

KALENA BRUCE



# Faith, Family & Farming



*Stephens  
Photography ©*

Kalena, Billy & Willa Bruce

# Commercial Cow Operation









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# U pick – We pick

at our 2 ½ acre berry patch



**STRAWBERRIES**  
Chandler (May)



**BLACKBERRIES**  
Natchez (June-July)



**BLUEBERRIES**  
Blue Ray, Blue Crop, Blue Jay, Chandler (June)



**RASPBERRIES**  
Heritage, Latham (July-Fall)



# FALL FUN AT THE FARM



**Pumpkin Patch**



**Corn Maze**



**Hay Rides**







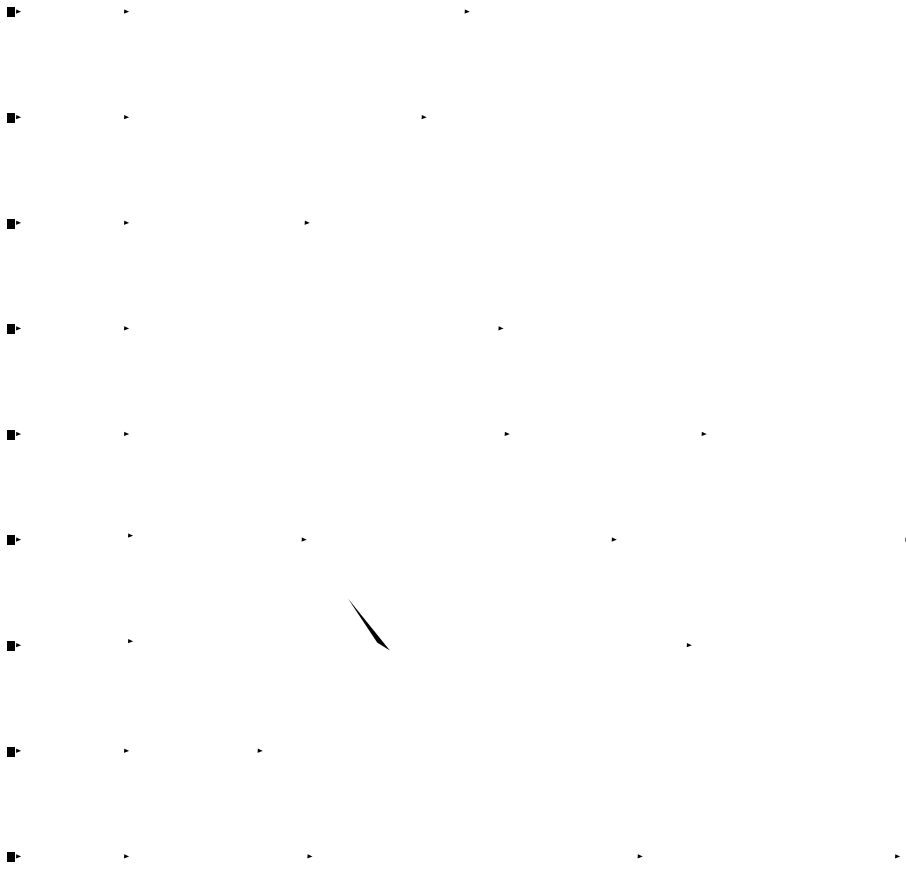
- Farm Tours
- Field Trips
- Agri–Bee
- Ag in the Classroom
- Ag Careers

# WHEN I GROW UP

## DISCOVER AG CAREERS

~M~ CURRICULUM FOR 6TH-8TH GRADERS ~M~







ESTIMATED TIME

55

minutes

GRADE LEVELS

Middle School  
(6-8)

CONTENT AREAS

Math, Economics

CAREER FOCUS AREA

## AGRIBUSINESS SYSTEMS

### Lesson Title

### *From Farm to Fork: Careers in the Agribusiness System*

#### Standards

- CCSS.MATH.7.EE.B.3. Solve multi-step, real-life, and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically.
- NSS-EC.5-8.14. Profit and the Entrepreneur.
- NCDA-7-9-3. Helping Pupils Understand Career Applications of Subject Matter.

#### Objectives

1. Students will explore the goal of an agribusiness and the four types of business resources.
2. Students will identify one career of interest in the Agribusiness Systems Career Focus Area and map out a plan to pursue that career.

#### Materials

- Access to a computer lab or laptops/tablets for students. One per student is ideal. Alternately, students could complete the activity in pairs.
- Copies of Career Plan handout (one per student)
- Copies of Company Ledger and Resource Roll Cards handouts (one per four students)
- Dice (one per four students)



ESTIMATED TIME

90  
minutes

GRADE LEVELS

Middle School  
(6-8)

CONTENT AREAS

Instruction,  
Community  
Development



CAREER FOCUS AREA

## AGRICULTURAL EDUCATION

### Lesson Title

### *Teaching the Future: Careers in Agricultural Education*

### Standards

- Economics Standard 15: Investment in factories, machinery, and new technology; and in the health, education, and training of people can raise future standards of living.
- CCSS.ELA-LITERACY.RH.6-8.7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

### Objectives

1. Students will understand that all careers and industries need trained, skilled workers, and this requires specialized training.
2. Students will indicate knowledge of where Agricultural Education instructors can work in order to share their skills and passion.

### Materials

- Access to a computer lab or laptops/tablets for students. One per student is ideal. Alternately, students could complete the activity in pairs.
- Paper and writing utensil (one per student)
- Candy, at least four varieties (Learning Station 2)

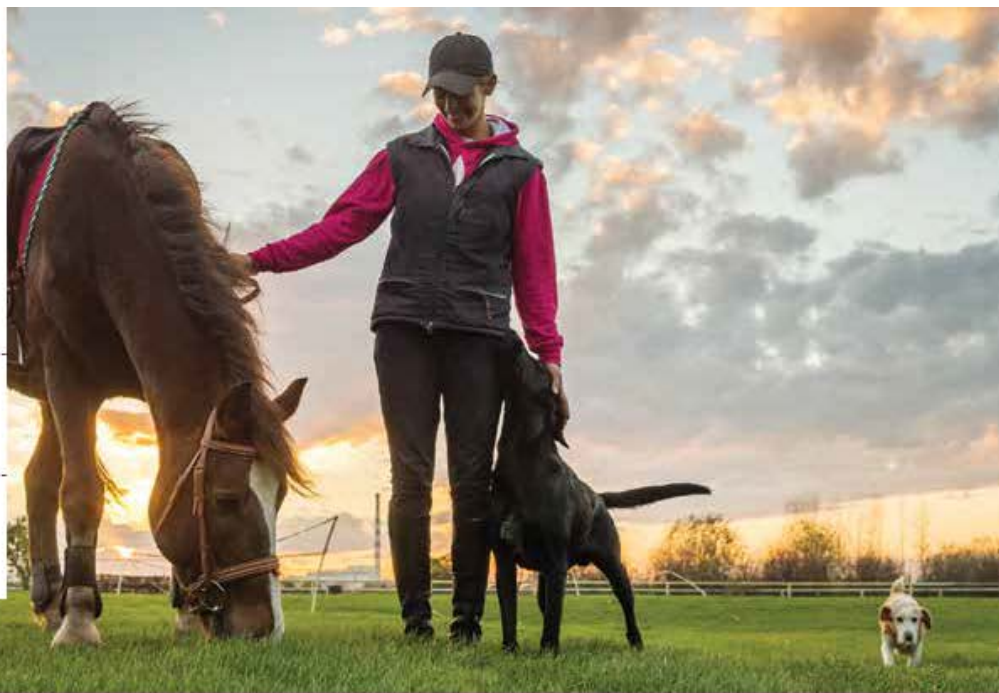


ESTIMATED TIME

**55**  
minutes

GRADE LEVELS  
Middle School  
(6-8)

CONTENT AREA S  
Life Science,  
Math



CAREER FOCUS AREA

## ANIMAL SYSTEMS

### Lesson Title

## *An Interconnected World*

### Standards

- MS-LS4-4: Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

### Objectives

1. Students will understand the scope of careers in the Animal Systems Career Focus Area and the skill set necessary for a career in this career focus area.
2. Students will use probability to consider animal traits and survivability.

### Materials

- Animal Systems handout (one per group)
- Dice (one per group)
- Paper and writing utensil (one per group)
- Access to the Internet on a computer or tablet
- *Optional:* Playdough or modeling clay





ESTIMATED TIME

**60-70**  
minutes

GRADE LEVELS

Middle School  
(6-8)

CONTENT AREAS

Science,  
Language Arts



CAREER FOCUS AREA

## BIOTECHNOLOGY SYSTEMS

### Lesson Title

### *Feeding the World with Biotechnology Careers*

### Standards

- NGSS: MS-ESS3-3. Earth and Human Activity: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- NGSS: MS-ESS3-4. Earth and Human Activity: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- NGSS: MS-ESS3-5. Earth and Human Activity: Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
- NCDA-7-9-3. Helping Pupils Understand Career Applications of Subject Matter.
- CCSS.ELA-LITERACY.SL.7.4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details and examples; use appropriate eye contact, adequate volume and clear pronunciation.





ESTIMATED TIME

**55**  
minutes

GRADE LEVELS  
Middle School  
(6-8)

CONTENT AREAS  
Science



CAREER FOCUS AREA

## ENVIRONMENTAL SERVICE SYSTEMS

### Lesson Title

### *Stewarding Our Natural Resources with Environmental Service Careers*

### Standards

- NGSS: MS-ESS3-3. Earth and Human Activity: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- NCDA-7-9-3. Helping Pupils Understand Career Applications of Subject Matter.
- CCSS.ELA-LITERACY.SL.7.4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.

### Objectives

1. Students will describe environmental management strategies utilized by farmers to minimize human impact on the environment.
2. Students will design a farm system that minimizes human impact on the environment.
3. Students will describe one career in the Environmental Service Systems Career Focus Area and how it relates to mitigating environmental impact.



ESTIMATED TIME

55  
minutes

GRADE LEVELS  
Middle School  
(6-8)

CONTENT AREAS  
Life Science,  
Economics



CAREER FOCUS AREA

## FOOD PRODUCTS & PROCESSING SYSTEMS

### Lesson Title

### *The Future of Food*

### Standards

- MS-LS3-1. Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial or neutral effects.
- LS3.A: Inheritance of Traits: Genes are located in the chromosomes of cells, with each chromosome pair containing two variants of each of many distinct genes. Each distinct gene chiefly controls the production of specific proteins, which in turn affects the traits of the individual. Changes (mutations) to genes can result in changes to proteins, which can affect the structures and functions of the organism and thereby change traits.
- NSS-EC-8.2 Effective decision-making requires comparing the additional cost of alternatives with the additional benefits. Most choices involve doing a little more or a little less of something; few choices are an all-or-nothing decision.

### Objectives

1. Students will identify future careers in the Food Systems Career Focus Area.
2. Students will examine the use of technology in food products and processing.





ESTIMATED TIME

**55**  
minutes

GRADE LEVELS  
Middle School  
(6-8)

CONTENT AREAS  
Science, Math



CAREER FOCUS AREA

## NATURAL RESOURCES SYSTEMS

### Lesson Title

### *Saving the Earth for Generations to Come*

### Standards

- MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- CCSS.MATH.CONTENT.6.RP.A.1 Understand the concept of a ratio, and use ratio language to describe a ratio relationship between two quantities.
- CCSS.MATH.CONTENT.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems; e.g., by reasoning about tables of equivalent ratios, tape diagrams, double-number line diagrams or equations.

### Objectives

1. Students will understand the definition and value of Earth's natural resources.
2. Students will use ratio and proportion skills to help understand limitations of natural resources in relation to human population.



ESTIMATED TIME

**55**  
minutes

GRADE LEVELS  
Middle School  
(6-8)

CONTENT AREAS  
Science



CAREER FOCUS AREA

## PLANT SYSTEMS

### Lesson Title

### *Careers in the Plant Systems Career Focus Area: Doctor, Plant Scientist or Both?*

### Standards

- NGSS: MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.
- NCDA-7-9-3. Helping pupils understand career applications of subject matter.

### Objectives

1. Students will design a biofortified crop that can cure a disease or nutrient deficiency.
2. Students will identify careers of interest in the Plant Systems Career Focus Area.

### Materials

- Access to a computer lab or laptops/tablets for students
- Small sheets of poster paper and markers

### Teacher Preparation

- Visit *AgExplorer* by the National FFA Organization ([www.agexplorer.com](http://www.agexplorer.com)) and preview the careers in the Plant Systems Career Focus Area.
- Review the lesson plan and determine if any modifications are required.



ESTIMATED TIME

**55**  
minutes

GRADE LEVELS

Middle School  
(6-8)

CONTENT AREAS

Science



CAREER FOCUS AREA

## POWER, STRUCTURAL, & TECHNICAL SYSTEMS

### Lesson Title

## *Designing Solutions: Careers in Power, Structure, and Technology*

### Standards

- NGSS: MS-ETS1-2 Engineering Design: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.
- NGSS: MS-ESS3-3 Earth and Human Activity: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- NCDA-7-9-3. Helping pupils understand career applications of subject matter.

### Objectives

1. Students will design an app to help farmers increase their efficiency while monitoring and minimizing their impact on the environment.
2. Students will evaluate solution designs to help farmers be more efficient.
3. Students will identify careers of interest in the Power, Structural, and Technical Systems Career Focus Area.





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Kalena Kenney-Bruce



America's Young Farmers & Ranchers