

LEARNING WITH *Sweetpotatoes*



Mini-Lesson

Plant Cells and Sweetpotatoes

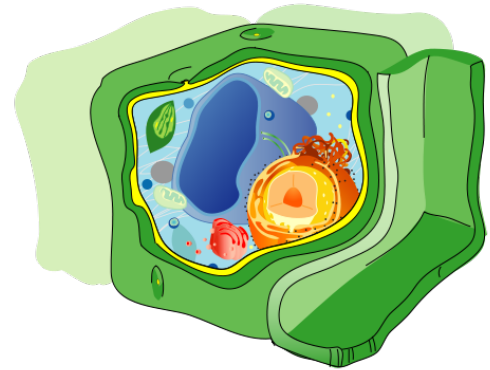
Grades 9-12

Mini-Lesson Focus:

- Cell Biology

Procedures:

1. Show students a plant cell model or diagram. Open the discussion by saying to students, "What is a plant cell?" *Some may have concrete ideas, where others may be unsure.*
2. Provide the definition for plant cell: A **plant cell** is a eukaryotic cell that contains a true nucleus and certain organelles to perform specific functions.
3. Say to students, "What does the plant cell and the sweetpotato have in common? Let's find out!"
4. Watch [The Lifecycle of a North Carolina Sweetpotato video series](#) to learn more about growing sweetpotatoes.
5. Ask students, "How does the process of a plant cell promote growth and development of the sweetpotato?" Ask students to make a list of specific parts of the cell, their function, and how that helps the sweetpotato grow.
6. After the lesson, students should expand their learning to focus on core curriculum standards aligned to curriculum.
 - [Plant Cell Label](#)
 - [The Science of North Carolina Sweetpotatoes Lesson Plan](#)
 - Use [agclassroom.org](#) for additional lesson plans



Extension Activities:

- More activities in [The Science of North Carolina Sweetpotatoes Lesson Plan](#)
- [Plant and Animal Cell overview \(video\)](#)
- [Journey 2050 Lesson Plans](#)

Subset of Standards:

Science

Bio 1.1 Understand the relationship between the structures and functions of cells and their organelles.

Bio.1.1.1 Summarize the structure and function of organelles in eukaryotic cells (including the nucleus, plasma membrane, cell wall, mitochondria, vacuoles, chloroplasts, and ribosomes) and ways that these organelles interact with each other to perform the function of the cell.

Bio.1.1.2 Compare prokaryotic and eukaryotic cells in terms of their general structures (plasma membrane and genetic material) and degree of complexity.

Thank you
to our partners

