



# GEORGIA MIDDLE SCHOOL

Instructional Resources

CAREER, TECHNICAL, & AGRICULTURAL EDUCATION

## AGRICULTURE

**COURSE:** Agriculture Education

**UNIT 6:** Is Agriculture in Your Future?

### INTRODUCTION

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**Annotation:**

In this unit, students will explore agriculture careers, including eight major career clusters, factors to consider when choosing a career path, and educational requirements. Students will prepare a comprehensive report on a career of their choice.

**Grade(s):**

<input type="checkbox"/>	6 <sup>th</sup>
<input type="checkbox"/>	7 <sup>th</sup>
<input checked="" type="checkbox"/>	8 <sup>th</sup>

**Time:**

Five 50 minute class periods

**Author:**

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**Students with Disabilities:**

For students with disabilities, the instructor should refer to the student's IEP to be sure that the accommodations specified are being provided appropriately. Instructors should also familiarize themselves with the provisions of Behavior Intervention Plans that may be part of a student's IEP. Frequent consultation with a student's special education instructor will be beneficial in providing appropriate differentiation. Many students (both with and without disabilities) who struggle with reading may benefit from the use of text reading software or other technological aids to provide access to printed materials. Many of these are available at little or no cost on the internet.

## FOCUS STANDARDS

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### GPS Focus Standards:

**MSAGED8-19**: The student will identify various career clusters in the field of agriscience.

- a) Production Agriculture
- b) Horticulture
- c) Forestry
- d) Ag Marketing and Business Management
- e) Rural Recreation and Natural Resources
- f) Ag Mechanics
- g) Ag Processing
- h) Ag Sales and Service

### GPS Academic Standards:

**S8CS1** – Students will explore the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

**M8P1** – Students will solve problems (using appropriate technology).

**M8P4** – Students will make connections among mathematical ideas and to other disciplines.

## UNDERSTANDING & GOALS

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### Enduring Understandings:

- Students will learn that the agricultural education program is not confined to the classroom/laboratory but that FFA is an integral part of the program incorporated with a supervised agricultural experience project. Through agricultural education and FFA they will develop a work ethic that will ensure hard work and diligence.

### Essential Questions:

- What are some careers in agriculture that interest you?
- What is the outlook for agricultural careers in Georgia?
- What role does agriculture play in Georgia employment?
- What is the difference between a job, occupation, and career?
- What are some agricultural careers available in Georgia?

### Knowledge from this Unit:

Students will be able to:

- Identify the eight major career clusters in the field of agriscience.
- Discuss the difference between a job, occupation, and career.
- Identify educational requirements for various careers.
- Identify factors to consider when choosing a career.

## Skills from this Unit:

Students will:

- Research a career of their choice and write a report.
- Identify their strengths, weaknesses and interests in career areas and specific careers.

## ASSESSMENTS

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### Assessment Method Type:

- Pre-test
- Objective assessment - multiple-choice, true- false, etc.
  - Quizzes/Tests
  - Unit test
- Group project
- Individual project
- Self-assessment - May include practice quizzes, games, simulations, checklists, etc.
  - Self-check rubrics
  - Self-check during writing/planning process
  - Journal reflections on concepts, personal experiences and impact on one's life
  - Reflect on evaluations of work from teachers, business partners, and competition judges
  - Academic prompts
  - Practice quizzes/tests
- Subjective assessment/Informal observations
  - Essay tests
  - Observe students working with partners
  - Observe students role playing
- Peer-assessment
  - Peer editing and commentary of products/projects/presentations using rubrics
  - Peer editing and/or critiquing
- Dialogue and Discussion
  - Student/teacher conferences
  - Partner and small group discussions
  - Whole group discussions
  - Interaction with/feedback from community members/speakers and business partners
- Constructed Responses
  - Chart good reading/writing/listening/speaking habits
  - Application of skills to real-life situations/scenarios
- Post-test

### Assessment(s) Description/Directions:

1. Students will write a paragraph describing a career. Students will choose a career that interest them and write a paragraph describing that career. Use the attachment **Career Opportunities in Agriculture** and/or **Agriculture Careers in Georgia** for a list of careers in agriculture.
2. Answer questions about factors to consider when choosing a career. Use the attachment **Compare Careers Jobs and Work PowerPoint**. Using the power point have the students individually or in pairs answer the 10 questions on the "factors to consider" slide for each of the careers they identified.
3. Worksheet **Educational Requirements for Agricultural Jobs**. Complete worksheet giving the education requirement for specific jobs.

4. Identify and list three careers under each of the eight agricultural career clusters. Use the attachment **Eight Major Agriculture Careers PowerPoint** and **Worksheet for Eight Major Agriculture Careers**. Using the internet list three careers that from each of the eight major agricultural career clusters.
  
5. Math Activity: Use the attachment **Math Activity Comparing Salary and Wages**.

**Attachments for Assessment(s):**

- Agriculture Careers in Georgia**
- Bingo Game on Agriculture Careers**
- Career Opportunities in Agriculture**
- Compare a Careers, Jobs, and Work PowerPoint**
- Education Requirements for Agricultural Jobs**
- Eight Major Agriculture Careers PowerPoint**
- Worksheet for Eight Major Agriculture Careers**
- Help Wanted**
- Math Activity Comparing Salary and Wages**

## LESSON PLANS

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• **INTRODUCTION**

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1. Identify the Standards. Standards should be posted in the classroom for each lesson.
  - MSAGED8-19. The students will identify various career clusters in the field of agriscience.**
  
2. Review Essential Question(s). Post Essential Questions in the classroom.
  - What are some careers in agriculture that interest you?
  
3. Identify and review the unit vocabulary. Terms may be posted on word wall.

Horticulture	Forestry	Production Agriculture
Ag Mechanics	Ag Marketing and Business Management	Ag Processing
Rural Recreation and Natural Resources	Ag Sales and Service	Communicators
Educators	Research Scientists	Service Jobs

## • LESSON 1

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1. Class Starter: Play Career Bingo with the students so they will become familiar with job titles. Use the attachment **AG 8-6 Bingo Game on Agriculture Careers**.

2. Discuss with the class the following about careers:

Agriculture is America's largest employer: nearly 23 million people work in agriculture and related fields. Only 2% of these people are actually involved in farming. Agriculture in Georgia offers numerous job opportunities.

There are over 300 career areas available within the agriculture industry. Many of these jobs are available for people who do not come from a farm. One out of five jobs is related to agriculture. All of these jobs are important and must be done for the agriculture industry to feed and clothe the world.

The education required for these jobs varies. Some jobs require unskilled workers; others require skills gained in a high school education or on-the-job training. Still other jobs require technical or professional skills and college education.

3. Explain the major career areas in the agriculture industry.

A. Science and Research—Scientists and researchers are people that research crops and new ways to grow them. They work in labs, test fields, large corporations, and universities.

B. Production—Producers are people who are responsible for planting, growing, and harvesting food and other agriculture products. These are the farmers and ranchers.

C. Communication and Education—Communicators and educators are people who deal with the public. They are teachers, advertising specialists, salespeople, and journalists responsible for informing others about all aspects of agriculture.

D. Business and Industry—They are responsible for purchasing, processing, and marketing the final product. They are also responsible for selling that product around the world.

**Middle** People with jobs in business and industry may provide the inputs to producers. They provide the products and services producers need.

E. Services—Services jobs assist farmers and businesses as they produce food and other products. These jobs include mechanics, electricians, inspectors, lawyers, and transporters.

4. Individual or Group Learning

Using the list of career opportunities in the attachment **Career Opportunities in Agriculture** or **Agriculture Careers in Georgia** have the students individually or in pairs identify a career that they are interested in and write a paragraph describing the career.

5. Incorporate Math

1. Nearly 23 million people work in agriculture and related fields. Only 2% of these people are actually involved in farming. How many people are in farming?

2. One out of five jobs is related to agriculture. If there are 250 jobs available in your county how many would be related to agriculture?

3. Write 2% as a decimal and a fraction.

## • LESSON 2

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1. Identify the Standards. Standards should be posted in the classroom for each lesson.

**MSAGED6-19** The students will identify various career clusters in the field of agriscience.

2. Review Essential Question(s). Post Essential Questions in the classroom.

- What items and products does the word "agriculture" encompass?
- What is the difference between a job, an occupation, and a career?

3. Identify and review the unit vocabulary. Terms may be posted on word wall.

Horticulture	Forestry	Production Agriculture
Ag Mechanics	Ag Marketing and Business Management	Ag Processing
Rural Recreation and Natural Resources	Ag Sales and Service	Communicators
Educators	Research Scientists	Service Jobs

4. Assessment Activity

- Answer questions about factors to consider when choosing a career.

5. Class Starter

- Using the career that the students choose in lesson one from the list of career opportunities in Agriculture discuss students' selections in class, focusing on the career, the job, and the occupation.
  - A career is defined as an individual's profession or calling
  - An occupation is defined as what a person does to make a living.
  - A job is defined as the specific task a person does.
  - Example: An agricultural education teacher's career is education. Being a teacher is an occupation, and being an agriculture teacher at a particular school is a job. Select other well-known individuals in the community, and have students list the career, occupation and job of each person.

6. Individual or Group Learning

Use the attachment **Compare Careers Jobs and Work PowerPoint** to discuss careers, jobs, and occupations with the class. Also discuss what factors influence a person when they are choosing a career and the steps to follow when choosing a career. Using the power point have the students individually or in pairs answer the 10 questions on the "factors to consider" slide for each of the careers they identified.

7. Incorporate Math

- 1 in 5 five jobs in America are agriculture-related. What percent of jobs in America are agriculture-related?
- If the base salary for an agriculture career is \$40,000 per year, what would the monthly salary be?
- Nationally, more than 20% of America's work force is employed in occupations related to agriculture. Write this as a ratio.

• **LESSON 3**

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1. Identify the Standards. Standards should be posted in the classroom for each lesson.

**MSAGED6-19** The students will identify various career clusters in the field of agriscience.

2. Review Essential Question(s). Post Essential Questions in the classroom.

- What role does agriculture play in Georgia employment?

3. Identify and review the unit vocabulary. Terms may be posted on word wall.

Horticulture	Forestry	Production Agriculture
Ag Mechanics	Ag Marketing and Business Management	Ag Processing
Rural Recreation and Natural Resources	Ag Sales and Service	Communicators
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4. Assessment Activity

- Worksheet **Education Requirements for Agricultural jobs**

5. Class Starter

- Divide the students into groups of four. Distribute copies of local Yellow Pages to the class. Have each group list all the jobs related to agriculture that they can find. Have each group share their list and discuss the various levels of education that is needed for the careers they choose. (*This lesson examines several occupations in agriculture and determines the education required to work in each.*) Job opportunities in agriculture require various levels of education. Discuss the educational training that is needed for careers related to agriculture.
  - Marketing, merchandising and sales: high school vocational courses, private career schools, community college, university
  - Science and engineering: college education; technicians can qualify with a community college degree
  - Managers and financial specialists: high school diploma, on-the-job training, career school, community college
  - Social service professionals: 2-year or 4-year college, depending on job description
  - Education and communication specialist: community college and college, on-the-job training, private career school
  - Agricultural production specialist: high school vocational courses, high school diploma, on-the-job training, private career schools, community colleges, university
  - Agriculture teacher 4-year degree
  - Farm helper: on-the-job training
  - Farm loan officer: high school diploma
  - Park ranger: on-the-job-training
  - Veterinarian: doctoral degree

6. Individual or Group Learning
  - Using the list of jobs on the **Agriculture Careers in Georgia** determine the education requirement for specific jobs. Have the students complete the worksheet **Educational Requirements for Agricultural Jobs** by checking the block of the education level required for each job. Agricultural magazines could be used for this information or the internet would be a great resource.
7. Incorporate Math – Production Agriculture
  - A swine farmer owns a feed out lot. He buys pigs that way between 20 and 30 pounds. He wants his pigs to average 250 pounds at market. If he has 5 months (150 days) to grow his pigs how much must each pig gain per day?
  - Use the answer from the previous question. If each pig must gain that much weight per day and the ratio is 3 pounds of feed to 1 pound of body weight, approximately how much feed will each pig require?
  - Feed costs \$25 per 100 pounds. How much will it cost for the farmer to feed out 100 pigs?
  - The gestation period for swine is 114 days. How many months, weeks, and days is this? (Hint: 30 days per month)

• **LESSON 4**

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1. Identify the Standards. Standards should be posted in the classroom for each lesson.

**MSAGED6-19 The students will identify various career clusters in the field of agriscience.**

2. Review Essential Question(s). Post Essential Questions in the classroom.
  - What are some agricultural careers available in Georgia?

3. Identify and review the unit vocabulary. Terms may be posted on word wall.

Horticulture	Forestry	Production Agriculture
Ag Mechanics	Ag Marketing and Business Management	Ag Processing
Rural Recreation and Natural Resources	Ag Sales and Service	Communicators
Educators	Research Scientists	Service Jobs

4. Assessment Activity
  - Identify and list three careers under each of the eight agricultural career clusters.

5. Class Starter

- Show the PowerPoint attachment **Eight Major Agriculture Careers PowerPoint**. Discuss each career with the class and let students share their knowledge of the careers. Have students complete the **Worksheet for Eight Major Agriculture Careers** while watching the PowerPoint.
- Eight Major Career Clusters
  - Production Agriculture
  - Horticulture
  - Forestry
  - Ag Marketing and Business Management
  - Rural Recreation and Natural Resources
  - Ag Mechanics
  - Ag Processing
  - Ag Sales and Service

6. Individual or Group Learning

- Identify Using the internet have students identify and list three careers that fit under each of the eight career clusters. Sites that can be used:
  - [ffa.org/index.cfm?method=c\\_job.careersearch](http://ffa.org/index.cfm?method=c_job.careersearch)
  - <http://www.kids.gov/>

7. Incorporate Math

- Suppose you choose a career from the career cluster "Agriculture Sales and Service." Your job is to be a salesman for a chemical company. Your salary is based on a commission of how much you sell.
  - The first month you sold \$75,000.00 of chemicals. If you receive 5% commission what your pay be for the first month? \$3750.00
  - To boost sales the company you work for will give 10% commission for all sales over \$75,000.00 in one month. If you sell \$80,000.00 of chemicals in one month how much would you make for that month? \$3750.00 + \$500.00 = \$4250.00

• **LESSON 5**

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1. Identify the Standards. Standards should be posted in the classroom for each lesson.

**MSAGED6-19** The students will identify various career clusters in the field of agriscience.

2. Review Essential Question(s). Post Essential Questions in the classroom.

- What role does agriculture play in Georgia employment?

3. Identify and review the unit vocabulary. Terms may be posted on word wall.

Horticulture	Forestry	Production Agriculture
Ag Mechanics	Ag Marketing and Business Management	Ag Processing
Rural Recreation and Natural Resources	Ag Sales and Service	Communicators
Educators	Research Scientists	Service Jobs

4. Assessment Activity
  - Choose a career and prepare a report on that career. Use the attachment **Career Opportunities in Agriculture** and/or **Ag Careers in Georgia** for a list of careers in agriculture.
5. Class Starter
  - In groups of four have the students list their parent's job. Next have them identify the career cluster the jobs are in. Let the groups share with the class the jobs and career clusters.
6. Individual or Group Learning
  - Using the list from lesson 4 where the students' listed three careers under each of the eight career clusters have them choose a career and prepare a report on that career.
  - The report should include:
    - Description of the work
    - Employment outlook in the field
    - Wage/ salary scale
    - Education or training required
    - Location of educational facilities
    - Related jobs in the area.
7. Incorporate Math
  - Have the students complete the worksheet attachment **Math Activity Comparing Salary and Wages**.

**Attachments for Learning Experiences:**

**Agriculture Careers in Georgia**

**Bingo Game on Ag Careers**

**Career Opportunities in Agriculture**

**Compare a Careers, Jobs, and Work PowerPoint**

**Education Requirements for Agricultural Jobs**

**Eight Major Agriculture Careers**

**Worksheet for Eight Major Ag Careers**

**Help Wanted**

**Math Activity Comparing Salary and Wages**

**Notes & Reflections:**

# CULMINATING PERFORMANCE TASK

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**Culminating Unit Performance Task Title:** Career Report

## **Culminating Unit Performance Task Description/Directions/Differentiated Instruction:**

Students will choose a career and prepare a report on that career.  
The report should include:

- A description of the work
- The employment outlook in the field
- The wage/ salary scale
- The education or training required
- The location of educational facilities
- Related jobs in the area

## **Attachments for Culminating Performance Task:**

# UNIT RESOURCES

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## **Web Resources:**

[www.ffa.org](http://www.ffa.org)

## **Attachment(s):**

## **Materials & Equipment:**

- Poster/large paper
- Magazines
- Markers

## **What 21st Century Technology was used in this unit?**

<input checked="" type="checkbox"/>	Slide Show Software	<input type="checkbox"/>	Graphing Software	<input type="checkbox"/>	Audio File(s)
<input type="checkbox"/>	Interactive Whiteboard	<input checked="" type="checkbox"/>	Calculator	<input checked="" type="checkbox"/>	Graphic Organizer
<input type="checkbox"/>	Student Response System	<input type="checkbox"/>	Desktop Publishing	<input type="checkbox"/>	Image File(s)
<input type="checkbox"/>	Web Design Software	<input type="checkbox"/>	Blog	<input type="checkbox"/>	Video
<input type="checkbox"/>	Animation Software	<input type="checkbox"/>	Wiki	<input type="checkbox"/>	Electronic Game or Puzzle Maker
<input type="checkbox"/>	Email	<input checked="" type="checkbox"/>	Website		