

Conservation & Pumpkins

Grade Levels

9-12

Estimated time

Two 45-minute sessions

Materials needed

pumpkin, Station Packet (includes teacher instructions, station materials, student answer sheet, and teacher answer sheet key), pencils, internet, electronic devices

See Station Packet ([Appendix A](#)) for material list and set-up details for each station.

Purpose

This is a station-based lesson that engages students in various activities to learn about conservation and pumpkins. After this lesson, students will be able to 1) list at least two conservation practices utilized on pumpkin operations that can improve soil health, water quality, wildlife habitat, etc. 2) recall at least three components and functions of pumpkin plants' flowers 3) describe the role of pollinators in pumpkin growth and production (when considering pumpkin flower structure and function) and the connection to conservation practices.

Introduction

Illinois is often the top US producer of one of our favorite fall symbols and crops, pumpkins. In 2021, Illinois led the US in number of pumpkin acres harvested and yield with a total of 652 million pounds of pumpkin (USDA ERS). Like any crop, there are conservation practices that can be used to maintain or enhance soil health, water quality, wildlife habitat, etc., while provided this popular vegetable.


This lesson includes stations for students to explore and begin learning about pumpkin plant structure and conservation practices for pumpkin operations. The student-led learning activity is intended to be an introduction to these topics and foster curiosity leading into future lessons about plant structure, vegetable production, etc.

Suggested Sequence

Day 1

Please note: It is crucial to review, prepare, and set-up station materials before this lesson. Only Day 1 stations should be used on Day 1.

1. Hook
 - a. Have a pumpkin (and pumpkin plant if possible) in the classroom visible to students. Ask them, "what do we know about this?"
 - b. After hearing several answers, ask, "what do we know about how they grow or growing them?"
2. Read or highlight key points of the [Introduction section](#) to the class about pumpkins and learning about them through stations.
3. Give station directions to the class and pass out student answer sheets (included in [Station Packet](#)). *If the class has not done learning stations or something similar before, it will be helpful to demonstrate how stations work and answer any questions prior to starting the activity.*
4. Separate students into small groups and have groups spread out at various [Day 1](#) stations. Once students are ready with necessary



materials, instruct them to begin the work at the station and start the timer for your designated time (7-10 minutes per station is suggested).

5. When allotted time at station finishes, have students rotate. Continue station work and rotations until the end of the class period.

Day 2

Please note: Day 1 and Day 2 stations should be used on Day 2.

6. Review station instructions and how many remaining stations the class has left to complete. At the end of this lesson, the students should complete six stations and have all sections of their student answer sheet filled out.
7. Instruct students to meet with their small group where they left off at Day 1. Once students are together, have the groups rotate to the next station, begin working, and start the timer.
8. When allotted time at station finishes, have students rotate. Continue until the students have completed all six stations. An additional 5-10 minutes can be given for students to go to any stations they need to finish.
9. Collect student answer sheets and ask students to share one thing they learned about conservation and pumpkins.

Extend the Lesson

This lesson can also be extended by adding instruction or a reading activity regarding vegetable or other fall specialty crops. See Issues 4 and 5 2023 of the AIM newsletter for student reading material and for more information regarding this topic.

Recommended Companion Resources

[Habitat Tip: Pumpkins, Pollinators, and Great Habitat video](#) by Conservation Blueprint; [Pumpkin Ag Reader](#) by National Agriculture in the Classroom, Illinois Agriculture in the Classroom, and The University of Arizona Cooperative Extension; [Pumpkin growing from Seed to the mature Fruit - EPIC Time Lapse](#) by Seemingly Forever Timelapse; [Pumpkin Production Can Benefit From Conservation Practices article](#) by Susan V. Fisk; and [Male vs. Female Pumpkin flower video](#) by Wild Floridian.

Acknowledgements

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Appendix A
Station Packet



Station Packet [PDF file](#) and [PPT file](#)