

Agriculture Counts



This lesson plan was furnished by the Agricultural Education Division on behalf of Kansas Farm Bureau, The Voice of Agriculture. It was compiled to educate young people, parents and teachers about where our food comes from and the importance of agriculture products in our everyday life.

America's food supply is safe, affordable and abundant but also vastly misunderstood by the consuming public. It is the intention of Kansas Farm Bureau to improve the public's knowledge about the importance farming and ranching plays in our quality of life.

Revised from Oklahoma Ag in the Classroom lesson plan.

BACKGROUND INFORMATION:

Can you count the ways agriculture touches your life? In the morning, when you wake up, you are lying on cotton sheets. You swing your feet onto a wood floor, a rug made from wool, or flooring made from linseed or soybean oil. In the shower, the soap you use contains tallow (a byproduct of the beef industry), cottonseed oil, or lanolin (a kind of oil from the wool of sheep). You dry off with a towel and get dressed into a t-shirt and jeans, all of which are made from cotton. You've already used many agricultural products, and you haven't even eaten.

You jump on your bike and ride on tires reinforced with cotton fibers. When you get to the classroom, you open a book held together with glue made from the hide and hair of a cow or a pig and printed with ink made from soybeans.

At recess you go outside and play baseball with a wooden bat and a glove made from the hide of a cow. Your baseball is made from wool yarn wound around a corn or rubber core and covered with the hide of a cow.

Agriculture feeds us, clothes us, shelters us, helps us get around, and keeps us clean and well-groomed. It even cares for us when we are sick or injured. Insulin for diabetics is made from a chemical produced by the pancreas of swine and beef animals, and pig skin is used in skin grafts for burn victims. Milk proteins help make bandaids stick.

And all these products are grown right here in Kansas. Agriculture is the largest contribution to our economy.

In 2010, national rankings showed that Kansas ranked first in wheat production and sorghum production. It also ranked second in number of cattle and calves produced.

You can **count** on Kansas agriculture—to keep on feeding and clothing us—and for so much more.

LEVEL:

3rd-5th grades

SUBJECTS/STANDARDS:

Reading

Standard 3: Text Features

Benchmark 1: understands the purpose of text features

Retell/Paraphrase Standard

Benchmark 1: retells main ideas or events as well as supporting details in narrative and expository texts

Writing

Writing Standard

Benchmark 2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly

Speaking & Listening Standard

Benchmark 1: Engage effectively in a range of collaborative discussions

Social Studies

Geography Standard

Benchmark 1: Geographic Tools and Location

Economic Standard

Benchmark 5: The student makes effective decisions as a consumer

Math

Standard 4: Data

Benchmark 2: Statistics

ACTIVITY DESCRIPTION:

Students will learn the importance of agricultural products and how they use them throughout their day.

ACTIVITY:

Language Arts

1. Read and discuss background.
2. Discuss meanings of the word “count.”
 - a. Brainstorm meanings of the word and write responses on the chalkboard.
 - b. Students will look up the word in a dictionary and take turns reading different meanings.
 - c. Students will list synonyms for the word “count” as used in the phrase “You can count on me” (depend, rely, trust).
3. Brainstorm with students all the ways they use agriculture in a typical day. Write answers on the chalkboard.
4. Hand out Student Worksheet A
 - a. Students will use the worksheet to write stories describing what they do in a typical morning and what agricultural products they use. Students will illustrate one of the activities described in their story.
5. Students will brainstorm in groups to prepare for writing 300-500 word essays on the topic “Agriculture Counts”

Math

1. Hand out copies of the “2010 Kansas Commodities,” included with this lesson.
2. Discuss what information can be found in each of the columns.
3. Students will answer the questions at the bottom of the page.
4. Have students prepare a bar graph to compare production dollars in column 2.

Social Studies

1. Provide copies of the list of products made from Kansas commodities.
 - a. Lead a class discussion about the agricultural commodities used to make common products.
 - b. Students will check the labels of products in their homes for Kansas agricultural commodities listed ingredients.
 - c. Student will select one of the products listed on the chart and research to find as much information as possible about how the product was made, beginning with raw materials.

Extra Reading

Geisert, Bonnie, *Haystack*, Houghton Mifflin, 2003.
Hill, Lee Sullivan, *Farms Feed the World*, Carolrhoda, 1997.
Wolfman, Judy, and David Lorenz Winston, *Life on a Crop Farm*, Lerner, 2002.
Yolen, Jane, and Greg Shed, *Harvest Home*, Harcourt, 2002.

STUDENT LEARNING

OUTCOMES:

Students will learn some of the products made from agricultural commodities using skills in reading, writing, oral language, social studies and mathematics.

ESTIMATED

TEACHING TIME:

50 Minutes

MATERIALS NEEDED:

Background Information
Copies of Handout 1
Copies of Handout 2
Copies of Worksheet 1
Copies of Worksheet 2

PREPARE AHEAD:

Make copies prior to class

Vocabulary

Agriculture- the science, art and business of cultivating soil, producing crops, and raising livestock; farming

Commodity- an article of trade or commerce, especially an agricultural or mining product that can be processed and resold

Diabetes- a disease caused by a disorder of the pituitary gland

Economy -the management of the resources of a country, community or business

Lanolin- a yellowish-white fatty substance obtained from wool and used in soaps, cosmetics, and ointments

Linseed oil- a yellowish oil extracted from the seeds of flax and used as a drying oil in paints and varnishes and in linoleum printing inks and synthetic resins

Pancreas- a long, soft, irregularly shaped gland lying behind the stomach that secretes pancreatic juices and produces insulin that is taken up by the blood stream

Product- something produced by human or mechanical effort or by a natural process

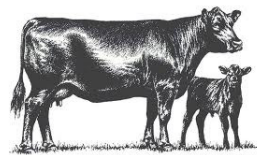
Production- the act or process of creating something by mental or physical effort

Raw materials- unprocessed natural products used in manufacture

Soybean- a leguminous Asiatic plant, widely cultivated for forage and soil improvement and for its nutritious edible seeds

Skin graft- to surgically transplant or implant skin to a bodily part to compensate for a defect

Tallow- a mixture of the whitish, tasteless solid or hard fat obtained from parts of the bodies of cattle, sheep or horses that are used in edibles or to make candles, leather dressing, soap and lubricants



Some Agricultural Products Made From Kansas Commodities

| | |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Cattle & Calves | hamburgers, glue for book binding, chalk, leather for ball gloves, baseballs, shoes, chewing gum, crayons, piano keys |
| Hogs & Pigs | pepperoni pizza, medicine, lipstick, gloves, buttons, makeup, chalk, crayons, flooring, dishes, hair brushes, sport gloves |
| Poultry & Eggs | omelets, chicken strips, turkey, pillows, bedding, cowboy boots, belts, shampoo, cakes, cookies, disposable diapers |
| Winter Wheat | bread, cookies, cake, breakfast cereal, pizza, building materials, baby powder, soccer balls, biodegradable paper. |
| Milk Production | ice cream, cheese, adhesive used in bandaids, medicine, yogurt, pudding, chocolate milk, nachos |
| Forest Products | pencils, paper, toilet paper, furniture, building materials, books, photo film, newspaper, ping pong balls, toilet seats, guitars |
| Cotton Lint & Seed | jeans, t-shirts, tires, airplane seats, hot air balloons, fireworks, mattresses, circus tents, underwear, socks, sheets towels |
| Corn | corn chips, tacos, batteries, feed for livestock, disposable diapers, floor mats, soft drinks |
| Soybeans | soy sauce, candy bars, vegetable oil, printer's ink, tires, car parts, makeup, crayons, flooring |
| Sheep & Wool | sweaters, baseballs, lotions, carpet, hats, instrument strings, dice, candles, wallpaper, detergents |

Look in your home for the products made from Kansas commodities. List them on the back of this paper.

Kansas Commodities 2010

Name _____

| Commodity | Value of Production in dollars |
|-------------------------------|---------------------------------------|
| Corn | 2831220000 |
| Wheat All | 1963150000 |
| Sorghum For Grain | 671440000 |
| Hay All (dry) | 241325000 |
| Soybeans | 154250000 |
| Sunflower All | 45509000 |
| Sunflower Seed for Oil | 36303000 |
| Cotton Upland | 32928000 |
| Potatoes All | 8995000 |
| Barley All | 879000 |
| Cattle and Calves | 6,533,521,000 |
| Hogs and Pigs | 487,601,000 |
| Milk and Other Dairy Products | 430,427,000 |

USDA.gov- National Agriculture Statistics Service, Kansas State Facts

Which commodity in the table has the highest value In Kansas?

Which commodity in the table has the lowest value in Kansas?

How many commodities in the table have a value higher than 1 billion dollars?

How many commodities have a value below 2 million dollars?

What is the difference in value between Wheat All and Soybeans?

