

Cheese Science Club Toolkit



Welcome to the UEN Cheese Science Club toolkit! Whether you are an interested citizen or a high school student, food science is a wonderful way to add excitement to the classroom, your stomach and your life. The main objectives of the Cheese Science Clubs are: to encourage leadership, to allow Utah citizens a fuller understanding of the scope of food (cheese), science and technology, and to expand awareness of the field of food and science in our daily lives and throughout our community. This toolkit contains everything you will need to gather students, friends, or colleagues to create a Cheese Science Club.

What's in this toolkit?

- Fact Sheet
- UEN Broadcast Schedule
- Cheese Slices Episode Descriptions <http://www.uen.org/tv/cheese/episodes.php>
- Cheese Cubed Episode Descriptions <http://www.uen.org/tv/cheese/scientist.php>
- Outreach Resources
- Activity Ideas
- Contact information

Enjoy and if you have any questions, give us a call or send an email.

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What is UEN's Cheese Science Project

About UEN Cheese Science

UEN provides STEM education in unique ways. Cheese Science is a partnership that launched Jan. 25, 2010. With statewide reach, UEN is uniquely positioned to effect public recognition that STEM is a national priority and motivate further STEM revitalization. Cheese Science builds on the same premise that helped UEN SciFi Friday receive a national community impact award: using popular culture as a bridge to science.

Cheese is accessible science. UEN licensed a 21-part program, Cheese Slices, that features different cheeses of the world, history, geography and culture. It's a fun program, and everyone loves cheese. But if it was just for fun, then UEN wouldn't be doing this project. UEN is doing this project because we believe we can use our broadcasting and web resources to bring science to a broader audience, elevate the conversation around science, inspire middle and high school students to build an academic record of core courses that make them college-ready, and influence a new pipeline of students to enter science careers. According to the U. S. Department of Labor, employment of agricultural and food scientists is expected to grow by 16 percent between 2008 and 2018, faster than the average for all occupations. Utah is a good location for food science careers, and UEN is doing its part to ready the pipeline of students.

UEN's Cheese Science received sponsorship from Cache Valley Cheese, DSM, Gossner Foods, Schreiber Foods and the Western Dairy Center. The project's Advisory Board includes: Beehive Cheese Company, The Utah Dairy Council, The Utah State Office of Education, Utah State University Extension and The Western Dairy Center.

About UEN

The Utah Education Network is a consortium of public education partners, including the Utah System of Higher Education and its ten universities and colleges; the Utah State Office of Education, local school districts and the Utah Electronic High School and; the state's Library system.

UEN Mission

We network to create educational opportunities, connect citizens, and collaborate with partners, serving Utah communities.

About STEM

Utah Education Network (UEN) invites you to join *The Science of Cheese Partnership*. Together, we'll meet a critical need in local communities to enhance **Science, Technology, Engineering and Mathematics** (STEM) education while raising awareness of STEM-related careers in Utah's food industry. UEN is targeting STEM education because it is critical to Utah's future: According to the STEM National Caucus, our national security and

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economic future depend on our capacity to sustain industry through innovation,¹ yet comparative studies reveal that our students lag behind other industrialized nations in math, science and engineering skills, resulting in a dearth of qualified professionals in relevant fields. By bridging the gap between the general public, youth and scientists in the dairy industry, The Science of Cheese Partnership will help Utah citizens make the connection between committing to STEM education and overcoming challenges to a thriving local economy.

About Cheese Slices

Touring three continents, Cheese Slices explores the world's best-loved cheeses and the passion and skill of the cheese makers who create them. Cheese Slices is hosted by Master of Cheese, Will Studd, who offers this unique 21 part series revealing the history, tradition without equal of these wonderful regions of the world.

The Series includes Genuine Normandy Camembert, the caves of Roquefort, mountain-ripened Comte Gruyere, English Stilton, Gorgonzola, and the age-old traditions of Pamigiano Reggiano. Cheese Slices also features the tradition and history behind Greek Feta, Edam and Gouda from the Netherlands, and the handmade farmhouse cheeses of Northern California, Australia and the US.

About Cheese³

Cheese³ is a 21 episode series of 3- 5 minutes segments featuring Utah food and dairy scientists answering fascinating questions about cheese. UEN produced these episodes to connect cheese to the science behind it. Scientists and dairy experts' answer questions ranging from topics in microbiology to food careers.

Each Episode of Cheese³ features three tasty tidbits of information. First, Cheese by the Numbers provides fun number facts related to cheese, followed by The Whey of our Cheese, where scientists and food experts answer your questions and finally there is a fun Queso Quiz at the end. This is great for everyone hungry for knowledge.

About UEN's Broadcast Station

Programming and operation of UEN-TV television station maintains a statewide system of translators to bring UEN-TV programs and services to rural communities across the state.

UEN-TV STATIONS

Digital Broadcast Channels 9.1 and 9.2

Dish Network Channel 9 or 8541

DirecTV Channel 9 or 983 and 218

¹ "Talking Points: Why is STEM Education Important?" STEMED Caucus Steering Committee.

<http://www.stemedcaucus.org/content/Home/TalkingPoints.aspx> Retrieved 11/22/09

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Visit Cheese Science online at

www.uen.org/tv/cheese

The Cheese science web site features the 21 Cheese³ where Utah scientist and food experts answer intriguing cheese science questions. There are links to Cheese Careers, Lesson Plans for teachers and interactive online games. On the site you can find basic cheese science vocabulary, a list of every cheese from a – z and global maps to help locate where a particular cheese is made.



Cheese is about science, math, geography, technology, biology, chemistry, climate, history, culture, and fun. You can experience it all on UEN's Cheese Science web site.

The screenshot shows the UEN Cheese Science website. At the top is the UEN logo and navigation menu. The main content area features a banner for 'Fermented milk food products. The best TV Around. Watch Monday nights at 8 on UEN-TV.' Below the banner are several interactive sections: 'ASK A CHEESE SCIENTIST' with a microscope icon, 'CHEESE CAREERS' with a butter knife icon, 'MORE CHEESE INFO' with a cheese wheel icon, and 'CHEESE SCIENCE BASICS' with a cheese and glass icon. A 'WHICH CHEESE IS YOUR FAVORITE?' poll is active, listing Feta, Brie, Cheddar, and Gruyere. A 'Vote Now' button is visible. On the right, there are links for 'CHEESE FUN', 'LESSON PLANS', 'CHEESE BOARD', 'CHEESE PARTY', 'CHEESE SLICES ON UEN-TV', and 'CHEESE AROUND THE WORLD'. The footer includes logos for various partners and copyright information.

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Cheese Slices with Cheese³ Broadcast Schedule 2010-2011 Monday nights @ 8pm Channel 9.1

06/21/10 France: Soft Washed Rind Cheese	01/24/11 France: Soft Washed Rind Cheese	06/27/11 France: Soft Washed Rind Cheese
06/28/10 England: Stilton, King of English Cheese	01/31/11 England: Stilton, King of English Cheese	*07/04/11 USA: Vermont Cheese
07/05/10 USA: Vermont Cheese	02/07/11 USA: Vermont Cheese	*07/11/11 England: Stilton, King of English Cheese
07/12/10 Italy: Parmigianino	02/14/11 Italy: Parmigianino	07/18/11 Italy: Parmigianino
07/19/10 France: Goats Cheese	02/21/11 France: Goats Cheese	07/28/11 France: Goats Cheese
07/26/10 Netherlands: Edam, Gouda	02/28/11 Netherlands: Edam, Gouda	08/01/11 Netherlands: Edam, Gouda
08/02/10 Italy: Gorgonzola, Cave Ripened Tallegio	03/07/11 Italy: Gorgonzola, Cave Ripened Tallegio	08/08/11 Italy: Gorgonzola, Cave Ripened Tallegio
08/09/10 France: Comte Gruyere and Farmhouse Morbier	03/21/11 France: Comte Gruyere and Farmhouse Morbier	08/15/11 France: Comte Gruyere and Farmhouse Morbier
08/16/10 Australia: Australian Cheese Pioneers	03/28/11 Australia: Australian Cheese Pioneers	08/22/11 Australia: Australian Cheese Pioneers
08/23/10 Ireland: the Irish Cheese Renaissance	04/04/11 Ireland: the Irish Cheese Renaissance	08/29/11 Ireland: the Irish Cheese Renaissance
08/30/10 England: Farmhouse Cheddar	04/11/10 England: Farmhouse Cheddar	09/05/11 England: Farmhouse Cheddar
09/06/10 Greece: Feta, Food of the Gods	04/18/11 Greece: Feta, Food of the Gods	09/12/11 Greece: Feta, Food of the Gods
09/13/10 France: Camembert	04/25/11 France: Camembert	09/19/11 France: Camembert
09/20/10 Spain: Spanish Traditional Quesos	05/02/11 Spain: Spanish Traditional Quesos	09/26/11 Spain: Spanish Traditional Quesos
09/27/10 France: Massif Central and Auvergne	05/09/11 France: Massif Central and Auvergne	10/03/11 France: Massif Central and Auvergne
10/4/10 USA: New Farmstead Cheeses of Northern California	05/16/11 USA: New Farmstead Cheeses of Northern California	10/10/11 USA: New Farmstead Cheeses of Northern California
10/11/10 Basque: Ossau Iraty Cheese	05/23/11 Basque: Ossau Iraty Cheese	10/17/11 Basque: Ossau Iraty Cheese
10/18/10 Switzerland: Mountain Cheese	05/30/11 Switzerland: Mountain Cheese	10/24/11 Switzerland: Mountain Cheese
10/25/10 France: The Legend of Roquefort	06/06/11 France: The Legend of Roquefort	11/07/11 France: The Legend of Roquefort
11/01/10 Italy: Pecorino Toscano	06/13/11 Italy: Pecorino Toscano	11/14/11 Italy: Pecorino Toscano
11/08/10 France: Cheeses of the Alps: Savoie, Comte	06/20/11 France: Cheeses of the Alps: Savoie, Comte	11/21/11 France: Cheeses of the Alps: Savoie, Comte

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Outreach Resources

Contact a Local Cheese Monger, Cheese Artisan, or other Cheese Expert

Southern Utah	Northern Utah	Wasatch Front	Wasatch Front
Harmons Dixie 1189 E. 700 S. St. George, UT 84790-4022 (435) 628-0411	Beehive Cheese Company, LLC 2440 East 6600 South #8 Uintah, Utah 84405 (801)476.0900	Harmons Bangerter Crossing 125 E 13800 S Draper, UT 84020 (801) 617-0111	Caputo's Market and Deli Matt 314 West 300 South Salt Lake City, UT (801)-531- 8669
4-H Offices http://utah4h.org/html/contacts/county-offices	Gossner Foods, Inc. 1051 North 1000 West Logan, Utah 84321-6852 (435)-713-6100	Harmons Brickyard 3270 S. 1300 E. Salt Lake City, UT 84106-3008 (801) 487-7736	Liberty Heights Fresh 1290 South 1100 East Salt Lake City, UT 84105-1813 (801) 467-2434
Central Utah	Harmons Five Points 37 N. Harrisville Rd. Ogden, UT 84404-3975 (801) 621-2532	Harmons Cougar 4874 W. 6200 S. Kearns, UT 84118-670 (801) 965-9450	Willow Lane Dairy Goats 1856 Drake Lane West Jordan, UT 84084 (801) 255-MILK (6455)
Harmons Orchards 870 E. 800 N. Orem, UT 84097-4245 (801) 225-1770	Harmons Roy 5370 S. 1900 W. Roy, UT 84067-2907 (801) 825-2788	Harmons Taylorsville 5454 S. Redwood Rd. Taylorsville, UT 84123-5319 (801) 967-9213	4-H Offices http://utah4h.org/html/contacts/county-offices
Red Rock Cheese Jon Nilson 1365 North Highway 6 Delta, Utah 84624 (435) 864-2430	Rock Hill Creamery Pete Schropp & Jennifer Hines PO Box 377• Richmond, UT 84333 (435)258.1278	Harmons The District 11453 S Parkway Plaza Dr. South Jordan, UT 84095-5614 (801) 495-5402	
Shepherd's Cheese AskElvis@shepherdscheese.com Tooele Valley	Western Dairy Center 8700 Old Main Hill Logan, UT 84322-8700 (435) 797-3466	Harmons South Jordan 10507 S. Redwood Rd. South Jordan, UT 84095-8504 (801) 446-9984	
4-H Offices http://utah4h.org/html/contacts/county-offices	4-H Offices http://utah4h.org/html/contacts/county-offices		

21 Cheese Club Activity Ideas

1. Watch Cheese Slices as a club
2. Ask a cheese making expert, biologist, chemist, and/or engineer etc. to do a demonstration with your group to learn more about the STEM and cheese connection.
3. Take a fieldtrip to a dairy farm/ cheese artisan company/cheese slicing and packaging plant.
4. Create a Utah based *Cheese show* Episode.
5. Watch Wallace and Gromit *Eat Cheese*.
6. Make Cheese!
7. Invite a Cheese Monger to give a presentation and help with tastings. Find out: Why the title of Monger? How do you use science, technology, engineering and math in your job? What is their favorite Cheesy fact?
8. Create a Social network site for your Cheese Club.
9. Meet with a cheese club from another school or community and share cheese fun and ideas.
10. Have a favorite fruit and/or savory food and cheese pairing event (ask a cheese monger for help)
11. Take a virtual tour of countries famous for cheese making (use CultureGrams).
12. Make pizza with variations of cheeses, go beyond Mozzarella.
13. Invite a chef to talk about recipes with various cheeses.
14. Meet in computer lab or bring laptops to a club meeting and play Cheese Fun games from uen.org/TV/cheese.
15. Ask a cheese monger to help you taste a different cheese from the 11 different countries featured on Cheese Slices.
16. Ask a cheese monger to help you try at least 3 different Utah made cheeses.
17. Investigate cheese from Africa and Asia.
18. Make a timeline of a favorite cheese.
19. Investigate Microbiology and Cheese: find out about microbes found in cheese
20. Investigate Technology and Cheese: Name a machine used in cheese making (modern or traditional) – Invite a guest speaker to discuss the technology or go on fieldtrip to learn about Cheese Making/Cheese Industry Technology.
21. Create your own Cheese Club Favorite Cheese Recipes Book.

Get Ideas From Other Cheese Clubs

Brandeis University Cheese Club on Facebook

<http://www.facebook.com/group.php?gid=265939878806#!/group.php?gid=265939878806&v=wall>

Cornell University Cheese Club

Bring Cornell community members together to promote learning about the production, traditions, and appreciation of cheese and fermented dairy products.

<http://rso.cornell.edu/cheeseclub/Home.html>

Fine Cheese Club Scripps College

The Fine Cheese Club enables cheese-loving Scripps students to gather biweekly for the purpose of enjoying and educating themselves about the most delicious of dairy products. Meetings are Saturday or Sunday at brunch, and feature a variety of cheeses and pairings. Excursions to cheese shops and or cooking schools are planned for members who want to hear a professional's take on cheese. apincus6569@scrippscollege.edu

Ithaca High School Cheese Club on Facebook

<http://www.facebook.com/group.php?gid=44057432666#!/group.php?gid=44057432666&v=wall>

University of Wisconsin-Madison Food Science Club

The UW Food Science Club consists of approximately 60 active undergraduate and graduate students. Members are from Food Science, Dairy Science, Agricultural Engineering, Marketing/Agribusiness, Microbiology, and other food related majors.

<http://foodscience.rso.wisc.edu/>

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Contact

UEN	Cheese Science Cheese Board	Cheese Science Underwriters	Cheese Scientists
Lisa Cohne 101 Wasatch Dr. SLC, UT 84112 801-581-5176 lcohne@uen.org	Beehive Cheese Company, LLC 2440 East 6600 South #8 Uintah, Utah 84405 (801)476.0900	Gossner Foods, Inc. 1051 North 1000 West Greg Rowley Logan, Utah 84321-6852 (435)-713-6100	Wayne Askew University of Utah College of Health Division of Nutrition 250 South 1850 East, #214, Salt Lake City, UT 84112 (801) 581-6730 wayne.askew@health.utah.edu
Resources resources@uen.org 1-800-866-5852	Jeff Broadbent Nutrition, Dietetics & Food Sciences Utah State University 8700 Old Main Hill Logan, Utah 84322 435-797-2113 jeff.broadbent@usu.edu	Dairy Farmers of America Cheese Factory 330 West 300 South Beaver, UT 84713 435-438-2421 http://www.dfamilk.com/	Jeff Broadbent Nutrition, Dietetics & Food Sciences Utah State University 8700 Old Main Hill Logan, Utah 84322 435-797-2113 jeff.broadbent@usu.edu
	Utah Dairy Council Ray Buttars raybuttars@q.com 1213 East 2100 South Salt Lake City, UT 84106 Phone: 801-487-9976	DSM Randal Thunell 1325, North 1000 West Logan Utah 84321 (435) 750 5005 randall.thunell@dsm.com	Rodney Brown Department of Nutrition, Dietetics, & Food Science Brigham Young University S-221 ESC Provo, UT 84602 (801) 422-3912 rodney_brown@byu.edu
	Western Dairy Center Don McMahon 8700 Old Main Hill Logan, UT 84322-8700 (435) 797-3466 westcent@usu.edu donald.mcmahon@usu.edu	Schreiber Foods 885 N 600 W. Logan UT www.schreiberfoods.com Dennis Cook 435-752-8175	Jong-Su Eun Department of Animal, Dairy, and Veterinary Sciences (ADV)S Utah State University 4815 Old Main Hill, Logan, UT 84322-4815 (435) 797-2162 jseun@usu.edu
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			<p>ALLEN J. YOUNG Associate Professor Utah State University Dairy Extension Specialist ADVS Department 4815 Old Main Hill Logan UT 84322-4815 (435) 797-3763 allen.young@usu.edu</p>