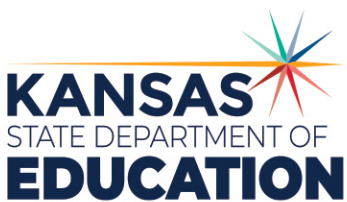


HARVEST OF THE MONTH - JUNE / CUCUMBERS

Grades 3-5



Kansas leads the world in the success of each student.

SEPTEMBER 27, 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

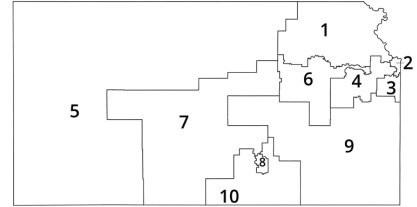
to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation.

OUTCOMES

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



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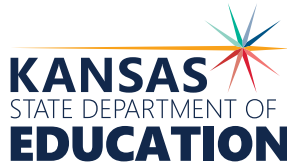


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Kansas leads the world in the success of each student.

Jan. 25, 2024

HARVEST OF THE MONTH

June / Cucumbers

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 vegetable grows on long creeping vines.
- They have fuzzy leaves
- They are green on the outside and white on the inside
- They contain a lot of water and are a good snack to keep you hydrated
- Their skins contain vitamins A and C
- People eat this vegetable raw in slices or in salads.
- They can also be made into pickles.
- Show picture.

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

Optional: You could also place a cucumber 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.



GENERAL RESOURCES



ENGAGE

Pose the question to the class while showing them either picture of different varieties of cucumbers: "What do you notice about these different varieties of cucumbers?" Create a class anchor chart to collect student notices. These notices should help students start to notice that different organisms vary in how they look and function because they have different inherited information, and that the environment also affects those traits that an organism develops.

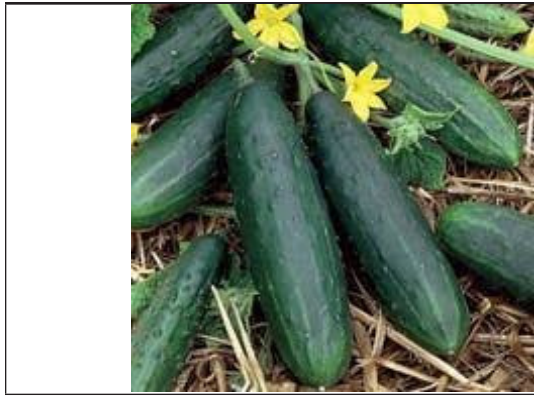
Ask students to brainstorm with groups of four ideas about why the cucumbers are different varieties.

Write these claims about why students believe why cucumbers are different varieties and what makes them different. Claims can be centered around that they are different lengths, they are different shapes, they might have different amounts of seeds inside along with other ideas.

Ask students to generate a list of what they could do to investigate these claims. The list can be things such as students wanting to cut the cucumbers to see the insides, measuring the length, or even doing a taste test to determine if one is more bitter than the other. (For your information, cucumbers vary in the amount of cucurbitacin that causes some cucumbers to taste more bitter than others, but this substance can also cause more burping in humans.)

			DASHER
			SPRINT

		RAIDER
		BURPEE HY
		MARKETMORE
		LIBERTY
		BURPLESS HY



SPACEMAKER

EXPLORE

Provide time for students to write out one of their ways to collect data that would help students determine what makes these cucumbers different varieties. Ask student groups to write out a procedure as to how they will collect data. Once procedures are written, provide students the time to conduct their investigations and collect data.

EXPLAIN

As a class, look at the data that was collected about the different varieties of cucumbers. Ask students to look for patterns in the class data. Use those patterns to explain to students that the plant has traits that they inherited from their parent cucumbers. That variations of these traits that we see in the cucumbers exist in similar ways in different varieties of cucumbers.

Use the following protocol to read the book *Cool as a Cucumber* by Michael Morpurg

ELABORATE

Use the following recipe to make cucumber soup using different varieties of cucumbers. Make 4 small batches using four different varieties of cucumbers. As a class, ask students to create a list of patterns in the taste to see if they can recognize similarities and differences that the cucumbers might make in the cucumber soup¹.

1 <https://www.allrecipes.com/recipe/233369/easy-cold-cucumber-soup/>

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

3-LS3 Heredity: Inheritance and Variation of Traits

Students who demonstrate understanding can:

3-LS3-1

Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms

Clarification Statement:

Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.

Assessment Boundary

Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

3-LS3-2

Use evidence to support the explanation that traits can be influenced by the environment

Clarification Statement:

Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.

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 3–5 builds on K–2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.

- Analyze and interpret data to make sense of phenomena using logical reasoning. (

Disciplinary Core Ideas

LS3.A: Inheritance of Traits

- Many characteristics of organisms are inherited from their parents.
- Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment.

LS3.B: Variation of Traits

- Different organisms vary in how they look and function because they have different inherited information.
- The environment also affects the traits that an organism develops.

Crosscutting Concepts

Patterns

- Similarities and differences in patterns can be used to sort and classify natural phenomena.

Cause and Effect

- Cause and effect relationships are routinely identified and used to explain change.

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