



WENSLEY FOLD CE PRIMARY ACADEMY SCIENCE SCHEME OF WORK - YEAR 5

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 describe the changes as humans develop to old age.
 - Animals are alive; they move, feed, grow, use their senses, reproduce, breathe/respire and excrete.
 - Pupils should draw a timeline to indicate stages in the growth and development of humans.
 - Pupils should learn about the changes experienced in puberty.
 - Research the gestation periods of other animals and compare them with humans.

See also Living Things and Their Habitats

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

Vocabulary

asexual reproduction baby birth egg fertilisation fetus gestation growth life cycle puberty reproduce sexual reproduction sperm womb

Investigative skills

predict prediction aim purpose method apparatus equipment measure accurate reliable repeatable
analyse diagram fair test control variable independent variable dependent variable relationship trend conclusion
evaluation



Key Learning Outcomes

During this Science topic the pupils will be taught:

- NOTE:** Pupils will have been introduced to pollination and seed dispersal in YR3.

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

Vocabulary

amphibian	bird	birth	carnivore	fertilization	fish	germination	gestation	growth	herbivore	invertebrate	life cycle
mammal	movement	nutrition	omnivore	pollination	predator	prey	reproduction	reptile	respiration	seed dispersal	sensitivity

Investigative skills

[illegible]



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PHYSICS – EARTH and SPACE

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 describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
 - The Earth orbits the Sun in one year.
 - Pupils should learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006).
 - Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.
- To describe the movement of the Moon relative to the Earth.
 - We can see the Moon because the Sun's light reflects off it.
 - The Moon orbits the Earth in approximately 28 days and changes to the appearance of the moon are evidence of this.
- To describe the Sun, Earth and Moon as approximately spherical bodies.
 - They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones).
- To use the idea of the Earth's rotation to explain day and night.
 - The Earth spins once around its own axis in 24 hours, giving day and night.
 - The Sun appears to move across the sky from East to West and this causes shadows to change during the day.
 - Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence supporting the movement of the Earth.

Note: Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses.

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

Vocabulary

attract attraction autumn axis distance ellipse equator geocentric gravity heliocentric hemisphere mass
moon orbit phases planet revolve rotation season shadow solar system sphere star temperature weight
winter

Investigative skills

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Key Learning Outcomes

During this Science topic the pupils will be taught:

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

acceleration	air resistance	balanced	contact	deceleration	drag	force	friction	gear	gravity	lever	lift	mass
newtons	non-contact	opposite	planet	pulley	thrust	unbalanced	upthrust	weight				

[illegible]



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CHEMISTRY - EVERYDAY MATERIALS/PROPERTIES and CHANGES OF MATERIALS

Key Learning Outcomes

During this Science topic the pupils will be taught:

- To compare and group together everyday materials on the basis of their properties.
 - hardness
 - solubility
 - response to magnets
 - transparency
 - conductivity (electrical and thermal)

Notes for Temperature and Thermal Insulation

- Heat always moves from hot to cold.
 - Some materials (insulators) are better at slowing down the movement of heat than others.
 - Objects/liquids will warm up or cool down until they reach the temperature of their surroundings.
- To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- To describe how a material dissolves to form a solution; explaining the process of dissolving.
- To describe and show how to recover a substance from a solution.
- To describe how some materials can be separated.
- To demonstrate how materials can be separated through:
 - filtering
 - sieving
 - evaporating
 - Magnetic attraction
- To demonstrate that some changes are reversible and some are not.
- To explain how some changes result in the formation of a new material and that this is usually irreversible.
- To discuss reversible and irreversible changes.

Vocabulary

burning	chromatography	conduct	distillation	evaporate	filter	filtrate	gas	insoluble	insulate	liquid	magnetic
opaque	oxygen	particles	property	solid	soluble	solute	solvent	state	thermal	transparent	
Investigative skills											
predict	prediction	aim	purpose	method	apparatus	equipment	measure	accurate	reliable	repeatable	



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analyse evaluation	diagram	fair test	control variable	independent variable	dependent variable	relationship	trend	conclusion
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