

READY, SET, 4th Edition FOODSAFE

A FOOD SERVICE FOOD SAFETY CURRICULUM FOR HIGH SCHOOLS

Extension Food Safety Specialist

Jang H. Kim, PhD

Extension Educators

Julie H. Buck, EdD, RDN Lorie Dye, MS Surine Greenway, MS Katie Hoffman, MS Shelly Johnson, MS Joey Peutz, MS Amy Robertson, MS Laura L. Sant, MS, RD Grace Wittman, MS





4TH EDITION

READY, SET, FOOD SAFE

A FOOD SERVICE FOOD SAFETY CURRICULUM FOR HIGH SCHOOLS

Extension Food Safety Specialist

Jang H. Kim, PhD

Extension Educators

Julie H. Buck, EdD, RDN Lorie Dye, MS Surine Greenway, MS Katie Hoffman, MS Shelly Johnson, MS Joey Peutz, MS Amy Robertson, MS Laura L. Sant, MS, RD Grace Wittman, MS





Issued in furtherance of cooperative extension work in agriculture and home economics, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Barbara Petty, Director of University of Idaho Extension, University of Idaho, Moscow, Idaho 83844. The University of Idaho has a policy of nondiscrimination on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity/expression, age, disability or status as a Vietnam-era veteran.

ECS 013 | Published September 2019 | © 2019 by the University of Idaho

INTRODUCTION

Purpose. The purpose of this curriculum is to teach food safety to high school students as it applies in Idaho food service settings. Students can receive a State of Idaho–approved certificate in food safety.

Description. The curriculum is divided into nine lessons and requires about nine hours to teach. Some activities can be omitted to reduce the time required. An additional hour of class time is needed for students to take the certification test. If students pass the certification test with a score of 80% or better, they can receive a food safety and sanitation certificate (also known as a food handler's card). The training provided in this curriculum is approved for compliance with the mandatory demonstration of knowledge requirement of Section 2-102.11 of the Idaho Food Code.

The curriculum and supporting files are entirely on our website:

- Nine lessons each with Objectives, Goals, Teacher Background Information, Materials Needed, Lesson Text with Thumbnails of Accompanying Slides, Understanding Check/Summary, References, and Handouts.
- PowerPoint slide files, some with attached audio or video files.
- Files of printable materials for student activities, including handouts and worksheets for many of the lessons, the Student Fill-in Notes, an Answer Key for each lesson, a printable list of definitions, and a song lyrics handout.
- Certification test, three versions.
- "Jeopardy" game to help students review for the test.
- Evaluation activity.

AUTHORS

The curriculum is authored by nine University of Idaho Extension faculty. Please contact any of us if you have questions about teaching this curriculum.



Jang H. Kim, PhD, Extension Food Safety Specialist University of Idaho Family and Consumer Sciences 875 Perimeter Dr. MS3183, Moscow ID 83844-3183 Ph: 208-885-6972 Fax: 208-885-5751 janghok@uidaho.edu



Julie H. Buck, EdD, RDN, Extension Educator-FCS University of Idaho Extension, Bingham County 412 West Pacific St., Blackfoot ID 83221 Ph: 208-785-8060 jhbuck@uidaho.edu



Lorie Dye, MS, Extension Educator-FCS University of Idaho Extension, Jefferson County 210 Courthouse Way, Ste. 180, Rigby ID 83442 Ph: 208-745-6685 Fax: 208-287-5909 ldye@uidaho.edu



Surine Greenway, MS, Extension Educator-FCS University of Idaho Extension, Owyhee County 238 8th Ave. West, Marsing ID 83639 Ph: 208-896-4104 surineg@uidaho.edu



Katie Hoffman, MAED, Extension Educator-FCS University of Idaho Extension, Lemhi County 200 Fulton St., Ste. 202, Salmon ID 83467 Ph: 208-742-1698 khoffman@uidaho.edu



Shelly Johnson, MS, Extension Educator-FCS University of Idaho Extension, Kootenai County 1808 North 3rd St., Coeur d'Alene ID 83814-3407 Ph: 208-446-1680 Fax: 208-446-1690 sjohnson@uidaho.edu



Joey Peutz, MS, Extension Educator-FCS University of Idaho Extension, Payette County 16 South 9th St., PO Box 10, Payette ID 83661 Ph: 208-642-6022 Fax: 208-642-6034 joeyp@uidaho.edu



Amy Robertson, MS, Extension Educator-FCS University of Idaho Extension, Boundary County 6447 Kootenai St., PO Box 267, Bonners Ferry ID 83805 Ph: 208-852-1097 Fax: 208-852-2812 amrobertson@uidaho.edu



Laura L. Sant, MS, RD, Extension Educator-FCS University of Idaho Extension, Franklin County 561 W Oneida, Preston ID 83263-1293 Ph: 208-852-1097 Fax: 208-852-2812 lsant@uidaho.edu



Grace Wittman, MS, Extension Educator-FCS University of Idaho Extension, Cassia County 1459 Overland Ave. Room 4, Burley ID 83318 Ph: 208-878-9461 Fax: 208-878-7862 gwittman@uidaho.edu

ACKNOWL-EDGMENTS

Reviewers. Thank you to Idaho Family and Consumer Sciences high school teachers who have used *Ready, Set, Food Safe* for a number of years for their help in reviewing and improving the 2019 version.

Ready, Set, Food Safe, 4th Edition (2019) was also reviewed by Patrick L. Guzzle, Food Protection Program Manager, Idaho Department of Health and Welfare, Boise, ID, and is approved for compliance with the mandatory demonstration of knowledge requirement of Section 2-102.11 of the *Idaho Food Code*.

Food Safety Songs. The lyrics for the eight food safety parodies included in *Ready, Set, Food Safe,* 4th Edition were written by Dr. Carl

Winter, Extension Food Toxicologist and Director of the Food Safe Program, University of California, Davis. He also performed the music. Dr. Winter is a food toxicologist and emeritus faculty member at the University of California. The included songs and additional food-related songs can be accessed directly from http://foodsafe.ucdavis.edu. He recently added two live performance videos: https://www.youtube.com/watch?v=3V1IslhflRs ("We Are the Microbes") and https://www.youtube.com/watch?v=ZbH_mSk2dNk ("Don't Get Sicky Wit It").

Idaho Central District Health Department Videos. The Central District Health Department, which covers four counties in the Boise area (Ada, Valley, Elmore, Boise), produced a series of six 3–5-minute worker training videos shot in a Boise-area restaurant; clips from these videos are used in some of the *Ready, Set, Food Safe* lessons. The complete videos can be downloaded from the Central District Health Department website: http://www.cdhd.idaho.gov/eh-food-training.php. They are also online at https://www.youtube.com/watch?v=URgF2Er-026c&feature=youtu.be.

History. *Ready, Set, Food Safe*, originally written by Sandra M. McCurdy and Joan Parr (both now retired) and Joey Peutz, was released in August 2002. It was revised by Sandra M. McCurdy, Joey Peutz, Carol Hampton, and Laura Sant in 2005 (2nd Edition) to reflect major changes in Idaho's food laws passed in the Spring 2005 legislative session. In 2010, it was again revised and approved to provide food safety resources and knowledge to people wishing to work in Idaho food establishments (3rd Edition).

USING THE CURRICULUM

PowerPoint Slides and Attached Files. The PowerPoint slides were prepared in PowerPoint 2017 and some of the PowerPoint slides have been designed to bring in various points or pictures on a mouse click. Users of an earlier version of PowerPoint software might experience compatibility issues.

There are eight food safety songs, one per lessons 2–9, attached to the "Song Activity" slides located at the end of the lesson. External speakers are required (speakers in a laptop or projector are generally not adequate).

Attached to the slides are also an audio clip, a number of sound recordings of how to pronounce microbe names, and ten video clips. Video clips range in length from about 1 to 5 minutes; the audio clip is 11 minutes. To hear the audio, external speakers are required.

Since the video clips are large files and might display as jerky video, we recommend that you copy the PowerPoint (.ppt) and linked audio (.wav or .mp3) and video (.avi or .wmv) files onto your hard drive. The .ppt, .wav, .mp3, .avi, or .wmv files all need to be in the same folder to maintain the links. (Previewing the video also helps to reduce jerky video.) Due to the number of pictures and the attached video and audio files, the PowerPoint files may take time to load.

Ready, Set, Food Safe, 4th Edition (2019) Audio and Video Files

Lesson	Slide	File(s) Needed for Each Lesson	
1	6	Botulism interviewWAV.wav	
2	5	Giardia pronunciation-L2.wav Aspergillus pronunciation-L2.wav	
	64-67	02 - Stayin' Alive.wav	
3	5	Bacillus cereus pronunciation.wav Campylobacter jejuni pronunciation.wav Clostridium perfringens.wav Clostridium botulinum pronunciation.wav Escherichia coli pronunciation1.wav Listeria monocytogenes pronunciation.wav Salmonella pronunciation.wav Shigella pronunciation.wav Staphylococcus aureus pronunciation.wav Vibrio pronunciation.wav Yersinia enterocolitica pronunciation.wav Anisakis pronunciation.wav Cryptosporidium pronunciation.wav Giardia lamblia pronunciation.wav Toxoplasma tondii pronunciation.wav Trichinella spiralis pronunciation.wav	
	7	Campylobacter jejuni pronunciation.wav Salmonella pronunciation.wav Clostridium botulinum pronunciation.wav	
	8	Campylobacter jejuni pronunciation.wav Salmonella pronunciation.wav Clostridium botulinum pronunciation.wav	
	11	Campylobacter jejuni pronunciation.wav	
	16	Escherichia coli pronunciation1.wav	
	18	Clostridium botulinum pronunciation.wav	
	20	Salmonella typhi pronunciation.wav Shigella pronunciation.wav	
	25-27	03 - A Case of Norwalk.wav	
4	21	CDHDVideo-Sourcing-Receiving-Storing L4.wmv (1 min 50 sec)	
	52-55	04 - Don't Be A Gambler.wav	

5	7	CDHCVideo-Handwashing L5.wmv	
	18	CDHDVideo-Gloves L5.wmv	
	22	CHDHVideo-Warewashing L5.wmv (31 sec)	
	29	clean.wmv	
	30	CHDHVideo-Sanitizing L5.wmv	
	34	CDHDVideo-Reporting Illnesses L5.wmv (36 sec)	
	38	CDHDVideo-Identifying Mistakes L5.wmv (1 min 10 sec)	
	39	CDHDVideo-Answers L5.wmv (39 sec)	
	44-46	05 - You Better Wash Your Hands.wav	
6	13	burger.wmv	
	26	CHDHVideo-Cross-Contamination L6.wmv	
	35-38	06 - We Are The Microbes.wav	
7	16	therm.wmv	
	30-33	07 - Stomachache Tonight.wav	
8	18	CHDHVideo-Cooling-Thawing L8.wmv	
	24-26	08 - Wholeftthefoodout.mp3	
9	30-35	09 - I Will Survive.wav	

Activities and Handouts. All the materials needed for student copies are located in the folder by its corresponding lesson number. Worksheets are also included in the lesson folders.

- Activity Pages. Student materials that are multiple pages or that are intended for student reference (and thus can be reused) can be found in their corresponding lesson folders.
- **Worksheets.** Those awaiting copying for students are located in the folders of Lessons 3–9.
- Student Fill-in Notes. Notes that emphasize the main points have been prepared for each lesson. The notes contain many blanks for students to fill in from the slides as each lesson is taught. It is recommended that the fill-in notes be photocopied and handed out to students before each lesson. They are useful study guides for the certification test and cover the material thoroughly enough so that a student can expect to pass the certification test after using the notes to study.
- **Definitions.** A compilation of the definitions given in the Teacher Background Information for each lesson is located in the Activities and Handouts section and may be photocopied for students.
- Food Safety Song Lyrics. These can also be printed for each student from the Activities and Handouts section of each lesson folder.

TABLE OF CONTENTSActivities, Video Clips, and Songs

Lesson 1. Why is Food Safety Important? Where Do the Rules	3
Come From?	
What Is Your Chance of Getting a Foodborne Illness?	17
Personal Account of FBI Audiotape	17
Federal and State Rules	
Using the Idaho Food Code	
Using the Idaho Food Safety and Sanitation Manual	
Lesson 2. What Are the Hazards to Safe Food?	0.0
Is It a Physical, Chemical, or Biological Food Hazard?	
Calculating Bacterial Growth	
Which Foods Need Time/Temperature Controls?	
Song Activity: "Stayin' Alive"	35
Lesson 3. What Are Some Important Foodborne Pathogens?	
Fill in the Pathogen	43
Pathogens for Study	
Song Activity: "A Case of Norwalk"	49
Jong Activity. It case of ivol walk	13
Lesson 4. Food Flow: Keeping Food Safe from Gate to Plate	
Video Clip: Sourcing, Receiving, and Storing Food	62
Food Flow Safety Concerns	
Let's Fry a Hamburger!	
A Life-Threatening Situation	
Intentional Contamination	
Interpreting Food Safety Icons	
Song Activity: "Don't Be a Gambler"	
Lesson 5. Clean: Do You Want to Eliminate a MillionBacteri	
Who's a "Star" at Washing?	
Video Clip: Hand Washing	
Sharing Food	
Video Clip: Gloves	
Food Server Role Play	81
Video Clip: Manual Warewashing	
Measuring Chlorine Concentration	
Video Clip: Clean vs. Sanitized	83
Video Clip: Sanitizing	
Who's a Star at Cleaning?	83
Video Clip: Reporting Illness	
Sick Employees—When Should They Avoid Food Handling?	
Video Clip: Identifying Food Safety Mistakes	
Video Clip: Answers	
Song Activity: "You'd Better Wash Your Hands"	86
551-611-611. Is a Dettor Wash Is at Harias minimum	00
Lesson 6. Keep It Straight, Don't Cross Contaminate	
Identifying Unlabeled Products	
Storing Food Correctly to Avoid Cross Contamination	92

Video Clip: Preparing a Hamburger	93
Using Color-coding to Avoid Cross Contamination	
Infosheet on Onion Dicer Prolonging Outbreak	
Video Clip: Cross Contamination Review	
Song Activity: "They Might Kill You/We Are the Microbes"	
Lesson 7. Hot Tips: Cooking, Hot Holding, and Reheating	
Video Clip: Thermometers	108
Calibrating a Thermometer	
"Safe Eats?" Case Studies	
Song Activity: "Stomachache Tonight"	111
Lesson 8. Chill Out: The Importance of Cold Temperatures	s in Food
Safety	
How Long Does It Take to Chill Food?	119
Video Clip: Chilling and Thawing Review	
Song Activity: "Who Left the Food Out?"	
Lesson 9. Managing Food Safety: Putting It All Together	
You're the Inspector: A Safe, Celebratory Meal for the Foot	tball
Team	
Song Activity: "I Will Survive"	137
Resources	
Glossary	143
Lyrics for Food-Safety Song Parodies	146
Resources Needed for Ready, Set, Food Safe 4th Edition	
Student Fill-In Notes and Answer Keys	
Certification Tests	
Curriculum Evaluation	
Alignment of RSFS 4th Edition with Idaho Content Standa	
Alignment of RSFS 4th Edition with National Standards fo	
and Consumer Sciences Education	







INTRODUCTION

(Slide 1) Introducing Ready, Set, Food Safe To Students

(Slide 2) *Ready, Set, Food Safe* is a program

- Developed at the University of Idaho
- Provides training in food safety as it applies to Idaho food service establishments
- For high school students

(Slide 3) This program has

- Nine lessons with activities and songs
- Student Fill-in Notes to help you study
- Certification Test—must pass with 80% to receive Idaho food safety and sanitation certificate, which is good for five years. The certificate, also known as a "food handler's card," demonstrates to potential food service employers that you have studied and learned about food service food safety.

(Slide 4) If using the song parodies, you should explain their origin to students

- Lyrics written by Dr. Carl Winter, Extension Food Toxicologist and Director of the Food Safe Program, University of California
- Professor Winter combined his scientific training and music hobby to write parodies of popular songs to enhance food safety education.