

# Muck, Mess and Mixtures

## Solids and liquids

Some materials can be solids or liquids.

A solid stays in one place and can be held. Some solids can be squashed, bent, twisted and stretched. Wood, metal, plastic, play dough and elastic are solids.

A liquid moves around easily and is difficult to hold in your hands. Liquids take the shape of the container in which they are held. Water, juice, milk, washing up liquid and bubble bath are liquids.

## Melting

Some materials melt when they are heated. Melting changes a solid into a liquid. Chocolate melts when it is heated.



## Freezing

Some materials freeze when they are cooled. Freezing changes a liquid into a solid. Water freezes at zero degrees Celsius (0°C).



## Mixtures

Mixtures are made by mixing different solids and liquids. For example, water, salt, flour and yeast are mixed to make bread dough.

Solids can be mixed with solids. For example, muesli is a mixture of oats, seeds and dried fruit.



Liquids can be mixed with liquids. For example, cordial can be mixed with water to make squash.



Sometimes, liquids don't mix with other liquids. For example, oil does not mix with water. The oil floats on top of the water.



Solids can be mixed with liquids. For example, clay can be mixed with water to make a runny clay called slip.

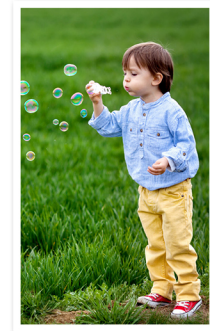


Some solids dissolve when mixed with liquids. When a solid dissolves, it looks like it has disappeared but it is still there. For example, sugar dissolves in water.



## Bubbles

Bubbles are made when air is blown into a mixture of soap and water. A bubble is a ball, or sphere, of air surrounded by a thin layer of the soapy mixture. No matter what shape a bubble starts as, it will always become a sphere.



## Dangerous substances

Some substances, like bleach and kitchen cleaner, can be dangerous to touch or swallow. You should never touch these substances.

Medicines can also be harmful if they are not used properly. Medicines should always be kept in a safe place and children should only take medicines given to them by an adult.

## Safety symbols

Symbols are used on packaging to warn people that the solids or liquids inside are dangerous.



This symbol is a warning that the substance is flammable. This means that it could easily catch on fire.



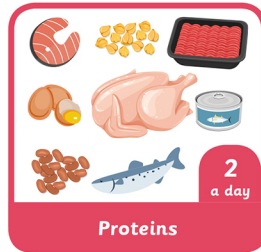
This symbol is a warning that the substance is corrosive. This means that if touched, it could burn and damage skin.

## Food groups

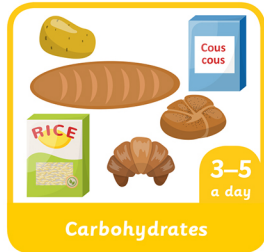
The foods we eat come from animals, such as meat, honey, milk, fish and eggs, and plants, such as grains, fruit, beans and vegetables. It is important to eat a healthy, balanced diet so that our bodies work properly. Below are the different food groups and how many we should eat each day.



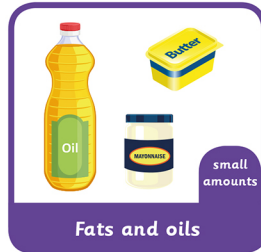
**Fruit and vegetables** contain vitamins and minerals, which help us to stay healthy.



**Proteins** helps our bodies to grow and repair. They are found in meat, fish, eggs, beans and nuts.



**Carbohydrates** give us energy. They are found in wholegrain cereals and breads, potatoes, pasta and rice.



**Fats and oils** give us energy and help to keep us warm. They are found in butter, oils and spreads.



**Dairy and alternatives** are a good source of energy. They are found in milk, yoghurt and cheese.



**Foods high in sugar and salt** should be eaten less often as they are not needed as part of a healthy diet. They are found in fizzy drinks and chocolate.

**Don't forget!** When preparing, cooking or eating food, it's important to wash your hands and store food properly. This is important to make sure the food you eat is safe and free from germs.

## Glossary

**Celsius** A unit to measure temperature.

**diet** The food and drink that a person or animal eats regularly.

**dissolve** When a solid mixes with a liquid and can't be seen anymore.

**float** To stay on the surface of a liquid.

**freeze** To change a liquid into a solid by cooling.

**liquid** Something that can be poured easily, takes the shape of its container and can't be held.

**melt** To change a solid into a liquid by heating.

**mixture** A substance made by mixing solids and liquids.

**solid** Something that stays in one place and can be held.

**substance** A solid, liquid, powder or gas of a particular kind.