


Year 3 Science Curriculum

	Autumn	
Curriculum focus/links	Animals Including Humans	Forces and Magnets
Scientist/Inventor Study	<p>Marie Curie: scientist whose research in radioactivity made huge contributions to finding treatments for cancer.</p>	
Key Vocabulary	<p>Food groups and nutrients: fibre, fats (saturated and unsaturated), vitamins, minerals.</p> <p>Skeletons and muscles: skeleton, muscles, tendons, joints, protection, support, organs, voluntary muscles, involuntary muscles, biceps, triceps, contract, relax, bone, cartilage, shell, vertebrate, invertebrate, endoskeleton, exoskeleton, hydrostatic skeleton.</p> <p>Names of human bones: e.g. skull, spine, backbone, vertebral column, ribcage, pelvis, clavicle, scapula, humerus, ulna, pelvis, radius, femur, tibia, fibula.</p> <p>Previously introduced vocabulary: movement, energy.</p>	<p>How things move: move, movement, surface, distance, strength. Types of forces: push, pull, contact force, non-contact force, friction.</p> <p>Magnets: magnetic, magnetic field, magnetic force, bar magnet, horseshoe magnet, ring magnet, magnetic poles (north pole, south pole), attract, repel, compass.</p> <p>Magnetic and non-magnetic materials: e.g. iron, nickel, cobalt.</p> <p>Previously introduced vocabulary: metal, names of materials.</p>
Substantive Concepts	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • compare how things move on different surfaces; • notice that some forces need contact between 2 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 2 poles; • predict whether 2 magnets will attract or repel each other, depending on which poles are facing.
Scientific Enquiry	<p>Plan use their scientific experiences to raise questions about the world around them start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions, e.g. recognising when a fair test is necessary help decide what observations or measurements they might make, how long they will make them for and the equipment they might use</p>	<p>Plan use their scientific experiences to raise questions about the world around them help decide what observations or measurements they might make, how long they will make them for and the equipment they might use</p> <p>Do make systematic and careful observations</p>

Year 3 Science Curriculum

help decide how to record and analyse data

Do

make systematic and careful observations

take accurate measurements using standard units

use a range of equipment, including thermometers and data loggers

use secondary sources for researching answers to questions, recognising

how this allows them to answer questions that cannot be answered through practical investigations

set up and carry out simple comparative and fair tests

set up and carry out pattern seeking enquiries

talk about criteria for identifying, grouping and classifying

identify, group and classify things, using simple keys when appropriate

Record

gather, record and present observations in a variety of ways to help answer questions, e.g. written recordings using simple scientific language, drawings, labelled diagrams or tables

gather, record and present measurements in a variety of ways to help answer questions, e.g. tables and bar charts

gather, record and present findings from their research (such as from secondary sources) in a variety of ways, e.g. fact files, answers to questions or giving explanations

record classification tasks in a variety of ways to help answer questions, e.g. simple keys, tables or Venn diagrams

use and apply mathematical skills at a level consistent with their increasing maths knowledge at lower key stage 2

Review

with support, identify changes, patterns, and similarities and differences, e.g. in their data, observations or from research of scientific ideas, to help answer questions and draw conclusions

use straightforward scientific evidence (from observations, measurements or secondary sources) to answer questions or support their conclusions

suggest improvements to investigations

use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge

report and present their results and conclusions to different audiences in written and oral forms with increasing confidence

take accurate measurements using standard units

use a range of equipment, including thermometers and data loggers

set up and carry out simple comparative and fair tests

group and classify things, using simple keys when appropriate

identify,

Record

gather, record and present measurements in a variety of ways to help answer questions, e.g. tables and bar charts

tasks in a variety of ways to help answer questions, e.g. simple keys, tables or Venn diagrams

use and apply mathematical skills at a level consistent with their increasing maths knowledge at lower key stage 2

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Year 3 Science Curriculum

	Spring	
Curriculum focus/links	Rocks	Light
Scientist / Inventor Study	Mary Anning: palaeontologist and fossil collector.	
Key Vocabulary	<p>Types of rock: sedimentary rock, igneous rock, metamorphic rock.</p> <p>Properties of rocks: permeable, semi-permeable, impermeable, durable.</p> <p>Names of rocks: e.g. marble, chalk, granite, sandstone, slate.</p> <p>Formation of rocks and fossils: natural, human-made, magma, lava, molten rock, sediment, erosion, fossilisation, layers, bone, fossil.</p> <p>Soil: sandy, chalky, clay, peaty, loamy, topsoil, subsoil, bedrock, mineral, organic matter, compost.</p> <p>Other: palaeontology.</p> <p>Previously introduced vocabulary: soil, water, air.</p>	<p>Light and seeing: dark, absence of light, light source, illuminate, visible, shadow, translucent, energy, block.</p> <p>Light sources: e.g. candle, torch, fire, lantern, lightning.</p> <p>Reflective light: reflect, reflection, surface, ray, scatter, reverse, beam, angle, mirror, moon.</p> <p>Sun safety: dangerous, glare, damage, UV light, UV rating, sunglasses, direct.</p> <p>Previously introduced vocabulary: opaque, transparent, sunlight, sun.</p>
Substantive Concepts	<ul style="list-style-type: none"> •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. 	<ul style="list-style-type: none"> •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.
Scientific Enquiry	<p>Do make systematic and careful observations</p> <p>take accurate measurements using standard units use a range of equipment, including thermometers and data loggers set up and carry out enquiries that involve observing over time use secondary sources for researching answers to questions, recognising how this allows them to answer questions that cannot be answered through practical investigations set up and carry out simple comparative and fair tests set up and carry out pattern seeking enquiries identify, group and classify things, using simple keys when appropriate</p>	<p>Plan use their scientific experiences to raise questions about the world around them</p> <p>start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions, e.g. recognising when a fair test is necessary help decide what observations or measurements they might make, how long they will make them for and the equipment they might use help decide how to record and analyse data</p> <p>Do make systematic and careful observations take accurate measurements using standard units use a range of equipment, including thermometers and data loggers set up and</p>

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gather, record and present findings from their research (such as from secondary sources) in a variety of ways, e.g. fact files, answers to questions or giving explanations

record classification tasks in a variety of ways to help answer questions, e.g. simple keys, tables or Venn diagrams

use and apply mathematical skills at a level consistent with their increasing maths knowledge at lower key stage 2

Review

with support, identify changes, patterns, and similarities and differences, e.g. in their data, observations or from research of scientific ideas, to help answer questions and draw conclusions

use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge

report and present their results and conclusions to different audiences in written and oral forms with increasing confidence

carry out enquiries that involve observing over time

use secondary sources for researching answers to questions, recognising how this allows them to answer questions that cannot be answered through practical investigations

set up and carry out simple comparative and fair tests

set up and carry out pattern seeking enquiries

identify, group and classify things, using simple keys when appropriate

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Year 3 Science Curriculum

	<h2>Summer</h2>
Curriculum focus/links	Plants
Scientist / Inventor Study	Sir Joseph Banks: a botanist who travelled the world in search of different types of plants
Key Vocabulary	<p>Water transportation: transport, evaporation, evaporate, nutrients, absorb, anchor.</p> <p>Life cycle of flowering plants: pollination (insect/wind), pollen, nectar, pollinator, seed formation, seed dispersal (animal/wind/water), reproduce, fertilisation, fertilise, stamen, anther, filament, carpel (pistil), stigma, style, ovary, ovule, sepal, carbon dioxide.</p> <p>Previously introduced vocabulary: life cycle.</p>
Substantive Concepts	<ul style="list-style-type: none"> •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.
Scientific Enquiry	<p>Plan use their scientific experiences to raise questions about the world around them help decide what observations or measurements they might make, how long they will make them for and the equipment they might use</p> <p>Do make systematic and careful observations take accurate measurements using standard units use a range of equipment, including thermometers and data loggers set up and carry out enquiries that involve observing over time use secondary sources for researching answers to questions, recognising how this allows them to answer questions that cannot be answered through practical investigations set up and carry out simple comparative and fair tests identify, group and classify things, using simple keys when appropriate</p> <p>Record gather, record and present observations in a variety of ways to help answer questions, e.g. written recordings using simple scientific language, drawings, labelled diagrams or tables gather, record and present measurements in a variety of ways to help answer questions, e.g. tables and bar charts gather, record and present findings from their research (such as from secondary sources) in a variety of ways, e.g. fact files, answers to questions or giving explanations record classification tasks in a variety of ways to help answer questions, e.g. simple keys, tables or Venn diagrams use and apply mathematical skills at a level consistent with their increasing maths knowledge at lower key stage 2</p>

Year 3 Science Curriculum

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