



Activity 1.2.2 Agriscience Careers and Me

Purpose

Science and technology are instrumental for producing and processing of food, fiber, and renewable natural resources, and are the basis for many careers in agriculture. Studying agriscience careers may help you identify an agriscience career right for you and guide you to the appropriate training and experience necessary for a successful and rewarding career.

An estimated 300 different careers await you if you chose a profession in the field of agriculture. There is a need for approximately 400,000 people to fill positions in agriscience careers each year. Of those positions, there are typically only 100,000 filled by people who are educated and trained in agriscience. The remaining openings go to people who are trained in fields outside of agriculture. Openings in agriscience include areas such as mechanics, sales, genetic engineering, nutrition, and extension.

Materials

Per student:

Computer with Internet access

Pencil

Agriscience Notebook

In this activity, you will explore the career opportunities awaiting you in the fields of agriculture and natural resources. First, you will need to access the www.careerwise.mnscu.edu website.

Part One – Careers in Agriculture

1. Go to www.careerwise.mnscu.edu.
2. Select **Explore Careers** at the top left of the screen.
3. Under **Research Careers**, select **Career Clusters and Pathways**.
4. Click on **Career Clusters** and then select **Agriculture, Food, and Natural Resources** from the choices in the center.
5. Read the introductory paragraph and select **Pathways in this cluster**.
6. Within the AFNR cluster, you will see seven career pathways. Take some time to explore each pathway by clicking on the pathway. On *Activity 1.2.2 Student Worksheet*, record the following information for each pathway in Table 1.
 - Brief overview
 - Interesting careers
 - Education requirements

Part Two – Finding Your Interests

1. At the top menu, select **Assess Yourself**.
2. Next select **Take an Assessment**.
3. Select **Interest Assessment**.
4. Read the information about the Interest Assessment and then select **Get Started**.

5. Complete the Interest Assessment. When finished, record the Interest Profile Graph in Table 2.
6. Review the descriptions for your top three letters, and record how each of those letters describes you.
7. Select **Next** and enter the education level that interests you at this time.
8. Select **View careers and majors** and review the careers listed.
9. Find two to three careers that interest you and record in the first row of Table 3.
10. Select each career you have chosen and review the *Quick Facts* and links associated with the career. Note the items about the career that interest you in the second row of Table 3.
11. Select the **Majors** tab at the top of the screen. Review the Majors listed and find two or three that interest you and record in the first row of Table 4.
12. Click on each major you have chosen and review the links associated with the major. Record the items about the major that interest you in the second row of Table 4.
13. Insert a completed copy of *Activity 1.2.2 Student Worksheet* into clear plastic sheets in *Section I Careers* of your *Career Portfolio*.

Conclusion

1. Which of the pathways reviewed in Part One interests you the most?

Animal systems because i like learning about animal and human anatomy.

2. How did your interests relate to the careers and majors you selected?

Most of my majors and careers had to do with science and anatomy which really interest me.

3. List three characteristics that make the careers you chose appealing to you?
4. You get to help others , Science, Biology

Activity 1.2.2 Student Worksheet

Table 1. Agriculture Pathways

Pathways	Overview	Careers	Education Requirements
Agribusiness	The agribusiness systems pathway includes occupations involved in the coordination of all activities that contribute to the production, processing, marketing, distribution, financing and development of agricultural commodities, plant and animal products, and other natural resources.	Agricultural and Food Science Technicians Farmers and Ranchers	Advance Degree +4
Animal Systems	The animal systems pathway includes occupations related to the raising and caring of animals and developing more efficient ways of producing and processing meat, poultry, eggs and dairy products. Workers study genetics, nutrition, reproduction, growth and care of domesticated farm animals. Includes workers who provide medical service to farm and nonfarm animals.	Animal Breeders Veterinary Technologists and Technicians	1-3 years
Environmental Service Systems	The environmental service systems pathway includes occupations involved in water and air pollution control, recycling, waste disposal and public health issues. Work includes hazardous-waste management, research, and quality control	Environmental Engineering Technicians Garbage and Recyclable Material Collectors	Bachelors degree 4 years
Food Products and Processing Systems	The food products and processing systems pathway includes occupations involved in bulk food production, the discovery of new food sources, the analysis of food content, and the development of ways to process, preserve, package or store food according to consumer needs, and. Includes those who monitor compliance with industry and government regulations.	Food Scientists Validation Engineers	Bachelors degree 4 years
Natural Resources Systems	The natural resources systems pathway includes occupations that develop, use, maintain, manage, and analyze natural resources. Includes catching and trapping various types of marine life. Work might relate to	Conservation Scientists Foresters	Bachelors degree 4 years

	recreation, wildlife, conservation, mining, logging, or oil drilling		
Plant Systems Pathway	The plant systems pathway includes occupations related to growing food, feed, and fiber crops, and the study of plants and their growth to help producers meet consumer demand while conserving natural resources and maintaining the environment. Work might include nutritional analysis or genetic engineering.	conservation scientist soil and plat scientist	Bachelors degree 4 years
Power, Structural, and Technical Systems Pathway	Power, structural, and technical systems workers apply knowledge of engineering, hydraulics, pneumatics, electronics, power, structures, and controls to the field of agriculture. They design agricultural structures as well as machinery and equipment.	agriculture engineers Machinist	Bachelors degree 4 years

Table 2. Interest Profile Results



R = Realistic	Total:	22
I = Investigative	Total:	31
A = Artistic	Total:	20
S = Social	Total:	29
E = Enterprising	Total:	18
C = Conventional	Total:	11

Top Letter:	I
Second Letter:	S
Third Letter:	R

Table 3. My Career Options

<p>Pediatricians</p> <p>Collect medical information from patients, family members, or other medical professionals. Conduct research to increase knowledge about medical issues. Prepare official health documents or records. Record patient medical histories.</p>	<p>Nurse Practitioners</p> <p>Apply bandages, dressings, or splints. Immunize patients. Refer patients to other healthcare practitioners or health resources. Treat acute illnesses, infections, or injuries.</p>	<p>Sociologists</p> <p>Interpret research or operational data. Collect information from people through observation, interviews, or surveys. Conduct research on social issues. Instruct college students in social sciences or humanities disciplines.</p>

Table 4. My College Major Interests

<p>Biomedical/Medical Engineering</p> <p>Biomedical/medical engineering programs prepare students to design, develop, and evaluate biomedical and health systems and products.</p>	<p>Biotechnology</p> <p>Biotechnology programs study the application of the biological sciences, biochemistry, and genetics to the preparation of new and enhanced agricultural, environmental, clinical, and industrial products</p>	<p>Chemical Engineering</p> <p>Chemical engineering programs prepare students to design, develop, and evaluate systems that use chemical processes.</p>