

Subject Area – Science
Year Group - 3

Term	Autumn One	Autumn Two	Spring One	Spring Two	Summer
Knowledge	Rocks	Light	Animals including humans	Forces and magnets	Plants
Scientific enquiry	Researching Classifying	Fair testing Researching Classifying	Classifying Researching	Classifying Fair testing	Researching Classifying Fair Testing
Working scientifically skills	Observe closely Predictions Gather/record results Ask scientific questions	Observe closely Predictions Draw conclusions	Ask scientific questions Observe closely	Predictions Gather/record results Draw conclusions Interpret results	Observe closely Predictions Gather/record results Ask scientific questions
Building science capital	Sensory Garden and school grounds Science Experiments	Science experiments	London Zoo Animals into school to showcase	Scientists, Doctors Geographical surveys	Sensory Garden and School grounds (Edible playgrounds project) Firs Farm Wetlands
Composite knowledge	What are the different types of rocks? Where and how are they formed? What are fossils? What is soil made from?	What is a light source? How does light travel? How does sun shine? How do we see? How are shadows formed? Do shadows move? What can we do to stay safe in the sun?	What is the difference between humans and animals? What is the purpose of a skeleton? What organs do humans have and their functions? How do humans and animals take care of their offspring? What is the life cycle of humans?	What is force? Which materials are magnetic? How does force affect our lives/how are magnets used in everyday life? What are the different types of magnets?	What are plants? What types of plants are there? How do we use plants in our everyday life? How do plants grow? What do plants need to grow? What is pollination? How do they reproduce?
Component knowledge	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	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	Identify 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	Compare how things move on different surfaces Notice that some forces need contact between two objects, but magnetic forces can act at a distance	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

	when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter Explore different kinds of rocks and soils, including those in the local environment	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 Understand why the moon is not a light source	Identify that humans and some other animals have skeletons and muscles for support, protection, and movement	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.	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
Vocabulary	Permeable, impermeable, durable, metamorphic, igneous, sedimentary, lava, molten, Fossils, Soils, Sandstone, Granite, Marble, Pumice, Crystals, Absorbent	Light, Shadows, Mirror, Reflective, Dark, Reflection	Movement, Organs, Muscles, Bones, Skull, Nutrition, Skeleton,	Magnetic, Force, Contact, Attract, Repel, Friction, Poles, Pull, Push, Gravity.	Air, Light, Water, Nutrients, Soil, Reproduction, Transportation, Dispersal, Pollination, Flower
Links to prior knowledge	Year 1 and 2 Uses of Everyday Materials	Year 1 and 2 Uses of Everyday Materials	Year 1 and 2 Animals including Humans	NA	Year 1 and 2 Plants
Key knowledge for assessment	What are the 3 types of rocks? How are the rocks made? What is a fossil? How is a fossil made? What is soil? How is soil made?	What is a light source? What are the different types of light sources? How do we see? What is reflection? What is a shadow and how does it move? How can we protect our eyes from the sun?	Explain how the human body is adapted for support, protection and movement using the skeleton and muscles	Explain how magnets work to repel and attract Predict and correctly classify materials according to their attraction to magnets.	Explain plant part functions and requirements for survival Explain a flowers importance in stages in the life cycle.

Cross-curricular links	Mountains River and Coasts- Where different fossils are found across the continent	Stone Age – how humans created fire and explored shadows		Explorers - Earth poles and compasses	Geography – Europe- physical geography What countries have forests/alpine plants/logging/tree industry
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Half Termly Planning

Autumn 1	Lesson Objective	Main Task	Resources
Lesson 1	LO: To identify igneous rocks and understand how they are made.	Chn will create actions to model how igneous rocks are made. Then they will draw and label a diagram. Then chn will write sentences to explain how igneous rocks are made. Children then practically explore the rocks.	Scaffold sheet with key vocabulary. Rocks (range of types with names and labels for each container)
Lesson 2	LO: To identify sedimentary rocks and understand how they are made.	Chn will identify and create actions for the process of how Sedimentary rocks are made. Then they will draw the stages in separate boxes and write sentences to explain each stage. Children then practically explore the rocks.	Scaffold sheet with key vocabulary. Rocks (range of types with names and labels for each container)
Lesson 3	L O: To identify metamorphic rocks and understand how they are made.	Chn will identify and create actions for the process of how Sedimentary rocks are made. Then they will draw the stages in separate boxes and write sentences to explain each stage. Children then practically explore the rocks.	Scaffold sheet with key vocabulary. Rocks (range of types with names and labels for each container)
Lesson 4	LO: To understand what a fossil is.	Chn will draw the process of fossilization. They will explain each diagram with a sentence for each stage. Children then practically explore the fossils.	Scaffold sheet with key vocabulary. Fossils (range of types with names and labels for each container)
Lesson 5	LO: To explore how fossils are made.	Chn to experiment with bread, soil and small toys to see how a fossil can be made overtime.	Scaffold sheet with key vocabulary. Bread, soil, counting bears.
Lesson 6	LO: To assess my knowledge of Rocks	Chn will answer questions in quiz format to assess their learning and retrieval of the Rock topic. Chn will then peer assess	Slides
Lesson 7	LO: To understand what soil is.	Chn to draw and label layers of soil and what can be found in soil. Then children can practically explore the soil tray.	Soil tray with different soil types.
Lesson 8	<u>Black History Month</u> : LO: To find out the achievements of a famous black scientist	Chn will make a poster about Marguerite Williams and her achievements linked with erosion in rocks	

Autumn 2	Lesson Objective	Main Task	Resources
Lesson 1	LO: To identify differences between natural and manmade light.	Sort pictures into manmade and natural.	Picture sheet widgit vocabulary

Lesson 2	LO: To understand how we see	Order picture cards explaining how we see things	Picture cards inc LA widget key words
Lesson 3	LO: To understand how reflection works	Sort picture objects into reflective and non -reflective surfaces then writing	Pictures of objects
Lesson 4	LO: To understand how shadows are formed	Label a picture explaining how shadows are formed (updated)	Label a picture
Lesson 5	LO: To know how to stay safe in the sun	Design a sun safety poster	Widget key words
Lesson 6	LO: To assess learning	Quiz	Questions on slides
Lesson 7			
Lesson 8			

Spring 1	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	LO: To find the similarities and differences between humans and animals	Chn will label a diagram using knowledge from the video and look at the similarities and differences between the two. HA can comment on why humans are more advanced	Video Widget keywords	Human Animal Similarities Differences
Lesson 2	LO: To be able to explore the function of the skeleton	Chn to label a diagram of skeleton and look at different bones as well as muscles. Chn identify the function of muscles and skeleton. Scaffold LA simple skeleton diagram and key words only.	Video Widget resources Diagram (skeleton) Gloves, water and elastic band	Movement Protection Support Muscles Skeleton Bones
Lesson 3	LO: To understand the function of important organs	Chn to label the main organs. Describe their functions. HA to explain what happens with they are damaged or not taken care of properly.	Video Widget resources Diagram - (organs)	Organs Function Brain Heart Lungs Stomach Liver Kidneys
Lesson 4	LO: To know how humans and animals take care of their offspring (included life cycle of humans as a plenary)	Chn will label the life cycle and then think of how animals and humans look after their offspring. Plenary: Order chn into the right order for the life cycle of a human	Video Widget keywords	Life cycle Humans Animals Offspring Protection Shelter Nutrition

				Education
Lesson 5	SRE:			
Lesson 6	LONDON ZOO TRIP			
Lesson 7				
Lesson 8				

Spring 2	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	To explore forces beginning with air resistance – standalone lesson Do not repeat lesson in 2023-2024 for this does not follow the Year 3 National Curriculum	Chn will explore different types of forces starting with air resistance	Paper bags String/wool Scissors Multi-link cubes	Forces Air resistance Parachute
Lesson 2	To compare how forces move between objects	Chn will explore how forces move by making contact. They will notice that heat is created when objects make fast contact. Chn will begin to articulate how easily or how hard it is to move two objects.	Various objects to rub together Widget keyword sheet Videos	Forces Contact Compare Easy Hard
Lesson 3	To explore magnets	Chn will explore magnets and discuss what objects they attract or repel. They will have a wide variety of everyday objects	Video Magnets Paperclips Paper Iron shavings Pencils	Attract Repel Opposite North pole South pole
Lesson 4	To understand how magnets attract or repel each other using everyday materials		Video Widget help sheet	Attract Repel Opposite North pole South pole Magnetic materials
Lesson 5				
Lesson 6				
Lesson 7				
Lesson 8				

Summer 1	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1				
Lesson 2				
Lesson 3				
Lesson 4				
Lesson 5				
Lesson 6				
Lesson 7				
Lesson 8				

Summer 2	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	LO: To evaluate our Firs Farm trip	Chn will recall their trip, explain why they went, what they saw and what they have learnt about plants	Photos Widgets keywords Their sheets from the trip	Evaluate Function Plants Leaves Stem Roots Petals Trees Wetlands
Lesson 2	To understand how bees pollinate flowering plants	Mention seed dispersal – how do you think pollen moves from one flower to another? Video Children to order the process of pollination using the context of bees. They will use the scaffolds and keywords to initially understand the process. HA: Discussion of impact if they were not around.	Cut and order process Word bank Sentence starters	Bees Pollination/Pollinate Attract Travel Flowering plant Pollen Nectar Seed dispersal
Lesson 3	To understand the reproductive parts of a flowering plant	Dissect flowers for parts, label, explain function etc How do these contribute to the growth and seed production of a flowering plant	Flowering plants	Stigma Stamen Pollen Ovary/Ovule Style

Lesson 4	Quiz Recap due to Eid/Strikes	Quiz about plant topic Competitive house teams – names of teams	Sheets	All key vocab
Lesson 5	To understand the life cycle of a flowering plant	Children will go through the life cycle of a flowering plant Seed dispersal (recap) Give examples What would happen to this cycle if there wasn't enough rain, light etc	LA: Order the parts and text MA: Images of cycle and keywords HA: Only image	Germination Seed dispersal Roots Leaves Flowering
Lesson 6				
Lesson 7				
Lesson 8				