

 **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.minnstate.edu website.

Part One – Careers in Agriculture

1. Go to www.careerwise.minnstate.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

Conclusion

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

The pathway that interests me the most is definitely Animal Sciences, because I love interacting with and caring for animals, and that's what that pathway is all about!

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

I'm interested in animals and how to care for the environment, which is what a majority of these careers are all about. I also really love the outdoors and learning more in depth about it and how the ecosystem/environment functions, which is what these careers teach.

3. List three characteristics that make the careers you chose appealing to you.

Three characteristics that make the careers appealing to me are for one, that you have the ability to get to work with animals. Another one is the way that you can work hands on both outdoors and indoors. Lastly, one more characteristic is that you are able to constantly be learning in an ever-growing career field.

Activity 1.2.2 Student Worksheet

Table 1. Agriculture Pathways

Pathways	Overview	Careers	Education Requirements
Agribusiness Systems	Occupations that are 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.	Farm labor contractors, secretaries and administrative assistants, farm and home management advisors, wholesale and manufacturing sales representatives, etc.	Anywhere from a high school diploma or GED to an advanced 4+ year degree will work. The higher you go with your education though, the more specific and advanced the careers get.
Animal Systems	Occupations that are related to the raising and caring of animals and developing more efficient ways to producing and processing meat, poultry, eggs, and dairy products. Workers in these occupations study genetics, nutrition, reproduction, and growth and care of domesticated farm animals.	Nonfarm animal caretakers, veterinary assistants, animal trainers, animal breeders, animal scientists, biochemists and biophysicists, etc.	Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you pursue.
Environmental Service Systems	Occupations that are involved in water and air pollution control, recycling, and waste disposal and public health issues. Work also includes hazardous-waste management, research, and quality control	Garbage and recyclable material collectors, hazardous materials removal workers, compliance officers, environmental engineers, environmental scientists, etc.	Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you pursue. A lower education will get you to be something like a garbage and recyclable material collector while a higher one will get you to be something such as an environmental scientist.
Food Products and Processing Systems	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 matchmakers, food cooking machine operators, slaughterers and meat packers, agricultural and food service technicians, food scientists, validation engineers, etc.	Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you pursue.

<p>Natural Resources Systems</p>	<p>Occupations that develop, use, maintain, manage, and analyze natural resources. Includes catching and trapping various types of marine life. Work might relate to recreation, wildlife, conservation, mining, logging, or oil drilling.</p>	<p>Hunters and trappers, mine shuttle car operators, logging equipment operators, commercial divers, fish and game wardens, conservation scientists, geoscientists, hydrologists, etc.</p>	<p>Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you pursue.</p>
<p>Plant Systems</p>	<p>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.</p>	<p>Landscaping and groundskeeping, farmworkers and laborers, conservation scientists, soil and plant scientists.</p>	<p>Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you will have the opportunity to pursue.</p>
<p>Power, Structural and Technical Systems</p>	<p>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.</p>	<p>Agricultural equipment operations, farm equipment mechanics, agricultural engineers.</p>	<p>Anywhere from a high school diploma or GED to an advanced 4+ year degree, but it will largely effect the type of career you pursue. For this career path specifically there are not many large careers you can get with less than a 1 year degree.</p>