HARVEST OF THE MONTH - FEBRUARY / SWEET POTATOES

Grades 6-8

KANSAS STATE DEPARTMENT OF EDUCATION

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JULY 17, 2025

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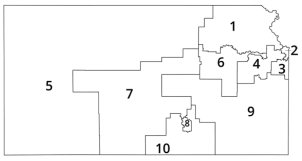

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Danny.Zeck@ksde.gov

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Melanie.Haas@ksde.gov

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Michelle.Dombrosky@ksde.gov

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Connie.O'brien@ksde.gov

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Cathy.Hopkins@ksde.gov

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Beryl.New@ksde.gov

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Dennis.Hershberger@ksde.gov

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Betty Arnold
Betty.Arnold@ksde.gov

DISTRICT 9

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Jim.Porter@ksde.gov

DISTRICT 10

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Debby.Potter@ksde.gov

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

Kansans CAN

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.

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Randy.Watson@ksde.gov

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Frank.Harwood@ksde.gov

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Renee.Nugent@ksde.gov

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July 1, 2025

HARVEST OF THE MONTH

February / Sweet Potatoes

INTRODUCTION

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

- This food is a vegetable that grows underground in the soil.
- They are a good source of Vitamin A which helps keep our eyes and immune system healthy. They are also good for our hearts and blood pressure. They are also a good source of Vitamin C and fiber which help with digestion.
- They are oval shaped, and their skin can be tan, brown, or purplish red and their insides can be white, orange, or purple.
- They are sweet and even have sweet in their name!
- They can be eaten raw, baked, mashed, and as an ingredient in pies and casseroles. Many of us eat them with marshmallow melted on top around Thanksgiving.

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

VOCABULARY

Tubers: thickened underground stems or roots that store nutrients for plants

Slips: vine cuttings from sprouted sweet potatoes that can be transplanted

Propagation: breeding plant organisms directly from the parent organism

GENERAL RESOURCES

ENGAGE

To engage students with the idea of sweet potatoes as a staple food source, we are going to first look at a sweet potato plant to identify and describe its structures. Share the interactive visual "Sweet Potato."[1]

Have students record what they notice about the characteristics of the sweet potato in their science notebooks or journals. If needed, have them use the notice and wonder sheet provided on page 5.[2] Have students pay particular attention to the structures of the plant that are edible.

Next have students analyze and annotate the short reading found at USDA.gov titled 'U.S. sweet potatoes are enjoyed around the world, export data show'.[3] In their science notebooks, journals or using the sheet linked above, have students record the trends that they notice in the reading.

EXPLORE

To start this section, students will need to examine several different texts to think about the different ways sweet potatoes are commonly grown, and the requirements for their growth. Without telling students, support their discovery by having them pay close attention to resources like space, water, and sunlight.

- How Sweet Potatoes Grows[4]
- Sweet Potato Project to End Hunger[5]
- How to Grow a Sweet Potatoes in Pots[6]
- Sweet Potatoes[7]

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1 https://www.thinglink.com/scene/719176179692601345

2 https://docs.google.com/document/d/1q2vRxd3GuOHJBvgBguIQHyLPDaOljon8j4ItgCwX9f4/edit?usp=sharing

3 https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=105095

4 https://cipotato.gov/sweetpotato/how-sweetpotato-grows/#:~:text=Sweetpotato%20is%20cultivated%20by%20vegetative,well%2C%20producers%20will%20plant%20roots

5 http://www.carbon.gov/senegal/sweetpotato1.htm

6 https://docs.google.com/document/d/1BreH_fqEKs1v_N_R4kWGP44bfaFfumaIpJGBG5LB3pc/edit?usp=sharing

7 https://extension.unh.edu/sites/default/files/migrated_unmanaged_files/Resource006096_Rep8608.pdf

Name: _____

Characteristics of Sweet Potatoes

Notice	Wonder

What patterns / themes are in the reading?

_____

_____

_____

_____

_____

_____

EXPLAIN

At this stage of the lesson, students should be prepared to make a claim about the requirements of a sweet potato plant to grow and reproduce. Students should then discuss which methods should be considered based on the consumption trends observed. To engage students in discussion consider using a scientist circle. To learn more and watch an example of scientist circles visit edutopia.gov.[8]

Considerations could include ways to increase sweet potato yields and with the least amount of limited resources.

ELABORATE

The Sweet Potato crop is in the top 10 staple food crops. New research has shown that due to the Sweet Potato genetic variability, it is very resilient to increased stress caused by global climate change. Have students research the Sustainable Development Goals (SDG's)9 and make recommendations based on what they find out. There are potentially 6 of the 17 goals that can be met by planting and harvesting more sustainable crops like the sweet potato.

KANSAS SCIENCE STANDARDS ADDRESSED

MS. Growth, Development, and Reproduction of Organisms

Students who demonstrate understanding can:

MS-LS1-5

Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

Clarification Statement:

Examples of local environmental conditions could include availability of food, light, space, and water.

Examples of genetic factors could include large breed cattle and species of grass affecting growth of organisms. Examples of evidence could include drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, and fish growing larger in large ponds than they do in small ponds.

Assessment Boundary
Assessment does not include genetic mechanisms, gene regulation, or biochemical processes.

The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education.

8 https://www.edutopia.gov/video/scientists-circle-encouraging-collaboration/

9 https://sdgs.un.gov/goals

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.

Disciplinary Core Ideas

LS1.B: Growth and Development of Organisms

- Genetic factors as well as local conditions affect the growth of the adult plant.

Crosscutting Concepts

Cause and Effect

- Phenomena may have more than one cause, and some cause and effect relationships in systems can only be described using probability

A sample of Kansas ELA Standards addressed in this unit are listed below. For details and specific grade level standard alignment, see Kansas 2023 English Language Arts Standards.[10]

Reading Foundations: Standard 3; using grade level phonics and word reading skills

Reading Literature: Standard 1; asking and answering questions about a text

Reading Literature: Standard 4; word meaning/ word choice

Reading Information: Standard 3; Describe relationship between historical events, scientific ideas or concepts

Reading Information: Standard 12; word meaning/ nuances

Writing: Standard 3; writing effective narratives to share experiences/ information with effective word choice and relevant details

Speaking and Listening: Standard 4; effectively presenting ideas and detailed/ sequenced descriptions with others

10 https://www.ksde.gov/Portals/0/CSAS/Content%20Area%20(A-E)/English_Language_Arts/Kansas%20Standards%20for%20English%20Language%20Arts.pdf?ver=2023-05-17-150345-123

For more information, contact:

Eryn Davis
Farm to Plate Project Coordinator
Child Nutrition and Wellness

(785) 296-5060
Eryn.Davis@ksde.gov

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

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