

Senior Lesson Plan 4 - Cheese up your life!

Objective:

To help pupils understand where cheese comes from and the process of cheese production.

Duration: 30 minutes (approximately).

Curricular Links:

SESE (Geography) → Human environments → People living and working in the local area and people living and working in a contrasting part of Ireland → People at work → Food and farming

Words of the Day

Pasteurisation: Involves heating the milk to a high temperature for a short time (e.g. 72° Celsius for 15 seconds), followed by rapid cooling.

Starter Bacteria: This is a culture of bacteria which converts the sugar in milk (lactose) into lactic acid. This helps to add flavour to the cheese.

Rennet: This enzyme is a natural extract from the stomach of a calf. Rennet causes the curd to form in cheese production.

Curd: This is the basic material from which cheese is made. It is solidified milk which is then cut and this action releases the whey.

Whey: This is the excess moisture residue which comes from the curd. The whey is released when the curd is cut and is washed away because it is not needed for making cheese. However, the whey can be used in the manufacture of other food products.

Enzyme: A group of complex proteins produced by living cells.

Biestings: The first milk produced by a cow after giving birth to a calf.

Classroom Discussion

Cheese Making in Ireland

Ireland has for a long time been famous as a producer of quality dairy products. There are more than 17,000 dairy farms in Ireland, producing 5 billion litres of milk per year. Dairy products have been an important part of the Irish diet since prehistoric times.

Because so many people wanted Irish butter, both here and abroad, the cheese-making industry in Ireland was almost extinct by the nineteenth century. However, cheese-making became very popular again in the 1970's and today it is a very successful industry.

Some of the different types of cheese made in the past were:

- *Faiscre grotha*, a compression of curds that was pressed in a mould and eaten when fairly fresh. This curd cheese was similar to the modern cottage cheese
- A sweet curd cheese using rennet was called *Millsen*
- *Maothermal* cheese was made of biestings, heated until they formed a jelly that was smooth and soft
- *Mulchan*, produced from buttermilk, was made until recent times
- Hard cheeses were rarer, although *Tanach* was one variation

The secret to Ireland's quality cheese-making begins in its pasturelands. Irish dairy cows graze on more grass and for longer over the year than dairy herds almost anywhere else in the world.



The Story of Cheddar Cheese – From Farm to Fridge

1. Cheddar cheese is made during the spring, summer and autumn months. This is when the cows are out in the fields and eating fresh grass which gives the Cheddar a lovely flavour and yellow colour.
2. The milk is brought in tankers to the cheese factory and is pasteurised and put into vats where it is kept warm.
3. First, friendly bacteria are added to the milk. These heat the milk sugars which help to preserve the cheese. Rennet is then added. Rennet is an enzyme that allows the milk to set. It is left to set for a period of 40-45 minutes.
4. The curd is then cut when the milk is firm and allowed to stand.
5. The curds and whey are then stirred gently while the temperature is increased.
6. The curds and whey are then pumped over to a special machine. This machine drains the whey. The curd fuses together and is then milled. Salt is added to give flavour and texture to the cheese and help preserve it.

7. The cheese is cut into blocks before it goes into the chill store for 24 hours where it is cooled down. It is then stored in a cool room to ripen for 6 – 12 months. It won't leave the cheese store until the cheese grader is satisfied that it is a first class piece of Cheddar.
8. So the next time you are enjoying a piece of cheese, you can be sure you are eating a high quality, nutritious and tasty product.

Did you know?

Cheddar cheese is part of the 'milk, yogurt and cheese' food group in the Food Pyramid (refer to 'Healthy Eating' lesson plan). Three servings are recommended per day from this food group for children aged 5-8 years, with five daily servings recommended for those aged 9-18 years. Examples of a serving include **200ml of milk, 125g of yogurt or a 25g (about a match-box size) piece of Cheddar cheese.**

Cheddar cheese provides many important nutrients such as **calcium, protein, phosphorus and vitamin B12.**

Class Activity:

Say Cheese!

Irish Cheddar cheese is one of our most delicious foods. Grate it, slice it, cube it or melt it! It's perfect for the lunchbox, as a snack, or adding to meals.

Ask the pupils what their favourite cheesy meal is and ask them to write the recipe and draw a picture of it.

Fun Fact!

It takes 10 litres of milk to make one kilogram of Cheddar cheese! Mature Cheddar cheeses are left to ripen for a year or more. The cheese is stored in a special room where the temperature and humidity are controlled. The longer they are left to ripen, the stronger the taste!

Bring it Home

Cheese up your life at home

- Adding 25g of Cheddar cheese to a pasta dish, a mixed salad or an omelette is a 'grate' way to get one of your recommended servings from the 'milk, yogurt and cheese' food group!
- What other recipes can you cook which include cheese?
 - Cheesy beans on toast
 - Jacket potatoes with cheese
 - Homemade pizza
 - Savoury pancakes
 - Quiche
 - Cheese scones