



Andover CE Primary – Science Progression of Vocabulary



Biology – Animals including humans

Year R

Herbivore	An animal that only eats plants.
Carnivore	An animal that eats meat.
Omnivore	An animal that eats both plants and meat.
Human	An individual of animal that walks on two feet: a person.
Animal	A living thing.
Fish	An animal that can breathe underwater using gills and has a tail and fins.
Bird	An animal with feathers, beaks and wings. Females lay eggs. Most birds can fly.
Body parts (children should know where these are)	Head, face, hair, leg, knee, arm, elbow, back, toes, ear, hands, eye, finger, mouth, nose.

Year 1 – Animal survival

Organisms	A living thing.
Growth	An increase in size.
Energy	The ability to do work or to make something move or change in some way.
Fish	An animal that can breathe underwater using gills and has a tail and fins.
Amphibians	Animals that have smooth slimy skin and live on land and in water.
Mammals	Animals that have hair or fur, give birth to live young and feed their young with milk.
Birds	An animal with feathers, beaks and wings. Females lay eggs. Most birds can fly.
Reptiles	An animal that is air breathing, has scaly skin and lays eggs.
Herbivore	An animal that only eats plants.
Omnivore	An animal that eats both plants and meat.
Carnivore	An animal that eats meat.
Predator	An animal that hunts, kills and eats other animals.
Prey	An animal that is hunted and killed by another for food.
Food chain	Describes the order in which living things depend on each other for food.
Senses	The ability to see, hear, smell, touch and taste.

Year 2 – Animal lifecycles

Maturity	Being fully grown or adult.
Reproduce	To produce another living thing of the same kind.
Die	To stop living
Offspring	The child or young of a particular human, animal, or plant
Life cycle	The stages a living thing goes through during its life
Food chain (from 'Animal survival' y1)	Describes the order in which living things depend on each other for food.
Producer	Something that has the ability to make its own food, usually a plant.

Consumer	An organism that must get its energy from eating a plant or animal.
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Year 3 - Animals, skeletons and movement

Vertebrates	A group of animals that have a backbone, e.g., humans, elephants, dolphins
Invertebrates	A group of animals that do not have a backbone, e.g., Lobsters, woodlice, worms
Skeleton	An internal or external framework of bone supporting/containing the body of an animal
Exoskeleton	A skeleton that is visible on the outside of the body
Vital organs	An organ that is essential for life
Support	To hold up or bear the weight of an organism
Mass	A quantity of matter measured in kg.
Muscles	A band/bundle of fibrous tissue that can contract, producing movement.
Connect	To bring together or into contact so a link is established
Contract	Become shorter and tighter in order to effect movement of part of the body

Year 4 - Digestion

Meat	The flesh of an animal, usually a mammal or bird for eating
Dairy	Food that contains or is made from milk
Protein	A nutrient found in food used for growth and repair of the body
Grains	A small hard seed harvested from crops, e.g. cereals, used to make food
Root vegetable	An enlarged root of a plant that can be eaten, e.g. carrot, swede or beetroot
Carbohydrates	A nutrient in food that is used for energy in the body
Fat	A nutrient in food that is used for energy and insulation in the body
Insulation	To prevent heat lost from the body
Fruits	The sweet and fleshy part of a plant that contains seeds and eaten as food
Minerals	A nutrient needed by the body to carry out functions of life, found in food
Vitamins	A nutrient needed in small amounts for the proper function of life
Fibre	A component of food that isn't broken down by the body but used to help move food through the digestive system
Healthy	In good physical/mental condition
Digestion	The breaking down food inside the body so nutrients can enter the blood

Year 5 Circulation

Oxygen	A colourless, odourless, reactive gas found in the air.
Sugar (Glucose)	A simple type of sugar which is an important energy source in organisms.
Lungs	Organs located either side of the breastbone. Responsible for removing CO ² from the blood and adding O ² to it.
Muscles	A band/bundle of fibrous tissue that has the ability to contract producing movement.
Circulation	Movement of a fluid in a closed system
heart	A hollow, muscular organ that pumps the blood though the circulatory system.

Biology – Plants

Year R

Tree	A woody plant with a trunk.
Petals	The brightly coloured adapted leaves on a plant.
Trunk	The main stem of a tree.
Fruit	Part of a plant that can be eaten.
Branch	A smaller part of a plant stem or trunk.
Roots	The part of a plant that grows downward, holds the plant in place and takes in water from the soil.
Leaves	Usually, flat green parts that grow from a plant stem.
Bulb	A root shaped like an onion that grows into a flower or plant.
Flowers	The part of the plant that occurs singly or in clusters, often with colourful petals
Seed	The small, hard part of a plant from which a new plant grows.
Stem	The main stalk of a plant.

Year 1 - Plants

Seed	The small, hard part of a plant from which a new plant grows.
Bulb	A root shaped like an onion that grows into a flower or plant.
Leaves	Usually, flat green parts that grow from a plant stem.
Germination	The growth of a seed into a young plant or seedling.
Roots	The part of a plant that grows downward, holds the plant in place and takes in water from the soil.
Shoots	A plant that comes up above the ground when it is just beginning to grow

Year 2 - New Plants

Flowering	Can produce flowers.
Reproduction (reproduce from 'Animal life cycles' yr 2)	To produce another living thing of the same kind.
Germinate (germination from 'Plants' yr1)	A seed beginning to grow into a young plant or seedling.
Generations	The period of time between the birth of parents and the birth of their children.

Year 3 - Plants and their food production

Carbon dioxide	A colourless odourless gas found in the air (0.04%) made up of carbon and oxygen.
Oxygen	A colourless and odourless gas found in the air (21%)
Roots	An organ of a plant that provide anchorage and absorb water and nutrients from the soil
Soil	A mixture of minerals and organic matter
Leaves	An organ of a plant that are green in colour and absorb carbon dioxide from the air as well as sunlight.

Year 4- Plant reproduction

Pollination	The transfer of pollen from one plant to another
Seed (from yr 1 'Plants')	The small, hard part of a plant from which a new plant grows.
Stamen	The male part of the flower which contains the pollen
Stigma	The female part of the flower that receives the pollen
Ovaries	A female part of the plant where the pollen much reach to create the seed
Petals	The segments of a flower that are usually brightly coloured
Dispersal	The spreading of seeds in a variety of ways
Germination (from yr 1 'Plants')	The growth of a seed into a young plant or seedling

Biology – Variation and Evolution

Year 1 – Habitats

Variation	The differences between living things or habitats.
Habitat	The place in which an animal or plant lives.
Adapted	Changes to an animal or plant to help it survive.
Survive	To live in spite of danger or difficulty.
Avoid	Keep away from something or try to stop something happening.
Wild plant	Plants that live or grow randomly and are not looked after by people.
Garden plant	Plants that are planted on purpose.

Year 4 – Living Things

Classification	The grouping of animals, plants or fungi based upon their physical features
Classification key	a series of questions to identify animals or plants based upon their physical features
Vertebrates (from yr 3 'Animal skeletons and movement')	A group of animals that have an internal backbone, e.g. humans, elephants, dolphins
Invertebrates (from yr 3 'Animals, skeletons and movement')	A group of animals that do not have a backbone, e.g. Lobsters, woodlice, worms, beetle or snail
Food chain (from yr 1 'Animal Survival')	Describes the order in which living things depend on each other for food.
Nutrients (from yr 3 'Plant food production')	A substance that provides the essential material needed by the body to live
Organism (from yr 1 'Animal Survival')	A living thing, e.g. animal, plant, fungi
Mammal (from yr 1 'Animal Survival')	An organism that is warm blooded, have fur, feeds their young milk and give birth to live young
Amphibian (from yr 1 'Animal Survival')	A cold-blooded animal that starts life living underwater with gills but as an adult, lives on land using lungs
Insect	A small animal that has six legs and often one or two pairs of wings
Bird (from yr 1 'Animal Survival')	A warm-blooded animal that has feathers, wings, and a beak.
Environmental change	A change or disturbance of an environment- can be caused by natural or man-made reasons

Year 5 – Fossils, geological time and classification

Million	A number that is equivalent to the product of a thousand and a thousand e.g., 1,000,000 (10 ⁶)
Billion	A number that is equivalent to the product of a thousand and a million e.g., 1,000,000,000 (10 ⁹)
Evolution	The process by which different kinds of living organisms have developed from early forms over time
Extinct	A species, family or group having no living members in existence.
Fossil	The remains or impression of prehistoric animals or plants preserved in rock
Palaeontologist	A scientist who specialised in life forms that existed in prehistoric times

Organism	A living thing, e.g., animal, plant, fungi or bacteria
Microorganism	A very small organism that cannot be seen with the naked eye
Bacteria	A specific type of microorganism present in huge numbers across most of the earth
Microscope	An instrument for looking at very small objects

Year 6 – Classification and Evolution

Evolution	The process by which different kinds of living organisms have developed from early forms over time.
Natural selection	The key mechanism of evolution where the best adapted organisms in a population are selected by nature to survive and pass on those physical features.
Population	All the members of a species that live in a one area.
Variation	The differences between the individuals in a species.
Competition	Species tend to produce more offspring than the environment can sustainably support leading to competition for survival.
Adapted	Modified features that make an organism more suitable for its purpose
Offspring	The young of living organisms, produced either by a single organism or, in the case of sexual reproduction, two organisms.
Inheritance	The passing on of characteristics to offspring.
Charles Darwin	Naturalist and scientist credited with the discovery of the mechanisms for how organisms adapt and change over time via the process of natural selection.
Lamarck	Jean-Baptise Lamarck was a naturalist who proposed an alternative mechanism for evolution centred around the inheritance of physical characteristics acquired during an organism's lifetime.
HMS Beagle	The Ship that Darwin sailed around the world on for 5 years and collected much of the evidence that led to his discovery of the process of Evolution by natural selection.

Chemistry – Materials

Year R

Material	An object that is often used to make something.
Metal	A solid material that is hard and shiny.
Wood	Wood comes from the trunks and branches of trees.
Rock	A natural solid material made from minerals which make up the surface of the earth.
Plastic	Plastic is a man-made material that can change its shape.
Hard	Not easily bent, cut or broken.
Glass	A solid material that you can see through.
Soft	Smooth to the touch.
Paper	A thin sheet made from wood.
Fabric	A material that is used to make clothes.
Smooth	No bumps or ridges – an even surface.
Shiny	Smooth and shiny surface.
Rough	Has bumps and ridges – an uneven surface.

Year 1 – Describing Materials

Properties	How a material can be described.
Metal	A solid material that is hard and shiny.
Rock	A natural solid material made from minerals which make up the surface of the earth.
Fabric	Cloth or material that is woven or knitted.
Wood	Wood comes from the trunks and branches of trees.
Plastic	Plastic is a man-made material that can change its shape.
Ceramic	Ceramics are often made from clay.
Suitable	Right for the purpose.
Purpose	The reason why something is made or done.

Year 2 – Changing Materials

Changed	Different from before
Physical force	When objects touch making them move in some way
Absorb	To soak up or take in liquid.
Crumbly	Easily broken onto a lot of little pieces.
Property	How a material can be described.
Drag	Pull something along with difficulty.
Suitable	Right for the purpose.
Strongest	Objects or materials that are not easily broken.
Flexible	Bends easily without breaking

Year 3 – Solids, liquids and gases

State	A distinct form in which matter can exist
Solid	A substance or object stays the same shape whether it is in a container or not
Liquid	A substance that flows freely

Gas	A substance that will expand to fill a container, with no fixed shape or volume
Gravity	A force that attracts a body towards the centre of the earth or other objects with mass
Viscous	Having a thick sticky consistency between a solid and a liquid.
Heating	To raise the temperature
Cooling	To lower the temperature
Melting	When an object changes from a solid to a liquid
Boiling	When an object changes from a liquid to a gas
Evaporate	The process of turning liquid into a gas
Freeze	When a liquid becomes a solid
Condense	When a gas becomes a liquid

Year 3 – Rocks and Soils

Rock (from 'Describing Materials' yr 1)	A natural solid material made from minerals which make up the surface of the earth.
Crystal	A uniform material with a symmetrical shape
Mineral	A solid substance made up of a range of different elements, e.g. iron, oxygen, carbon.
Ore	A rock that contains a metal that can be extracted.
Grains	Small pieces of broken-down rock that is moved and placed in a new location
Fossil	The remains of animals or plants persevered in rock
Sedimentary	Rocks made of grains cemented together
Igneous	Rocks made magma or lava from volcanoes or deep underground
Metamorphic	Rocks formed by the heating and crushing of existing rocks
Porosity	How much empty space there is between grains or crystals
Hardness	How resistant a rock is to damage
Soil	A mixture of minerals and organic matter
Humus	Dead plant matter within soil
Silt	Fine sand or clay material

Year 4 – Mixtures and separating them

Substance	A type of matter with uniform properties
Mixture	A number of substances together but can be separated
Dissolving	To become incorporated into a liquid
Solution	The product of when a substance is dissolved into a liquid

Year 5 – Making new substances

Matter	A physical substance which occupies space.
Mass	A quantity of matter measured in kg.
React	The process of transformation from one set of substances to another
Irreversible	Not able to be undone or altered.

Physics – Earth and Space

Year R

Summer	The season where the trees are full of green leaves and the weather is at its warmest.
Spring	The season when young animals like lambs and chicks are born, the flowers bloom and the weather starts to become warmer
Autumn	The season when the leaves fall off the trees and the amount of time we have in the day becomes less.
Winter	The season which has the shortest amount of time during the day and the weather is at its coldest.
Season	One of the four parts of the year.
Day	The time after the sun comes up.
Dark	The absence of light.
Light	Something that makes seeing possible.
Night	The time after the sun goes down.
Moon	A very large object that goes around a planet in a circle.
Sun	The sun is the star that is closest to the earth, it gives heat and light.
Earth	The name of the planet we live on.
Planet	A large object in space that moves around a star.
Space	The area that contains the stars, planets, sun and moon.
Star	The lights in the sky at night.

Year 1 – Seasons

Spring	The season when young animals like lambs and chicks are born, the flowers bloom and the weather starts to become warmer
Summer	The season where the trees are full of green leaves and the weather is at its warmest.
Autumn	The season when the leaves fall off the trees and the amount of time we have in the day becomes less.
Winter	The season which has the shortest amount of time during the day and the weather is at its coldest.
Hibernating	When animals spend the winter in a type of long, deep sleep.
Migration	The journey an animal takes to a new home.
Evergreen	Trees that keep their green leaves all year round.
Deciduous	Trees that lose their leaves every autumn

Year 5 – Space and Gravity

Solar System	A collection of planets and moons in orbit around the sun, along with asteroids and comets
Planets	A body moving in an elliptical orbit around a star
Orbit	A curved path of a celestial object round a star or planet
Star	A giant ball of gas in the centre of a solar system that all planets orbit around.
Moon	A natural satellite that orbits a planet
Rotating	To move or cause to move around an axis or centre
Day	A complete rotation of a planet on its axis, on Earth equal to 24 hours
Year	A complete orbit by a planet around its star, on Earth equal to 365.25 days

Galaxy	A system of millions or billions of stars with gas and dust held together by gravity
Universe	All existing matter and space as a whole. Contains all galaxies and has been continually expanding since its formation 13.9 billion years ago
Asteroid	A small rocky body orbiting the sun. Many are found between Mars and Jupiter.
Comet	An object consisting of rock and ice orbiting the sun.
Gravity	The force that attracts a body towards the centre of the earth or any other body with mass.
Mass	A quantity of matter measured in kg.

Physics - Electricity

Year 4 – Electricity

Electricity	A form of energy that flows around a circuit
Batteries	A store of chemical energy
Mains electricity	Electricity supplied to a building through wires
Device	Any machine powered by electricity
Wires	A long thin piece of conducting metal that electricity can flow through
Circuit	A connection of electrical devices, wires and a power supply
Conductor	A material that will allow electricity to flow through it
Insulator	A material that will not allow electricity to flow through it

Year 6 – Controlling electrical circuits

Current	The flow of electricity through a conductor.
Voltage	The push on the electrical current through a conductor.
Volts	The unit for voltage.
Conductor	A material that will allow electricity to flow through it.
Resistance	A measurement of the opposition to electrical flow in a circuit.
Resistor	A component in a circuit that resists electrical flow.

Physics – Energy Pathways

Year R

Loud	A big noise.
Quiet	Something is quiet when it does not make much or any noise.
Volume	How loud or quiet a noise is.
Sound	Something that people or animals can hear with their ears.

loud quiet volume sound

Year 3 – Light

Light Source	An object that emits light
Shiny	A smooth surface, usually very clean or polished.
Transparent	A material that allows light to pass through so objects behind can be clearly seen
Opaque	A material that is not able to be seen through
Reflective	A material that allows light rays to be bounced back off of it
Translucent	A material allowing light to pass through but not so an object can be clearly seen.

Year 6 – How light behaves

Shadow	A dark area or shape produced by a body or object coming between rays of light and a surface.
Opaque	Not able to be seen through.
Transparent	A material that allows light to pass through so objects behind can be clearly seen.
Translucent	A substance that allows light but not detailed shaped to pass through.
Reflection	The throwing back of light or sound without absorbing it.
Pupil	The pupil is the black circle in the centre. It opens and closes to control the amount of light that enters the eye.

Year 6 - Sound

Sound	Vibrations that travel through the air or other medium and can be heard when they reach an animal's ear.
Pitch	The rate or frequency of vibrations produced by a sound.
Volume	How loud or quiet a sound is.
Vibration	To move continuously and rapidly to and fro.
Ear drum	A membrane of the middle ear which vibrates in response to sound waves.
Frequency	How high or low a sound is determined by the rate at which vibrations occur over a particular period of time.
Amplitude	The maximum extent of a vibration.

Physics - Forces

Year 2 – Pushes and Pulls

Motion	Moving or being moved.
Pushing	To move something away from you or away from where it was before.
Pulling	Move something towards you or away from where it was before.
Slow down	To move or happen more slowly.
Speed up	To move or happen faster.
Direction	The path along which something moves

Year 3 – Magnets

Magnet	A piece of iron or other material that attracts other iron objects.
Force	A push or a pull action that changes the motion of an object
Attraction	The coming together of opposite poles
Repulsion	The moving away of like poles
Metal	A solid material that is hard and shiny, with good electrical and heat conductivity
Non-contact force	A force that acts on an object without coming physically in contact with it.
Pole	The ends of a magnet. Either north or south.

Year 5 – Forces that oppose motion

Water resistance	A type of force that uses friction to slow things down moving through water, often called drag
Air resistance	A type of force that uses friction to slow things down moving through air.
Friction	The force resisting the motion of a moving object when in contact with another.
undulations	The appearance of up and down structure or motion.
Interlock	Two or more objects fitting together.
Gears	A toothed wheel that works with others to alter the relation between the speed of a driving mechanism and the speed of a driven part, e.g., the speed of the engine in relation to the speed of the wheels
Pulley	A wheel with a grooved rim around which a cord passes which acts to change the direction a force acts to lift heavy objects
Lever	A rigid bar resting on a pivot, used to move heavy objects with one end when downward force is applied to the other end