

HARVEST OF THE MONTH - NOVEMBER / PUMPKINS

---

# Grades 3-5



*Kansas leads the world in the success of each student.*

SEPTEMBER 17, 2024

## 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

Kansas leads the world in the success of each student.

## MOTTO

Kansans Can

## SUCCESS DEFINED

A successful Kansas high school graduate has the

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

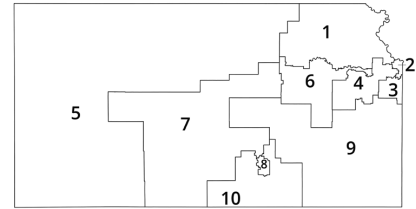
to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

## OUTCOMES

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



900 S.W. Jackson Street, Suite 600  
Topeka, Kansas 66612-1212  
(785) 296-3203  
[www.ksde.org/board](http://www.ksde.org/board)



DISTRICT 1



Danny Zeck  
[dzeck@ksde.org](mailto:dzeck@ksde.org)

DISTRICT 2



Melanie Haas  
Chair  
[mhaas@ksde.org](mailto:mhaas@ksde.org)

DISTRICT 3



Michelle Dombrosky  
[mdombrosky@ksde.org](mailto:mdombrosky@ksde.org)

DISTRICT 4



Ann E. Mah  
Legislative Liaison  
[amah@ksde.org](mailto:amah@ksde.org)

DISTRICT 5



Cathy Hopkins  
[chopkins@ksde.org](mailto:chopkins@ksde.org)

DISTRICT 6



Dr. Deena Horst  
Legislative Liaison  
[dhorst@ksde.org](mailto:dhorst@ksde.org)

DISTRICT 7



Dennis Hershberger  
[dhershberger@ksde.org](mailto:dhershberger@ksde.org)

DISTRICT 8



Betty Arnold  
[barnold@ksde.org](mailto:barnold@ksde.org)

DISTRICT 9

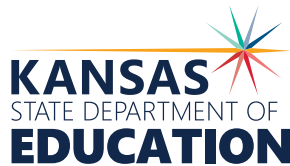


Jim Porter  
Vice Chair  
[jporter@ksde.org](mailto:jporter@ksde.org)

DISTRICT 10



Jim McNiece  
[jmcniece@ksde.org](mailto:jmcniece@ksde.org)



900 S.W. Jackson Street, Suite 102  
Topeka, Kansas 66612-1212  
(785) 296-3201  
[www.ksde.org](http://www.ksde.org)

COMMISSIONER OF  
EDUCATION



Dr. Randy Watson

DEPUTY COMMISSIONER

Division of Fiscal and Administrative Services



Dr. Frank Harwood

DEPUTY COMMISSIONER

Division of Learning Services



Dr. Ben Proctor

The Kansas State Department of Education does not discriminate on the basis of race, color, religion, national origin, sex, disability or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. The following person has been designated to handle inquiries regarding the nondiscrimination policies: KSDE General Counsel, Office of General Counsel, KSDE, Landon State Office Building, 900 S.W. Jackson, Suite 102, Topeka, KS 66612, (785) 296-3201

*Kansas leads the world in the success of each student.*

Jan. 25, 2024

## 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

**Decomposition:** the state or process of rotting; decay.

**System:** a set of things working together as parts of a mechanism or an interconnecting network.

**Interactions:** a change which is a result or consequence of an action or other cause

# GENERAL RESOURCES

## ENGAGE

Display a small pie pumpkin for the class to observe. State: "We as humans often will eat this pumpkin for food. What are some ways that you have enjoyed pumpkin as a source of food?" Solicit student ideas.

**Ask:** "What are some animals that you have either seen or have heard eat pumpkin for food?" Solicit student ideas. If students struggle with ideas, you might seek student input around when they might have seen zoo animals eat pumpkins.

**Ask:** "When an animal might eat part of the pumpkin, what do you think happens to the part of the pumpkin that isn't eaten?" Allow students to first talk with a partner, and then allow students to share out through a class discussion.

**Ask:** "What could we do to the pumpkin to investigate what might happen to the part of the pumpkin that we don't eat over time?" Solicit student ideas. Listen for an idea that would set up an investigation putting the small pumpkin in a closed system to allow it to decompose.

## EXPLORE

Use the following plan from Kelly's Classroom Online<sup>1</sup>

Gather the following items:

- A small pie pumpkin
- A large plastic or glass container with a tight-fitting lid.
- Potting soil
- Clear packing tape
- Exacto knife
- Water

---

1 <https://www.kellysclassroomonline.com/2021/07/pumpkin-life-cycle.html>

Take the large plastic container and cut a hole large enough to fit your small pumpkin through. Save that piece. Add several inches of planting soil to the bottom of the container and spritz with water until damp. Do not saturate the soil. Place the pumpkin in the container and replace the top of the container. You may need to use packaging tape to fasten it in place.

Place your pumpkin in a warm place and water in order to decompose. Place a heat lamp over the container with the pumpkin to allow the pumpkin to decompose faster. Keep the container closed.

Throughout the month, the pumpkin will go through the phases of decomposition. Fungus will grow on it and spread to the soil. As the fungus decomposes the pumpkin, the pumpkin will change colors, shrink, and eventually decompose into the soil.

Once the pumpkin has decomposed into the soil, open the container to allow fresh air in. This would be best done outside as the container will not smell very good. Cover the remains of the pumpkin and the seeds with planting soil. Spritz the soil with water until it's damp, replace the top, and wait. In a week or so, you should see little seedlings emerge.

After you see seedlings begin to emerge, you can remove and discard the top of the container. Keep the container in a sunny window so the seedlings can grow. Water the seedlings as needed and watch your seedlings become mature plants!

If there are too many seedlings in the container, you can thin out the smallest ones to make room for the others. You can transplant them into paper cups for your students to grow at home.

If you are not able to conduct this exploration in class, use the Homeschool Science Experiments video.<sup>2</sup>

## EXPLAIN

Use the following protocol to read aloud the book Pumpkin Jack by Will Hubbell

---

2 <https://www.youtube.com/watch?v=t3b4PhGtng4>

# LITERATURE CONNECTIONS

## READ ALOUD PROTOCOL

Reading aloud to children is an important part of helping them be proficient readers. It builds their oral vocabulary, which is foundational to establishing a strong reading and writing vocabulary. It builds background knowledge which will support future reading comprehension. Reading (and singing) with students is one of the best ways to “reset” the climate in your classroom, calm and refocus attention on learning. As you share a book with students, make sure students are seated comfortably and that you show the book’s illustrations as you read the text. This will allow students to utilize the illustrations to support vocabulary learning and comprehension. This will be extremely important for students who have recently arrived. Included below are some helpful tips for sharing a book with children that will ensure the experience is joyful and informative.

- Prepare for the reading, preview the book to see if there are any parts of the book that may be confusing and require additional explanation. Check for both content and language appropriateness.
- Think of a fun and engaging way to introduce the book. Engagement can be enhanced by having an item to accompany the book to peak their interest and curiosity. Consider an item integral to the theme/topic of the book (a piece of fruit, a spade, a cup of soil), a puppet, a brief story or an engaging question.
- Plan a few questions to propose before, during and after the reading- but don’t make it an interrogation! Questions don’t need to be literal or detail oriented, but can be thought provoking, such as “How might you fix this problem?” or “Think of a time when something like that happened to you?”, etc.
- Think of ways to keep each student actively engaged during the reading (raising hands, giving thumbs up/down, discussing with a shoulder partner, clapping out answers, etc.)
- Encourage word curiosity! Stop at words not all students may know and conduct a think-aloud. “Boys and girls...I see a new word and I am wondering if anyone can tell me what “soil” is..
- Check for understanding. At the completion of the book, ask a few questions to check for general understanding related to the characters, plot, problem or solution in the story and/ or a few of the relevant who, what, when, where, why and how questions essential to comprehending the story.
- Leave the book where the children can access it for a re-reading experience, navigation of the pictures if a picture book and for a future writing model.

## ELABORATE

Provide students with an option to show the system of the decomposing pumpkin and the interactions the parts had on each other to in time grow into a new pumpkin. Projects could be one of the following:

- Create a comic strip that illustrates the system and interactions of the pumpkin
- Draw a poster of the decomposing pumpkin at different times with labels of the interactions
- Write a story of how the pumpkin decomposed
- Create a stop motion video of the class pumpkin decomposing

KANSAS SCIENCE STANDARDS ADDRESSED
<p><b>5-LS2</b> Ecosystems: Interactions, Energy and Dynamics</p> <p>Students who demonstrate understanding can:</p> <p><b>5-LS2-1</b></p> <p>Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p> <p>Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food.</p> <p>Examples of systems could include organisms, ecosystems, and the Earth.] [Assessment Boundary: Assessment does not include molecular explanations.</p> <p><i>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education.</i></p>
<p>Science and Engineering Practices</p> <p><b>Developing and Using Models</b></p> <p>Modeling in 3–5 builds on K–2 models and progresses to building and revising simple models and using models to represent events and design solutions.</p> <ul style="list-style-type: none"> <li>• Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)</li> </ul> <p><b>Connections to Nature of Science</b></p> <p>Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena</p> <ul style="list-style-type: none"> <li>• Science explanations describe the mechanisms for natural events. (5-LS2-1)</li> </ul>

- Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)

- Science explanations describe the mechanisms for natural events. (5-LS2-1)

## Disciplinary Core Ideas

### LS2.A: Interdependent Relationships in Ecosystems

- The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)

### LS2.B: Cycles of Matter and Energy Transfer in Ecosystems

- Matter cycles between the air and soil and among plants, animals, and microbes as these organisms live and die. Organisms obtain gases, and water, from the environment, and release waste matter (gas, liquid, or solid) back into the environment. (5-LS2-1)

## Crosscutting Concepts

### Systems and System Models

- A system can be described in terms of its components and their interactions. (5-LS2-1))



For more information, contact:

**Eryn Davis**  
Farm to Plate Project Coordinator  
Child Nutrition and Wellness  
(785) 296-5060  
[Edavis@ksde.org](mailto:Edavis@ksde.org)



Kansas State Department of Education  
900 S.W. Jackson Street, Suite 102  
Topeka, Kansas 66612-1212

<https://www.ksde.org>

