

## 6

# Careers Within Agriculture

## Class Introduction

### Activity 1: School Lunch Connection

Worksheet a: Interview a Food Service Professional

Worksheet b: Thank You

### Activity 2: Ag Careers Bingo

Worksheet a: Bingo Card

Worksheet b-c: Career Cards

### Evaluation: Student Worksheet

What I Know About Careers Within Agriculture

## OUTCOMES

The students will

- Recognize the importance of foodservice personnel to nutrition.
- Demonstrate responsibility for health.
- Discover agricultural careers in their school.
- Discover agricultural careers.

## Educator Introduction

Agriculture is more than crop and livestock production. In Kansas, agriculture is the state's largest industry. In fact, one of out every five people working in the United States is employed in the agriculture industry.

Agricultural career opportunities are available in business, industry, government, education, research and production agriculture. Producing food and other products useful to humans is challenging and rewarding.

As the world's population grows, new jobs are created as agriculture strives to meet the growing needs for food, clothing and shelter. High costs for land, machinery and livestock limit the opportunities for students to become farmers or ranchers. However, because agriculture is the single largest employing industry in the United States, there are many other career choices. Students who have never even visited a farm or ranch may find themselves pursuing an agriculture-related career.

"The only background I had in food and agriculture came from having a Jewish mother who was always telling me: "Eat! Eat!" said Dan Glickman, Former U.S. Secretary of Agriculture. Glickman grew up in Wichita, Kansas and represented Kansas in Congress before being named U.S. Secretary of Agriculture, the highest-ranking official in the U.S. Department of Agriculture.

## Unit 6: Introduction, *continued*

### **SCHOOL LUNCH CONNECTIONS**

Each school day, the U.S. Department of Agriculture (USDA) connects with students and teachers through school lunches and other food programs. The federal government established the first school lunch and milk programs in the 1940s. More than 183 billion school lunches have been served since the beginning of the National School Lunch Program. Public and nonprofit private schools receive cash subsidies and donated commodities from the USDA\* for each meal served. In return, the schools must serve lunches that meet federal nutrition requirements and must offer free or reduced price lunches to eligible children.

Milk, snacks for students in after-school educational and enrichment programs, breakfast meals and summer lunches are also funded through the USDA. All school food programs must meet federal nutrition requirements set by the USDA. However, local school food authorities make the decisions about what specific foods to serve and how they are prepared.

Each year, National School Lunch Week is observed in October. By law, it is a seven-day period beginning on the second Sunday of October.

\*Note: Funding for the National School Lunch Program and other food and nutrition assistance programs account for almost 60% of the annual budget of the U.S. Department of Agriculture.

## RESOURCE BOOKS

\*Teachers and Advanced Readers

Atking, Jeannine. *Girls Who Looked Under Rocks: The Lives of Six Pioneering Naturalists*. Dawn Publications, 2000 (1584690119) Econo-Clad Books, 2000. (0613353838)

Barbour, Karen. *Little Nino's Pizzeria*. Econo-Clad Books, 1999. (0833598821) Harcourt, 1990. (0152463216)

Bowman-Kruhm, Mary. *A Day in the Life of a Veterinarian*. The Rosen Publishing Group, Inc., 1999. (0823952967)

Burby, Liza N. *A Day in the Life of a Chef*. Rosen Publishing Group, Inc., 1998. (0823952983)

Burgan, Michael. *Veterinarian*. Capstone Books, 2000. (0736804935)

\*Duggleby, John. *Artist in Overalls: The Life of Grant Wood*. Chronicle Books, LLC, 1996. (0811812421)

Firefly Books. *I Want to Be a Cowboy*. Firefly Books Ltd., 1999. (1552094472) (1552094324)

Flanagan, Alice K. *Dr. Friedman Helps Animals*. Scholastic Library Publishing, 1999. (0516211382)

—. *Farmers*. Compass Point Books, 2002. (0756503051)

—. *Mr. Santizo's Tasty Treats*. Scholastic Library Publishing, 1998. (0516262963) (0516207717)

\*Fritz, Jean. *Leonardo's Horse*. Penguin Group (USA), 2001. (0399235760)

Hansen, Ann Larkin. *Farmers*. ABDO Publishing Co., 1998. (156239620X)

Harper, Jo. *Ollie Jolly, Rodeo Clown*. Graphic Arts Center Publishing Co., 2002. (1558685537) (1558685529)

High, Linda Oatman. *Barn Savers*. Boyd Mills Press, 1999. (1563974037)

—. *Winter Shoes for Shadow Horse*. Boyd Mills Press, 2001. (156397472X)

Jackson, Donna M. *The Bug Scientists*. Houghton Mifflin Company, 2002. (0618108688)

Jones, Lynda. *Great Black Heroes: Five Brilliant Scientists*. Scholastic, Inc., 2000. (0590480316)

Klingel, Cynthia Fitterer and Robert B. Noyed. *Farmers, Vol. 1*. The Child's World, Inc., 2001. (1567669409)

Lehn, Barbara. *What is a Scientist?* Millbrook Press, 1999. (0761312986) (1998, 0761312722) Econo-Clad Books, 1999. (061321031X)

\*Maze, Stephanie and Catherine O'Neill Grace. *I Want to Be a Chef*. Harcourt, 1999. (0152019367) (0152018646)

\*—. *I Want to Be a Veterinarian*. Harcourt, 1999. (0152019650) (1997, 0152012966) Econo-Clad Books, 1999. (0613178122)

Miller, Heather. *Chef*. Heinemann Library, 2003. (140343607X) Spanish — (140343395X)

—. *Cowboy*. Heinemann Library, 2003. (1403405883) (2002, 140340366X) Spanish — (2003, 1403403767) (1403405980)

—. *Veterinarian*. Heinemann Library, 2003. (1403436096) Spanish — (1403433968)

\*Pasternak, Ceel and Linda Thornburg. *Cool Careers for Girls with Animals*. Impact Publications VA, 1999. (1570231052)

Patrick, Jean L. *Cows, Cats, and Kids: A Veterinarian's Family at Work*. Boyd Mills Press, 2003. (1563971119)

Peterson, Cris. *Amazing Grazing*. Boyd Mills Press, 2002. (156397942X)

\*Presnall, Judith Janda. *Horse Therapists*. Gale Group, 2001. (0737706155)

Ready, Dee. *Farmers*. Capstone Press, 1998. (0560655119) Spanish — (1999, 1560657987)

—. *Veterinarians*. Capstone Press, 1997. (1560655143) Spanish — (1999, 1560658045)

Schaefer, Lola M. *We Need Farmers*. Capstone Press, 1999. (0736803904)

## Resources

—. *We Need Veterinarians*. Capstone Press, 1999. (0736803955)

Schomp, Virginia. *If You Were a Farmer*. Marshall Cavendish, Inc., 2000. (0761410015)

—. *If You Were a Veterinarian*. Marshall Cavendish, Inc., 1997. (0761406131)

Scott, Ann Herbert. *Cowboy Country*. Houghton Mifflin Company, 1996. (0395764823) (1993, 0395575613)

\*Talbert, Mark. *Holding the Reins: A Ride through Cowgirl Life*. HarperCollins Publishers, 2003. (060292563)

\*Thimmesch, Catherine. *The Sky's the Limit: Stories of Discovery by Women and Girls*. Houghton Mifflin Company, 2002. (0618076980)

### WEB SITES AND OTHER RESOURCES

Agricultural Careers Word Search — Kansas Agri Women, [www.ksagriwomen.org/education.html](http://www.ksagriwomen.org/education.html)

American Culinary Federation, Wichita Area Chapter, Dan L. Hypse, 331 W. 54th St. South, Wichita KS 67217, 316-677-1363

Career Resources — Agricultural Research Service, USDA, [www.ars.usda.gov/is/kids/scientists/scientistsframe2.htm](http://www.ars.usda.gov/is/kids/scientists/scientistsframe2.htm)

Careers in Agricultural Science — Florida Dept. of Agriculture and Consumer Services, [www.fl-ag.com/PlanetAg/careers.htm](http://www.fl-ag.com/PlanetAg/careers.htm)

Careers in Animal Science — American Society of Animal Science, [www.asas.org/career.htm](http://www.asas.org/career.htm)

Chef Apprenticeship Major, Johnson County Community College, Patrick Sweeney, Coordinator, 913-469-8500, ext. 3611, [web.jccc.net/academic/hospitality\\_mgmt/chef\\_apprenticeship/](http://web.jccc.net/academic/hospitality_mgmt/chef_apprenticeship/)

College of Veterinary Medicine, Kansas State University, [www.vet.ksu.edu](http://www.vet.ksu.edu)

Culinary Arts — North Central Kansas Technical College, [www.ncktc.tec.ks.us/Departments/culinary/default.htm](http://www.ncktc.tec.ks.us/Departments/culinary/default.htm)

A Farmer's Many Hats — Museum of Science and Industry, Chicago, [www.msichicago.org/exhibit/farm/video.html](http://www.msichicago.org/exhibit/farm/video.html)

Food Safety Careers — Center for Safety and Applied Nutrition, Food and Drug Administration, [www.cfsan.fda.gov/~dms/careers.html](http://www.cfsan.fda.gov/~dms/careers.html)

Greater Kansas City Chefs Association, American Culinary Federation, Jesse Vega, 913-339-3046, [www.kccchefs.org](http://www.kccchefs.org)

Kansas Veterinary Medical Association, [www.vet.ksu.edu/links/KVMA/](http://www.vet.ksu.edu/links/KVMA/)

Pork Racing — National Pork Board, [www.porkracing.com](http://www.porkracing.com)

Today's Veterinarian — American Veterinary Medicine Association, [www.avma.org/communications/brochures/veterinarian/veterinarian\\_faq.asp](http://www.avma.org/communications/brochures/veterinarian/veterinarian_faq.asp)

Veterinary Technology — Colby Community College, [colby.cc.org/www.vet/VetTech.html](http://colby.cc.org/www.vet/VetTech.html)

# Answering Future's Question

By Amy Langvardt

My grandpa rode a horse to school  
His dad finished the eighth grade.  
Great-granddad quit to work the farm  
Traded pen for spade.

My dad said he would not do that  
He finished lots of school.  
He goes to work  
He wears a suit  
And follows every rule.

I ride a bus,  
I read some words,  
Sometimes I like to tease.  
I like TV and my Game Boy  
I don't always say 'please.'

Although I cannot see it yet  
The future is close by  
Every second  
    minute  
    hour  
    (They say that time can fly.)

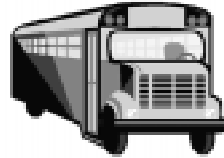
But what if the secret  
Is sitting right here  
At our desks and in our minds?  
    Our future is in the things we love  
    And even if we are blind  
    Our hearts contain the answer  
    Our brains tell us it's true:  
    "What can I be when I grow up?"  
The one who knows is you!

# Unit 6: Class Introduction

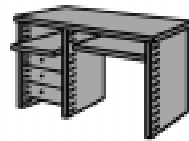
## Answering Future's Question

Directions: Match the word in the first column with the picture in the second column.

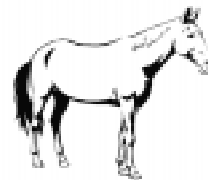
horse



school



bus



time



desk



# School Lunch Connection

**LEVEL:** Lower Elementary

**SUBJECTS:** Nutrition, Social Studies, Reading, Writing

**SKILLS:** Reading, writing, interviewing, responding to auditory stimuli

## BACKGROUND INFORMATION

The National School Lunch Program is a link between students and agricultural producers. The U.S. Department of Agriculture (USDA) administers many food and nutrition programs, including the school lunch program that serves more than 51 million meals in Kansas each school year. The USDA also provides services and programs for farmers and ranchers.

There are many people and processes involved in moving food products from farms and ranches to students' lunch trays. The work carried out by food service personnel in each school district demonstrates the variety and number of steps involved in the agriculture industry. The work begins long before the food products or ingredients arrive at the school. School menus must be carefully planned keeping nutrition requirements in mind, as well as students' food preferences. Math is used to estimate quantities of food needed and to change recipes to produce the correct quantities. Ingredients and food products are ordered from food companies and delivered to

the school, where boxes are unloaded and stored in freezers, refrigerators or dry storage areas. Everything has to be counted and double-checked for quality.

Food is prepared each school day. The food may be moved onto serving carts, loaded into a truck and delivered to other school buildings. Serving the food may include supervising students who help with the school lunch program or helping students make their food selections. After students have finished eating and returned to their classrooms, there are still many dishwashing and cleaning tasks to be performed. There are also inventory tasks, such as counting cartons of milk, and filing reports concerning how many students ate lunch that day.

The people working to provide nutritious, attractive meals for students have many different skills and interests. For example, the person who plans the menus and orders supplies may not be interested in learning to drive the truck that carries food to other school buildings. However, by working together, they deliver lunch to students.

## BRIEF DESCRIPTION

The students will interview a school foodservice professional and write a thank you note.

## OUTCOMES

The students will

- Recognize the importance of foodservice personnel to nutrition.
- Demonstrate responsibility for health.
- Discover agricultural careers in their school.

## ESTIMATED TEACHING TIME

60 minutes

**TEACHER PREPARATION****MATERIALS NEEDED**

- One copy of worksheet 6-1a, page 145 (for class interview)
- One copy of worksheet 6-1b, page 146, for each student

**PREPARE AHEAD**

Contact school food service administrator or an employee to arrange for a class interview.

**STEPS**

1. Choose students to greet and escort guest to the classroom, introduce guest to class, ask the interview questions, thank guest, and escort guest from classroom.
2. Have students role play and practice their assigned tasks.
3. Record answers during the interview on worksheet 6-1a.
4. Following the interview, assist each student in completing worksheet 6-1b — a thank you to the guest speaker.

**ADDITIONAL ACTIVITY**

Arrange for a class field trip to the central kitchen where food is prepared for the school lunch program. Worksheet 6-1b can also be used as a thank you to the food service employees at the central kitchen.

**DISCUSSION QUESTIONS**

1. Would you like a career in school food service? Why or why not?
2. Why is math important in working with the school lunch program? (Preparing enough meals for everyone who wants to eat, following recipes so the food tastes right, knowing the correct amount to serve each student, knowing when to re-order milk and other food supplies, etc.)
3. Which government agency is responsible for the school lunch program? (The U.S. Department of Agriculture)

# Interview a Food Service Professional

Date of Interview: \_\_\_\_\_

Name of Person Interviewed: \_\_\_\_\_

1. What is your job title? \_\_\_\_\_

2. Where do you work? \_\_\_\_\_

3. Please describe what you do each day. \_\_\_\_\_  
\_\_\_\_\_

4. What time do you start work each day? \_\_\_\_\_

5. Is a high school diploma or college degree required for your job? \_\_\_\_\_  
\_\_\_\_\_

6. Have you received additional training related to your job? \_\_\_\_\_  
\_\_\_\_\_

7. How many meals are prepared and served at school each day?

Breakfast \_\_\_\_\_ Lunch \_\_\_\_\_

8. How many cartons of milk are served each day? \_\_\_\_\_  
\_\_\_\_\_

9. Do students drink more chocolate milk or regular milk? \_\_\_\_\_

10. What is your favorite school lunch? \_\_\_\_\_  
\_\_\_\_\_

11. How many people work in our school's food service department? \_\_\_\_\_  
\_\_\_\_\_

12. What do you like most about your job? \_\_\_\_\_  
\_\_\_\_\_

# Thank You Note

\_\_\_\_\_ (Date)

Dear \_\_\_\_\_:

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Sincerely,

\_\_\_\_\_ (Name)

# Ag Careers Bingo

**LEVEL:** Lower Elementary

**SUBJECTS:** Social Studies, Reading

**SKILLS:** Recognizing letters, matching, following directions

## BACKGROUND INFORMATION

Farmers and ranchers are very efficient at producing food. Today, there are less than two million people (less than 1% of the population) living on farms and ranches in the United States.

In the United States, other people have the time and opportunity to pursue careers that match their skills and interests because they do not have to be directly involved in crop or livestock production in order to eat. Many of those people (one out of every five) will work in agriculture-related careers. Agriculture is the single largest employing industry in the U.S. There are more than 500 different job classifications for college graduates with animal science majors — and that's just one of many college degree programs.

Strong math, science and communication skills are needed in many agriculture-related careers. Researchers identify problems and find solutions, in addition to developing

new and improved products. Government employees analyze data, forecast trends and developments and write and administer regulations. Businesses employ people to provide services and products to consumers, and to develop packaging and advertising for those products. Education professionals persuade people to eat healthier diets, advise business owners about research results and teach skills necessary for future employment. Transportation industry employees move products to processors or manufacturers and consumers. A variety of people provide services and products to farmers and ranchers while others are directly involved in production agriculture.

As agricultural producers work to supply the world's growing population with food, clothing and shelter, new career opportunities are emerging. Today's students will have many choices when they enter the work force.

## BRIEF DESCRIPTION

The students will play bingo to learn about agricultural careers.

## OUTCOMES

The students will

- Discover agricultural careers.

## ESTIMATED TEACHING TIME

40 minutes

**TEACHER PREPARATION****MATERIALS NEEDED**

- Copies of worksheet 6-2a, page 149, one for each student
- One copy each of worksheets 6-2b and 6-2c, pages 150-151
- Container for drawing
- Optional — small items for bingo markers

**PREPARE AHEAD**

- Cut out the squares on worksheets 6-2b and 6-2c.

**ACTIVITY**

1. Hand out copies of worksheet 6-2a, page 149.
2. Ask students to write one letter of the alphabet in each box. Explain that any letter of the alphabet can be written in any square on the worksheet. (No letters are to be used more than once.)
3. Define the bingo — straight line across, down, diagonal or blackout (all squares marked).
4. Place all cut squares from worksheets 6-2b and 6-2c into container and mix well.
5. Draw one letter out at a time, calling out the letter and reading the career title and information. Students with a matching letter on their own worksheet will mark through that square.
6. Continue drawing letters until a student announces a bingo.

**ADDITIONAL ACTIVITY**

1. Make several copies of worksheets 6-2b and 6-2c.
2. Cut out the squares.
3. Have students sort through the squares and find letters that match the letters they wrote on their own worksheets.
4. Students may glue the matching squares on top of the letters on their own worksheets.

**DISCUSSION QUESTIONS**

1. Name an example of an agriculture-related career. (Includes all jobs related to food and other agriculture products as well as products and services provided to farmers and ranchers.)
2. If the school (or class) represented everyone who is working in the United States, how many people would be farmers or ranchers? (One out of every fifty; two out of every one hundred)
3. Why are there so many different agriculture careers? (everyone needs food to eat)
4. Would you rather work with animals or plants or people?
5. Who do you know that works in an agriculture-related career? (include school food service personnel)

# Agriculture Careers

# BINGO


# Career Cards

<p><b>A</b></p> <p><b>Auctioneer</b></p> <p>Sells livestock through a bidding process (auction).</p>	<p><b>B</b></p> <p><b>Beekeeper</b></p> <p>Manages honeybees for the production of honey.</p>	<p><b>C</b></p> <p><b>Chef</b></p> <p>Skilled cook who manages the kitchen of a restaurant.</p>	<p><b>D</b></p> <p><b>Dietician</b></p> <p>Helps people make the connection between food, nutrition and health.</p>
<p><b>E</b></p> <p><b>Entomologist</b></p> <p>Studies insects and solves insect-related problems.</p>	<p><b>F</b></p> <p><b>Farmer</b></p> <p>Grows crops or manages animals.</p>	<p><b>G</b></p> <p><b>Grocer</b></p> <p>Sells food, meat, produce, dairy products and household products.</p>	<p><b>H</b></p> <p><b>Horse Trainer</b></p> <p>Trains horses to be ridden or to perform.</p>
<p><b>I</b></p> <p><b>Insurance Agent</b></p> <p>Writes contracts to pay money when property is damaged by accidents or weather.</p>	<p><b>J</b></p> <p><b>Journalist</b></p> <p>Collects and presents news stories.</p>	<p><b>K</b></p> <p><b>Kennel Operator</b></p> <p>Manages a shelter for caring for cats or dogs.</p>	<p><b>L</b></p> <p><b>Loan Officer</b></p> <p>Assists people in borrowing money and paying it back.</p>
<p><b>M</b></p> <p><b>Meteorologist</b></p> <p>Studies weather and makes weather forecasts.</p>	<p><b>N</b></p> <p><b>Nutritionist</b></p> <p>Designs plans for the food people or animals will eat.</p>	<p><b>O</b></p> <p><b>Oologist</b></p> <p>Studies birds' eggs.</p>	<p><b>P</b></p> <p><b>Processor</b></p> <p>Manages actions that change ingredients into a specific product (i.e. milk into ice cream).</p>

## Career Cards

<p><b>Q</b> <b>Quality Control Technician</b> Monitors and evaluates to be sure certain standards are being met.</p>	<p><b>R</b> <b>Rancher</b> Owns or works on a farm where animals are raised.</p>	<p><b>S</b> <b>Scientist</b> Collects, analyzes and reports facts to help make decisions or solve problems.</p>	<p><b>T</b> <b>Truck Driver</b> Transports goods, including animals, by truck.</p>
<p><b>U</b> <b>University Professor</b> Teaches college students.</p>	<p><b>V</b> <b>Veterinarian</b> Diagnoses, treats and helps prevent diseases and disabilities in animals.</p>	<p><b>W</b> <b>Wildlife Biologist</b> Studies wildlife and relationships to their environments.</p>	<p><b>X</b> <b>X-ray Technician</b> Takes X-rays for diagnosing problems.</p>
	<p><b>Y</b> <b>Youth Program Director</b> Manages programs for young people, such as 4-H, FFA, camp activities, after-school programs, etc.</p>	<p><b>Z</b> <b>Zoologist</b> Studies animal life and researches problems.</p>	

## Unit 6: What I Know About Careers Within Agriculture

Directions: Fill in the blanks, using the words in the Word Bank.

1. \_\_\_\_\_ identify problems and find solutions.
2. Even though very few people are involved directly in production \_\_\_\_\_, one out of five people will work in an agriculture-related career.
3. School menus must be carefully planned, keeping \_\_\_\_\_ requirements and students' preferences in mind.
4. A \_\_\_\_\_ manages honeybees for the production of honey.
5. An \_\_\_\_\_ studies birds' eggs.
6. A rancher owns or works on a farm where \_\_\_\_\_ are raised.

### Word Bank

agriculture

animals

beekeeper

nutrition

oologist

Researchers