

Middle and High School Teacher Food Safety Resources

Food Safety Lessons for Middle School Students

These lessons were designed by the Penn State Extension program to supplement the Newspapers in Education (NIE) Supplement called [Food Safety: From Farm to Table](#). Each [lesson](#) includes lesson summaries, lesson plans, overheads, worksheets, handouts, teacher information sheets, lesson quizzes, and the National Education Standards met by this lesson.

Foodborne Illness Outbreak Investigation

The University of Delaware's College of Agriculture and Life Sciences has developed a set of [resources](#) for teaching the science of foodborne illness, prevention, and outbreak resolution. The resources include powerpoints, case studies, and online interactive web-based activities that can assist teachers in developing a food safety unit for their classroom.

The Pathogen Tracker Game

The Pathogen Tracker Game has been created as a fun challenge for anyone interested in learning more about the spread of foodborne illnesses and how online databases can help track down the source of the organisms that cause them.

The game centers around *Listeria monocytogenes*, a potentially deadly cause of "food poisoning," especially in pregnant women. *Listeria* was the featured organism for the [initial prototype](#) of the [Pathogen Tracker](#) bioinformatics system developed at the Laboratory of Food Microbiology & Pathogenesis of Foodborne Diseases directed by Dr. Martin Wiedmann.

The online "PathogenTracker" computer game is available at <http://game.pathogentracker.net>

Food Safety Exercises, Activities, and Instructional Materials

North Carolina A&T State developed and uses a [hands-on food safety activity](#) that exposes students to the basics of food safety and microbes in the food service.

Instructional Materials for Middle School and High School Food Safety Modules

Instructional materials for middle school and high school food safety modules (including detailed lesson plans and worksheets) were developed by graduate students Travis Chapin, Rachel Pfuntner, and Matt Stasiewicz and pilot tested with 61 students during 4-H Career Explorations and at 4-H Camp Bristol Hills. These materials may be of interest to middle school and high school teachers in life sciences, consumer sciences, and forensics.

[Teaching Plan_Career Ex.docx](#)

[Teaching Plan_Bristol Hills.docx](#)

[Was it something they ate? memo bristol hills 2013.docx](#)

[Was it something they ate? memo career ex.docx](#)

[Attack Rate Table_Ice cream.docx](#)

[Attack Rate Table_Ice cream \(Blank\).docx](#)

[Attack Rate Table_picnic](#)

[Attack Rate Table_picnic \(Blank\)](#)

[Protocol for culturing bacteria.docx](#)

[Pre-Assessment Career Ex.docx](#)

[Post-Assessment Career Ex.docx](#)

[Pre-Assessment Bristol Hills.docx](#)

[Post-Assessment Bristol Hills.docx](#)

[Evaluation Sheet-Reactions-Career Ex.doc](#)

[Evaluation Sheet-Reactions-Bristol Hills.doc](#)

Cornell University National GAPs Program's Food Safety Investigation Curriculum

<http://www.gaps.cornell.edu/FSI.html>

The Food Safety Investigation (FSI) Curriculum has been developed for students in high school agriculture, biology, health, and food science classes. It is a supplemental curriculum designed to teach students safe food handling and preparation practices as well as increase their understanding of food production from farm to table. Created collaboratively with educators, it is presented in an easy to use format with activities that were tested in the classroom. While this curriculum presents cases that include food contamination events and foodborne illnesses, the lessons and activities are designed to be educational and not to raise concerns about specific food products.

Food science/food safety resources for K-12 teachers from the Journal of Food Science Education

<http://www.wiley.com/bw/vi.asp?ref=1541-4329&site=1>

This page includes a number of food science related resources, including two specific food safety related resources:

[Development and Evaluation of an Online, Inquiry-Based Food Safety Education Program for Secondary Teachers and Their Students](#)

Patricia A. Beffa-Negrini, Nancy L. Cohen, Mary Jane Laus, Lynne A. McLandsborough

[Validation of an Interdisciplinary Food Safety Curriculum Targeted at Middle School Students and Correlated to State Educational Standards](#)

Jennifer Richards, Gary Skolits, Janie Burney, Ashley Pedigo, F. Ann Draughon

FDA US Food and Drug Administration

[Information for Students and Teachers](#)

This page has many links to valuable teacher resources: the Science and Our Food Supply middle and high school supplementary curricula, which are linked to the NSES and include five modules following food from farm to table; and, the Food Safe Schools Action Guide, which has roles for everyone in any given school from the teacher to the cafeteria manager to the school nurse. The Action Guide also includes the supplementary curriculum.

[Science And Our Food Supply](#)

A downloadable middle school science curriculum on food safety and foodborne illnesses.

[Dr. X and the Quest for Food Safety](#)

An award-winning video that accompanies the middle and high school supplementary food science curricula---"Science and Our Food Supply"

[Food Safe Schools Action Guide](#)

The Guide represents the state of the science in school based foodborne illness prevention.

[Teach Food Science](#)

The FDA/NSTA Professional Development Program in Food Science is a sustained professional development opportunity for Middle Level and High School Science Teachers, as well as Family and Consumer Science (FACS) teachers of food-related content.

Additional FDA Resources

[The Bad Bug Book](#)

A handbook providing basic facts regarding foodborne pathogenic microorganisms and natural toxins.

[Foodborne Illness Causing Pathogens in the U.S. – What You Need to Know](#)

The page contains a chart listing many of the pathogens that cause foodborne illnesses in the United States. The chart, available in Spanish, also lists information about these pathogens.

[Food Safety Facts for Consumers \(e.g., Raw Milk, Food Allergens\)](#)

This page has links to several FDA resources related to food safety such as food allergens, bottled water, juices, and milk.

[Food Safety and Nutrition Information for Kids & Teens](#)

This page has links to many games and activities and other resources for teenagers related to food safety and nutrition.

Other Related Resources

[Animation Quiz 5: Southern Blot](#)

This animation describes in words and in text the process of Southern Blotting. The animation is [also available on dnatube.com](#) but the text is not given.

[The Barf Blog](#)

This blog has information about many outbreaks of foodborne illnesses and related resources.

[CDC Food Safety Office](#)

The homepage for CDC's Food Safety Office with links to many resources for food safety.

[Create a DNA Fingerprint](#)

This site is a simulation of the process used to make a DNA fingerprint.

[Diagnosis and management of foodborne illnesses: A primer for physicians and other health care professionals](#)

The online pdf version of this book contains information about many different agents of foodborne illness. The resource also has several different patient scenarios regarding these diseases.

[Disease Detectives](#)

This website comes from the Cleveland Museum. In this activity, students conduct an outbreak investigation using some of the same methods as epidemiologists or "disease detectives" working in the field. The site has teacher resources and student worksheets.

[Disease Listing](#)

An alphabetical listing of infectious diseases with links to information about those diseases.

[DNA Fingerprints](#)

In this high school lesson, students learn how DNA fingerprinting has been used in criminal investigations.

[DNA Interactive Teacher Guide](#)

This Teacher Guide has background information for the teacher as well as lessons relating to genetic fingerprinting.

[EXCITE!](#)

Excellence in Curriculum Innovation through Teaching Epidemiology and the Science of Public Health. EXCITE! is a collection of teaching and reference materials developed by the Centers for Disease Control and Prevention (CDC) to introduce and excite youth from kindergarten through 12th grade about the knowledge and skills utilized by public health professionals.

[Fight Bac!](#)

This page is a consumer food safety resource with links to curriculum materials and downloads on safe food handling information from the [Partnership for Food Safety Education](#). This organization saves lives and improves public health through research-based, actionable consumer food safety initiatives that reduce foodborne illness.

[FSIS Recalls](#)

USDA Food Safety and Inspection Service's links to information about recalls and public health alerts that involve meat, poultry, and processed egg products.

[Foodborne Illness](#)

Frequently asked questions about foodborne illness.

[Free Bacteriology Textbook](#)

A free textbook with information about *Listeria* and listeriosis as well as all other areas of microbiology.

[Hands On: Real-World Lessons for Middle School Classrooms](#)

Hands On teaches middle school students key food safety concepts while meeting Common Core Standards in Math and Language Arts and state mandated curriculum standards science and social studies.

[Listeriosis: General Information](#)

Frequently asked questions about listeriosis.

[Medical Mysteries](#)

Medical Mysteries is a problem-based adventure game that engages the student in the role of scientist, historian, and detective. The game has three missions, each of which helps the student understand how infectious diseases are spread. There are several teacher and student resources found on the site.

[Microbes 1: What's Bugging You](#)

The focus of this middle level lesson is the relationship between microorganisms and foodborne illness, as well as the implications that foodborne illness has on human health.

[Outbreak Surveillance Data](#)

Links to United States reported foodborne illness outbreaks by etiology and food commodities from 1990 – 2007.

[PulseNet](#)

PulseNet is a national network of public health and food regulatory agency laboratories coordinated by the Centers for Disease Control and Prevention (CDC). The network consists of: state health departments, local health departments, and federal agencies (CDC, USDA/FSIS, FDA).

[Update: Multistate Outbreak of Listeriosis – United States, 1998-1999](#)

An article from CDC describing the 1998-1999 outbreak of listeriosis in hotdogs.

[Virtual Bacterial Identification Lab](#)

The purpose of this lab is to familiarize students with the techniques used to identify different types of bacteria based on their DNA sequence. The techniques used in this lab are applicable in a wide variety of settings, including scientific research and forensic labs.

[YUCK Photos](#)

This page has links to a gallery of photographs that show the growth of microorganisms on food contact surfaces.

Careers

[BLS Occupational Outlook Handbook](#)

A great place to start the career exploration. Public Health Investigator does NOT show up in this database.

[juju job search engine](#)

Another good source with many examples for careers in food safety and disease prevention.