

Agriculture Counts

Background

Can you count the ways agriculture touches your life? When you wake up in the morning, you're lying on cotton sheets. You swing your feet onto a wood floor, a rug made from the wool of a sheep, or flooring made from linseed or soybean oil. The soap you use in the shower contains tallow (a byproduct of the beef industry), or cottonseed oil or lanolin (a kind of oil from the wool of sheep). The towel you dry off with and the jeans and T-shirt you put on are made from cotton. You've already used dozens of agricultural products, and you haven't even started eating.

You get 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 printer's 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 cork or rubber core and covered with the hide of a cow.

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

And all of these products are made from raw materials produced right here in Oklahoma. Agriculture is second only to the oil and gas industry in its contribution to our economy.

In 2008, Oklahoma ranked number two nationally in the production of rye, number 3 in the production of beef cows, number four in the production of winter wheat and number five in the production of pecans.

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

Language Arts

1. Read and discuss background.
2. Discuss the meaning of the word "count."
 - Brainstorm meanings of the word and write responses on the chalkboard.
 - Students will look up the word in a dictionary and take turns reading different meanings.

P.A.S.S.

GRADE 3

Reading—2.1,3,4

Writing—1.1; 2.1,2

Oral Language—3.2

Social Studies—4.4; 5.3

Math Process—5.1,2

Math Content—5.1b

GRADE 4

Reading—1.1,3,4b

Writing—1.1; 2.1

Oral Language—3.2

Social Studies—4.2

Math Process—5.1,2

Math Content—5.1a

GRADE 5

Reading—1.1a,b,3,4b

Writing—1.1; 2.1,6abcd

Oral Language—3.2

Math Process—5.1,2

Math Content—2.1a; 5.1a

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.

insulin—A preparation derived from the pancreas of a pig or the ox for use in the medical treatment of diabetes. Insulin is also produced in the pancreas of humans.

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 into 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 and used in edibles or to make candles, leather dressing, soap and lubricants.

—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.
 - Students will use the worksheet to write stories describing all they do in a typical morning and what agricultural products they use.
 - Students will illustrate one of the activities described in the 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 “2008 Top Oklahoma Commodities,” included with this lesson.
 - Help students understand how to read the chart.
 - Discuss what information can be found in each of the columns.
 - Students will answer the questions at the bottom of the page.
 - Each student will graph one of the columns from the chart.
 - The numbers in Column 4 on are meant to be read as millions. Students will add the appropriate number of zeroes to each number to make it read in the millions.

Social Studies

1. Provide copies of the list of products made from Oklahoma commodities.
 - Lead a class discussion about the agricultural commodities used to make common products.
 - Students will check the labels of products in their homes for Oklahoma agricultural commodities listed as ingredients.
 - Students 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.

Name _____

2008 Top Oklahoma Commodities

column 1 Oklahoma Rank	column 2 National Rank	column 3 Commodity	column 4 2008 Cash Receipts (in millions)
1	5	Cattle & Calves	\$1,954 (000,000)
2	2	Winter Wheat	1,082 (000,000)
3	11*, 27**	Poultry and Eggs	663
4	4	Hogs and Pigs	550
5	17	All Hay	479
6	27	Milk Production	216
7	27	Corn for Grain	166
8	13	Soybeans	81
9	not ranked	Cotton and Cottonseed	73
10	26	Grain Sorghum	47
11	6	Peanuts	14
12	5	Pecans	7
13	2	Rye	7
14	13	Watermelons	4
15	22	Sheep and Lambs	3
16	24	Oats	2

1. Add the correct number of zeroes to the numbers in column 4 to show them as millions.

2. Which Oklahoma commodity is ranked number 8 nationally? _____

Which is ranked number 1? _____

3. What are Oklahoma's top five crops?

Name _____

Some Agricultural Products Made from Oklahoma Commodities

Cattle & Calves	hamburgers, glue for book binding, chalk, leather for ball gloves, baseballs, basketballs, 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 report cards
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
Peanuts	peanut butter, candy bars, cooking oil, wallboard, kitty litter, paper, bleach, shaving cream, face cream, soap, flooring, makeup
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 products made from Oklahoma commodities. List them on the back of this paper.