

HARVEST OF THE MONTH - NOVEMBER / PUMPKINS

Grades 6 - 8

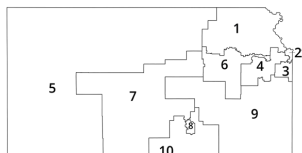


Kansas leads the world in the success of each student.

JULY 10, 2025



900 S.W. Jackson Street, Suite 600
Topeka, Kansas 66612-1212
(785) 296-3203
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SUCCESS DEFINED

A successful Kansas high school graduate has the

- Academic preparation,
- Cognitive preparation,
- Technical skills,
- Employability skills and
- Civic engagement

to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

OUTCOMES

- Social-emotional growth
- Kindergarten readiness
- Individual Plan of Study
- Civic engagement
- Academically prepared for postsecondary
- High school graduation
- Postsecondary success



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MISSION

To prepare Kansas students for lifelong success through rigorous, quality academic instruction, career training and character development according to each student's gifts and talents.

VISION

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MOTTO

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July 1, 2025

HARVEST OF THE MONTH

November / Pumpkins

INTRODUCTION

Over the next few weeks, we will be learning about a kind of food that we grow in Kansas. I'm going to give you some clues to see if you can guess what this food is.

- Although we often think of this food as vegetables, they are actually fruits.
- Each of these fruits contains about 500 seeds.
- Beta carotene gives this fruit its orange color. Beta carotene is great for your eye and skin health and your immune system.
- They can range in size from small enough to fit in the palm of your hand to so big that you can crawl on it!
- We eat this fruit cooked and softened, smashed up in pies, roast and eat their seeds, or carve them into jack-o-lanterns during Halloween.

Can you guess what food I'm talking about? We will be learning about pumpkins!



VOCABULARY

Transfer: To move something from one place to another. In science, it often means moving energy or matter

Energy: The ability to do work or cause change. Energy makes things move, heat up, or grow

Matter: Anything that takes up space and has weight. Everything around you—solids, liquids, and gases—is made of matter

GENERAL RESOURCES

ENGAGE

Ask students, “How many of you can recall what is Cinderella’s coach made from?”

Explain to students that the pumpkin in the folk tale of Cinderella was first added to the story by Charles Perrault in 1697.

Ask students to read the folk tale¹ from 1697 with a partner where students are reading aloud each paragraph, alternating partners.

EXPLORE

Pose the question, “Can pumpkins really turn into stagecoaches that are able take Cinderella to the ball?”

Allow for students to answer the question.

Ask, “What would we need to do in order to see if pumpkins are able to turn into stagecoaches?” Lead students into the idea of getting the seeds from a pumpkin and planting pumpkin seeds to start growing pumpkins. Focus on the concept of collecting evidence for the role of photosynthesis and the cycling of matter and energy.

1. Harvesting and Cleaning the Seeds:

- **Scoop out the pulp and seeds:** After carving or cutting your pumpkin, scoop out the pulp and seeds with a large spoon or your hands.
- **Rinse the seeds:** Place the seeds in a colander and rinse them under cool water to remove any remaining pulp.
- **Select the largest, healthiest seeds:** Choose the plumpest, most intact seeds for planting.

2. Drying the Seeds:

- **Spread seeds to dry:** Spread the cleaned seeds in a single layer on a clean, dry surface like a baking sheet lined with paper towels or wax paper.
- **Turn the seeds periodically:** Turn the seeds every day or two to ensure they dry evenly.

1 <https://tea4avcastro.tea.state.tx.us/thl/G7ELAR.W5.L1.cinderella.pdf>

3. Planting the Seeds:

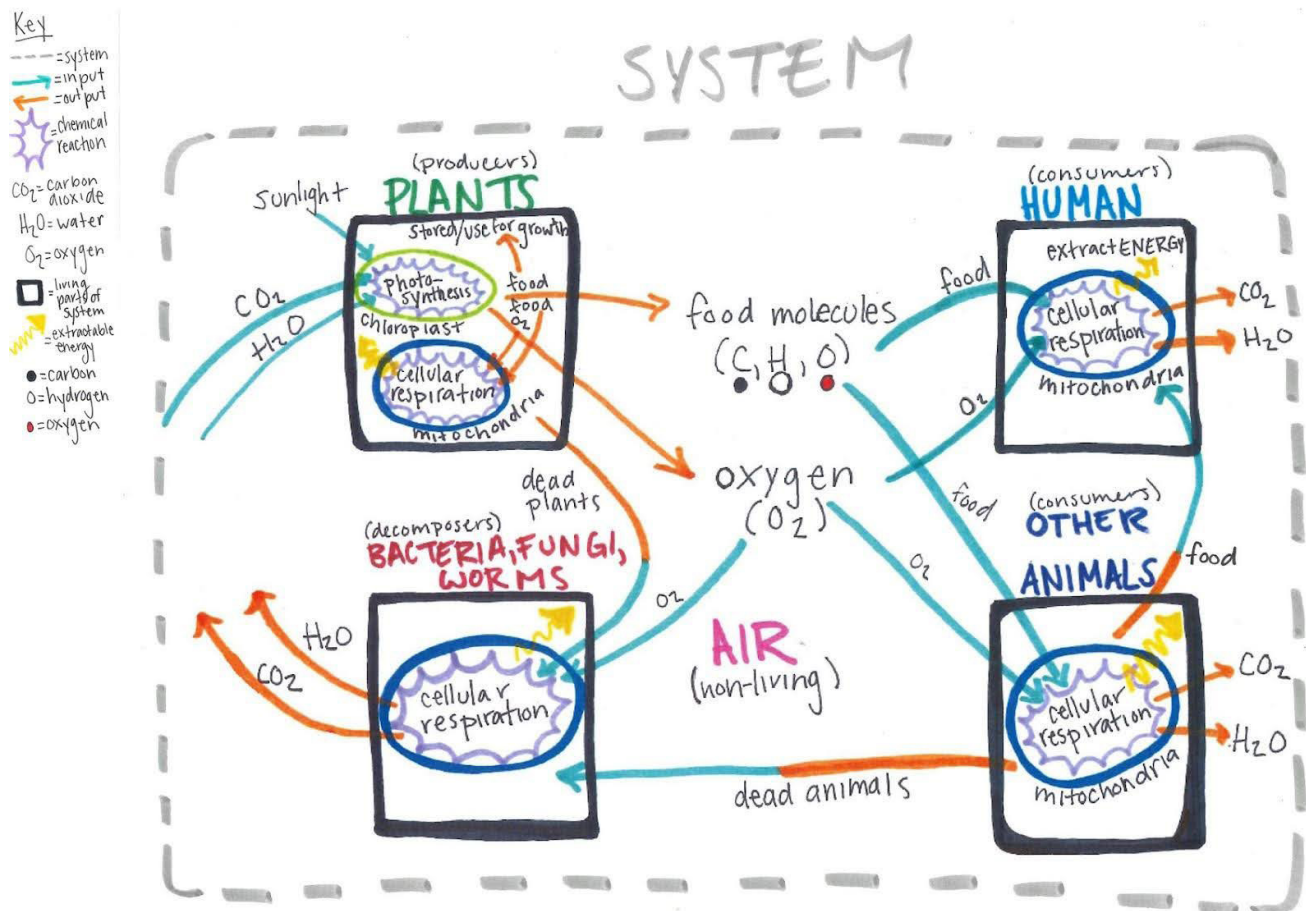
- **Choose a sunny location:** Pumpkins need at least 6 hours of sunlight per day.
- **Prepare the soil:** Ensure the soil is well-drained and rich in organic matter. Fill a plastic cup with soil.
- **Plant the seeds:** Plant pumpkin seeds about 1 inch deep in the cup of soil.
- **Water regularly:** Keep the soil consistently moist, especially during the germination period.

EXPLAIN

Show the video Timelapse of Uneaten Pumpkin²

As students watch the video, allow them time to write down things they notice about the pumpkin.

Use the following model to explain matter cycling and how this relates to the video of the pumpkin.



2 <https://www.youtube.com/watch?v=LMnTvuiX4nw>

ELABORATE

Once the class has made the pumpkin snack, ask teams to model the transfer of energy and cycling of matter from the snack to their bodies. Models should include ideas that the energy originated from the sun, was transferred to the pumpkin. The energy was then transferred to the students.

KANSAS SCIENCE STANDARDS ADDRESSED
MS-LS1-6 From Molecules to Organisms: Structures and Processes Students who demonstrate understanding can: MS-LS1-6 Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms. Clarification Statement Emphasis is on tracing movement of matter and flow of energy. Assessment Boundary Assessment does not include the biochemical mechanisms of photosynthesis. <i>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education.</i>
Science and Engineering Practices Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific knowledge, principles, and theories. - Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. Connections to Nature of Science Scientific Knowledge is Based on Empirical Evidence - Science knowledge is based upon logical connections between evidence and explanations.

- Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.

- Science knowledge is based upon logical connections between evidence and explanations.

Disciplinary Core Ideas

LS1.C: Organization for Matter and Energy Flow in Organisms

- Plants, algae (including phytoplankton), and many microorganisms use the energy from light to make sugars (food) from carbon dioxide from the atmosphere and water through the process of photosynthesis, which also releases oxygen. These sugars can be used immediately or stored for growth or later use.

PS3.D: Energy in Chemical Processes and Everyday Life

- The chemical reaction by which plants produce complex food molecules (sugars) requires an energy input (i.e., from sunlight) to occur. In this reaction, carbon dioxide and water combine to form carbon-based organic molecules and release oxygen. (secondary)

Crosscutting Concepts

Energy and Matter

- Within a natural system, the transfer of energy drives the motion and/or cycling of matter.

Cinderella by Charles Perrault³

For more information, contact:

Eryn Davis

Farm to Plate Project Coordinator
Child Nutrition and Wellness

(785) 296-5060

Eryn.Davis@ksde.gov



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