

**FOOD
TECHNOLOGY
SUMMER 1
KNOWLEDGE
ORGANISERS**





Basic cooking skills are required to make a dish.

Grate



Mix



Peel



Snip



Spoon



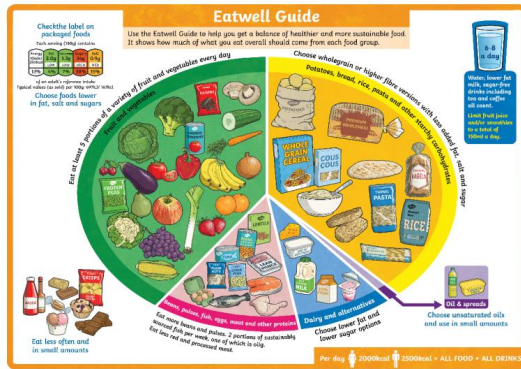
Spread



Thread



Whisk



The UK's healthy eating model is called The Eatwell Guide and it has five groups: **Fruit & Vegetables, Fats, Proteins, Dairy and Carbohydrates.**



Claw grip

Bridge hold

Key Knowledge

Design-make-evaluate process

Bread is a staple food product eaten across the world.

Bread is one of the oldest known prepared foods.

Dough is a malleable paste made out of grains.

Gluten is a protein that allows bread to develop and create large pockets of air.

Resting allows to gluten to relax.

Leavening is the process of adding gas to the bread before or during baking so a lighter and more easily chewable bread is produced.

Bread can be leavened by adding chemicals such as baking powder.

Bread can be leavened by using yeast.

Yeast are micro-organisms that ferment the carbohydrates in bread creating carbon dioxide.

Proofing is the final rise of the bread before baking.

Nutrition

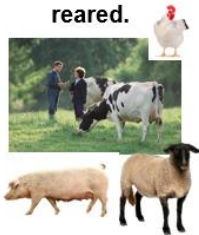
Bread is a good source of carbohydrates, protein, B vitamins and the minerals calcium and iron, wholemeal flour is also a very good source of dietary fibre.



Plants are grown.



Animals are reared.



Fish and shellfish are caught.



Where is my food from?

Once grown, reared or caught, food is processed to make it edible and safe. For example: milk is from a dairy cow; apple juice is from apples which grow on trees; a tomato is a fruit which grows on a plant; mashed potato is made from potatoes (a plant) which grows under the ground; ham and bacon are made from pork which is the meat from a pig; toast is made from bread, bread is made from flour, flour is made from the plant called wheat (it is milled).

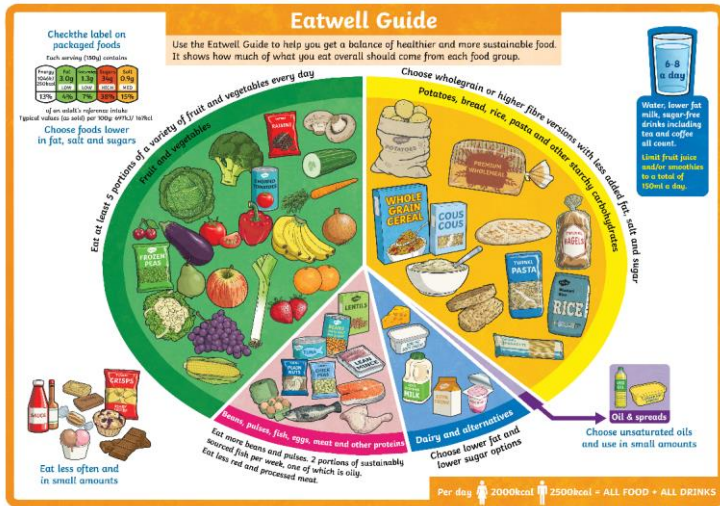


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Let's get ready to cook!



After cooking Wash equipment in warm water and washing up liquid and dry it thoroughly. Clean down surfaces. Put ingredients or food away, wrap, seal, refrigerate.



Vitamins and minerals are needed for general good health.

Some have special jobs: vitamin A is needed for night vision; vitamin C is needed for the maintenance of healthy skin; iron is needed for healthy blood; calcium is needed for the growth and maintenance of strong bones and teeth.

Units of measurement	
solids	liquids
 • ounces (oz) • pounds • milligrammes • grammes.	 • millilitres • litres • fluid ounces • pints.

Pasta and Pizza are popular foods from Italy. Flatbreads are cooked all over the world from Mexican tortillas to Indian chapatis. They are high in carbohydrates.



Our senses help us like or dislike a food.



Name of the Nutrient	Sources	Function	
Carbohydrates (energy giving food)	Rice, potato, wheat, sugar	Provides energy	
Fats (energy giving food)	Butter, ghee, milk, cheese	Gives more energy compared to carbohydrates	
Vitamins and Minerals (protective food)	Fruits and vegetables	Required for normal growth and development	
Proteins (body building food)	Milk, eggs, meat, fish, soybean	Helps in building and repair of body	

Food is produced all around the world.
A lot of the food we eat is grown in the UK, but some food comes from other countries where the weather or seasons are different to ours.

UK food



World food



Some of the food we eat is seasonal in the UK. This means it only grows at certain times of the

Spring
(March, April, May)



Summer
(June, July, August)



Autumn
(September, October, November)



Winter
(December, January, February)



Function of Flour:

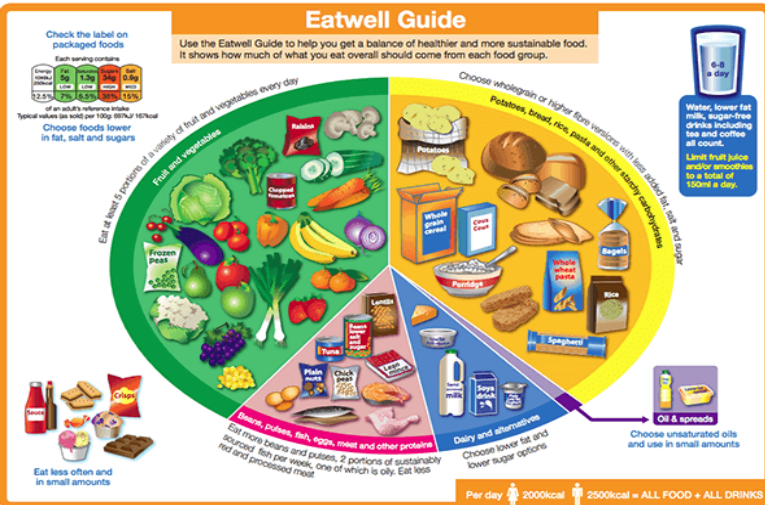
The structure of the pastry. Soft, plain flour is used for shortcrust pastry to give it a **short crumb**. Strong plain flour is used in choux and Flaky or puff pastry as it contains more **Gluten** - this is needed to make the dough and give the pastry **elasticity**.

Function of fat:

Fat **shortens** the mixture in shortcrust. It **traps air** between the layers in flaky Pastry. It adds **colour** and **flavour**.

Function of Water:

Binds dry ingredients together.



8 tips for healthier eating

These eight practical tips cover the basics of healthy eating, and can help you make healthier choices.

1. Base your meals on starchy carbohydrates.
2. Eat lots of fruit and veg.
3. Eat more fish - including a portion of oily fish.
4. Cut down on saturated fat and sugar.
5. Eat less salt (max. 6g a day for adults).
6. Get active and be a healthy weight.
7. Don't get thirsty.
8. Don't skip breakfast.

Food needs to be stored properly and within its date mark.

USE BY:

25/08/20

KEEP REFRIGERATED

BEST BEFORE:

25/08/21

STORE IN A COOL DRY PLACE

Foods high fat, salt and sugar

- Includes products such as chocolate, cakes, biscuits, full-sugar soft drinks, butter and ice cream.
- Are high in fat, sugar and energy and are not needed in the diet.
- If included, should be had infrequently and in small amounts.

Composite/combination food

Much of the food people eat is in the form of dishes or meals with more than one kind of food component in them. For example, pizzas, casseroles, spaghetti bolognese and sandwiches are all made with ingredients from more than one food group. These are often called 'combination' or 'composite' foods.

Food labelling

Information on the labels of pre-packed food and drink products can be legally required or just for consumer information.

Legally required information:

country of origin and place of provenance; date mark; list of ingredients (including additives and allergens); name and address of the manufacturer, packer or seller; name of food or drink; nutrition information; storage and preparation instructions; weight or volume.

Consumer information:

front-of-pack nutrition labels; price; serving suggestions/image.



Content source.

Why food is cooked:

1. To make it safe to eat
2. To improve the shelf life
3. To develop flavour
4. To improve texture
5. To give variety

Methods of heat transfer

Convection - when the environment (air, water or oil) is heated up.

- e.g. - baking a cake
- boiling an egg

Conduction - when heat is transferred directly.

- e.g. - frying an egg

Radiation - when heat radiates

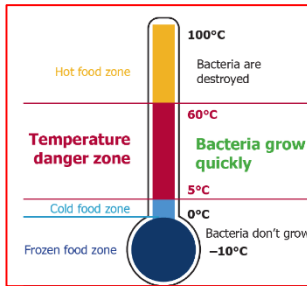
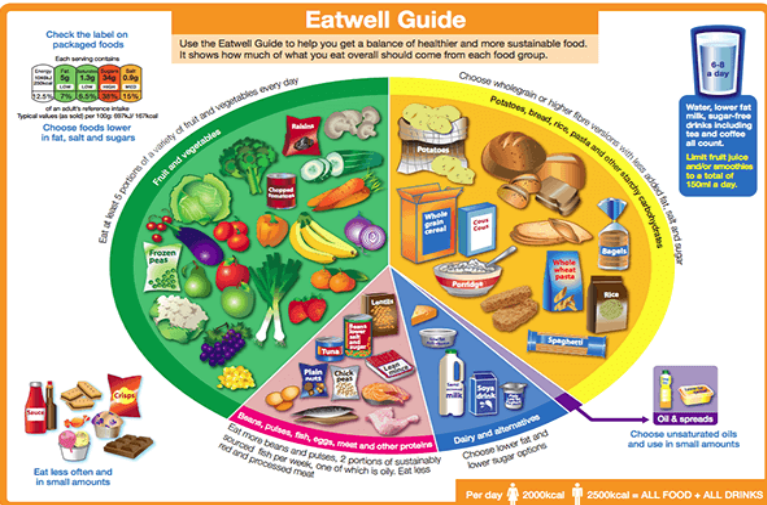
- e.g. - toast

Hygiene rules

- Wash hands!
- Tie hair up
- Wear apron
- No false nails or nail varnish
- Antibacterial spray on surfaces before & after cooking

Potatoes, bread, rice, pasta or other starchy carbohydrates

- Base meals around starchy carbohydrate food.
- This group should make up just over a third of the diet.
- Choose higher-fibre, wholegrain varieties.



Symptoms of food poisoning
The symptoms of food poisoning include:
nausea;
vomiting;
stomach pains;
diarrhoea.

Bacterial growth and multiplication
All bacteria, including those that are harmful, have four requirements to survive and grow:

- food;
- moisture;
- warmth;
- time.

Food skills	Techniques
Knife skills - Chopping	Bridge hold, claw grip, slice, dice, julienne, baton's, meat and vegetable preparation
Organisation / tidying skills	Being able to work hygienically and safely to produce recipes and ensure all equipment, utensils and work area is fully clear and tidy. Teamwork and communication. Following personal hygiene rules.
Food safety	Using food probes for meat to check for safe temperatures (75°C)
Weighing and measuring	Demonstrating accurate measurement of liquids and solids. Being able to use both manual and digital scales.
Use of equipment	Oven, hob, chopping boards, knives, sieve, mixing bowl, measuring jug/spoons
Making sauces	Reduced sauce, roux sauce
Working with ingredients	Using a range of ingredients from the Eatwell Guide to create recipes.
Test for readiness	Using a knife/skewer, finger or poke test, bite or visual colour check to establish whether a recipe or ingredient is ready.
Adapting recipes	Using a nutritional analysis program to analyse recipes. Making adaptations to make the recipe better suit the Eatwell Guide / healthy eating requirements.
Judge and manipulate sensory properties	Demonstrate how to taste and season during cooking. Self-evaluation of practical dishes made.
Food science	Learning how foods react with heat and acid and adapt accordingly.
Cooking methods	Using a variety of cooking methods including conduction, convection and radiation.
Food styling	Quality and creative presentation techniques. Using garnishes and decorative techniques where possible.

Food skill	Food skill	Food skill	Food skill
Bake	Fry and sauté	Portion / divide	
Beat	Glaze and coat	Prove	
Blitz, puree and blend	Grate	Roast	
Casserole	Grill	Roll-out	
Chill	Juice	Rub-in	
Core	Knead	Sift	
Cream	Layer	Snip	
Crush	Mash	Spread	
Cut out	Measure	Stir-try	
Cut, chop, slice, dice and trim	Melt, simmer and boil	Weigh	
Decorate and garnish	Microwave	Whisk	
Drain	Mix, stir and combine	Zest	

High risk food
Bacteria easily multiply on foods known as 'high-risk food'. These are often high in protein or fat, such as cooked meat and fish, dairy foods and eggs. Cooked pasta and rice are also regarded as high risk foods if they are not cooled quickly after cooking and stored below 5°C.

What are raising agents? Raising agents include anything that causes rising within foods, and are used when making baked goods including cakes, bread and meringues.

What is aeration? The definition of aeration means 'the introduction of air into a material'. The process of adding air to food by using a raising agent is called 'aeration'

Functional characteristics of ingredients
Ingredients provide a variety of functions in recipes, such as: browning, e.g. flour in a bread roll (dextrinisation); raising, e.g. yeast in bread (aeration); setting, e.g. scrambled eggs (coagulation); thickening, e.g. flour in a roux sauce (gelatinisation).

Seasonality
Fruit and vegetables naturally grow in cycles and ripen during a certain season each year. Some meat and fish can also be seasonal. Advantages of buying food in season include:

- it is fresh;
- best flavour, colour and texture;
- optimal nutritional value;
- supports local growers;
- lower cost;
- reduced energy needed to transport.

Content source.

Hygiene rules - meats

Tie hair up Wear apron Wash hands!
Coloured chopping boards
No false nails or nail varnish
Cleaning surfaces before & after cooking
Avoid cross contamination