ACTIVITY 1.4

HOW FOOD IS PRODUCED, PRESERVED AND COOKED

Suggested success criteria
• We will explore how foods are produced, preserved and cooked.
• We will be able to examine food labels and the information they provide.
• We will be able to compare and discuss different cooking methods.
KEY STAGE 2 SECTION 1: HOW FOOD IS PRODUCED

SCREEN 1

KEY MESSAGE
Ingredients can be used in different ways to make different foods.

Screen 1 shows a number of raw ingredients or animal sources and the processes that they undergo to become a food product.

The screen shows a number of food items across the top. Ask the children to make suggestions themselves about what other food products can be made with the raw ingredients (for example butter from milk and bread from wheat). The children’s answers can be typed on the screen.

Teaching Aid
Additional Teacher’s Notes on page 37 provide more information about ingredients and the food made from them.

ACTIVITY 1

Ask the children to look at the food at home and to write down the different ingredients the CD or you can download it from www.safefood.eu/EatTasteGrow Print some copies for the children to use at home. There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying. When you get the worksheets back, make a list and discuss the results in class.

SCREEN 2

KEY MESSAGE
The foods we eat come from animals and plants.

Screen 2 shows a video. The video plays automatically and you can pause it at any time by clicking on the ‘Pause’ button.

After watching the video encourage the children to discuss what happened during it and what they learned.

Ask the children to discuss different types of foods that they eat and whether they come from animal or plant sources.
CLASSROOM

ACTIVITY 1

The screen shows images of food arranged in circles. Click the ‘Print’ button to print out three separate circle images. Then cut out the images and stack them together. Food sources (plant and animal) can then be matched up with ingredients and food products. Ask the children to turn the wheels to match the food sources (plant or animal) with the ingredients and food products. Ask the children to colour in the final chart. The children can work in small groups or on their own. A copy of the food circle drawings are provided in the Printable Resources section for Key Stage 2 for photocopying. The food circles can be downloaded from www.safefood.eu/EatTasteGrow

ACTIVITY 2

Ask the children to suggest what foods are made using the raw ingredients shown on the worksheet you print off. Encourage them to think of more examples. They could include the following:

- **Beef products** – chop, steak, stewing meat, roast beef, burger
- **Wheat** – bread, scones, croissants, cakes, pasta
- **Dairy** – cheese, yoghurt, icecream, buttermilk
- **Chicken** – chicken wings, chicken legs, chicken nuggets and chicken burgers.
- **Orange** – fruit salads, marmalade and juice.

There is a worksheet on the CD or you can download it from www.safefood.eu/EatTasteGrow Print some copies for the children to use at home. There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying. When you get the worksheets back, make a list and discuss the results in class.
KEY STAGE 2 SECTION 1: HOW FOOD IS PRODUCED

KEY MESSAGE
A lot of the food we eat doesn't look like a meal until it has been prepared, cooked and presented attractively.

Screen 4 is a video which shows some primary school children treat themselves to a meal at a fancy restaurant to find out more about food.

After watching the video encourage the children to discuss what happened in the video and what they learned.

WHERE DOES IT COME FROM?
VIDEO

SCREEN 5

KEY MESSAGE
There is a specific process involved in the production of milk.

Screen 5 shows a video on the production of milk. The video plays automatically and you can pause it at any time by clicking on the ‘Pause’ button. After watching the video encourage the children to discuss what happened during it and what they learned.

Ask the children to discuss different types of dairy foods that they eat.

MILKING

SCREEN 6

KEY MESSAGE
Milk can be processed in different ways to produce different foods.

Screen 6 shows a dairy cow on one side and a number of foods made from milk on the other. Explain, using the examples on the screen, that the same raw materials can be processed in different ways to produce different foods. Click on the button to reveal the answers.

Butter
Butter is made by churning cream or milk. Churning produces small butter grains floating in a watery liquid called buttermilk. The buttermilk is drained off. Then the grains are pressed and kneaded together to form butter.

Yoghurt
Yoghurt making is a process similar to cheese making, only the process stops before the curd becomes very hard and turns into grains.

Cream
Cream is the fat skimmed off the top of milk or separated by machines.

Ask the children to discuss different types of dairy foods that they eat.

MILK IS USED TO MAKE MANY DIFFERENT DAIRY FOODS
KEY STAGE 2 SECTION 1: HOW FOOD IS PRODUCED  

HOW FOOD IS PRODUCED, PRESERVED AND COOKED

SCREEN 7

KEY MESSAGE
Food preservation is the process of treating a food so that it keeps for longer and slows down food ‘going off’ or rotting.

Screen 7 lists some of the reasons for preserving food.

Ask the class if they can think of any foods that have been preserved in some way.

WHY DO WE PRESERVE FOODS?

HOME

ACTIVITY 1

The worksheet shows different foods. Ask the children to record on the worksheet where the foods are stored. There is a worksheet on the CD or you can download it from www.safefood.eu/EatTasteGrow. There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying. When you get the worksheets back, make a list and discuss the results in class.

SCREEN 8

KEY MESSAGE
There are lots of different methods of preserving food (putting in brine, freezing, smoking, canning, drying).

Screen 8 shows a number of different foods and methods of preserving food.

Click ‘Show example’ to display the preserved foods. Go through the on-screen examples with the children.

Ask the class to talk about the foods they eat that have been preserved.

TEACHING AID
Additional Teacher’s Notes on page 37 provide more information about preservation methods.

CLASSROOM

ACTIVITY 1

The worksheet that you print off shows different foods. Ask the children to show on the worksheet if the foods can be canned or frozen. There is a worksheet on the CD or you can download it from www.safefood.eu/EatTasteGrow. There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying. When you get the worksheets back, make a list and discuss the results in class.
KEY MESSAGE
There are many different ways to cook food. Some are healthier than others.

Screen 10 shows different methods of cooking food. Use this screen to discuss the methods in more detail. Ask the children which are the healthy ways to cook food and why.

Teaching Aid
Additional Teacher’s Notes on page 38 provide information about different cooking methods.

CLASSROOM
ACTIVITY 1
Discuss with the children that different food ingredients and cooking methods can be used to make a meal. Review the food groups and discuss what types of food belong in each food group. Ask the children about different cooking methods and how to cook tasty, healthy meals.

Break the children into teams of at least two people. Each team gets a sheet that lists 20 ingredients. Looking at the list, they are asked to create two tasty meals using some of the ingredients. Their answers should include how the food will be cooked.

SCREEN 11
KEY MESSAGE
There are many different ways to cook food. Some are healthier than others.

Click on Screen 11 to visit the British Nutrition Foundation website at www.foodafactoflife.org.uk to see cooking videos that show different cooking methods.

After watching the video encourage the children to discuss how food is cooked at home.
**CLASSROOM**

**ACTIVITY 1**

Invite the school cook into the classroom and ask him or her how they plan a menu and what they do to make sure they provide a healthy and balanced diet. Ask the children to work with the school cook to plan a day’s menu for the school.

**HOME**

**ACTIVITY 1**

Ask the children to try steaming and boiling potatoes with a grown up and time how long each method takes. The results can be presented in a range of numeracy-based charts. There is a worksheet on the CD or you can download it from www.safefood.eu/EatTasteGrow. There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying.

**SCREEN 12**

**KEY MESSAGE**

It’s fun to experiment with food!

Screen 12 shows different ways of having fun with food. Describe, using the image on the screen, how you can have fun with food.

**CLASSROOM**

**ACTIVITY 1**

Chop up different types of fruit and put them onto separate plates. Ask the children to close their eyes and try one piece of fruit. Ask the child to describe how it tastes and to guess which fruit they are eating. Ask the child to open their eyes to see if they were right.
**CLASSROOM**

**ACTIVITY 2**

Introduce the children to the colour wheel. See if they can cut out pictures of fruit and vegetables from magazines to go with all the primary and secondary colours in the colour wheel. Make up a large collage display.

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**HOME**

**ACTIVITY 1**

Ask the children to watch a grown up cooking a meal and use the worksheet to record all the different cooking methods. There is a worksheet on the CD or you can download it from www.safefood.eu/EatTasteGrow There is also a copy of the worksheet in the Printable Resources section for Key Stage 2 for photocopying. When you get the worksheets back, make a list and discuss the results in class.

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**SCREEN 13**

**KEY MESSAGE**

*Vegetables can be eaten in lots of different ways.*

Screen 13 is a ‘drag and drop’ game. Ask the children to design their own pizza using the different vegetables shown on the screen.

Print out each child’s pizza and make a display showing the different designs and pictures they have made.

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**DESIGN A PIZZA GAME**
KEY STAGE 2 SECTION 1: HOW FOOD IS PRODUCED

ACTIVITY 1.4

ADDITIONAL TEACHER’S NOTES

SCREEN 1 – FOODS THAT ARE MADE FROM...

Ingredients and the food and dishes made from them

Here are some examples.

Eggs: scrambled eggs, poached eggs, boiled eggs, fried eggs, pastry, meringue, quiche, omelette.

Beef: beef stew, shepherds pie, beef curry, beef goulash, beef burgers, roast beef, spaghetti Bolognese, lasagne.

Milk: cheese, cream, custard, rice pudding, porridge, hot chocolate, milkshake.

Wheat: bread, crackers, biscuits, scones, croissants.

SCREEN 8 – METHODS OF PRESERVING FOOD

Preserving food increases the shelf life of fresh, seasonal foods that makes it last longer. Fresh fruit and vegetables will not be good for more than a week or so depending on how they are stored, but dried, canned, or frozen fruit and vegetables can last for months, even years.

Because food is so important to survival, food preservation is one of the oldest technologies used by human beings. The most ancient and highly reliable method for preserving food is drying. People from the start of time have dried herbs, meats, fruits and vegetables to store them. Historians have even credited the ability to store foods in this way with allowing the first advances toward civilization.

The basic idea behind all forms of food preservation is to either:
• Slow down the growth of bacteria; or
• Kill the bacteria altogether.

Different preservation methods commonly used today, include the following:

Cold Stores
Cold storage such as fridges can store a variety of food. The temperature depends on the food being stored but it will generally be between 5 and 10 degrees centigrade. This cool temperature prevents rotting and spoiling.

Freezing
Freezing is one of the most commonly used processes for preserving a very wide range of foods.

The true flavour, colour and appearance of the food is kept well during freezing. Most vegetables are blanched (put in boiling water for a very short time), dried and then frozen. An example of this method is frozen peas. Fruits can be frozen dry or in sugar or syrups.

Pickling
Vegetables can be pickled raw or cooked. They are stored in vinegar, which is a weak acid, and this prevents bacteria from spoiling the food. Even eggs can be cooked and pickled in vinegar and spices. Pickled onion, beetroot and cucumbers (as gherkins) are more common.

Making jams and jellies
Fruit is cooked and softened, sugar is added and the mixture is boiled. When a certain temperature is reached, the jam can be taken off the heat and poured into jars. As it cools, it sets. Jellies are strained jams, without pips or whole fruits.
Drying
Drying is one of the oldest methods of preserving food. Many fruits can be dried (for example apples, pears, bananas, mangoes, papaya). Currants, sultanas and raisins are all forms of dried grapes. Drying is also used to preserve cereal grains such as wheat, maize, oats, barley, rice, millet and rye. Foods can be dried, either in the sun or by artificial heat.

Smoking
Meat, fish and some other foods can also be preserved through the use of smoke. The combination of smoke and heat to dry the food without cooking it preserves the food.

Canning and bottling
Canning and bottling involves cooking foods, sealing it in sterile cans or jars, and boiling the containers to kill or weaken any remaining bacteria. Food preserved by canning or bottling is at risk of spoiling once the can or jar has been opened. Lots of care is needed during the canning or bottling process so that water or micro-organisms do not get into the can. If this happens, gas produced in the can or bottle will cause it to swell or burst. This is why you should never buy a damaged can in the supermarket.

SCREEN 10 – THERE ARE MANY DIFFERENT WAYS TO COOK FOOD

Types and health benefits
The healthiest cooking methods are those that use the least fat and provide a lot of flavour without adding large amounts of salt. Trimming fat from meat before cooking and draining off fat from cooked foods are ways of reducing fat content. Starchy foods absorb fat, so using fat-free cooking methods with foods like potatoes is preferable.

Foods containing a mixture of foods from different food groups (for example beef stew with carrots, vegetable stir fry with nuts and noodles, baked potatoes with baked beans and cheese, low-fat grilled burger in a bread roll with salad) are very nutritious.

<table>
<thead>
<tr>
<th>Method</th>
<th>Guidance</th>
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<tbody>
<tr>
<td>Baking</td>
<td>Baking is using an oven to cook food, usually at lower temperatures. Try not to add any extra fat or oil.</td>
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<tr>
<td>Boiling</td>
<td>Boiling is cooking foods in hot water. Avoid boiling vegetables for too long to reduce the loss of nutrients and try not to add salt to the water.</td>
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<tr>
<td>Grilling</td>
<td>Make sure the grill is hot before adding the food to ensure the outside of the food is quickly sealed and juices are not lost. Grill food on a rack so fat can drain away.</td>
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<tr>
<td>Poaching</td>
<td>Poaching involves simmering foods, such as eggs, in liquid until it’s cooked through.</td>
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<tr>
<td>Roasting</td>
<td>Roasting is similar to baking in that you cook the food in the oven but roasting involves higher temperatures. Trim off fat before cooking and try not to add extra fat or oil.</td>
</tr>
<tr>
<td>Steaming</td>
<td>Steaming involves cooking food, usually on a stove top, with a steamer so that the steam actually cooks the food. It’s one of the healthiest ways to cook vegetables and fish because steamed food contains more nutrients.</td>
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<tr>
<td>Stir frying</td>
<td>Stir frying is cooking food in a large pan or wok on the stove over a high heat and stirring frequently. But be careful of using sauces with a lot of salt.</td>
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