

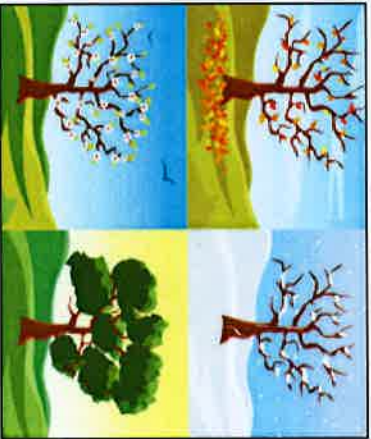


SEASONAL CHANGES

KNOWLEDGE ORGANISER

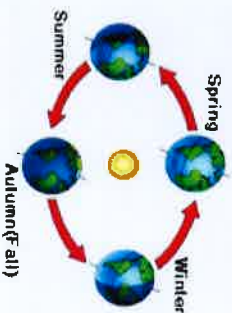
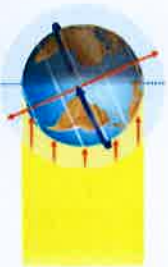


Overview



- Seasons are different times in the year when there are weather changes.
- In places like the UK, there are four seasons in a year: spring, summer, autumn and winter.
- The seasons have an effect on landscapes, and plant and animal life.
- The length of days changes as the seasons change.
- The seasons are different in some other parts of the world.

Causes of the Seasons/ Length of Days



- The seasons are caused because our planet (the Earth) is on a tilt. As the Earth moves around the Sun, different places on Earth face the Sun more.
- When a place is tilted towards to the Sun it is warmer (the summer).
- When a place is tilted away from the Sun it is colder (the winter).
- When it is summer in the northern part of the Earth, it is winter in the southern part.
- This also affects the length of days.
- When a place is tilted towards the Sun (in the summer) the days are longer.
- When a place is tilted more away from the Sun (in the winter) the days are shorter.

The Four Seasons

 <p>Spring</p> <p>In spring, the weather starts to get warmer after winter.</p> <p>-Lots of baby animals are born and new flowers blossom.</p> <p>-It takes place in March, April and May.</p>	 <p>Summer</p> <p>-Summer is the warmest season of the year.</p> <p>-Insects such as wasps and bees are around, and plants have lots of leaves.</p> <p>-The summer months are June, July & August.</p>
 <p>Autumn</p> <p>In autumn, the weather starts to get cooler after summer.</p> <p>-Many types of leaves begin to turn brown and fall from trees.</p> <p>-Autumn is September, October & November</p>	 <p>Winter</p> <p>-Winter is the coldest season of the year.</p> <p>-Many trees have no leaves and many animals are hibernating.</p> <p>-Winter is December, January & February.</p>

Things to Look For...



- Spring: Flowers growing, baby animals, frog spawn, birds building nests, caterpillars.
- Summer: Flowers fully grown, insects, fully-grown frogs, trees with lots of leaves on.
- Autumn: Brown leaves on the ground, squirrels storing nuts, hedgehogs hibernating.
- Winter: Frost/snow, trees with no leaves, evergreen trees.

Winter		Spring		Summer		Autumn		Winter			
January	February	March	April	May	June	July	August	September	October	November	December



EVERYDAY MATERIALS KNOWLEDGE ORGANISER



Overview



- Materials are the substances that things are made from.
- We use lots of different materials every day, e.g. metal, plastic, wood, and glass.
- Composites are made from two or more materials together.
- Different materials have different physical properties, which make them useful for different things.
- Some materials are used to make many things.



What are Objects Made From?

Have a look around your house/ classroom and investigate what objects are made from. Often (but not always) objects are made from the materials shown below:



- Tables, chairs, desks, benches and book cases are often made from wood.
- Keys, taps, screws, nails, saucepans and radiators are often made from metal.
- Windows, mirrors and drinking glasses are often made from glass.
- Bins, toys, food packaging and shopping bags are often made from plastic.
- Diaries, planners, exercise books and posters are often made from paper.

Types of Materials

Metal	Glass
 <ul style="list-style-type: none"> -Metals are made from rocks. -Metal is strong and shiny. 	 <ul style="list-style-type: none"> -Glass is made from fine sand. -Glass is very strong and clear (transparent).
Wood	Plastic
 <ul style="list-style-type: none"> -Metals include aluminium, iron and steel. -Wood is made from trees. -Wood is a hard and strong material. -Woods include oak, pine and ash. 	 <ul style="list-style-type: none"> -Glass is used for windows and glasses. -Plastics can be made from lots of different materials. -Plastic can be tough or bendy, and so it is used for many different purposes.
Water	Paper
 <ul style="list-style-type: none"> -Water is a natural material, found all over the world. -Water is clear and can take many shapes. It can be frozen into ice or heated into gas. 	 <ul style="list-style-type: none"> -Paper is made from trees. -Paper is normally thin and can be made into different shapes. Lots of different things are made from paper.

Composites

- A composite is a material that is made from two or more different materials.
- Composites are often made because they are stronger, lighter, or less expensive than other materials.
- For example, concrete is made out of water, cement, and either rocks, sand or gravel. It is very strong.
- Fibreglass is another type of composite. It is used to make things like showers, sinks and toilets.

Soft Materials

Wool Fabric Cotton Polystyrene Paper Rubber

Hard Materials

Plastic Glass Wood Concrete Metal Diamond



ANIMALS including Humans KNOWLEDGE ORGANISER



Overview



- Animals are living things.
- Like plants, animals need food and water to live
- Unlike plants (which make their own food) animals feed themselves by eating plants or other animals.
- Animals are also able to sense (including see, hear, smell, taste, touch) what is going on around them.
- Millions of animals live on earth.

Types of Animals

Mammals



- Mammals are warm-blooded creatures. Most have hair.
- They give birth to live young. They produce milk to feed them.

Reptiles



- Reptiles are cold-blooded. They lay eggs/ have scales. They breathe through lungs.

- Examples include lizards, crocodiles & snakes.

Fish



- Fish are cold-blooded and live in water. They breathe through gills. Have fins/scales.

- Examples include sharks, salmon, & rays.

Birds



- Birds are warm-blooded. They lay eggs/ often have feathers and wings. Most have hollow bones & can fly.

- Examples include robins, penguins & ducks.

Amphibians



- Amphibians are cold-blooded. They live in water and land. They have 3 life stages: eggs, larvae, & adult.

- Examples are frogs, toads & salamanders. etc

Animal Structures



- Birds have wings, to help them fly.
- They use beaks for eating and keeping themselves clean.
- They have light bones to make flying easier.
- Feathers are also light (helping them fly) and are important for keeping birds warm.
- Mammals have hair/ fur, to keep them warm.
- Their warm blood also keeps them and their young warm.
- Mammary glands – nipples/uders help mammals to feed their young.

Senses



- Sight - Eyes help humans and most animals to see
 - Hearing - Ears help humans and most animals to hear
 - Smell - Noses help humans and most animals to smell
 - Taste - Tongues help humans and most animals to taste
 - Touch - Skin helps humans and most animals to feel
- Brains helps humans and animals to think.

Herbivores (eat plants)

- Elephants
- Deers
- Rabbits
- Cows

Omnivores (eat plants and animals)

- Brown Bears
- Badgers
- Raccoons
- Lizards

Carnivores (eat animals)

- Lions
- Crocodiles
- Hyenas
- Sharks



PLANTS

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Overview

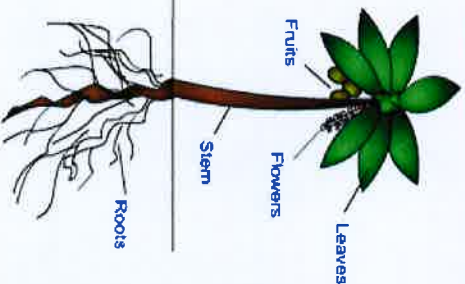


- Plants are a large group of living things that use sunlight to make their own food.
- There are many, many different kinds of plants, including trees, vines and grasses.
- Plants have lots of different parts, for example stems, leaves and roots.
- Some trees lose their leaves in the winter (deciduous). Some keep their leaves through the year (evergreen).
- Some plants are 'flowering plants' - they grow flowers sometimes.

Types of Plants

 <p>Trees</p> <p>Trees are tall, woody plants. They usually have a stem called a trunk.</p> <ul style="list-style-type: none"> -Some trees can live for hundreds or even thousands of years. -Trees include birches, palms and pines. 	 <p>Moss</p> <p>Mosses are small, seedless plants that grow in moist places.</p> <ul style="list-style-type: none"> -Mosses grow together in large, thick mats. -There are more than 10,000 different types of moss around the world.
 <p>Bushes/Shrubs</p> <p>Bushes and shrubs are quite low plants that have lots of branches.</p> <ul style="list-style-type: none"> -Bushes do not normally grow as tall as trees. -They include lavender, periwinkle and thyme. A shrubbery is a place with lots of shrubs. 	 <p>Vegetables</p> <p>-Vegetables normally come from a type of plant called a herbaceous plant. Vegetables can be eaten.</p> <ul style="list-style-type: none"> -Lettuce, spinach and broccoli are the leaves of plants. Asparagus is the stem of a plant. Some vegetables grow in the ground, e.g. carrots.

Basic Structure of Plants



- Plants are made up of many different parts.
- Roots - Roots absorb water and minerals from the ground. They also help the plant to stay standing in the ground.
- Stem - The stem supports the plant above the ground. It also helps to carry water and minerals from the roots to the leaves.
- Leaves - Leaves collect energy from the Sun and turn this into food for the plant (photosynthesis).
- Flowers and Fruits - Flowers and fruits help the plant to reproduce (to make more plants).

Flowering Plants



Flowering plants produce flowers to help them reproduce. They follow this life cycle:

Seed - Flowering plants begin life as seeds. They need soil, air and water to grow.

Seedling - When the plant first starts to grow, it is called a seedling.

Flowering - When the plant is fully grown, it will produce its own flowers. These flowers will eventually produce seeds. When the seed gets to the ground, the cycle starts again.

Deciduous Trees

- Oak
- Maple
- Sycamore
- Horse Chestnut
- Elm
- Beech

Evergreen Trees

- Yew
- Pine
- Fir
- Herlock
- Blue Spruce
- Holly