

VIKING SCIENCE

Learning Objective:

To learn about the science behind some Viking food production methods, and find out about the modern production of dairy foods.



What do you immediately picture
when you think of Vikings?



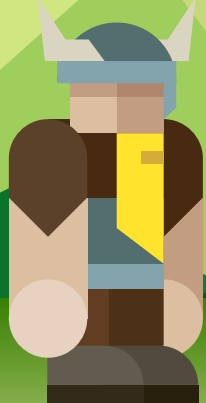
Did you picture something like these stereotypical Viking warriors? Unfortunately, many people don't know very much about real Vikings. Did you know that they didn't even have horns on their helmets?



I'm studying the science of the Vikings. What I've learned about them shows that they have been misrepresented and misunderstood as a primitive civilisation. I need your help to prove that the Vikings were much more than marauding warriors!



The Vikings used biology and chemistry to make food more edible, nutritious and longer-lasting.



WHAT
FOODS DO YOU THINK
VIKINGS ATE?



WHAT
FOOD PRODUCTION
AND PREPARATION
METHODS MIGHT THEY
HAVE USED?

The Vikings were farmers. They grew many of the grains, fruits and vegetables that we eat today, including barley, oats, apples, berries, cabbages and peas. They also raised livestock such as cattle, sheep, goats, pigs and chickens for meat, milk and eggs.



WE ALLOWED OUR CATTLE AND SHEEP TO ROAM FREELY IN THE HIGHLANDS DURING THE SUMMER. WE HAD TO WORK TOGETHER TO ROUND THEM ALL UP AT THE START OF WINTER!



The Vikings were hunter-gatherers, too. They collected wild fruits, vegetables, grains and mushrooms. They hunted boar and elk as well as duck, turkey and other birds. They collected eggs from coastal birds and fished in lakes, rivers and at sea.



In the harsh Scandinavian winters, animals had to be brought inside. Ordinary Vikings kept their animals at one end of their longhouses, but farmers often had separate cowsheds.

The Vikings milled grain to make flour which could be stored for a long time, and used to make bread. They cooked most of their food by boiling it in water, usually over fires in the middle of their longhouses.



They used simple tools made of wood, stone, bone, horn or iron to farm the land and prepare food. Cooking pots were made of soapstone, or of sheets of iron, bent into shape and riveted together.



DID ANY OF THESE FOODS OR FARMING AND FOOD PRODUCTION METHODS SURPRISE YOU? WHY? WHAT QUESTIONS COULD YOU ASK AND ANSWER ABOUT VIKING FOOD AND FARMING?



Milk was an important food for Vikings. Do you know what is in milk which our bodies need to stay healthy?



Milk contains the following in significant quantities:

- Protein
- Sugar
- Fat
- Calcium
- Vitamins: D, B12, Riboflavin
- Minerals: Phosphorus, Calcium

All those things are important for a healthy diet (in the right quantities).

Milk, and the foods made from milk, were one of the most important parts of the Viking diet.

Vikings didn't have refrigerators or freezers. They had to process milk, making other products which lasted longer.

**WHAT
FOODS DO YOU
THINK WE PRODUCED
FROM MILK? HOW ARE
THEY PRODUCED?**



WE PRODUCED:

CREAM
BUTTER
CHEESE

WE ALSO USED
THE BYPRODUCTS
OF BUTTER AND
CHEESE MAKING.

The Vikings collected milk from cattle, sheep, goats and even horses. When left to stand for a while, the cream in raw milk rises to the top.

The Vikings poured the cream off the top and churned it to make butter. To preserve the butter, salt was added to it.

Buttermilk, the liquid left behind, was left to go sour. It was drunk, or used to preserve food.

Milk we buy today is pasteurised, meaning it is heated to kill bacteria. The cream in pasteurised milk doesn't rise to the top.



Far left: A butter churn.

Left: Buttermilk being strained from butter through a cheesecloth. The Vikings used a similar method.



Today we're going to learn
more about the science of the
production of dairy foods.



PLENARY



Evaporated milk and condensed milk



Clotted cream



American 'cheese' slices



Ice cream



Do you know anything about the methods used to produce these dairy foods? Which of them do you think the Vikings would not have been able to produce? Why?

