

Kansas: Wizard of Oz

If I Only Had a Heart!

Farmers and Ranchers are the Heart of Kansas Agriculture

Agriculture, Math, Writing

Materials

One apple
Paring knife
Flip chart paper
Markers
Copies of Student Handout A: Agriculture Data
Computer
Projector
Construction paper

Overview

Students will learn why farmers and ranchers are considered the “heart” of Kansas agriculture.

Objectives

1. Students will compare farm demographics throughout history.
2. Students will understand why farmers and ranchers are important to all people.
3. Students will observe the relative proportion of land available for agriculture use.

Background Information

In the movie “The Wizard of Oz,” Dorothy and the Scarecrow stumble across a Tin Man who is rusted and stiff. Once they get him all oiled up, he tells them how he is in need of a heart so that he can have feelings, too. Kansas agriculture is not in need of a heart - it already has one! The heart of Kansas agriculture is the farmers and ranchers who work hard each day to ensure that Kansas have enough to eat.

There are fewer farmers today, yet they are still producing enough food for a growing population. Kansas farmers and ranchers pour their hearts into planting crops, raising animals and taking care of the land each and every day. Farmers and ranchers often go unnoticed when people go to the store and pick up our groceries. Farmers and ranchers deserve recognition for all their hard work and for providing Kansas with food and other products.

Grade Level: 3-5

Time: 60 minutes

Standards:

3rd grade Math
S4: Data, B2 I1, B2 I2

3rd grade Writing
S1: Writing, B1 I1, B1 I2

Intro to Ag. 018
Agriscience in our World
3,6,7

*For Kansas standards, visit
www.ksde.org*



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Preparation

1. Make copies of the Student Handout: Agriculture Data.
2. Prepare video clip to play.
3. Find addresses of local farmers' and ranchers' associations or for specific farmers and ranchers in the area to send the cards. Consider putting the notes in the local paper or displaying them in a public place.
4. Prepare a place where all students can see the "Earth as an Apple" demonstration.

Instructional Format

1. Wizard of Oz video clip <http://www.youtube.com/watch?v=iak9HxW6dHY&feature=related>
2. The "Earth as an Apple" demonstration will be shown.
3. Discuss why farmers and ranchers are so important in preserving and taking care of the little land we have to farm with.
4. Look at agriculture statistics for farms throughout the years (Student Handout).
5. Students make graphs using demographics of Kansas farms (Student Handout).
6. Students write thank you notes to farmers and ranchers.

Procedures

Wizard of Oz

1. Have students watch the "Wizard of Oz" where Dorothy and the Scarecrow meet the Tin Man. The video can be accessed through YouTube by doing a simple search "Wizard of Oz Tin Man,"
2. Have students discuss why farmers and ranchers could be considered the heart of agriculture.

Earth as an Apple

1. Ask students to imagine that the apple is the earth. Share the following information as you cut the apple:
2. Cut the apple into quarters. Set aside three of the quarters, and state that these slices represent the oceans of the world. The fourth quarter roughly represents the total land area left.
3. Slice this land quarter in half, which will yield two 1/8th-world pieces. Set aside one of these pieces and note that this is land where people cannot normally live (the polar ice caps, deserts, swamps and very high or rocky, mountainous areas). The other 1/8th piece is the land area where people live. It is not all used to grow the foods people need.
4. Slice the 1/8th piece into four sections (this yields four 1/32nd-world pieces). Set aside three of these pieces. Note that these are areas too rocky, too wet, too cold, too steep or with soil too poor to actually produce food. These pieces also include the areas of land that could produce food but are buried under cities, highways, suburban developments, shopping centers and other structures that people have built.
5. Take the 1/32nd piece that remains. Carefully peel this slice. This tiny bit of peel represents the surface, the very thin skin of the earth's crust upon which humankind depends for its food. Less than 5 feet deep, it represents the amount of food-producing land.
6. Have students create thank you notes or letters that can be sent to area farmers and ranchers or printed in the local newspaper.



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Graphs

1. Have students make graphs for different categories (farm size, #of farms, age of farmers, world population). Any type of graph will work; whatever has been emphasized in class.
2. Compare the graphs and discuss.

Conclusion Questions (Assessments)

1. Why are farmers and ranchers considered the heart of Kansas agriculture?
Kansas farmers and ranchers are the ones who work hard in the fields and pastures. They take care of livestock and crops and help ensure that we have a safe and abundant food supply. Farmers and ranchers are stewards of the land to make sure agriculture lives on for years to come.
2. What would our world be like if there were no farmers and ranchers?
The reality is that without farmers and ranchers, there would be no food. We would possibly have to return to a society of hunter gatherers. There would be more people going hungry and many of the luxuries humans now enjoy would be gone.

*Note: To assess for understanding and writing skills, the thank you notes may be used.
To assess for math, graph construction may be used.*

Want More? Extensions

A fractions lesson could be taught using the lesson information.

World Hunger Challenge: This activity allows students to see just how badly some nations are in need of food and how important it is that farmers and ranchers continue to produce more food.

This lesson plan is part of the Colorado Agriscience Curriculum:

<http://www.cccs.edu/animal%20science%20curriculum/start%20here.pdf>

Resources:

Kansas Department of Agriculture:

<http://agriculture.ks.gov/about-ksda/kansas-agriculture>

National Ag Statistics Service:

www.agcensus.usda.gov/Publications/2012/Full_Report/volume_1,_Chapter_1_State_Level/Kansas/st20_1_002_002.pdf

Population Reference Bureau at prb.org

National FFA Association. PALS Activity Handbook II: Earth as an Apple.

YouTube. Search "Wizard of Oz Tin Man" for the video clip.

Another great resource from



**Kansas Foundation
for Agriculture
in the Classroom**

www.ksagclassroom.org

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Kansas Agriculture Data

All Kansas Farms	2012	2007	2002	1997	1992	1987
Number of farms	64,700	65,531	64,414	65,476	63,278	68,579
Land in Farms (acres)	46,137,000	46,345,827	47,277,944	46,650,618	46,672,188	46,628,519
Average Farm Size (acres)	747	707	733	748	738	680
Cattle and Calves sold	10,153,087	8,738,281	8,044,209	8,233,339	7,699,746	7,310,338
Corn for grain (bushels)	286,362,000	500,560,815	289,681,829	351,343,546	258,720,259	144,133,581
Wheat (bushels)	359,484,644	270,115,386	262,980,052	463,721,879	329,092,833	292,999,442
Soybeans (bushels)	83,696,476	82,719,224	57,946,285	76,267,366	56,854,327	55,789,994
Sorghum (bushels)	87,007,994	201,048,807	126,371,170	233,499,331	222,145,624	228,045,100
Sunflower (pounds)	111,263,316	220,194,520	105,943,758	133,747,103	*****	*****
World Population	7,057,075,000	6,606,214,786	6,234,361,771	5,855,086,722	5,451,671,517	5,045,315,871

Information from:

Kansas Department of Agriculture:
<http://agriculture.ks.gov/about-ksda/kansas-agriculture>

National Ag Statistics Service: cut and paste the url address below:
www.agcensus.usda.gov/Publications/2012/Full_Report/volume_1,_Chapter_1_State_Level/Kansas/st20_1_002_002.pdf.
 You may have to wait a bit for the screen to come up. Be patient.

OR

google: NASS for National Ag Statistics website: Click on Statistics by state in lower left hand box select Kansas at the Select a Location site; Pick :Census of Agriculture for Kansas; Select state report; Select Table2

Population Reference Bureau at prb.org

Another great resource from

