HARVEST OF THE MONTH - AUGUST / MELONS

K - 2

KANSAS STATE DEPARTMENT OF EDUCATION

Kansas leads the world in the success of each student.

OCTOBER 1, 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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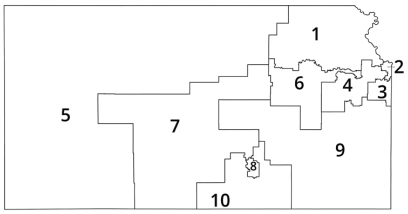

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Kansas leads the world in the success of each student.

Jan. 25, 2024

HARVEST OF THE MONTH

August / Melons

INTRODUCTION

Over the next feel 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.

- These are a large, round, sweet fruit with a think rind that have a fragrant, Juicy inside that is usually eaten fresh. Show where fruits are found on a MyPlate.gov poster.[1]
    - Rind- a thick peel on the outside of fruit that protects it.
- They feel quite heavy for their size and can weigh anywhere from 1 to 50 pounds.
- They are a good source of Vitamin A which helps keep your eyes and skin healthy and Vitamin C which helps fight off germs.
- They grow on a vine.
    - Vine- a plant that has a long, thin stem that either climbs up something or creeps along the ground.
- They contain lots of water.
- The most common types in Kansas are cantaloupe, honeydew, and watermelon.
- Show picture.

What do you think this fruit might be? We will be learning about melons!

VOCABULARY

Seed: a fertilized ripened part of a flowering plant and is capable of producing a new plant.

Conclusions: Something that is decided after thinking, observing, and investigating

Function: The role or job a specific structure plays

Fruit / Flesh: The fleshy part of a tree or other seed bearing plant that can be eaten. This part also provides water and a padded barrier for the seeds / plants.

Internal: inside

Structure: A part that has a specific function

Skin / Rind: The outermost lay of a fruit or vegetable that protects the fruit and seeds

Stem: The part of a plant that connects fruits, vegetables and leaves to the other parts of the plant.

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.

Lesson Title: Cutting the Watermelon
Skills Mini-Lesson PK-2

Material List:
One Watermelon Seed (book), by Celia Barker Lottridge
One watermelon- only to view
Sentence strips/ word cards
Marker
Scissors
Magnetic tape, velcro, tape (optional)

GENERAL RESOURCES

Farm Flavor Resource: Watermelon[2]

Farm Facts: Watermelon[3]

ENGAGE

Prepare watermelon pieces in a baggie or on a tray for each student (or set of partners) in the class. The selected kindergarten standard asks us to have students use observations to describe patterns of plant needs. In this activity students will examine their watermelon slice and record their findings on the sheet. While this step does not get to "needs" it will help us to have a conversation about the purpose of seeds in plant reproduction.

EXPLORE

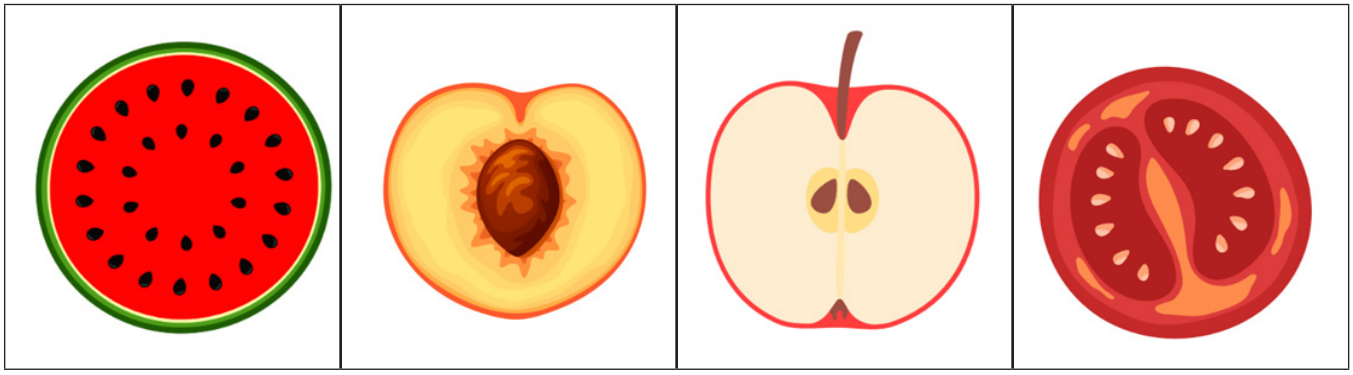
After students have interacted with what types of things are not needed from the rhyme, have students create an anchor T chart with plants they might have experienced in a garden on one side of the chart. On the other side of the T chart have students add what plants they have experienced growing in gardens or fields. Next, have students use the information from the T chart to interact with the rhyme again by rewriting it with their name and understanding of how plants grow. The sheet provides an outline for students.[4]

Hand students magnifying glasses and have them look at the seeds in their slice. Do all the seeds look the same? Have them answer the question from the worksheet together, why might not slices have the same number of seeds? Have students record their observations using the sheet [5]or in a composition book.

Consider also bringing in segments from other types of Kansas fruits or vegetables and having students explore their structures as well. Seasonal examples may include blackberries, tomatoes, apples, and peaches. This is

2 https://farmflavor.com/?s=watermelon
3 https://farmflavor.com/lifestyle/farm-facts-watermelon/
4 https://docs.google.com/document/d/1MKcd82czhLoYY4XadkI8WAG0NC7UCWcB8ETIII8UFpI/edit?usp=sharing
5 https://drive.google.com/file/d/19cn0C_y7QlcJ1tFlAuUZweZS0A5ps_sU/view

a great opportunity to talk to students about how and why we collect data. We are looking for a pattern in our observations about what plants (and animals) need to survive. Consider asking students how might we want to organize this information if we are looking for a pattern? prompting them to think of either graphing or putting the information in a data table. The images linked[6] may be used for student investigations in place of real fruit slices, or to add a visual when creating the anchor chart / data tool.



EXPLAIN

What structures do you think plants need? Using the images in the Explore stage of this lesson, guide students through the patterns. Examples of patterns include; All of these fruits and vegetables have seeds but the seeds don't all look the same nor does each plant have the same number. In thinking about which plants have more seeds and which plants have less, guide students in thinking about the way plants grow. The peach and apple have fewer seeds than the tomato and the watermelon. We can have a lot more watermelons in a space than an entire peach tree. In this section the goal is to bring together student observations with the actual structures necessary for plant survival.

STRUCTURE / PLANT PART	FUNCTION / JOB
Seed	To make more plants
Skin / Rind	To protect the fruit and seeds
Fruit / Flesh	To provide water and a padded barrier for the seeds / plant
Stem	To connect the fruit/vegetable to the other parts of the plant.

ELABORATE

Read students one of the selected read alouds about Watermelon utilizing the protocol and supports below.

Engage
Have a watermelon available for students to see. Discuss that if you cut it down the middle, you would have two halves. Tell students they are going to learn today about cutting words in half to have two perfect pieces. Show the word watermelon on a piece of paper or sentence strip. Depending on earlier learning opportunities, explore the word at the letter level, 10 letters; 3 different vowels, and syllable level (4).

6 https://drive.google.com/file/d/17JEnmDXRYl75Waf6yUrgKSY7T2QhbpqM/view

Explore:

Read the book, One Watermelon Seed. Ask students to share what they noticed about the story line, pictures and the words. (number words and counting by 10, colorful pictures, items had to grow to be picked, etc.)

Today is a watermelon day! We are going to explore some watermelons and other melons today!

1. Measure the length of the melon in inches.

Watermelon	
Cantelope	
Honeydew Melon	
Muskmelon	

2. Color of the melon.

Watermelon	
Cantelope	
Honeydew Melon	
Muskmelon	

3. Color of the seeds of the melon.

Watermelon	
Cantelope	
Honeydew Melon	
Muskmelon	

4. Shape of the melon.

Watermelon	
Cantelope	
Honeydew Melon	
Muskmelon	

Explain

Teach the concept of compound words. Some words that have meaning alone can be combined to create words that hold new meaning. One of those words is the word watermelon. Ask students the meaning of water and the meaning of the word melon:

mel·on [melən]

NOUN

1. The large round fruit of a plant of the gourd family, with sweet pulpy flesh and many seeds:
   "a ripe melon will smell sweet" · "a slice of melon"

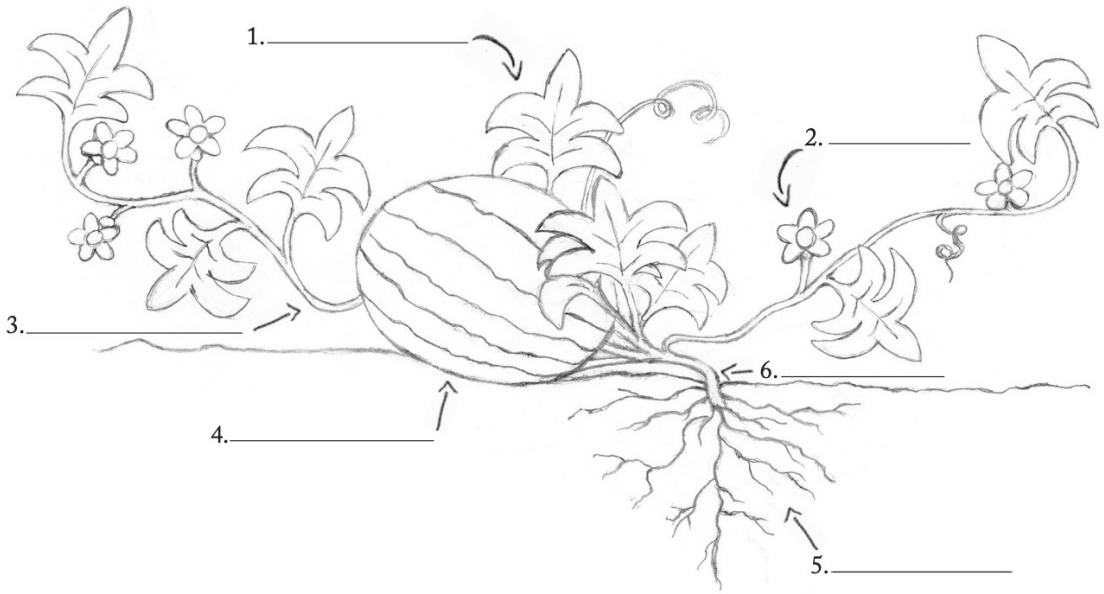
Ask students (if they have eaten watermelon) why they think it got its name. Discuss their experience. Explain that two words that have meaning can sometimes be linked together to make a brand new word and those words are called compound words. Take a sentence strip with the word watermelon on it and in view of the students, cut the two words apart and display both words as separate words (teacher may want to affix them with velcro or magnets). Re-read the book and ask students to raise their hands when they see/ hear a compound word. (watermelon, eggplant, blueberry, blueberries, strawberry, strawberries, popcorn). As words are identified, record them on a chart/ board and/ or word cards.

Elaborate

Show the backmatter to the book. Discuss the additional compound words: butterfly , ladybug, hummingbird, dragonfly, earthworm. Add those words to the list. With scissors, cut the words into the two individual words and discuss word meanings separately and combined.

Use the words in the box to label the parts of a watermelon plant. Color the picture.

Vine
Flower
Leaf
Fruit
Stem
Roots



Evaluate

Have word cards (for younger students supplement with picture clues) with water, melon, egg, plant, blue, berry, straw, berry, pop, corn, butter, fly, lady, bug, humming, bird, dragon, fly, earth, worm. Have students connect the two words to make a compound word. Ask students to use the word in a sentence to demonstrate what they know about the word. These can be programmed to be self-correcting and placed at a center for independent practice.

KANSAS SCIENCE STANDARDS ADDRESSED

K-LS1-1 From Molecules to Organisms: Structures and Processes

Students who demonstrate understanding can:

K-LS1-1

Use observations to describe patterns of what plants and animals (including humans) need to survive

Clarification Statement:

Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need wate.

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

Analyzing and Interpreting Data
Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1)

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

- Scientists look for patterns and order when making observations about the world. . (K-LS1-1)

Disciplinary Core Ideas

LS1.C: Organization for Matter and Energy Flow inOrganisms

- All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)

Crosscutting Concepts

Patterns

- Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1)

1-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

1-LS3-1

Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents

Clarification Statement:

Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.

Assessment Boundary
Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

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

Constructing Explanations and Designing Solutions
Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.

- Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena.

Disciplinary Core Ideas

LS3.A: Inheritance of Traits

- Young animals are very much, but not exactly like, their parents. Plants also are very much, but not exactly, like their parents.

LS3.B: Variation of Traits

- Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways.

Crosscutting Concepts

Patterns

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence.

Connections to other DCIs in first grade: N/A

Articulation of DCIs across grade-levels: 3.LS3.A (1-LS3-1); 3.LS3.B (1-LS3-1)

Common Core State Standards Connections: ELA/Literacy

RI.1.1
Ask and answer questions about key details in a text. (1-LS3-1)

W.1.7
Participate in shared research and writing projects (e.g., explore a number of "how-to" books on a given topic and use them to write a sequence of instructions). (1-LS3-1)

W.1.8
With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-LS3-1)

Mathematics
MP.2
Reason abstractly and quantitatively. (1-LS3-1)

MP.5
Use appropriate tools strategically. (1-LS3-1)

1.MD.A.1
Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-LS3-1)

2-LS4-1 Biological Evolution: Unity and Diversity

Students who demonstrate understanding can:

1-LS1-1

Make observations of plants and animals to compare the diversity of life in different habitats

Clarification Statement:

Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.

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

Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

- Make observations (firsthand or from media) to collect data which can be used to make comparisons. (2-LS4-1)

Connections to Nature of Science

Scientific Knowledge is Based on Empirical Evidence

- Scientists look for patterns and order when making observations about the world. (2-LS4-1

Disciplinary Core Ideas

LS4.D: Biodiversity and Humans

- There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)

Crosscutting Concepts

N/A

Connections to other DCIs in second grade: N/A

Articulation of DCIs across grade-levels: 3.LS4.C (2-LS4-1); 3.LS4.D (2-LS4-1); 5.LS2.A (2-LS4-1)

Common Core State Standards Connections:

ELA/Literacy –

W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-LS4-1)

W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS4-1)

Mathematics –

MP.2 Reason abstractly and quantitatively. (2-LS4-1)

MP.4 Model with mathematics. (2-LS4-1)

2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare

problems. (2-LS4-1)

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

K - 2

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

Research to Build and Present Knowledge: Standard 7,8,9

Companion Texts for this study:

One Watermelon Seed
By Celia Barker Lottridge & Karn Patkau
ISBN: 978-1-55455-222-1
Year Published: 1986

Watermelon Party
By Jasmine Cabanaw
ISBN: 0993939104
Year Published 2014

Watermelon Madness
By Taghreed Najjar
ISBN: 978292478622
Year Published: 2021

This Watermelon Is Not Round
By Vicky Y.W. Wong
ISBN: 0648803449
Year Published: 2020

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