

Curriculum Driver: Science Year 1 / 2 A

Lens: Discovery

Animal Vegetable or Mineral? - Autumn Term

Texts *Animals, Vegetables and Minerals from A to Z* By Sallie O' Donnell, *Owl Babies: Martin Waddle The Gigantic Turnip* Aleksey Nikolayevich Tolstoy, National Trust: *Sunflower Shoots and Muddy Boots; A Child's Guide to Gardening* Board book *Dogger: Shirley Hughes* *Funny bones* by Allan Ahlberg

Questions Knowledge Question: It is animal, plant or mineral? Debatable question: Is a seed alive or dead?
Conceptual question: Is it living, once lived or never lived?

	Scientific Enquiry	Biology		Chemistry	Physics	
Term	Autumn Spring Summer	Animal Vegetable or Mineral Autumn	Funtrition Summer	Florence and the Disease Spring	Round the World as Biddulph Grange	
Milestone 1	To work scientifically	To understand plants	To understand animals and humans	To investigate living things	To investigate materials	To investigate the Earth's movement in space
Key Knowledge	<ul style="list-style-type: none"> To know how to ask scientific questions. To know how to observe carefully. To collect identify and classify. To justify ways to classify 	<ul style="list-style-type: none"> I Know that plants, animals and materials can be grouped by features: evergreen and deciduous; mammals. birds, fish, I Know that animals including humans eat different things. I Know that living things need nutrition, move, are sensitive their environment and reproduce. I can reason if something is living, one lived or never lived. Know about the feeding habits of carnivores, herbivores and omnivores and give examples of each group. 		<ul style="list-style-type: none"> Know some examples and uses of everyday materials. Know basic properties of some materials and can describe these 	<ul style="list-style-type: none"> Know the four seasons. Know the typical and variable weather of the four seasons. 	
Interesting Knowledge		<ul style="list-style-type: none"> Know that objects can made of things that once lived. Know that vitamins and minerals keep us healthy Know that some people live without use of all 5 senses. 		Discuss the benefits and limitation of using natural materials and manmade materials.	<ul style="list-style-type: none"> Know how to measure rainfall 	

Curriculum Driver: Science Year 1 / 2 B

Lens: Discovery

It's Alive - Summer Term

Texts [Giraffes Can't Dance](#) by [Giles Andreae](#) and [Guy Parker-Rees](#) [The Hungry Caterpillar](#) by [Eric Carle](#) [Lifecycles: Caterpillar to Butterfly](#) by [Camilla de la Bedoyere](#) [My Five Senses \(Let's-Read-and-Find-Out Science 1\)](#) by [Aliki](#)

Questions Knowledge Question: What are the 5 senses used for? Debatable Question: Should humans eat animals? Conceptual Question: how are lifecycles similar?

	Scientific Enquiry	Biology		Chemistry	Physics	
Term	Autumn Spring Summer	It's Alive Summer		London's Burning Autumn	Pole to Pole Spring	
Milestone 1	To work scientifically	To understand plants	To understand animals and humans	To investigate living things	To investigate materials	To investigate the Earth's movement in space
Key Knowledge	<ul style="list-style-type: none"> To know how to ask scientific questions. To know to observe carefully. To collect identify and classify. 	<ul style="list-style-type: none"> Know that trees and animals can be grouped by features: evergreen and deciduous; mammals, birds and Fish Know that animals including humans eat different things. Know that living things need food and that living things reproduce. Know about the feeding habits of carnivores, herbivores and omnivores and give examples of each group. 		<ul style="list-style-type: none"> Know some examples and uses of everyday materials. Know basic properties of some materials and can describe these 	<ul style="list-style-type: none"> Know the four seasons. Know the typical and variable weather of the four seasons. 	
Interesting Knowledge		<ul style="list-style-type: none"> Know the basic features of the human body including the 5 senses. Know about 5 predators of the United Kingdom. Know that some people live without use of all 5 senses. 		<ul style="list-style-type: none"> Know that the great fire of London spread so quickly because of the flammable Tudor houses. 	<ul style="list-style-type: none"> Know how to measure rainfall 	

Curriculum Driver: Science Year 2 / 3 A

Lens: Discovery

Jungle Story

Question: Why do sycamore seeds spin? (Knowledge) Is right to pick wildflowers? (Debatable) What are your top three plants to nominate for a pride of plant award? (Conceptual)

Texts Jack and the beanstalk Jim and the beanstalk Jack's beanstalks stinks

Scientific Enquiry

Biology

Chemistry

To work scientifically

To understand plants
To investigate living things

To investigate materials: Rocks and Soils

Term

Plants (Green Giants) Spring

Plants (Jungle Story) Spring.

Roman (The Emperor's New Land)- Autumn
Plants (Green Giants) Spring

Key
knowledge

Know how to ask and write **scientific/ increasing relevant and focused** questions.
Know how **to make / reason about** predictions **and compare results**
know how to collect evidence to answer questions and test predictions.
Know how to carry out an investigation of key requirements for germination and growth

Revise features of birds, fish and mammals; know some features of amphibians, reptiles, and invertebrates
know the main features of diverse habitats (Food, shelter and water)
Know that different animals thrive in different habitats
Know that different plants thrive in different environments.
Know how **plant** and **animal** habitats can be endangered by humans.
Know how energy is passed along a food chain.
Know how to identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
Recognise seeds from different fruit and vegetables and describe.
Know how different seeds are well adapted for different types of seed dispersal.

Know that soil consists of a mix of organic material (decayed plants and animals) and broken bits of rocks and minerals.
Know that soil is the loose top layer of the Earth's crust.

Interesting
Knowledge

Know how to plan and write up scientific investigations.
Know how to dissect flowers (lilies) for detailed observation of the parts of a flowering plant.

Know about features of insectivorous plants.
Know how cacti are well adapted to for survival.

Know that mountains are formed as part of the rock cycle.

Curriculum Driver: Science Year 2 /3 B

Lens: Discovery

Deadly 60 - Spring

Question: Why don't sharks like eating humans? (knowledge) Is it right to hunt? (debatable) Can we save animals from extinction? (conceptual)

TEXTS

Little Mermaid by Hans Christian Anderson

Trees, Leaves, Flowers & Seeds: A visual encyclopaedia of the plant kingdom by DK

The Story of Life: A First Book about Evolution by Catherine Barr

Scientific Enquiry

Biology

Chemistry

Y2

Autumn Spring
Summer

Dragon Dance Summer

Funtrition

Deadly 60
Spring

Tunnels Autumn

LO

To work scientifically

To understand plants
To understand animals and humans

To investigate materials

Key Knowledge

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Recognise seeds from different fruit and vegetables and describe.
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To predict which materials are malleable.
Know how malleable materials such as dough and clay can form different shapes.
To know how the availability of materials has led to improvements in homes and living standards from the Bronze Age to the modern times.

Interesting Knowledge

Know how the absence of light and water and extreme temperatures will affect growth.
Know some ways that predators have adapted to hunt and kill prey.
Know some ways that animals have adapted to defend themselves against predators.
know about the feeding habits and variation of underwater animals

Curriculum Driver: Science Year 3/4 Cycle A

Lens: Discovery

Blood and Bones

Question: Knowledge What are the major organs of digestive system? Debatable: Should dental care be free for everyone? Conceptual: How could humans further evolve for life in the future?

Texts	The Quest to Digest- Mary Corcoran.			
	Scientific Enquiry	Biology	Chemistry	Physics
	To work scientifically	To understand animals and humans/ To investigate living things/ To understand evolution and inheritance	To investigate materials: States of Matter	To understand movement, forces and magnets /To understand electrical circuits
Term	Bile and Bones- Autumn	Bile and Bones- Autumn Victorians - Summer	Stars and Stripes- Spring	Victorians- Summer
Key knowledge	<ul style="list-style-type: none"> To ask a range of increasingly focused and relevant scientific questions. Know how to make and test predictions based on prior scientific knowledge. To know how to observe, measure and report findings in a variety of ways including temperature and length. Know how to use and make classification keys (branching data base) 	<ul style="list-style-type: none"> Know the main functions of the human skeleton including support, protection and movement. Know about the different functions of each type of tooth. Know that animals including humans inherit looks and characteristics from their parents. Know the journey of food through the digestive system. Know how to identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Know how to classify plants by their characteristics. (US national and state flowers) Know how the functions of plant parts support optimum growth. 	<ul style="list-style-type: none"> Know the characteristics of solids, liquids and gases. Know that liquids can freeze or turn to gas and vice versa. Know that the water cycle is a process that repeats and involves precipitation and evaporation. Know that soil consists of a mix of organic material (decayed plants and animals) and broken bits of rocks and minerals. Know that soil is the loose top layer of the Earth's crust. 	<ul style="list-style-type: none"> Knows how to make an electric circuit with a switch.
Interesting Knowledge		<p>Know the name of major bones in the human skeleton.</p> <p>Know some examples of habitats that are well adapted to live in the 7 biomes.</p>		<ul style="list-style-type: none"> Know that electricity can be dangerous to living things.