

Lesson – Exploring a STEM Career



Lesson Overview

In this lesson, participants will be introduced to the STEM career pathway. Participants will gain greater knowledge of what it takes to become employed in related food science and technology occupations.

Lesson Objectives

After completing this lesson, participants will be able to:

- Identify the tasks that are typical for food science and technology occupations
- Research and identify the qualifications, including the education and training that is required to become an employee in a variety of related food science and technology occupations
- Write a clearly written cover letter

Lesson at a Glance

Activity	Materials	Preparation	Approximate class time
FOCUS	<ul style="list-style-type: none"> • Food science and technology video clips • <i>Food Science and Technology Sample List of Occupations</i> handout 	<ol style="list-style-type: none"> 1. Choose the video clip(s) you wish to show about Food Science and Technology occupations and have available online 2. Print/photocopy the <i>Food Science and Technology Sample List of Occupations</i> handout– one per participant 	10 minutes
LEARN	<ul style="list-style-type: none"> • Library and internet access • <i>Food Science and Technology Education and Training Plan</i> handout 	<ol style="list-style-type: none"> 1. Print/photocopy the <i>Food Science and Technology Education and Training Plan</i> handout – one per participant 	30-90 minutes
REVIEW	<ul style="list-style-type: none"> • <i>Cover Letter Format</i> handout • Job listings for a support services position • <i>Cover Letter Assessment Rubric</i> 	<ol style="list-style-type: none"> 1. Have the <i>Cover Letter Format</i> handouts available – one per student 	60-90 minutes

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FOCUS: How do you ensure a high-quality food science and technology staff?

10 minutes

Purpose:

The STEM cluster includes occupations that relate to food science and technology. Introduce participants to the important role that these career opportunities play in STEM.

Materials:

- Food science and technology video clips
- *Food Science and Technology Sample List of Occupations* handout

Facilitation Steps:

1. Begin by sharing this information with students:

Food scientists and technologists use a variety of methods to study the content of food. They use the information they find to develop new food products or improve the value, production, packaging, and selection of existing food products. Aside from being involved in food production, a food scientist's career may also involve regulatory responsibilities. They may evaluate food production facilities' methods to make sure that food safety standards are met and enforce regulations when necessary. Other activities may include discovering new food sources, testing for contaminants or harmful additives, and more!

Salaries vary depending on the specific occupation you choose within this pathway.

2. Show a short video introducing this pathway. Go to YouTube and use keywords, "food science or food technology" or similar. Here are links to a few examples:
 - <https://www.youtube.com/watch?v=ULaw7GNjE6Y>
 - <https://www.youtube.com/watch?v=cWbaZEIe7GQ>
 - <https://www.youtube.com/watch?v=7rvAQISkn8U>

3. Share the *Food Science and Technology Sample List of Occupations* with students. Ask for any impressions of these types of jobs. Are there any on the list that are a surprise or are there any that they don't recognize?

Food Science and Technology Sample List of Occupations

Food Science Technician	Manager, Analytical Lab
Extension Agent and Specialist	Manager, Meat Applications
Consumer Safety Officer	Market Researcher
Food Policy Analyst	Meat Scientist
Federal, State and Local Government Jobs	Natural Products Researcher
Food Scientist	New Technologies
Biochemist	Packaging Specialist
Cereal Scientist	Plant Manager
Dairy Products Scientist	Plant Supervisor
Director of Quality Assurance	Product Development
FDA/USDA Research Scientist	Project Leader, Technology
Flavor Chemist	Project/Product Manager
Food Biochemist	Public Health Official
Food Biotechnologist	Quality Assurance Director
Food Chemist	Quality Assurance Manager
Food Engineer	Quality Assurance Supervisor
Food Industry R&D	Research and Development
Food Ingredient Sales	Research Scientist
Food Inspector	Quality Assurance Officer
Food Microbiologist	Sales Manager
Food Product Consultant	Scientific and Regulatory Affairs
Food Product Developer	Scientific Research
Food Safety Inspector	Senior Food Scientist
Food Technologist	Sensory Evaluation Expert
Food Toxicologist	Sensory Scientist
General Manager, Research	Technology Development Manager
Laboratory Director	Technical Sales Representative