HARVEST OF THE MONTH - SEPTEMBER / TOMATOES

Grades 3-5

KANSAS STATE DEPARTMENT OF EDUCATION

Kansas leads the world in the success of each student.

SEPTEMBER 30, 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

Kansans CAN

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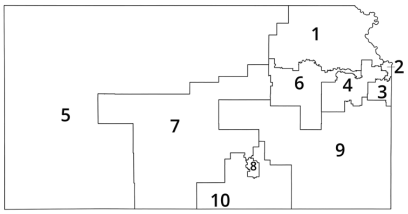

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Jan. 25, 2024

HARVEST OF THE MONTH

September / Tomatoes

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.

- This is a round or oval fruit that is often mistaken for a vegetable. Show where fruits and vegetables are found on a MyPlate.gov poster[1]. They come in many colors include red, yellow, orange, green and even purple and pink!
- They grow on a vine.
- They are good for your heart's health.
- They can be eaten fresh and are used as an ingredient in things like juice, soup, sauces, salsa, or ketchup
  Ingredient- an ingredient is one part of a mixture.
- Show picture.

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

Optional: You could also place a tomato in a brown paper bag and let the children reach in and feel it without peeking to see if they can guess what it might be as you give the clues

1 https://www.myplate.gov/sites/default/files/2020-12/Coloring%20Sheet.pdf

VOCABULARY

Cause

Effect

Pollinator

GENERAL RESOURCES

Kansas Wheat[2]

Whole Grain Council[3]

ENGAGE

Show students a tomato and ask the following question: "How do you think this tomato was able to become the fruit that we are able to eat?"

Solicit answers from the class.

Present groups of four students with pictures that show the life cycle of a tomato:[4]

Share with students that you were able to take different pictures of your tomato plant that you have at home, and you would like for each group to analyze the pictures to look for patterns to try to figure out how the tomato was able to become a tomato. Provide groups with about five minutes to look at the pictures to look at patterns. Allow students to annotate on the pictures as to the patterns they notice.

Once groups seem to have had ample time finding patterns, allow each group to share the patterns they noticed. Document the patterns on a larger set of pictures that the entire class is able to see.

EXPLORE

Share with students that tomatoes can come in different types such as cherry tomatoes, heirloom tomatoes, and beefsteak tomatoes. Ask students to brainstorm as a group how they might use these tomatoes to look for patterns to see if the life cycle of the tomatoes might compare. Provide groups of students with one large piece of paper to write down their ideas.

Once groups have had enough time to write down some ideas, allow for a whole class share out. Once all ideas have been shared, ask each group to take one of the suggestions and give them a portion of three different types of tomatoes to explore.

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2 https://kswheat.com/

3 https://wholegrainscouncil.org/

4 https://docs.google.com/document/d/1t-abZzc6q3I598G9wybkjRVPM3dKd_SrAg_za85zqCQ/edit?usp=sharing

Once groups have had time to explore and find evidence of potential patterns of the life cycles of the different types of tomatoes, allow each group to share their findings.

EXPLAIN

Use the following read aloud protocol to read the book titled Tomatoes for Neela by Padma Lakshi. Pay close attention to how the story shares about how the heirloom tomatoes were able to pass down from generation to generation.

ELABORATE

Share with students that there are many different varieties of tomatoes. Ask each group of students to find a picture of a variety of tomatoes. Ask for each group, give students a large piece of blank paper. Ask students to create a model or a picture of the life cycle of that specific tomato variety. Make sure groups have access to colored pencils. Provide groups with time to complete models. When models are completed, hang pictures up and allow students to do a gallery walk to see what patterns they notice of the tomato variety life cycles.

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.

KANSAS SCIENCE STANDARDS ADDRESSED

K-LS1 From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can:

3-LS1-1

Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

Clarification Statement:

Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

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

Science and Engineering Practices

Developing and Using Models
Modeling in 3–5 builds on K–2 experiences and progresses to building and revising simple models and using models to represent events and design solutions

- Develop models to describe phenomena. (3-LS1-1)

Connections to Nature of Science
Scientific Knowledge is Based on Empirical Evidence

- Science findings are based on recognizing patterns. (3-LS1-1)

Disciplinary Core Ideas

LS1.B: Growth and Development of Organisms

- Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS1-1)

Crosscutting Concepts

Patterns

- Patterns of change can be used to make predictions. (3-LS1-1)

Connections to other DCIs in third grade: N/A

Articulation of DCIs across grade-levels: MS.LS1.B (3-LS1-1)

Common Core State Standards Connections: ELA/Literacy –

RI.3.7
Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). (3-LS1-1)

SL.3.5 Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or

enhance certain facts or details. (3-LS1-1)

Mathematics –
MP.4 Model with mathematics. (3-LS1-1)

3.NBT
Number and Operations in Base Ten (3-LS1-1)

3.NF
Number and Operations—Fractions (3-LS1-1)

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