HARVEST OF THE MONTH - MARCH / PORK

Grades 3-5

KANSAS STATE DEPARTMENT OF EDUCATION

Kansas leads the world in the success of each student.

SEPTEMBER 23, 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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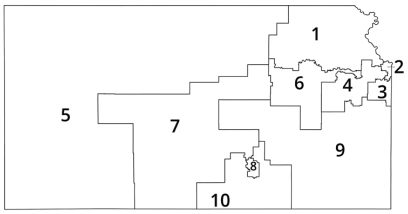

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Jan. 25, 2024

HARVEST OF THE MONTH

March / Pork

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!

GENERAL RESOURCES

ENGAGE

Pose the question to students: What do you eat that gives you energy to get through your school day?

Give students five minutes to write down or draw the things they have eaten that has given them energy.

Share that as a class we are going to explore the things that pigs consume to get energy and to figure out where the energy comes from.

EXPLORE

Show the following video 'What do pigs eat?'[1]

Students will work in pairs to read an article about what pigs eat.[2]

Use the following partner reading strategy:

1. Student one will read aloud a paragraph to student two.
2. Student two will rephrase and summarize what the paragraph is about.
3. Student one checks the summary.
4. Students repeat reversing roles.
5. Students continue until the article is completed.

EXPLAIN

Show the 'Food Chain | Food Web | Video for Kids' video[3]

This video will explain about food webs and how the food plants and animals eat will provide them energy. Pigs eat food so they will get energy. This energy starts with energy from the sun. The sun then helps the plants make their own food to help them grow. The plants then become food for the pig to provide the pig energy.

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1 https://www.youtube.com/watch?v=_pdnwh5cdqw

2 https://kansasfarmfoodconnection.org/spotlights/what-do-pigs-eat
https://thefarmerslamp.com/what-do-pigs-eat/

3 https://www.youtube.com/watch?v=FFloV2J-eKI

ELABORATE

In groups of three, task students with creating an energy diagram that shows the transfer of energy of that allows pigs to get their energy to grow. This can be completed on large pieces of paper or on a large whiteboard.

The food web can look similar to this:

Sun > Grain > Pig

Connect with a Kansas Pig Farm at kspork.org.

KANSAS SCIENCE STANDARDS ADDRESSED

5-PS3 Energy

Students who demonstrate understanding can:

5-PS3-1

Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun

Clarification Statement:

Examples of models could include diagrams, and flow charts.

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.

- Use models to describe phenomena. (5-PS3-1)

Disciplinary Core Ideas

PS3.D: Energy in Chemical Processes and Everyday Life

- The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)

LS1.C: Organization for Matter and Energy Flow in Organisms

- Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion. (secondary to 5-PS3-1)

Crosscutting Concepts

Energy and Matter

- Energy can be transferred in various ways and between objects. (5-PS3-1)

Connections to other DCIs in fifth grade

Articulation of DCIs across grade-levels: K.LS1.C (5-PS3-1); 2.LS2.A (5-PS3-1); 4.PS3.A (5-PS3-1); 4.PS3.B (5-PS3-1); 4.PS3.D (5-PS3-1); MS.PS3.D (5-PS3-1); MS.PS4.B (5-PS3-1); MS.LS1.C (5-PS3-1); MS.LS2.B (5-PS3-1)

Common Core State Standards Connections: ELA/Literacy

RI.5.7

Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. (5-PS3-1)

SL.5.5

Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes. (5-PS3-1)

Observable features of the student performance by the end of the grade

1. Components of the model
    a. Students identify and describe* a phenomenon that includes the idea that energy in animals' food was once energy from the sun. Students identify and describe* the components of the model that are relevant for describing* the phenomenon, including:
        i. Energy.
        ii. The sun.
        iii. Animals, including their bodily functions (e.g., body repair, growth, motion, body warmth maintenance).
        iv. Plants.
2. Relationships
    a. Students identify and describe* the relevant relationships between components, including:
        i. The relationship between plants and the energy they get from sunlight to produce food.
        ii. The relationship between food and the energy and materials that animals require for bodily functions (e.g., body repair, growth, motion, body warmth maintenance)
        iii. The relationship between animals and the food they eat, which is either other animals or plants (or both), to obtain energy for bodily functions and materials for growth ad repair.
2. Connections
    a. Students use the models to describe* causal accounts of the relationship between energy from the sun and animals' needs for energy, including that:
        i. Since all food can eventually be traced back to plants, all of the energy that animals use for body repair, growth, motion, and body warmth maintenance is energy that once came from the sun.
        ii. Energy from the sun is transferred to animals though a chain of events that begins with plants producing food then being eaten by animals.

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