

A FEAST FOR THE SENSES



When we eat, we feed more than just our bodies. By tasting new flavours, we stimulate our senses. By sharing a meal with others, we nourish our souls. By trying new cuisines, we travel the world, experiencing new cultures and traditions. Food does more than just keep us alive; it can bring us joy, too.



You can explore food with all five of your senses: sight, smell, hearing, taste and touch. Have you ever bitten into the fuzzy skin of a ripe peach and felt its sweet, sticky juices running down your chin? Have you heard the crunch of a salty cracker as you bite into it? Have you smelled the warming scent of bread baking in the oven? Have you tasted a silky and savoury miso soup with soft, chewy udon noodles, or eaten warm apple pie in the same mouthful as cold vanilla ice cream?

The act of eating provides us with a moment to sit down together with the people you live with, or welcome in visitors, to share food and talk, argue, laugh and solve problems. Meals give our days fixed points to work around, times when we can stop what we're doing and pause to nourish our bodies and minds.

FOOD AND OUR BODIES

As well as being delicious, food is as vital to our bodies as fuel is to a car.

Food provides more than just energy, though. The helpful substances it contains are called nutrients, which keep every part of our body in good working order and help it to repair itself.



CARBOHYDRATES

Plants store energy as carbohydrates, the most common form of which is sugar. Humans get most of their energy from carbohydrates in potatoes, wheat, rice, corn and other plants.



FATS

Human bodies need fat. The body can make most of the fat it requires from other foods, but we have to eat a small amount to help absorb the vitamins A, D, E and K, and provide essential fatty acids, which our bodies can't produce.



FIBRE

Fibre comes from the parts of plants that our bodies can't digest easily, such as husks and stems. It's found in fruit and vegetables, pulses and whole grains. Fibre is important because it helps other foods pass through the digestive system more quickly, and softens our poo.



MINERALS

Minerals are chemical elements that we need in tiny amounts, such as calcium, iron, magnesium, phosphorus, potassium, sodium and zinc, which are needed by the body for many different functions, such as keeping your heart healthy.



PROTEINS

Proteins are the basic building blocks for all plant and animal life. Your body needs protein to grow and to repair itself. Plants can make their own protein, but we have to eat it, usually in the form of meat, fish, pulses, soya beans and dairy products.



VITAMINS

Vitamins are essential in small quantities for specific bodily functions like eyesight, and to prevent certain diseases. Vitamins were discovered in the early twentieth century, and each one was given a letter: A, B, C, D, E and K.

WHAT'S THE BEST WAY TO STAY HEALTHY?

For most people, the best way to stay healthy is to eat as many different kinds of food as possible, without consuming too much of any one thing. This ensures a balanced diet.

Why not experiment by trying a new food each month? If we don't enjoy our first experience of a new food, it often happens that the more we eat it, the more we get to like it.

It's good to avoid eating too many processed foods because they often contain unhealthy amounts of fat, sugar or salt. Processed means anything in which the ingredients have been changed into a different form before you buy it, for example in breakfast cereals, crisps, biscuits, sauces and ready meals.

SPECIAL DIETS

Some people avoid eating certain foods that make them ill. They may have an allergy to something, or they may have trouble digesting a particular food (called an intolerance), which may give them a stomach ache.

Some people do not eat specific foods for religious reasons. In Judaism and Islam, for example, eating pork is forbidden, and Jainism (an ancient Indian religion) requires people to be vegetarian, which means not eating any meat or fish.

Some people choose to become vegetarian or vegan. Veganism means eating only plant-based foods and no meat, fish or dairy products. They might choose this for different reasons: perhaps because of the environmental cost of eating meat, or because they don't feel it's right to eat animals or animal products.

FOOD AND THE PLANET



Producing enough food for everybody to eat has a big impact on our planet and the plants and animals we share it with.

It takes up a lot of land and water, and uses machinery that gives out carbon emissions (these are releases of carbon dioxide gas that collect in the atmosphere and cause the Earth's temperature to rise).

When food is transported around the world so that ingredients are available whenever we want them, this also creates carbon emissions. For example, bananas need a hot climate in which to grow, so in order for people to eat them in Europe, they have to be transported thousands of miles by boat or plane.

Large-scale agriculture (the growing of plants for food) also has an effect on the planet. The chemicals used to get rid of weeds and pests can damage the soil and other creatures living nearby. Important landscapes such as rainforests are cut down to make space for growing crops like oil palm trees to make palm oil, which is used in many processed foods.

Thinking carefully about the food we eat is something we can all do to look after the Earth. Eating less meat and fewer dairy products, and more food that comes from plants, will help.

If you want to take it further, knowing the origins of your food is a good place to start. You could try to choose ingredients that haven't been grown or produced too far away from where you live. You could look for organic food, which is made using no pesticides or weedkillers, and often means better living conditions for animals.

It's not always easy or even possible to make these choices, of course. But whatever we can do will help to make a difference.



A WORLD OF INGREDIENTS

People around the world eat all kinds of different things. There are lots of ways to eat well, as long as you get enough of the essential nutrients like protein, vitamins and minerals.

The type of food a country can grow depends on its weather and what the land is like. For example, tropical fruit such as mangoes need lots of sunshine and moisture, so they can only be grown in warm countries that get plenty of rain. They are then transported all around the world.

Most countries have staple foods – these are plants that grow well there and form a big part of people's diets, like corn in the US, rice in China and Japan, cassava in parts of Africa, and wheat in Europe. The dishes that a country is best known for often include its staple food, such as sushi in Japan, fufu dumplings made from cassava and yam in West Africa, and lentil dals in India.

The majority of countries can't produce all the food they need, so they import some things from elsewhere. But it's much better for the environment to eat locally grown food – it doesn't have to travel as far to arrive on your plate, so it helps to reduce carbon emissions.

Did you know where these key ingredients come from, and how they are produced?

ALMONDS

More than half the almonds in the world are grown in California in the US, with the rest mostly in Europe and the Middle East. Although almond growers use modern industrial methods, they still depend on bees to pollinate the almond trees.



AVOCADOS

Avocado trees grow in warm places where the winters aren't too cold, like Mexico, the Dominican Republic, South Africa and Indonesia. They're harvested by hand using a long pole with a basket on the end.



CHOCOLATE

Out of the things you've eaten recently, chocolate has probably travelled the furthest. Most cocoa beans are grown in West Africa, in Ivory Coast and Ghana. They're also produced in Indonesia and in Central and South America. The chocolate itself is mostly made in European countries such as Germany, Belgium and Switzerland, or in the US.



CINNAMON

Cinnamon comes from the dried inner bark of the cinnamon tree, and is either ground to a fine powder or broken into sticks or quills. Most cinnamon is produced in Sri Lanka, India and Myanmar.



CORN

Corn (also called maize) grows all the way from Russia and northern Canada to South America, but most of it is grown in the US, which produces around 370 million tonnes per year. There can be as many as 1,200 sweetcorn kernels on one cob!



GRAPES

Grapes grow on vines and are produced in many countries in southern Europe, the Middle East and the US, as well as in India, South Africa and Chile. They have to be treated regularly with chemicals to keep them fresh until we buy them. The best time to buy European grapes that have not travelled too far is from August to October.



LEMONS

Globally, the countries that grow most lemons are India, Mexico and China. In Europe, the lemons we eat often come from Spain, Morocco or Israel during the winter, and from further away in the summer. The skin of most citrus fruit is covered with a special wax to protect it and make sure it keeps well.



OATS

Unlike many other grains, oats grow well in cool, wet countries, and the world's top producers are Russia, Europe and Canada. There are many



species of wild oat, but only four have been cultivated.

OLIVE OIL

Spain is the world's biggest olive oil producer. As well as being an essential ingredient in cooking, olive oil is used to make cosmetics, medicines, fuels and soap.



PEANUTS

Peanuts grow in many countries, but the biggest crops come from China, India and West Africa. Peanut butter is made in large quantities in North America, as well as in Europe.



PEPPER

Black pepper is native to the Malabar Coast of India and is one of the earliest spices known. The fruits are picked when they begin to turn red and are placed in boiling water, which causes them to turn dark brown or black. They are then dried in the sun for up to four days. The whole peppercorns, when ground, produce black pepper which is used as a seasoning in cooking.



PINEAPPLE

Most pineapples eaten in Europe and America come from Costa Rica, where large-scale plantations have caused damage to the natural landscape. They're also grown in Brazil and the Philippines, among other places. They keep well and preserve their sweet, tangy flavour.



PRAWNS

Small, pink, cold-water prawns are caught in the North Atlantic Ocean. They're usually cooked on the boat while still at sea, then shelled and frozen in factories on land. Large, grey tiger prawns are farmed in warmer waters, often in Thailand or Indonesia.



RED PEPPER

Peppers prefer to grow in warm sunshine, which gives them lots of flavour. They can also grow in glasshouses all year round with automatically controlled water, light and nutrients. Most of the peppers people eat in Europe are grown in this way in the Netherlands.



RICE

About half the world's population depends on rice for food. It is grown in more than a hundred countries, but China and India produce the most.



SALT

Sea salt is made by evaporating shallow pools of seawater until crystals form. Refined table salt

is made by dissolving salts found in deposits underground. Globally, China, India and the US are the biggest salt producers, but many countries produce their own.

SUGAR

Sugar can be made from two different plants: sugar cane and sugar beet. Cane sugar is the most common, and the biggest producers include Brazil, India and China. The main producer of beet sugar is Europe.



SWEET POTATO

Sweet potatoes need warm, dry growing conditions, and most are grown in places like Egypt, Senegal, Israel and the southern US. However, in recent years some cooler countries have found ways to grow their own sweet potatoes.



TOMATOES

Tomatoes are grown in lots of countries where there's plenty of sunlight, but the chief producers are China, India, the US and southern Europe. In colder places like the UK, they are often grown in polytunnels (long tunnels made of polythene plastic that protect crops and keep them warm).



◦ **FRUIT** ◦

Fruit has been a valued source of food since the very first humans walked the Earth. The sweet, juicy crops we love to eat are produced by plants as containers for their seeds, to help them to reproduce. It's amazing to think that plants have come up with such delicious and varied ways to spread their seeds, from tiny blueberries to huge durian fruits. Fruit is produced when the plant's flowers are pollinated. Through this incredible process, fruits of every possible colour, flavour, texture and scent grow and are enjoyed all around the world, by animals and humans alike.



• **FRUIT** •

CITRUS FRUIT

Citrus fruits taste both acidic and sweet, which makes them useful for cooking with as well as for eating raw.

A squeeze of lime or lemon juice can transform a dull dish. And few things are nicer than the smell when you peel an orange! The history of citrus trees goes back 20 million years, and their fruits have been enjoyed for thousands of years.

The brightly coloured skin of citrus fruits contains fragrant essential oils – this is the zest and can be peeled or grated to use in cooking. Underneath that is a layer of bitter white pith, which is not good to eat. The juice is contained inside tiny teardrop-shaped pouches called vesicles that are packed inside the segments.

Citrus trees grow best in hot countries: some types produce fruit all year round and some only at certain times of year. They hybridize easily, when pollen from one citrus tree pollinates a different type of tree to create a new variety, so there are many variations on the main types below, such as calamondins, limequats and tangelos.



5. Bergamot



6. Yuzu



1. Lemon



4. Orange



7. Lime



2. Citron



8. Kumquat



9. Mandarin



3. Grapefruit



10. Pomelo

1. LEMON
Although they aren't usually eaten on their own, bright yellow lemons are essential in kitchens all around the world. Look out for special varieties, such as aromatic Amalfi lemons from Italy or sweeter Meyer lemons from America.

2. CITRON
One of the first citrus fruits to arrive in Europe, citrons are very large – they can grow to about 30 centimetres in length. Their aromatic zest has been used for many years in perfume, medicine and religious rituals.

3. GRAPEFRUIT
Grapefruits are more bitter in flavour than other citrus fruits, and can be eaten raw (some people have them for breakfast) or used in cooking, usually in desserts. Pink grapefruits are slightly sweeter.

4. ORANGE
Oranges come in sweet varieties for juicing and eating, including Valencia and navel oranges, as well as bitter ones for cooking and making marmalade, such as Seville oranges. Blood oranges have a sweet flavour and a deep ruby-red colour.

5. BERGAMOT
A variety of orange mostly grown in Italy for its aromatic skin, which is used to flavour Earl Grey tea and as an ingredient in perfumes and cosmetics.

6. YUZU
A small, sour, bright yellow citrus fruit commonly used in Japanese cooking. The flesh is too sour to eat, so normally the juice or zest are used.

7. LIME
Limes are used in cooking to add fragrance and acidity, most often in Asia, Mexico and Iran. They are sometimes used dried, and the aromatic leaves and zest of a type called makrut, or Thai lime (sometimes called kaffir lime), are popular in South East Asia.

8. KUMQUAT
Not actually a citrus fruit but from the citrus family, the kumquat looks like a miniature, oval-shaped orange. It can be eaten skin and all. Kumquats are often used to make preserves and marmalade.

9. MANDARIN
The word 'mandarin' refers to any type of small orange citrus fruit, such as tangerines, clementines and satsumas. They are sweet, juicy and delicious eaten fresh. Easy peelers are mandarins bred to have looser skins.

10. POMELO
A large citrus fruit with a thick skin, mostly grown and eaten in Asia. It is the ancestor of the grapefruit, but varies in sweetness and sourness. A similar fruit, unfairly called the ugli fruit, is grown in Jamaica.

APPLES & PEARS

From Snow White to William Tell, from the Garden of Eden to the Trojan War, apples have featured in stories and legends for thousands of years.

The first wild apple and pear trees came from Central Asia, and there are now at least 7,000 apple and 1,000 pear varieties all over the world.

Apples are an important crop in the UK, and there is a tradition of 'wassailing', or singing to the trees in the orchard to wake them up, scare away any evil spirits and help them to bear lots of fruit.

An apple tree grown from an apple seed won't be like its parents, so to be sure of getting the apples they want, apple growers have to attach a cutting to the base of another tree. In 1996, the 'papple' was invented, which is a pear that looks like an apple!

Some types of apples and pears are good for eating just as they are and others are better for cooking in delicious dishes like tarte tatin, fruit pie, brown Betty, cobbler and crumble. Or how about trying the American desserts known as apple slump, apple grunt or apple pandowdy?



1. *Granny Smith apple*



2. *Golden Delicious apple*



3. *Red Delicious apple*



4. *Bramley apple*



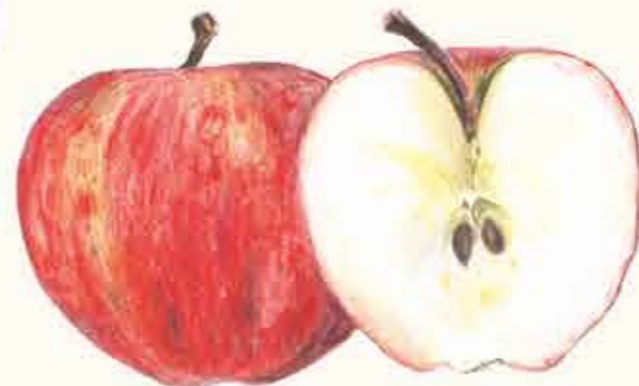
5. *Russet apple*



6. *McIntosh apple*



7. *Pink Lady® apple*



8. *Gala apple*



9. *Cox apple*



10. *Anjou pear*



11. *Conference pear*



12. *Reinette apple*



13. *Comice pear*



14. *Bosc pear*



16. *Williams pear*



15. *Seckel pear*



17. *Nashi pear*



18. *Quince*

1. GRANNY SMITH APPLE

This bright green, crisp apple with tart flesh is one of the most popular varieties. Its name comes from Maria Ann Smith, a British-born Australian woman who grew the first one around 150 years ago.

2. GOLDEN DELICIOUS APPLE

A large, pale yellow-green apple that appeared in America in the early twentieth century by chance when two other apples created a hybrid.

3. RED DELICIOUS APPLE

Strangely, this is not a close relative of the Golden Delicious. Its shiny red skin makes it look as though it has come straight from the pages of a fairy tale.

4. BRAMLEY APPLE

First grown more than 200 years ago, the Bramley apple is the best type for baking with. Its tart flesh turns into a soft, snow-like purée when cooked.

5. RUSSET APPLE

This has a brown-green skin that feels slightly rough, a lovely crisp texture and a distinctive nutty flavour. There are many different kinds of russet apple.

6. MCINTOSH APPLE

One of Canada's most popular apple varieties, the McIntosh is tender and juicy with a classic red-and-green skin. It helped inspire the name of one of the world's most famous computer manufacturers.

7. PINK LADY® APPLE

A tart, crisp apple with a lovely pink blush on its skin. It needs lots of sunshine, so it can only be grown in warm countries.

8. GALA APPLE

A mild, sweet apple with a mottled red-and-yellow skin that is now one of the most popular varieties around the world. It was developed in New Zealand.

9. COX APPLE

Probably the most famous English apple, the Cox has a balanced, sweet, tart flavour and crisp flesh. Its full name is Cox's Orange Pippin.

10. ANJOU PEAR

A short, stumpy variety that comes in green or red versions, it's a great all-purpose pear that's perfect for lunchboxes.

11. CONFERENCE PEAR

This is one of the most popular pear varieties, thanks to its sweet, juicy flesh. It's great eaten either raw or cooked.

12. REINETTE APPLE

Popular in France for around 500 years, the name of this apple means 'little queen'. There are several types, the most famous of which is the yellow-streaked Golden Reinette.

13. COMICE PEAR

These small, round pears are good for eating or cooking with. They have firm, creamy flesh and feel nice to hold in your hand.

14. BOSCH PEAR

The Bosc pear has an aromatic flavour and is crisp and firm. Its long neck and brownish skin make it easy to spot.

15. SECKEL PEAR

The sweetest and tiniest of all the pears, the American Seckel pear is perfect for snacking.

16. WILLIAMS PEAR

One of the oldest pear varieties, Williams pears have a wonderful fragrance and are sweet and soft. They're called Bartlett pears in America and Canada.

17. NASHI PEAR

Although it looks more like an apple, the nashi pear – sometimes called the Japanese or Asian pear – is most definitely a pear. It is crisper than other varieties with a fresh, delicate flavour, and it's lovely in salads.

18. QUINCE

Yellow, knobbly and extremely hard, the quince is an ancient relative of the apple and pear that is highly valued for its fragrance. It's too sour to eat raw but is delicious cooked or preserved, when it turns a beautiful pink colour.