

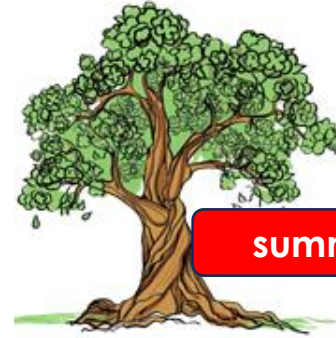
Vocabulary

Key Word	Definition
spring	The season in which plants begin to grow
summer	The warmest season of the year
autumn	The season in which some trees lose their leaves
winter	The coldest season of the year
rain	When water falls from the cloud
sun	the bright sphere in the sky that provide light and warmth
change	When something is different

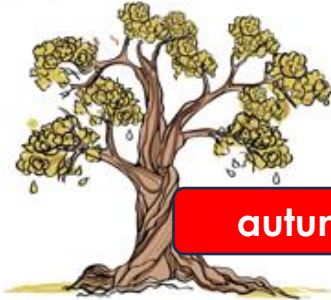
Science Knowledge Organiser Seasonal Changes – Throughout Year 1 Strand: Physics



spring



summer



autumn



winter

Key Questions

• What is spring?

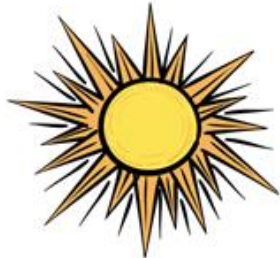
• What is summer?

• What is autumn?

• What is winter?

• How does the day change?

• How can we keep dry in the rain?



sun



rain



wind



snow



thunderstorm





Science Knowledge Organiser

Animals including Humans


Year 1



Strand: Biology

Vocabulary

Key Word	Definition
amphibian	an animal that is born in water but later develops lungs and lives on land
animal	a living thing
carnivore	an animal that just eats meat
herbivore	an animal that just eats plants
omnivore	an animal that eats both plants and meat
mammal	an animal with fur or hair that feeds on milk from its mother when they are young
reptile	an animal with scales that is cold-blooded and lives on land
fish	an animal that lives in the water that has scales, fins and gills
bird	an animal with feathers, a beak and wings that can usually fly

Grouping animals

<p>Fish Fish live in water and have gills, scales and fins on their body.</p> 	<p>Birds Birds have feathers, beaks and wings. Most birds can fly.</p> 	<p>Mammals Mammals have fur or hair. They drink milk from their mother when they are young.</p> 
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<p>Amphibians Amphibians are born in water but then develop lungs and live on land.</p> 	<p>Reptiles Reptiles are cold-blooded animals with scales that live on land.</p> 
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Nutrition


<p>Carnivores Carnivores just eat other animals (meat).</p> 	<p>Herbivores Herbivores just eat plants.</p> 	<p>Omnivores Omnivores eat both plants and meat.</p> 
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Our senses


We can **see**.
We see with our




We can **hear**.
We hear with our




We can **touch**.
We touch with our



We can **smell**.
We smell with our



We can **taste**.
We taste with our



Key Questions

• What is this animal?

• How are animals different?

• Do all animals eat the same thing?

• What are our body parts called?

• What are senses?

• Are all humans the same?



Science Knowledge Organiser

Everyday Materials

Year 1

Strand: Chemistry

Vocabulary

Key Word	Definition
waterproof	keeps water out
fabric	cloth made by knitting or weaving fibres
object	a thing that can be seen or touched
hard	solid or firm, not easily broken
Soft	easy to mould, cut, fold or change shape
rough	having an uneven surface.
fragile	easily broken or damaged
smooth	having an even surface
material	the substance used to make something

Plastic

We can make **toys** and **food packaging** from **plastic** because it is **smooth** and **strong**. It can be **hard** or **hardy**.



Rubber

We can make **wellington boots**, **car tyres** and **bouncy balls** from **rubber** because it is **squashy** and **waterproof**. You can **hard** it.



Paper

We can make **wrapping paper** and **books** from **paper** because it is **smooth**. It can tear easily.



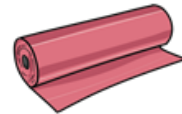
Rock

We can make **tiles** and some **jewellery** from **rock** because it can be **hard**. Some rock can also be **fragile**.



Fabric

We can make **clothes** and **bedding** from **fabric** because it is **soft**. It is usually **smooth**.



Brick

We can make **buildings** from **brick** because it is very **hard**. It can be **rough**.



Wood

We can make **tables**, **chairs** and some **toys** from **wood** because it is **hard**. It can be **rough** or **smooth**.



Metal

We can make **cars**, **spoons** and some **musical instruments** from **metal** because it is **hard** and **smooth**. You can't see through it.



Glass

We can make **windows**, **mirrors** and **glasses** from **glass** because it is **hard** and **see-through**. It is very **fragile**.



Key Questions

• What are materials?

• How are materials different?

• What are objects made of?

• How can we sort materials?

• Which materials would be best for an umbrella?

• Which materials would be best for curtains?

Vocabulary	
Key Word	Definition
plant	a living organism
tree	a woody plant
deciduous	a tree that loses its leaves annually
evergreen	a tree that does not lose its leaves
flower	the seed bearing part of a plant that is usually surrounded by brightly coloured petals
roots	the part of the plant that attaches into the ground for support and nutrient collection
stem	the main stalk of a plant
leaf	part of a plant that is typically flat and hangs off the stem

Science Knowledge Organiser

Plants

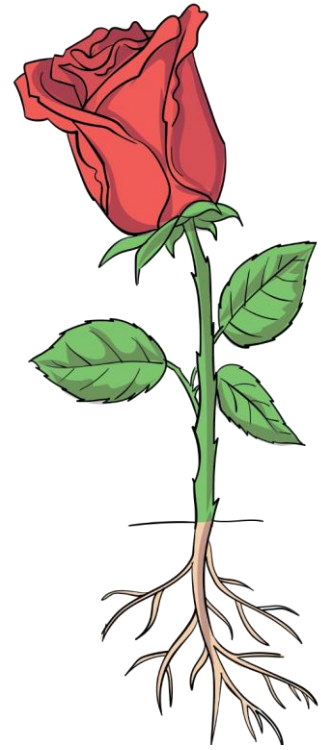
Year 1

Strand: Biology

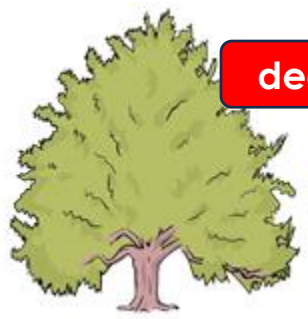
Key Questions

How to grow a plant

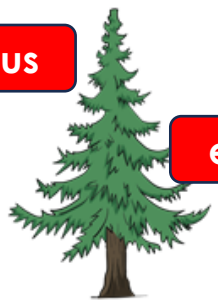
Parts of a plant



- What is a plant?
- What are the parts of a plant called?
- Do plants grow?
- Do wild plants grow in our local area?
- How can we group plants?
- Can we eat plants?
- Are trees a type of plant?
- What is a leaf?



deciduous



evergreen



Science Knowledge Organiser

Plants

Year 2

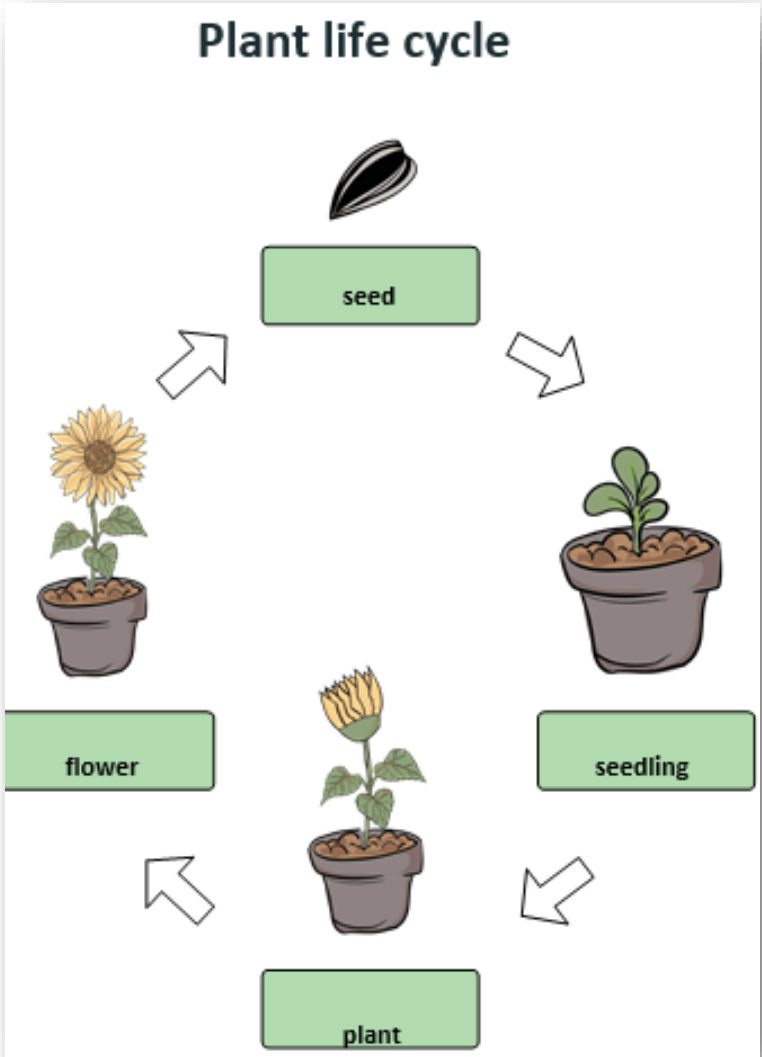
Strand: Biology

Vocabulary

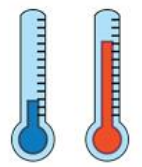
Key Word	Definition
plant	A living organism
Tree	A woody plant
flower	The seed-bearing part of a plant that is usually surrounded by brightly coloured petals
roots	The part of the plant that attached into the ground for support and nutrient collection
stem	The main stalk of a plant
leaf	Part of a plant that is typically flat and hangs off the stem
seed	A small part of a plant that can grow another plant
bulb	A fleshy base of a plant that can grow another plant

Key Questions

- Which plants can we eat?
- Are all seeds the same?
- What do plants need?
- Where will plants grow?
- How do plants grow and change?



What do plants need to grow and be healthy?





Vocabulary	
Key Word	Definition
basic needs	the humans need to survive
diet	the food we eat
exercise	moving our bodies
hygiene	keeping clean
illness	when we do not feel well
medicine	something we might take to feel better
offspring	the babies of an animal
survive	to live

Science Knowledge Organiser
Animals including humans
Year 2
Strand: Biology

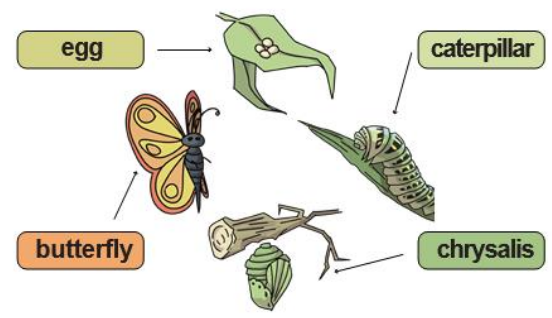
How can we look after ourselves?

We can **exercise** regularly, eat a **healthy diet** and make sure we have **good hygiene**.

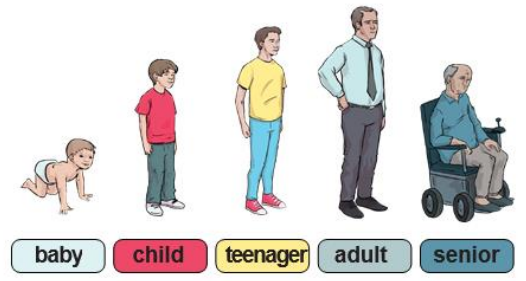


- mammals
- amphibians
- fish
- birds
- reptiles

The life cycle of a butterfly



How humans change



Key Questions

- What do humans need?
- What are offspring?
- How do animals change as they grow into adults?
- Do we all grow the same?
- Do we need to exercise?
- What is a healthy diet?
- Why do we need to have good hygiene?
- How can we feel better when we are ill?



Science Knowledge Organiser

Materials

Year 2

Strand: Chemistry

Vocabulary

Key Word	Definition
material	the substance used to make something
fabric	cloth made by knitting or weaving fibres
object	a thing that can be seen or touched
fragile	easily broken or damaged
bend	to make a curved shape
stretch	to make longer
flexible	easily bent without breaking
rigid	difficult to bend
twist	to turn an object in opposite directions so parts turn away from each other

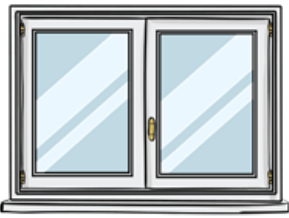
We can change the shape of some **objects** by —



squashing them bending them twisting them and stretching them.

Key Questions

- What are materials?
- What are things made from?
- Which material should the pigs make their house from?
- Which material will protect Humpty Dumpty?
- How can we change materials?



This is a **window**. Windows are made from **glass**. Glass is see-through which makes it a good material for the window as it lets **light** into your house and allows you to see out. The glass also stops **rain** and wind entering your **house**.



This is a pair of **wellington boots**. They are made from **rubber**. Rubber is **strong, waterproof** and **bendy** which makes it a good material for wellies. They will be **comfy** on your feet, keep your feet **dry** and not damage easily.

Vocabulary

Key Word	Definition
excretion	to dispose of waste
food chain	a diagram that scientists use to show what different animals eat within a habitat
offspring	the babies that an animal produces
Respiration	- taking in gas and giving out another (breathing in humans)
sensitivity	using your senses (see, smell, hear, touch, taste)
habitat	where a living thing lives
diet	the food that an animal eats

Food chains

Sometimes, scientists use food chains to show **what different animals eat in a habitat**. This is a simple **food chain**:



The arrows mean 'is eaten by'.
The grass is eaten by the rabbit. The **rabbit is eaten by the fox**.

Science Knowledge Organiser Living things and their habitats Year 2 Strand: Biology

Key Vocabulary

There are seven things that all **living** things do, we call these life processes. All animals, including **humans**, do these and **plants** do too! We can remember them with the help of **Mrs Gren!**

Movement

Respiration

Sensitivity

Growth

Reproduce

Excretion

Nutrition



Key Questions

• Is it living, dead or never been alive?

• What is a microhabitat?

• How are habitats different around the world?

• What conditions to woodlice prefer?

• How are living things adapted to their habitat?

• What is a food chain?

Habitats

A habitat is where a living thing lives. Habitats provide things that living things need for the life processes such as **food, water and air**.

Examples of micro-habitats:

- flower beds
- trees
- bushes
- under rocks/logs
- ponds

Examples of large habitats:

- desert
- mountains
- polar regions
- jungle
- ocean

