

Year 8 Food Knowledge Organiser: Where Food Comes From / Function of ingredients.

Function of ingredients

Each ingredient has an important role in the making of each dish.

Cupcakes	
Self-raising flour	Makes the cake rise (increase in size).
Caster sugar	Makes the cake sweet.
Margarine	Makes the cake moist.
Egg	Binds the mixture together
Vanilla essence	Adds flavour



Seasonal Foods



What is seasonal food?

Food grows at different times of year in England. The time that food is ripe for eating is known as its season. Food grows in different countries at different times, so if food is not in season in England, it can be transported from another country.

Why is eating seasonal food whenever you can a good idea?

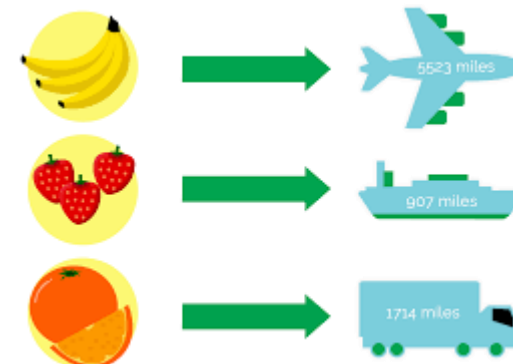
- Seasonal foods are fresher.
- Seasonal foods taste better, as they are full of flavour.
- Seasonal foods have less environmental impact because carbon footprints are reduced.
- Local foods supports the local community.

What is are Food Miles?

The distance food has travelled.
Less food miles are better for the environment.

How to reduce them:

Eat seasonal, local food where possible



What is a Carbon Footprint?

The amount of energy you use during your lifetime.

How to reduce it:

Don't fill the kettle (only boil what you need)

Reduce food waste

Eat seasonal, local food where possible

Reuse/Recycle food packaging

Food Waste

What is food waste?

Food waste is food that is discarded, lost or uneaten.

What is the difference between best before, use by and sell by date?

- Best Before date: It means the product will taste best up until that date. It is still edible and okay to eat a little past the listed date, though you may notice a slight change in texture, flavour, or colour.
- Use by date: The date that food should be used by. After this it may be unsafe.
- Sell by date: a date marked on a perishable product indicating the recommended time by which it should be sold.

Tips for reducing food waste

- Reduce
- Reuse
- Redistribute/recycle
- First in first out
- Store food correctly - use your freezer
- Don't cook too much
- Know the difference between best before and use by dates



Bread	
Strong flour	To provide structure.
Yeast	Makes the bread rise.
Water	Provides moisture.



Bacteria

What are bacteria?

A micro organism that multiply in certain conditions.

Where can bacteria be found?

Everywhere!

Are all bacteria bad?

No- some are good and essential for normal bodily function.

How can you reduce the risk of bacteria?

- Storing food separately
- Storing and cooking foods at the correct temperatures

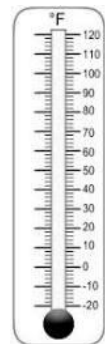
Can we kill bacteria by putting them in the fridge?

No- but keeping food chilled at the correct temperatures will slow bacterial growth.

What do bacteria need to multiply?



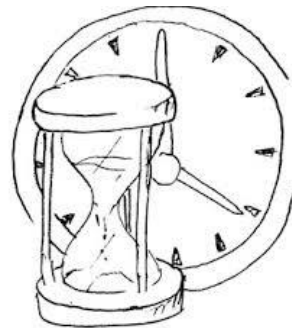
Water: bacteria need moisture to grow



Temperature: bacteria grows when warm



Food: provides the energy for bacteria to grow, multiply and produce toxins



Time: if food is exposed to these things for a long time they will quickly multiply

Why we cook food

Appearance - heat changes the colour and size of food

Taste - makes it taste nicer

Texture - heat changes the texture

Safety - heat kills bacteria so we don't get food poisoning

The 4 C's

Cleaning - wash your hands properly

Cooking - make sure you cook food properly or you could make someone very ill

Chilling - keep it chilly silly

Cross contamination - keep raw meat and cooked food apart

Year 8 Food Knowledge Organiser: The Science of Food

Cross Contamination

What is cross contamination?

Cross contamination is spreading bacteria from one place to another.

What are the four C's to help prevent spreading bacteria?

- Clean
- Cook
- Chilling
- Cross contamination

Why do we use different coloured chopping boards when preparing food?

To prevent the spreading of bacteria (to avoid cross contamination).

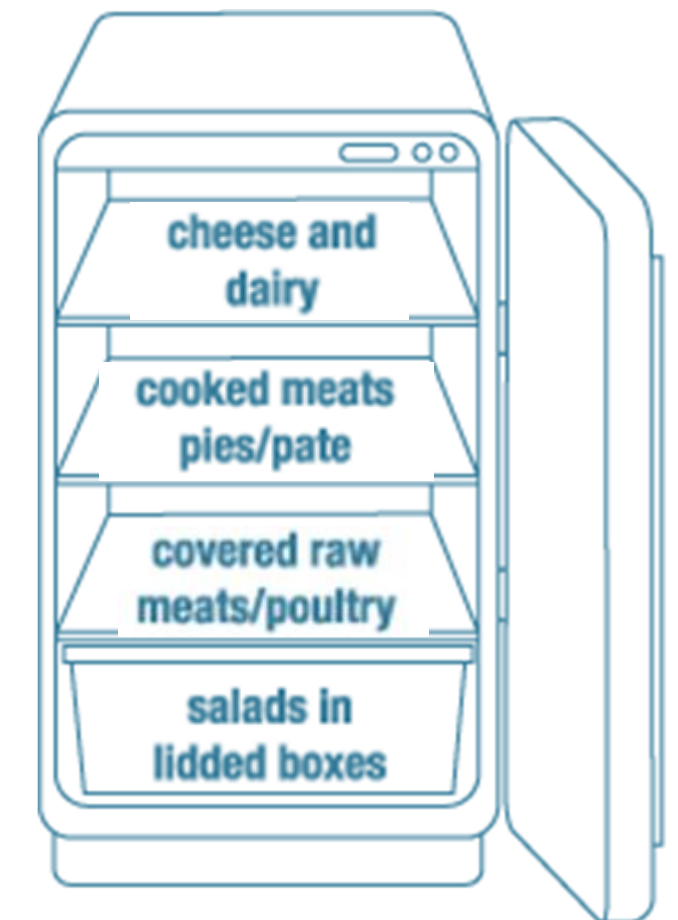


Storing Food

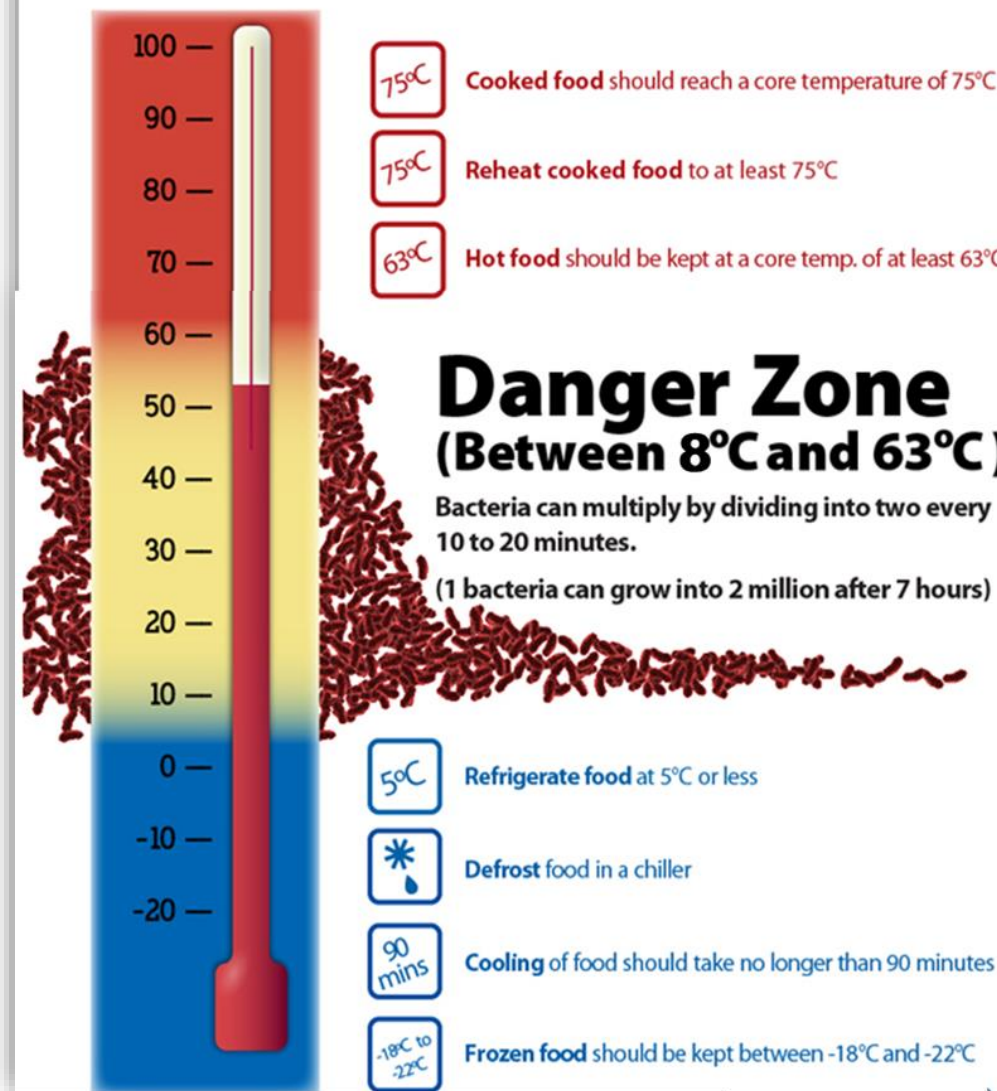
Temperature is really important to keep food safe. The following temperatures should be used:

Refrigeration	Fridges should run at 4°C or below.
Freezing	Freezing of food at -18°C or below will stop bacteria multiplying.
Cooking	Temperatures of 72 °C or above kills almost all types of bacteria.
Danger Zone	The temperature range where bacteria is most likely to reproduce: 8°C-63°C.

To prevent cross contamination (the spreading of bacteria), foods must be stored separately. Follow the rules of food storage within a fridge:



Keep food out of the Danger Zone



What is the Eatwell Guide?

The Eatwell Guide is a guide that shows you the different types of food and nutrients we need in our diets to stay healthy.

Why is the Eatwell Guide important?

The Eatwell Guide shows you how much (proportions) of food you need for a healthy balanced diet.

What are the consequences of a poor diet?

A poor diet can lead to diseases and can't stop us from fighting off infections.

What are the sections on the Eatwell Guide?

- 1. Fruit and vegetables
- 2. Potatoes, bread, rice, pasta and other starchy food
- 3. Dairy and alternatives
- 4. Beans, pulses, fish, egg, meat and other proteins
- 5. Oils and spreads

The Eatwell guide



Macronutrients

Needed in **large amounts** to help the body to function properly

Fat



Function:
Energy
Warmth
Protection of organs



Sources:

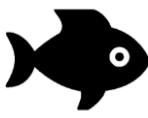
Saturated Fat
(*Bad Fats*)
Meat
Processed Foods
Lard

Unsaturated Fat
(*Good Fats*)
Avocado
Nuts
Olive oil

Too much

- Obesity
- Type 2 diabetes
- Heart Disease

Protein



Function:
Growth and Repair
Energy

Sources:

Plant (LBV)
Nuts
Quorn
Beans
Lentils

Animal (HBV)
Eggs
Fish
Meat

Too much

Turns to fat if not turned into energy

Too little

- Anaemia
- Slow growth in children

Carbohydrates



Function:
Energy



Sources:

Bread
Pasta
Rice
Wheat
Potatoes
Cereals

Sugars:

Cakes
Sweets

We should consume no more than 30g of sugar per day

Too Much

- Weight Gain -Tooth decay
- Type two diabetes -Heart disease

Water

Keeps us hydrated.

Source

Drinks, fruit and vegetables, soup.

Function

- Controls body temperature.
- Gets rid of waste in the body.

Too little

- Dehydration leads to headaches, irritability and loss of concentration.

Fibre

Function:

It helps us poo
It helps to get rid of waste

Source:

Wholegrain, whole wheat, wholemeal cereals,
Peas and beans

Too Little

- Constipation
- Bowel Cancer

Micronutrients

Needed in small amounts to help the body to function properly



Vitamin	Sources	Function
Vitamin A	Fish, eggs, oranges	Helps us to see well
Vitamin C	Oranges, tomatoes, vegetables	Helps to heal cuts, helps the immune system.
Vitamin D	Eggs, the sun	Helps our bones to grow
12 B Vitamins	Cereals, meat, fish	Helps to keep us healthy

Mineral	Sources	Function
Iron	Red meat, spinach, beans and lentils	Helps our red blood cells carry oxygen so that we are not anaemic.
Calcium	Milk, cheese and some cereals	Help us to have strong bones and teeth.

Dietary Needs

People have different dietary needs; this affects what they can and cannot eat.

Key Words:

- **Allergy:** an adverse reaction by the body to certain substances.
- **Intolerance:** a condition that makes people avoid certain food because of the effects on their body
- **Allergic reaction:** the way someone responds to certain food. For example: a rash/swelling/anaphylactic shock



Do not eat the meat of any animal (meat, poultry or fish) or eggs, milk, cheese and honey



Do not eat the meat of any animal (meat, poultry or fish), but they do eat eggs, milk, cheese and honey



Do not eat red meat or poultry but they do eat fish, eggs, milk, cheese and honey

If you were a vegetarian, how could you get your portion of protein?

Sources of protein don't have to be in the form of meat.

- Beans (kidney beans, chickpeas, lentils, etc.)
- Nuts
- Soy and low-fat dairy products
- Micro-protein (Quorn, etc.)

Some people make a choice not to eat certain foods. Reasons include:



➤ Religious beliefs



➤ Medical reasons



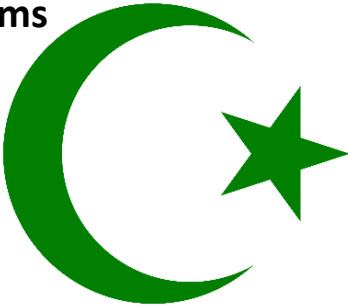
➤ Taste/texture of food



➤ Ethical beliefs

Religious/cultural reasons

Muslims



- Do not eat pork
- Meat must be halal
- No alcohol or shellfish

Jews



- No pork or shellfish
- No milk and meat together
- Meat must be kosher

Medical reasons

Name of medical condition	Food/drinks to avoid	Reason to avoid
Diabetes	Starchy food/ high in sugar	High in saturated fat. Can lead to heart disease, while excess sugars can cause unwanted weight gain and blood sugar spikes
Nut allergy	Nuts, blended cooking oil, margarine with nuts oils and often seeds	the immune system overreacts to proteins in these foods
Lactose intolerance	Milk, cheese, yogurt, processed food	cannot metabolize lactose properly; they lack lactase, an enzyme required in the digestive system to break down lactose . Patients typically experience bloating, flatulence, and diarrhoea
Gluten intolerance (coeliac)	Wheat, wholemeal, bran, pasta, rye, beer	Celiac disease is caused by a reaction to a gluten protein found in wheat, barley, rye, and sometimes oats. Symptoms include chronic diarrhoea , weight loss and fatigue