Autumn Term 1 - Seasonal Changes - Autumn

Seasons

There are 4 Seasons.

The Seasons are Spring, Summer, Autumn, and Winter.

The Seasons occur in a cycle.

Day length differs depending on the season.

In the **Autumn**, the amount of daylight becomes less. This means the day times are shorter and the nights are longer than the summer.

Autumn September October November	In **autumn**, the weather begins to get colder. The leaves start to fall from the trees. The amount of daylight becomes less. This means the daytimes are shorter and the night times are longer.

Weather Symbols

	windy		snowy
	sunny		rainy
	cloudy		sunny and rainy
	stormy		

Deciduous Trees

- Birch tree
- Sycamore tree
- Oak tree

Evergreen Trees

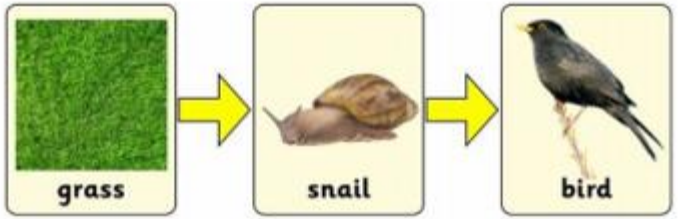
- Pine tree
- Spruce tree
- Holly tree

Seasons	Four different times during the year with different weather.
Weather symbol	Symbols used to communicate the weather in forecasts.
Deciduous	A tree which has leaves that change colour and fall off in the Autumn.
Evergreen	A tree which has leaves that stay green all year round.

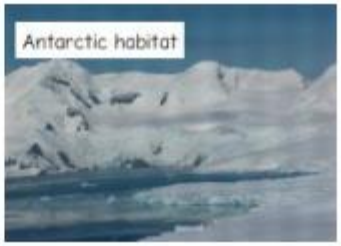
Autumn Term 2 – Living things and their habitats

Top Vocabulary	
Organism – a word used for a living thing, including plants and animals.	**Prey** – animal that is hunted by another for food
Habitat – a place where an organism lives.	**Predator** – an animal that naturally preys on others.
Microhabitat – a very small habitat where plants, animals and insects live.	**Producer** – living things that create energy in a food chain.
Food chain – shows what animals eat.	**Consumer** – animals within the food chain that use the energy produced.

Food chains show what animals eat. Animals and plants in any habitat are linked together through food chains. Here is an example:



A habitat must provide everything an organism needs to survive, otherwise the organism will not be able to live there and will die.
Here are some habitats:



Characteristics of living things

MRS GREN

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition

Living

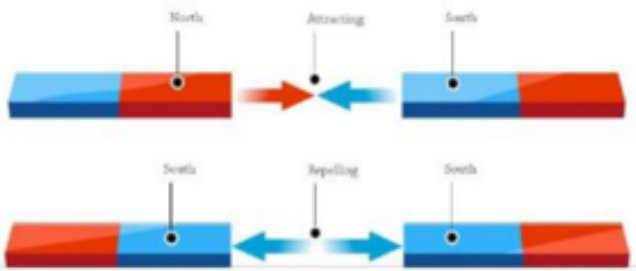
Dead

Never Alive

Year 3 Autumn Term 2 – Must Knows Forces and Magnets

Top Vocabulary
Force – A force is a push or pull. It can make something start moving, speed up, slow down or stop moving.
Friction – Friction is a force between two things that are moving, or trying to move, across each other.
Magnet – A magnet attracts some types of metal towards it by a force called magnetism.
Magnetism – This is the force which attracts magnetic objects.
Poles – The ends of magnets are called poles. Every magnet has a north and a south pole.
Attract – A magnet's North pole pulls towards another magnet's South pole. This is described as magnetic attraction
Repel – Two poles of the same type always push each other away. This is described as magnetic repulsion.
Magnetic – A magnetic material is one which is attracted to a magnet.

Magnets have north and south poles. These attract each other but two north or two south poles repel each other.



Horseshoe Magnet

Disc Magnet

Bar Magnet

Key Facts
A force cannot be seen. Only the affect of a force can be seen.
Friction is a force between two surfaces which are moving (or trying to move) across each other. For example, the surface of a car wheel moving against the surface of a road.
Objects move differently on different surfaces because of friction. Think about riding your bike on fresh tarmac vs an uneven, bumpy field.
Friction creates heat. (Try rubbing your hands together.)
Gravity is a pull force and friction is a push force.
Magnets are used to pull a fridge door shut, to select items in vending machines and to store personal information on bank cards.
Magnetic forces are non contact forces. We do not need to physically touch an object to move it.
Iron, cobalt, steel and nickel are magnetic metals.
Silver, gold and aluminium are not magnetic metals.

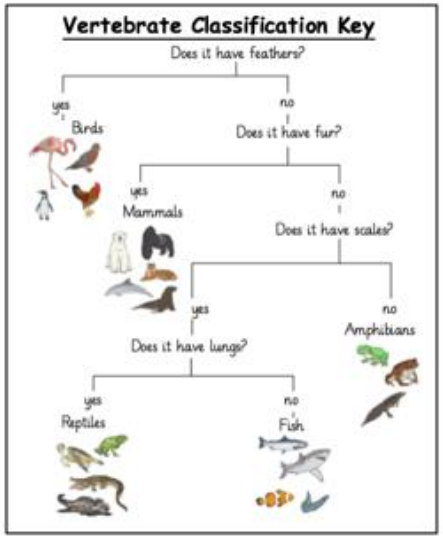
Year 4 Autumn Term 1- Science – Livings Things and their Habitats

Key Vocabulary

organism – a living thing – an animal or a plant
vertebrate – an animal with a backbone
invertebrate – an animal without a backbone
mammal – type of vertebrate - animals that give birth to live young & feeds them milk, breathes with lungs and has body hair or fur.
bird - type of vertebrate - animals that fly, have feathers & wings and lay eggs
fish – type of vertebrate - animals that live in water, has fins & scales, lays eggs in water and breathes using gills
amphibian - type of vertebrate - an animal that can live in and out of water, lays eggs and has damp skin
reptile - type of vertebrate - an animal that lays eggs but lives on land, has dry & scaly skin
flowering plant – plants that produce flowers in order to reproduce. Their flowers develop into fruits and seeds after pollination & fertilisation.
non-flowering plant – plants that do not use flowers to reproduce.
classify – to group together, based on characteristics (the features than the organism has) so that they can be identified
classification key – a set of yes/no questions used for classifying
habitat – the place where something lives
life processes – the 7 things that tell us living things are alive. All living things do these.
environmental dangers – something within the habitat that may cause harm or damage to the organisms that live there.
extinct – when there are no living specimens left on Earth of the organism

Invertebrates

Invertebrates can be grouped 4 ways	• Insects • Arachnids • Snails and slugs • Worms
How to spot an insect 	• 3 body sections • 6 legs
How to spot an arachnid 	• 2 body sections • 8 legs
How to spot snails and slugs 	• Slimy foot • Often have a shell
How to spot a worm 	• 0 legs • Long tube-like body



local

global

Deforestation

Many of the things that humans do, destroy animal habitats.
Only a very small amount of the world's land is covered in rainforest, but about half of all plants and animals live here.
Humans have cut down large areas of the forest to clear space for building or farming. This has destroyed the habitats of many species and made it difficult for them to survive.

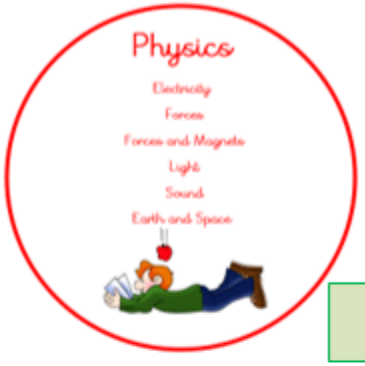
Year 5 – Autumn Term 1 – Sound (Y4 Science Unit)

Key Vocabulary

vibration – a movement backwards and forwards
sound wave – vibrations travelling from a sound source
volume – how loud or quiet a sound is
amplitude – the size of a vibration. A larger amplitude = a louder sound
pitch – how low or high a sound is.
medium – the material or substance that sound waves travel through
fainter – when a sound gets quieter and has less volume
insulation – a material that doesn't allow something to pass through it. This might be sound, electricity or heat.

Key Facts

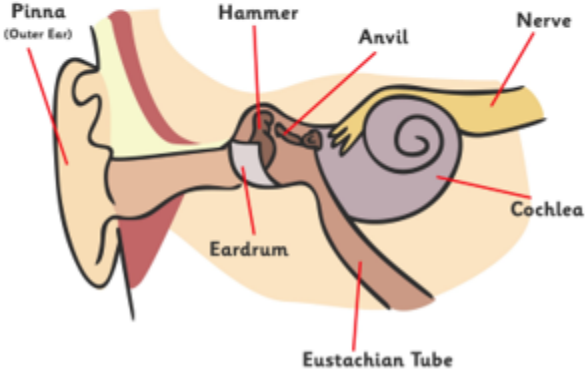
Sounds are made when an object **vibrates**. The vibration makes the air around it vibrate and the air vibrations enter your ear. Our brain hears the vibrations and turns it into a sound.
The **louder** the sound, the bigger the vibrations. The **quieter** the sound, the smaller the vibrations.
The size of vibrations is called the amplitude. **Quieter** sounds have a **smaller amplitude**. **Louder** sounds have a **bigger amplitude**.
Different musical instruments create sounds in different ways



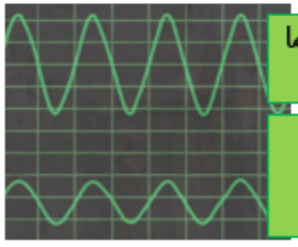
Musical Instruments

String family | Percussion family | Woodwind family | Brass family

The Ear



Sound Waves

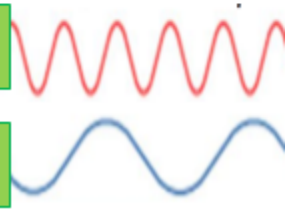


loud sounds have a large amplitude

quieter sounds have a smaller amplitude

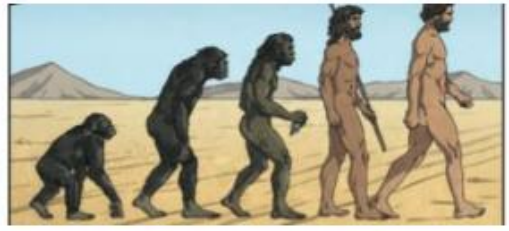
High pitch sounds from short soundwaves

Low pitch sounds from long soundwaves



Year 6 Autumn 2 Must Knows - Science – Evolution and Inheritance

Key Vocabulary
Offspring – The young animal or plant that is produced by the reproduction of that species.
Inheritance – This is when characteristics are passed on to offspring from their parents.
Variations – The differences between individuals within a species.
Characteristics – The distinguishing features or qualities that is specific to a species.
Adaption – An adaption is a trait (or characteristic) changing to increase a living thing's chances of surviving and reproducing.
Habitat – Refers to a specific area or place in which particular animals and plants can live.
Environment – An environment contains many habitats and includes areas where there are both living and non-living things.
Evolution – Adaption over a long time.
Natural Selection – The process where organisms that are better adapted to their environment tend to survive and produce more offspring.
Fossil – The remains or imprint of a prehistoric pant or animals, embedded in rock and preserved.
Adaptive Traits – Genetic features that help a living thing to survive.
Inherited Traits – These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair.



Fossils are the preserved remains, or partial remains, of ancient animals and plants. **Fossils** let scientists know how plants and animals used to look millions of years ago. This is proof that living things have **evolved** over time.

Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!

Living Things		Habitat		Adaptive Traits
polar bear		arctic		Its white fur enables it to camouflage in the snow.
camel		desert		It has wide feet to make it easier to walk in the sand.
cactus		desert		It stores water in its stem.
toucan		rainforest		Its narrow tongue allows it to eat small fruit and insects.

Inherited Traits
Eye colour is an example of an **inherited** trait, but so are things like hair colour, the shape of your earlobes and whether or not you can smell certain flowers.

Adaptive Traits
Characteristics that are influenced by the **environment** the living things live in. These **adaptations** can develop as a result of many things, such as food and climate.

Offspring
Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are

Variation
In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.