

## FROM THE GROUND UP FAMILY ACTIVITY GUIDE: CAREER FOCUS

“What do you want to be when you grow up?” Your family must have had that conversation dozens of times. Some people know what their career interests are when they’re very young. Others take longer to find a good fit. But everybody has a bank of skills and interests that can guide them as they make career choices. These activities will help you evaluate and consider a career in soil science.

### DID YOU KNOW?

According to the U.S. Department of Agriculture, well-trained soil scientists are in high demand in both government agencies and private firms. That’s because soil is much more important than you thought it was when you first started playing in the dirt. Soil is crucial for food production, but it also distributes and stores water and nutrients, breaks down waste, and supports life beneath its surface. Soil is its own ecosystem, but it also makes all others possible.

Because soil is so important, there are many careers linked to it. In just a few examples, soil scientists:

- Work in labs to study the characteristics of many different types of soils
- Use high-tech equipment to map where different types of soil occur in a specific geographic location
- Work with growers and others in the agriculture industry to boost soil’s nutrients for better crops
- Work with city and county planning departments to make sure building construction is compatible with the type of soil in an area
- Teach upcoming scientists at universities

With a growing population and the ongoing need for healthy soil and water, our world will always need these professionals. In fact, job growth in the field is expected to increase up to 13 percent through the year 2020.

All of these career options in soil science do have requirements in common. Later, you will be asked to take a survey of your skills and interests to see if soil science is the career for you!

## FAMILY CHALLENGE

How much do you and your family already know about careers in soil science? Try to guess the answers to these questions, based on Internet research or your own knowledge. You can compete against each other or work as a team. Give yourself one point for every correct answer!

- What is the goal of a soil scientist?
  - to help produce sufficient and affordable food
  - to help construct safe homes and businesses
  - to locate and map different types of soils
  - all of the above
- Which of the following classes might be most useful in pursuing a career in soil science?
  - chemistry
  - history
  - psychology
  - keyboarding
- What do you think the median salary is for a soil scientist?
  - \$43,260
  - \$51,000
  - \$58,940
  - \$70,250

## ACTIVITY 1: SURVEYING SKILLS AND INTERESTS

Every industry has both educational and skill-based requirements for working in the field. And many of them overlap to encompass many types of careers. That means that the classes you take in middle and high school today will serve you well, no matter what career you choose. But the field of soil science has some very specific requirements, including some you might not realize!

But first, you need to know what interests you and what skills you bring to a future career. Working with your family, first consider the words and phrases below. Then, circle or make a note of those that define your **interests**.

math	geography	geology	computer science	communication
physics	chemistry	agriculture	natural science	biology

Now, circle or make a note of the following words or phrases that define your **skills**.

problem-solving	investigation	observation	critical thinking	analysis
initiative	communication	adaptability	attention to detail	research

Finally, circle or make a note of the following words or phrases that help define your **ideal working environment**.

exposure to outdoors	independence	collaboration	hands-on work	laboratory work
communicating scientific information to the public	freedom to make decisions	real-world work		

All of these words and phrases describe what is required or desired in the field of soil science. How many of them did you circle? Which skills, interests, and desires were you already aware that you had? Did other family members see skills and interests you have, but were not aware of? Look at the total list of the words you chose and rank them in order of "most skilled," "most interested," and "most desired."

Do you think soil science is a career you want to further explore?

Family Challenge  
Answer Key  
1. D 2. A 3. C

## **ACTIVITY 2:** **DIGGING DEEPER**

Below is a list of specific careers in soil science. Choose two that seem interesting to you and that you'd like to explore further. Use the Internet, library, or other sources to find out as much as you can about those positions – such as educational requirements, growth potential, working conditions, and average pay.

Soil scientist/mapping and interpretation

Consulting soil science/agriculture

Soil scientist: research and/or teaching

Agronomist

Plant scientist

Agriculture Extension Agent

Environmental Engineer

Agricultural inspector

Food science technician

Soil and water conservationist

Farmer

Landscaper

Hydrologist

Once your research is complete, work with your family to chart a path to this career. Your “career path” should include the classes you will need to take in high school and college, any experiences outside of school connected to soil science, and any mentors that would help you to reach your goal. As a family, decide how everybody can help contribute to your career path.

## **ACTIVITY 3:** **CAREER COMMUNICATION**

You might not think that soil scientists need to be experts at oral and written communication, but communication is a big part of their jobs. They often attend conferences, where they are called upon to communicate the results of their research to their peers. They work with farmers and others in agriculture to communicate complex data that has a real-world effect on crop yields. And they explain scientific information for government employees and members of the public as cities plan for future growth.

Choose one of the soil science careers that you've already explored. As a family, imagine you are explaining this career to other family members or friends. Which details do you think are most important to include? Which details might be difficult for the average person to understand? How would you explain them in that case?

Now, plan a presentation about this career for a FFA group, a school science club, or your school's Career Day. Your presentation should include a three-minute description of the importance of soil scientists to our world, a graphic that communicates information about the field, and a statement about why you might be interested in a career in soil science.

If possible, include a real-world soil scientist as part of your presentation. You can get referrals from your county's agricultural extension office or a local college or university. Following your presentation, introduce the scientist and ask him or her to answer any questions your audience has about soil-science careers.

Practice with your family and incorporate their suggestions into the finished presentation.

### **ADDITIONAL RESOURCES**

Nutrients for Life Foundation

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

Soil Science Society of America

<https://www.soils.org/>