Balcombe CofE Primary School Curriculum Overview

KNOWLEDGE

EYFS	KS1 Year A	KS1 Year B	Forest	Spring	Mill
Animals including humans	Animals including humans	Animals including humans	Animals including humans	Animals including humans	Animals including humans
Seasonal Change	Seasonal Change				
Living things and their habitats	Living things and their habitats			Living things and their habitats	Living things and their habitats
Plants	Plants	Plants	Plants		
Everyday materials	Everyday materials	Uses of everyday material		States of matter	Properties and changes of materials
			Forces and magnets	Forces	
			Rocks		
			Light		Light
				Sound	
				Electricity	Electricity
				Earth and Space	
					Evolution and inheritance

*Not in order of teaching

Animals including humans

EYFS	KS1 Year A	KS1 Year B	Forest	Spring	Mill
• explain/describe healthy food, the importance of cleaning teeth and the ways we can keep healthy and feel well **Balcombe:** - harvesting and eating vegetables from our vegetable patch - finding out about how children have changed since they were babies	• find out about and describe the basic needs of animals, including humans for survival (water, food and air) • describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene • notice that animals, including humans, have offspring which grow into adults • identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense ***CC Links:*** DT – Food and a balanced diet PSHE – Health **Balcombe:** - investigate own pets - pond dipping - Nature Ninjas	• identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • identify and name a variety of common animals that are carnivores, herbivores and omnivores • describe and compare the structure of a variety of common animals, fish, amphibians, reptiles, birds and mammals, including pets ***CC Links:*** English – various texts **Balcombe:** - pond dipping - Nature Ninjas - visit British Wildlife Centre	• identify that animals including humans need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • identify that humans and some animals have skeletons and muscles for support, protection and movement ***CC Links:*** DT – Cooking and nutrition PSHE – Why should we eat well? **Balcombe:** - Nature Ninjas - investigate own bodies and how muscles relax and contract - classify food into food groups / data handling - identify different bones in the body	• describe the simple functions of the basic parts of the digestive system in humans • identify the different types of teeth in humans and their simple functions • construct and interpret a variety of food chains identifying producers, predators and prey ***CC Links:*** DT – Cooking and nutrition **Balcombe:** - create a full size model of a digestive system - explore own teeth - compare own teeth with pet or favourite animals - use wild area to find Balcombe food chains - Nature Ninjas	• identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • describe the ways in which nutrients and water are transported within animals, including humans • describe the changes as humans develop to old age ***CC Links:*** PSHE – Health and the future RSE **Balcombe:** - legal/illegal drugs - pulse rate investigation

Seasonal Change

EYFS	KS1 Year A
• talk about the weather and how it changes the outdoors, including leaves on the trees and how frost and ice appears/melts • talk about how buds and seeds grow and change in spring **Balcombe:** - planting seeds and growing fruit, vegetables and flowers in our Lake garden - welly walks on our school grounds all year round - texts: Seasons (J Burningham), Seasons (Discovery), Poetry Basket and other poems	• observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies **CC Links:** Geography – seasonal and daily weather patterns in the UK English – Lila and the secret of the rain by David Conway / Weather: poems for all seasons / The Robot and the Bluebird by David Lucas Maths – data / statistics **Balcombe:** - welly walks on our school grounds all year round

Living things and their habitats

EYFS	KS1 Year A	Spring	Mill

• understand and talk about
  ○ how plants and animals such as caterpillars grow and change
  ○ why animals are nocturnal
  ○ which animals love the coldest climates
• know which animals and mini-beasts are in our school grounds
• understand the need to respect and care for the natural environment and all living things
 	
Balcombe:
- learning about the coldest places
- bug hunts on school field
- pond dipping
- animal visits
- VR animal workshop
- visit from Marine Conservation Society
	• explore and compare the differences between things that are living, dead and things that have never been alive
	• identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other
	• identify and name a variety of plants and animals in their habitats, including micro-habitats
	• describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food
	
	CC Links:
	English – Tadpole's Promise by Jeanne Willis
	
	Balcombe:
	- bug hunts on school field
	- pond dipping
	- animal visits
	- VR animal workshop
	- visit from Marine Conservation Society
	- grow vegetables in Coombe garden
	- Nature Ninjas
	- tadpoles in classroom
		• recognise that living things can be grouped in a variety of ways
		• explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
		• recognise that environments can change and this can sometimes pose dangers to living things
		• describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird
		• describe the life processes of reproduction in some plants and animals
		
		CC Links:
		PSHE – how can our choices affect our environment
		
		Balcombe:
		- bug hunts using the field/wild area and pond dipping using keys to identify
		- caterpillars to butterflies / tadpoles to froglets in the classroom
		- dissect flower (lily)
		- look after and observe vegetables and flowers from seed to flower
		- Nature Ninjas
			• describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences including micro-organisms, plants and animals
			• give reasons for classifying plants and animals based on specific characteristics
			
			CC Links:
			
			Balcombe:
			- bug hunts and pond dipping using keys to identify
			- classify plants from field and local area
			- Nature Ninjas
			- identify warm / cold blooded animals
			- identify vertebrates / invertebrates
			- 'Animal Friday' – name and identify animals in local environment
			- learn about newly discovered animals e.g. Bosavi Woolly Rat

Plants

EYFS	KS1 Year A	KS1 Year B	Forest
• understand and talk about how plants grow and change, including through seasonal change as above • understand the need to respect and care for the natural environment and all living things **Balcombe:** - plant seeds and grow fruit, vegetables and flowers in our Lake garden - welly walks on our school grounds all year round to see how our local plants grow and change	• observe and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy ***CC Links:*** Geography – seasonal and daily weather patterns in the UK DT Food – fruit and vegetable smoothies **Balcombe:** - plant flowers in our garden and watch them grow - Nature Ninjas - observing our school grounds and local area to see how our plants grow and change	• identify and name a variety of common, wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees ***CC Links:*** English – 10 things I can do to help my world Geography – seasonal and daily weather patterns in the UK DT Food – fruit and vegetable smoothies Maths – measure / data **Balcombe:** - plant vegetables in our garden and watch them grow - harvesting and eating our vegetables - Nature Ninjas - observing our school grounds and local area to see how our plants grow and change	• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • 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 • investigate the way in which water is transported within plants • explore the part that flowers play in the lifecycle of flowering plants, including pollination, seed formation and seed dispersal ***CC Links:*** English texts – The Flower by John Light / non-fiction science texts DT Food – vegetable tarts Art & Design – collages to represent the natural world / clay flowers / still life of food **Balcombe:** - plant flowers in our Forest garden and watch them grow - Dying flowers – how water moves through plants - Nature Ninjas - observing our school grounds and local area to see how plants grow and change

Materials

Everyday materials EYFS	Everyday materials KS1 Year A	Uses of everyday materials KS1 Year B	States of matter Spring	Properties and changes of materials Mill
• identify and name a variety of everyday materials such as wood, plastic, glass, metal, water, rock • begin to understand similarities and differences between materials • begin to use vocabulary to identify different materials such as soft, hard, bendy, squashy, wet **Balcombe:** - make 3D models of our school using variety of materials - make and create props for their stories using a variety of materials	• distinguish between an object and the materials from which it is made • identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock • describe the simple physical properties of a variety of everyday materials • compare and group together a variety of everyday materials on the basis of their simple physical properties **CC Links:** DT – structures (windmills) **Balcombe:** - material hunts around school environment	• identify and compare the uses of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching **CC Links:** DT - textiles (puppets) **Balcombe:** - material hunts around school environment	• compare and group materials together according to whether they are solid, liquid or gas • observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius • identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature **CC Links:** Maths – negative numbers / data handling and statistics **Balcombe:** - melting points: chocolate or ice - molecule drama - set up own evaporation enquiry	• compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity and response to magnets • know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution • use knowledge of solids, liquids and gases to decide how mixtures might be separated including through filtering, sieving and evaporating • give reasons, based on evidence from comparative and fair tests for the particular uses of everyday materials including metals, wood and plastics • demonstrate that dissolving, mixing and changes of state are reversible changes • explain that some changes result in the formation of new materials and that this kind of change is not usually

				reversible, including changes associate with burning and the action of acid on bicarbonate of soda **CC Links:** DT – structures (bridges) **Balcombe:** - practical, hands-on reversible and irreversible changes enquiries - investigate which substances make a gas - make a polymer: slime - 'kitchen chemistry' – dissolving, making solutions - thermal conductors and insulators

Forces

Forces and magnets Forest	Forces Spring
• compare how things move on different surfaces • notice that some forces need contact between two objects but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • 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 • describe magnets as having two poles • predict whether two magnets will attract or repel each other, depending on which poles are facing **CC Links:** Maths – data handling and statistics **Balcombe:** - toy car friction experiment - magnet exploration fun	• explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between moving forces • recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect **CC Links:** Maths – data handling and statistics **Balcombe:** - Knex lever, pulley and gear construction - parachute investigation / effects of friction

Rocks

Forest

- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter

CC Links:
History – Stone Age
English – Stone Age Boy by Satoshi Kitamura
Geography - volcanoes

Balcombe:
- visit from Rock Scientist
- rock handling
- investigate the permeability of soil
- texts: The Street Beneath My Feet (Guillain Charlotte), This Little Pebble (Anna Claybourne), Escape from Pompeii by Christina Balit

Light

Forest

- recognise that they need light in order to see things and that dark is the absence of light
- notice that light is reflected from surfaces
- recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- recognise that shadows are formed when the light from a light source is blocked by a solid object
- find patterns in the way that the size of shadows change

CC Links:
DT – Electronic charm to use in low light conditions

Balcombe:
- investigate materials suitable for nightwear
- investigate suitable material for school bag so can be seen in dark in winter

Mill

- recognise that light appears to travel in straight lines
- use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye
- explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes
- use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them

CC Links:
Maths – data handling and statistics

Balcombe:
- Newton and the colour spectrum
- shadow investigation
- Incredible Images – refraction riddles

Sound

Spring

- identify how sounds are made associating them with something vibrating
- recognise that vibrations from sounds travel through a medium to the ear
- find patterns between the pitch of a sound and features of the object that produced it
- find patterns between the volume of a sound and the strength of the vibrations that produced it
- recognise that sounds get fainter as the distance from the sound source increases

CC Links:
Computing – Audio editing / data logging
Music – pitch and tone

Balcombe:
- real world sound challenge: how to muffle or amplify sound

Electricity

Spring	Mill
• identify common appliances that run on electricity • construct a simple series electrical circuit, identifying and naming its basic parts including cells, wires, bulbs, switches and buzzers • identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery • recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit • recognise some common conductors and insulators, and associate metals with being good conductors **CC Links:** PSHE – managing risk DT – electrical systems: torches **Balcombe:** - real purpose – make a switch for a torch	• associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit • compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches use recognised symbols when representing a simple circuit in a diagram **CC Links:** DT – electrical circuits: steady hand game / moving vehicles **Balcombe:** - make an electronic quiz game

Earth and space

Spring

- describe the movement of the Earth, and other planets relative to the sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the sun, earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night and apparent movement of the sun across the sky

CC Links:
Maths – data handling and statistics / scaling
English – The Iron Man by Ted Hughes
Geography – moon mapping

Balcombe:
- visit to the Southdowns Planetarium / from Space scientist (moon specialist)
- scale fruit model of the Solar System
- investigate the sun movement through shadow investigation
- understand time zones with torches, globes and Lego people

Evolution and inheritance

Mill

- recognise that living things have changed over time and that fossils provide information about living things that inhabited that Earth millions of years ago
- recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

CC Links:
History – timeline
PSHE – change and independence as we grow / sex education
Geography – changing environments
English – Charles Darwin biography

Balcombe:
- in depth study of Charles Darwin
- Peppered Moth story and Darwin's finches
- The fossil record
- investigate variation in eye colour in the class

Assessment:

TAPS - Primary Science Teaching Trust (pstt.org.uk)
TEACHER | PLAN (planassessment.com)