

Year 3

Plan Bee

Medium Term Planning and Progression

Animals Including Humans	Rocks, fossils and soil	Light	Forces and magnets	How plants grow	Working Scientifically
<u>NC statements</u> 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 other animals have skeletons and muscles for support, protection and movement.	<u>NC statements</u> 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.	<u>NC statements</u> 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 an opaque object. Find patterns in the way that the size of shadows change.	<u>NC statements</u> 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	<u>NC statements</u> 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 life cycle of flowering plants, including pollination, seed formation and seed dispersal.	<u>NC statements</u> I know how to ask relevant scientific questions. I know how to use observations and knowledge to answer scientific questions. I know how to set up a simple enquiry to explore a scientific question. I know how to set up a test to compare two things. I know how to set up a fair test and explain why it is fair. I make careful and accurate observations, including the use of

			having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.		standard units. I know how to use equipment, including thermometers and data loggers to make measurements.
<u>Key Vocabulary</u>					
Week 1: germination, growth, conditions, shoots, observations, functions and information.	Week 1: naturally occurring, man-made, materials, concrete	Week 1: light sources, variety, produce, strongest, weakest	Week 1: contact, pushes, pulls, movement, direction	Week 1: germination, growth, conditions, shoots, observations, functions and information.	
Week 2: investigating, perform, transporting, information, experiment	Week 2: characteristics, observe, compare, categories	Week 2: difference, sun rise, set, dangerous, directly, absence	Week 2: force metre, newton's, surfaces	Week 2: investigating, perform, transporting, information, experiment	
Week 3: energy, produce, pores, life cycle, function	Week 3: permeable	Week 3: investigate, opaque, transparent, translucent, materials, shadows	Week 3: gravity, retract, repel	Week 3: energy, produce, pores, life cycle, function	
Week 4: pollination, formation, reproduce, function, disperse, fertilisation	Week 4: marble, chalk	Week 4: formed, blocked, solid, objects	Week 4: aluminium, attraction, repulsion, force	Week 4: pollination, formation, reproduce, function, disperse, fertilisation	
Week 5: dispersed, fertilised	Week 5: decaying, organic, layers, particles	Week 5: size, casting, position, course, shadows	Week 5: metal, magnetic	Week 5: dispersed, fertilised	

Week 6: structure, functions	Week 6: fossils, igneous, sedimentary, metamorphic	Week 6: reflects, surfaces, travels.		Week 6: structure, functions	
Week 7: skeletal, healthy, muscles, purposes.	Week 7: prehistoric, fossils, palaeontologist				

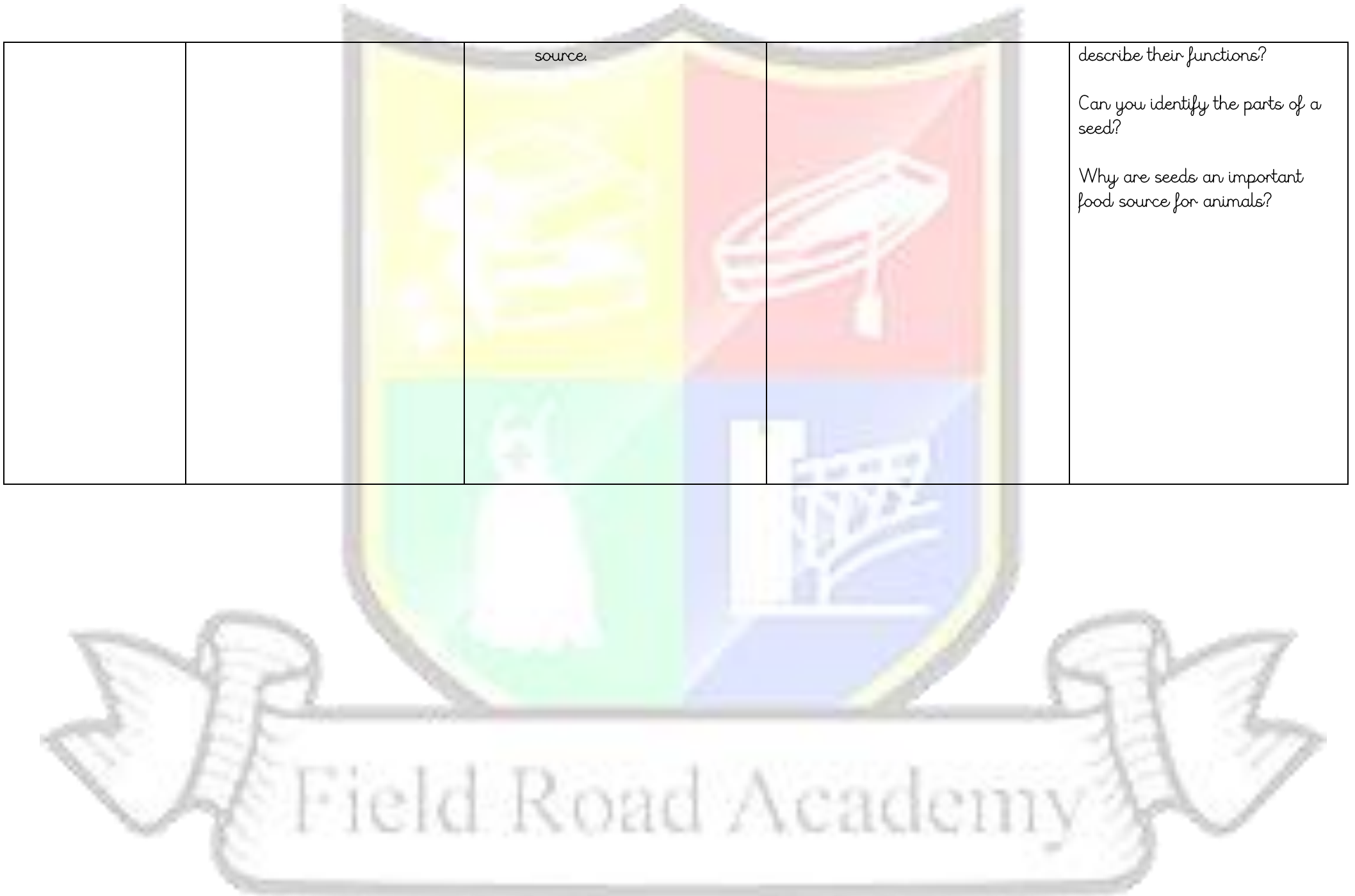
<u>Topic</u>	<u>Knowledge - Children will learn</u>	<u>Children will be able to...</u>	<u>Prior Knowledge</u>	<u>Key Questions</u>
Animals including Humans	To know about the importance of a nutritious, balanced diet. To know how nutrients, water and oxygen are transported within animals and humans. To know about the skeletal system of a human. To know about the muscular system of a human. To know about the purpose of a skeleton in humans and animals.	- Identify that human's get the nutrition they need from what they eat. - Identify that a balanced diet is needed in order to stay healthy. - Investigate which foods different animals eat. - Carry out an investigation to find out what pets eat. - Explore human and animal skeletons. - Find out about how the skeleton supports and	<u>Reception</u> Children can talk about why we should have enough sleep. Children can talk about how our bodies change as we get older. Children can talk about why we need a balanced diet and why exercise is important. <u>Year 1</u> Children can identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <u>Year 2</u> Children can describe the importance for humans to exercise, eat the right amounts of different	Name a food source what just you energy? What do human need to help to promote growth? What is meant by a balanced diet? Which group of food should we eat more of? Which groups of food should we eat less of? What does the word herbivore /omnivore /carnivore mean? What are animals with a skeleton called? What does the word invertebrates mean?

		protects the body and to investigate how invertebrates are supported.	types of food, and look after their basic hygiene. Children can notice that animals, including humans, have offspring which grow into adults. Children can describe the basic needs of animals, including humans, for survival (water, food and air)	What do muscles help us to do?
Rocks, fossils and soil	To compare and group rocks on their appearance and physical properties, giving a reason. To know how fossils are formed. To know how soil is made. To know about and explain the difference between sedimentary, metamorphic and igneous rock.	- Identify naturally occurring rocks and explore their uses. - Group rocks according to their characteristics. - Plan, carry out and evaluate experiments to compare rocks. - Identify rocks that are used for particular purposes. - Explore soil and how it is formed. Explore what fossils are and how they are formed	<u>Reception</u> Children can name some dinosaurs and know they are now extinct. Through discussion children can say what animals are extinct, endangered. <u>Year 1</u> Children can identify a variety of common materials. Children can describe materials according to their properties. Children can describe why some materials are more suited to certain objects. Children can investigate which materials are waterproof. <u>Year 2</u>	Do children know that rocks are used for a variety of purposes? Can you identify rocks that are naturally occurring and those that are man-made? Can you suggest ways of grouping rocks? What the terms 'erosion' and 'permeable' mean? What different types of soil types can you name? What different layers of soil are there? What is a fossils? How are fossils formed?

			Children can identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. Children can explore and compare the differences between things that are living, dead, and things that have never been alive.	
Light and shadow	To know what dark is (the absence of light) To know that light is needed in order to see. To know that light is reflected from a surface. To know and demonstrate how a shadow is formed. To explore shadow size and the changes. To know the dangers of direct sunlight and describe how to keep protected.	• Recognise that we need light in order to see. • Explore the Sun as a light source and identify the difference between night and day. • Investigate what shadows are and why they are formed. • Investigate how shadows behave. • Investigate how the size of shadows change throughout the day. • Explore how light is reflected from surfaces.	<u>Reception</u> Children can talk about the features in Winter and Spring. <u>Year 1</u> Children can observe changes across the four seasons. Children can observe and describe weather associated with the seasons and how day length varies.	Can you name a source of light? Define the difference between day and night? When are shadows formed? What does the word opaque mean? What does the word transparent mean? What does the word translucent mean? How does light travel?
Forces and magnets	To know about and describe how objects move on different	• Explore what forces are and notice that some forces need	<u>Reception</u> Children can name different objects	What is a force?

	surfaces. To know how some forces require contact and some do not giving examples. To know about and explain how objects attract and repel in relation to objects and other magnets. To predict whether objects will be magnetic and carry out an enquiry to test this out. To know how magnets work. To predict whether magnets will attract or repel and give a reason.	contact between two objects. • Compare how things move on different surfaces. • Explore how magnetic forces work. • To be able to identify magnetic materials. • Investigate uses for magnets.	which are magnetic and non-magnetic. <u>Year 1</u> Children can distinguish between an object and the material from which it is made. Children can describe why some materials are more suited to certain objects.	What are forces measured in? What happens when two magnets are brought together? Name a material that is magnetic? Can you name a use for a magnet?
--	---	--	--	---

How plants grow	To know the function of different parts of flowering plants and trees. To identify and describe the functions of the roots of flowering plants. To know what different plants need to survive. To know how water is transported in plants. To know the plant life cycle, especially the importance of flowers.	• To identify and describe the functions of the roots of flowering plants. • To investigate the way in which water is transported within plants. • To identify and describe the functions of leaves in flowering plants. To identify and describe the functions of leaves in flowering plants. • To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. • To explore some of the ways in which flowering plants disperse their seeds. To explore some of the ways in which flowering plants disperse their seeds. To understand the structure of seeds and their importance as a food	<u>Reception</u> Children can talk about what a bean needs to grow. Children can name some of the features of trees and know that in Autumn the leaves change colours and fall off. Children have observed broad beans grow and can talk about some of the features <u>Year 1</u> Children can identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Children can observe and describe how seeds and bulbs grow into mature plants. <u>Year 2</u> Children can identify and describe the basic structure of a variety of common flowering plants, including trees. Children can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Can children name the main parts of flowering plants? Explain the function of the roots? Where do plants get their water from? Can children name the parts of the plant that transport water? Can children say what plants need to produce their own food? Can children explain the function of leaves in flowering plants? Can children name the main parts of Flowers? Can children describe the functions of the main parts of flowers? Can you explain why flowering plants need to disperse their seeds? Can children describe some ways in which seeds are dispersed? Name the parts of a seed and
------------------------	---	--	--	---



--

--

source:

--

describe their functions?
Can you identify the parts of a seed?
Why are seeds an important food source for animals?