differences between sexual and asexual propagation and which they think is the best for growing plants. Have them turn in their written responses as a ticket-out-the-door.

Assessment

Formative: Assess the students understanding of propagation by reviewing their ticket-out-the-door responses.

Summative: N/A

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