



WENSLEY FOLD CE PRIMARY ACADEMY SCIENCE SCHEME OF WORK - YEAR 3

BIOLOGY – ANIMALS INCLUDING HUMANS

Key Learning Outcomes

At the start of this topic, assess children's prior knowledge by using a 'What I already know' mind map.

During this Science topic the pupils will be taught:

- To identify that humans and some other animals have skeletons.
 - To recognise that animals are alive
 - To identify animals (vertebrates) which have a skeleton. which supports their body, aids movement & protects vital organs (be able to name some of the vital organs).
 - To identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to support themselves, move and protect their vital organs.
- To describe and explain the skeletal system.
 - To know how the skeletons of birds, mammals, fish, amphibians or reptiles are similar (backbone, ribs, skull, bones used for movement) and the differences in their skeletons.
 - To explore how humans grow bigger as they reach maturity by making comparisons linked to body proportions and skeleton growth – e.g. do people with longer legs have longer arm spans? Is the size of our head related to our height, etc.
- To describe the purpose of the skeleton in humans and animals (for support, protection and movement).
- To describe and explain the muscular system of a human.
 - To know that muscles, which are attached to the skeleton, help animals move parts of their body.
- To explain how nutrients, water and oxygen are transported within animals and humans.
- To identify that humans need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.
 - To be able to make informed choices.
 - To know an adequate and varied diet is beneficial to health (along with a good supply of air and clean water).
 - To know that regular and varied exercise *from a variety of different activities* is beneficial to health (focus on *energy in versus energy out*)

To assess progress at the end of the topic, children must complete the 'What I know now' mind map.

Vocabulary

nutrition	diet	food	protein	carbohydrate	minerals	vitamins	fats	sugars	salts	balanced diet	skeleton	skull
spine	vertebrate	invertebrate	calcium	muscle	contract	relax	pairs	movement				

Investigative skills

predict	prediction	aim	purpose	method	apparatus	equipment	measure	accurate	reliable	repeatable
analyse	diagram	fair test	relationship	trend	conclusion					



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BIOLOGY – PLANTS

Key Learning Outcomes

At the start of this topic, assess children's prior knowledge by using a 'What I already know' mind map.

During this Science topic the pupils will be taught:

- To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.
 - Roots grow downwards and anchor the plant.
 - Stems provide support and enable the plant to grow towards the light.
 - Plants make their own food in the leaves using energy from the sun.
 - Flowers attract insects to aid pollination.
- To explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.
 - Nutrients (not food) are taken in through the roots.
 - Plants need nutrients to grow healthily (either naturally from the soil or from fertiliser added to soil).
- To investigate the way in which water is transported within plants.
 - Water, taken in by the roots, goes up the stem to the leaves, flowers and fruit.
- To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.
 - Pollination is when pollen is transferred between plants by insects, birds, other animals and the wind.
 - The transferring of pollen is required for new seeds to be produced.
 - Many flowers produce fruits which protect the seed and/or aid seed dispersal.
 - Seed dispersal, by a variety of methods, helps ensure that new plants survive.

Note: Pupils can be introduced to the idea that plants can make their own food, but at this stage they do not need to understand how this happens.

To assess progress at the end of the topic, children must complete the 'What I know now' mind map.

Vocabulary

plant	roots	stem	trunk	leaf/leaves	flower	stalk	veins	surface	edge	tip	food	root hair	nutrients
anchor	support	seed	germination	seedling	growth	mature plant	flowering	pollination	seed formation	bud	petal		
pollen	nectar	seed	fruit										

Investigative skills

predict	prediction	aim	purpose	method	apparatus	equipment	measure	accurate	reliable	repeatable
analyse	diagram	fair test	relationship	trend	conclusion					



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CHEMISTRY – LIGHT

Key Learning Outcomes

At the start of this topic, assess children's prior knowledge by using a 'What I already know' mind map.

During this Science topic the pupils will be taught:

- To recognise that they need light in order to see things and that dark is the absence of light.
- To recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- think about why it is important to protect their eyes from bright lights
- To explain that light can be reflected from a surface.
 - Explore what happens when light reflects off a mirror or other reflective surfaces, including playing mirror games to help them answer questions about how light behaves.
- To recognise and explain that shadows are formed when the light from a light source is blocked by a solid object.
- To find patterns in the way that the size of shadows change (shape and size)
 - Look for, and measure shadows and find out how they are formed and what might cause shadows to change.

To assess progress at the end of the topic, children must complete the 'What I know now' mind map.

Vocabulary

light	dark	absence	reflection	surface	natural	man-made	light source	shadow	blocked	bright	dim	mirror
absorb	plane mirror		concave mirror	convex mirror		image						

Investigative skills

predict	prediction	aim	purpose	method	apparatus	equipment	measure	accurate	reliable	repeatable
analyse	diagram	fair test	relationship	trend	conclusion					



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PHYSICS – FORCES and MAGNETS

Key Learning Outcomes

At the start of this topic, assess children's prior knowledge by using a 'What I already know' mind map.

During this Science topic the pupils will be taught:

- To compare how objects move on different surfaces.
- To notice that some forces need contact between two objects but magnetic forces can act at a distance.
- To observe how magnets attract or repel each other and attract some materials and not others.
- To compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.
- To describe magnets as having two poles.
- To predict whether two magnets will attract or repel each other, depending on which poles are facing.

To assess progress at the end of the topic, children must complete the 'What I know now' mind map.

Vocabulary

force	surface	magnet	magnetic force	attract	repel	magnetic material	poles	bar magnet	horseshoe magnet	materials
contact	non-contact	north pole	south pole	magnetic field	iron	iron filings				

Investigative skills

predict	prediction	aim	purpose	method	apparatus	equipment	measure	accurate	reliable	repeatable
analyse	diagram	fair test	relationship	trend	conclusion					



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CHEMISTRY – ROCKS and SOILS

Key Learning Outcomes

At the start of this topic, assess children's prior knowledge by using a 'What I already know' mind map.

During this Science topic the pupils will be taught:

- To compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.
 - Rocks and soils can feel and look different.
 - Rocks and soils can be different in different places/environments.
- To describe in simple terms how fossils are formed when things that have lived are trapped within rock.
- To recognise and describe that soils are made from rocks and organic matter.
- To describe and explain the difference between sedimentary and igneous rock.

To assess progress at the end of the topic, children must complete the 'What I know now' mind map.

Vocabulary

waterproof strong hard opaque heavy sedimentary igneous metamorphic porous fossil layers erosion soil
inner core outer core mantle crust earthquake volcano pebble boulder crystal weathering

Investigative skills

predict prediction aim purpose method apparatus equipment measure accurate reliable repeatable
analyse diagram fair test relationship trend conclusion