Cheeses of the World
Leader/Teacher Guide

Objectives:

- Help members explore origins of cheese and cheese-making.
- Help members learn how cheese can be part of a healthy diet.
- Discuss and have members learn some differences in cheeses and participate in a tasting activity to begin to recognize differences.

Supplies needed before lesson:

1. A pencil and piece of paper for each participant.
2. A picture of ChooseMyPlate.gov logo.
3. A pair of dice.
4. Cheeses of the World poster (optional--2 different posters available from www.allposters.com or www.amazon.com)
5. Obtain 3-5 samples of a variety of cheeses (purchase varieties different than the common cheddar, mozzarella, Monterey jack, etc.) on member hand-out from different categories for tasting activity. Before class cut into 1-inch squares and keep in air-tight containers. Provide toothpicks for picking up cheese or a spoon may be necessary for cheeses that are too soft or crumbly. (Optional-have some crackers or fresh fruit available to accompany tasting.)
6. Small plates and napkins.

Member Handouts:

1. Cheese Varieties
2. Cheese Tasting Worksheet
3. Serving and Adding Tips
4. Cheese Recipes (Ricotta, FCE Lasagna)

Teaching Outline:	***Activities:***
Introduction/Ice Breaker Give the participants 1 minute to list as many types of cheeses as they can. Have the person who has the most cheeses read their list. (You may want to reward them with a small or "cheesy" prize.)	
Objectives The objectives of this lesson are to: • Explore origins of cheese and cheese-making. • Learn how cheese can be part of a healthy diet. • Learn some differences in cheeses and participate in a tasting activity to begin to recognize differences.	*State objectives.*

History/Geography:	
You may have enjoyed a simple grilled Cheddar cheese sandwich or savored a rich and complex Stilton cheese with a crisp pear slice. Today cheeses are served breakfast through dinner, for snacks and dessert. Cheeses have been crafted for over 4,000 years and the wide varieties available now have everything to do with geography, weather and human ingenuity. The first cheeses may have been produced before Roman times in Europe and Asia accidentally when milk was carried in the fourth or true stomach of a milk-fed calf. Rennet, an extract in that organ, acted as a curdling agent to thicken the milk. Prolonged bacterial action took the homogeneous, yogurt-like mixture to the next phase: cheese! In the dark ages, religious houses preserved the appreciation of fine cheeses. In Greece goat's milk cheese was dried and carried by soldiers and sailors on journeys. Romans preferred dry cheeses and sometimes smoked. The people of the British Isles learned about cheese-making during the Roman occupation. Cheshire cheese was well known by 1662. In the early 18th century, Cheddar and Stilton were commonly known. Cheddar, a popular cheese, was made by combining all the cow's milk in its namesake town in Somerset in a cooperative venture. Stilton, a cow's milk version of Roquefort was named for its home town in Huntingtonshire. It was served with the mites and maggots that surrounded it and eaten with a spoon. Conversely, the French admired their bleu cheese. Roquefort was the most popular cheese followed by Brie, Maroilles and Gruyere. Cheese enjoyed rank in England and France. Fresh or briefly aged types were part of the diets of the poor and were considered "white meat." The rich enjoyed a variety of cheese near the end of the meal to promote digestion or stimulate the appetite to continue eating. Being overweight or obese was a symbol of wealth. The Greeks	*Summarize this section in your own words or copy, cut and hand out sections for participants to take turns reading.*

prolonged the party at the end of the meal by eating cheese to stimulate their thirst for wine. Only the very wealthy could afford the large wheels of cheese in the markets. Anyone that had enough money to buy cheese was called a "Big Wheel" or "Big Cheese." Geographically, livestock thrives or fails on the quality of feed and availability of water. In regions where feed is scarce, smaller animals that require less calories and nutrients are sometimes the only producers of milk. Cattle can thrive in areas with lush meadows and a way to harvest and feed hay to the livestock through the harsh winter months.	
How cheese is made: Milk is made of fat, water, sugar, protein and minerals. The tiny, lumpy globules of fat float to the top to form a layer of cream. The protein in milk is called casein and whey. Casein is like small clusters of tiny sponges soaked in water. "When milk is heated or mixed with salt or acids the denatured proteins" clump together. The liquid that has been forced out is called whey. The curds-mostly protein and fat are used to make cheese. Fresh curds can be eaten. The cheese can be stored and ripened. The aged cheese can be eaten over many months. Fresh cheeses are cottage or ricotta. Cheese producers can control the ripening process with enzymes and other methods to create flavors, textures and appearances for distinctive cheeses. Ripened cheeses can be aged to mild flavors or strong and sharp.	*Optional activity: make simple cottage cheese with members to see process of curdling. Simply heat several cups of 2% or whole milk to boiling and add lemon juice; continue stirring until you see curds forming. Drain curds, add a small amount of milk back in, salt and pepper to taste.*
Nutrition Connection Ask any child you know what cheese is made from the most common answer will be, obviously, milk! And, we all know that familiar little jingle "milk does a body good"...well so can cheese which is a product of milk, as we have just discussed. Cheese can be a part of your healthy diet and can really liven up your favorite dishes. On ChooseMyPlate.gov cheese fits into the Dairy	

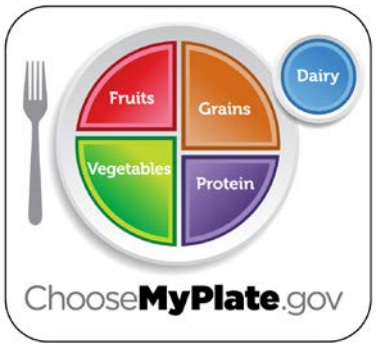
group. A person on a 2,000 calorie diet needs about 3 cups of milk, or it's equivalent, a day (1.5 ounces of natural cheese or 2 ounces of processed cheese = 1 cup of milk). You can go to http://www.choosemyplate.gov to get a personalized diet plan based on gender, age and activity level.

So what can we get from eating cheese?

- Excellent source of ***calcium*** which is an essential mineral needed for building bones and teeth, in maintaining bone mass, regulating blood pressure and important for the nervous system. Three cups of milk a day can improve bone mass. (Older women often don't get enough so this is a good way to add some into your diet.)
- Good source of ***protein*** which gives us energy, is found in every cell in our bodies and used as the building blocks of our bodies.
- Source of ***phosphorus*** which is an essential mineral that is required by every cell in the body for normal function.
- Provides some vitamins such as ***vitamins A, B2, B12*** *and* ***E*** needed for various reasons such as eye function and skin health.
- Milk products fortified with ***vitamin D*** work with calcium to build and maintain bones.

Different varieties of cheese contain varying amounts of all the nutrients listed above and some cheeses contain other nutrients not listed here. To learn more about a specific cheese read the *Nutrition Facts Label* found on the packaging or see the *Nutrients and health benefits* section of Dairy on choosemyplate.gov

One other nutrient that we get from cheeses that often scares people away is saturated **FAT**. Saturated fat content varies widely from high amounts to low- or non-fat. Choosing low-fat varieties will help you still enjoy cheese while not increasing your fat consumption. Again, refer to the Nutrition Facts Label for help.



Show a picture of ChooseMyPlate.gov.

To illustrate 1.5 ounces of cheese show 2 dice or state that it would be the size of your whole thumb (from the tip to the base).

For an easy comparison of nutrients in various cheese see Food-A-Pedia at https://www.supertracker.usda.gov/foodapedia.aspx. After you select a cheese, choose the ***Nutrient Info*** *button.*

https://www.choosemyplate.gov/dairy-nutrients-health

Other handouts that may be of interest at choosemyplate.gov are 10 Tips: Got Your Dairy Today?

Cheese Varieties: There are <u>hundreds</u> of varieties of cheeses: ➢ in colors from white to orange to red to blue to green ➢ from countries around the globe from China to France to Mexico to India ➢ in textures from soft to semi-firm to hard ➢ in all flavors from fruity to nutty to mild to pungent ➢ made from cows, goats, sheep, yaks, camels, reindeers and buffalo's milk. Everyone seems to have their own way of classifying cheese. Commonly, though, the moisture content of cheese determines the category. The subtle characteristics within each category are distinguished by the type of milk and the quality of that milk—which is determined by the regional quality of the feed influenced by the sun, soil, and water. In this lesson we will refer to different types by the following classifications: • Soft • Semi-soft • Firm • Hard • Blue-veined Refer to the poster *Cheeses of the World*, if available, and choose several from each category to look at and read the descriptions to illustrate variety.	*Refer to the cheese chart provided in the member handouts.*
Tasting Activity and Serving Tips: At this time bring out prepared, cut cheeses for tasting. If you choose a cheese from the poster you could read the description as you pass out the cheese. *Note: Most cheeses are best if served at room temperature, it will help to bring out the flavor.	*Encourage participants to discuss the differences in the cheeses, likes, dislikes, etc. and write cheeses and comments onto Member Handout entitled <u>Cheese Tasting.</u>*
Game: *Cheese Heads* Pass out prepared sticky notes, one per participant and have them stick to their foreheads. One at a time have them take a turn	*Sticky notes labeled with various cheese varieties.*

asking questions to figure out what kind of cheese they are. They can ask questions such as- am I a soft cheese, am I fruity tasting, am I made in Italy, etc.? If your time is limited you could limit the questions to 10 total or just have 3 or 4 participants stand in front of the group to discover their "head" cheese.	
OSU Publications on cheese: PNW 539 Fresh Cheese Made Safely	
Summary: Ask members if there are any more questions. Encourage members to try new varieties of cheeses, find out some fun facts about them and use them to excite their palate and plate!	
Evaluation: Distribute the "Informed Consent Statement" and evaluation form. Read aloud the "Informed Consent Statement" and give participants about five minutes to complete the evaluation. Collect the evaluations and return them to your local county Extension Office.	

Bibliography

ChooseMyPlate.gov. https://www.choosemyplate.gov/ (2018, May 2)

Johnson and Wales University. *Culinary Essentials*. New York: Glencoe/McGraw-Hill, 2002.

Mehas, Kay, and Rodgers, Sharon. *Food Science, The Biochemeistry of Food and Nutrition.* New York: Glencoe McGraw-Hill, 2002.

McGee, Harold. *On Food and Cooking: The Science and Lore of the Kitchen.* New York: Collier Books, MacMillan Publishing, 1984.

Seelig, Tina L. *Incredible Edible Science.* New York: W. H. Freeman and Company, 1994.

Teubner, Christian. *The Cheese Bible.* New York: Penguin Studio,1998.