Science	<u>Oak pathway</u>							
Curriculum cycle – Year 1 (2024– 2025)								
	Subject specific curriculum							

Schemes of work - ADD LINK TO SOW

	Aut	umn	Spri	ng	Summ	er
Sunfl ower	I am Special!	We're not scared!	The Egyptians	Nature Detectives	How can I travel?	Splish, splash, splosh into the sea
Scienc e	How do we grow?	<mark>Electric lights</mark>	Tombs (including rocks)	Comparing plants	Testing materials	Why does it float?
Key Learnin g	 Describe people who are familiar to them Learn about how to take care of themselves 	 Explore shadows Explore rainbows 	 Identify rocks Explore differences in rocks 	 Grow plants Explore colours and differences in plants 	 Explore a range of materials, including natural materials Make objects from different materials, including natural materials Observe, measure and 	 Explore a range of materials, including natural materials Compare how materials change over time and in

					record how materials change when heated • and cooled • Compare how materials change over time and in different conditions	different conditions • Explore how objects move in water
Key	names of animals, live,	sun, sunny, light,	natural, shells, pebbles,	tree, bush, herb,	ice, water, frozen, icicle,	float, sink, up, down,
Vocabu	on land, in water,	shadow, shady, clouds,	stones	names of plants they	snow, melt, wet, cold,	top, bottom, surface,
lary	jungle, desert, North	torch, see-through, not		see	slippery, smooth, big,	move, roll, drop, fly,
	Pole, South Pole, sea,	see-through, source,			bigger, biggest, smaller,	turn, spin, fall, fast,
	hot, cold, wet, dry,	light source			smaller, smallest, hard,	slow, faster, slower,
	snow, ice, hair (e.g.				soft, bendy, rigid,	fastest, slowest,
	black, brown,				wood, plastic, paper,	further, furthest,
	dark, light, blonde,				card, metal, strong,	wind, air, water, blow,
	ginger, grey, white,				weak, hot, apply heat,	bounce
	long, short, straight,				waterproof, soggy, not	
	curly), eyes (e.g. blue,				waterproof, best,	
	brown, green, grey),				change, change back	
	skin (e.g. black,					
	brown, white),					
	big/tall, small/short,					
	bigger/smaller, baby,					
	toddler, child, adult,					
	old person, old, young,					
	brother, sister,					
	mother, tather, aunt,					
	uncle,					
	grandmother,					
	grandtather, cousin,					

friend, family, boy,							
girl, man, woman							
n . Asking questions - Go With support, the children develop their ideas for answering their questions . Talk about objects, mo			athering data - t their observations of objects, als and living things. their observations when comparing aterials and living things.	Recording data Use a camera to take phy videos to record their observa drawings. Record their observations drawings.	a – otographs or vations. tions using s using labelled	Drawing conclusions – Use their observations and simple secondary sources (e.g. identification sheets) to name living things they find in the local area. • Recognise 'biggest and smallest', 'best and worst' etc. from their data.	
				Garden Centres			
Aut	tumn		Spr	ing		Summ	er
			- F				
Look at Me!	Winter Won	derland	China	Extreme Earth	Local History - Warrington		Adventures
<mark>My Senses</mark>	Solids, Liqu Gase	uids and s	<mark>The Seasons</mark> Weather	Volcanoes	Plan	<mark>its</mark>	<mark>Magnets</mark>
 Identify, name, draw and label the basic parts of the human body and say which part of 	 Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, 		 Observe changes across the four seasons Observe and describe weather associated with the seasons and 	 Compare how materials change over time and in different conditions Explore how 	 Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. Identify and 		 Observe and experiment how magnets push and pull Compare and sort materials
	friend, family, boy, girl, man, woman . Asking questio With support, the child their ideas for answering their of Aut Look at Me! My Senses . Identify, name, draw and label the basic parts of the human body and say which part of	friend, family, boy, girl, man, woman Asking questions - With support, the children develop their ideas for answering their questions for answering their questions Autumn Look at Me! My Senses My Senses Solids, Liqu Gase - Identify, name, draw and label the basic parts of the human body and say which part of by squ	friend, family, boy, girl, man, woman . Asking questions - With support, the children develop their ideas for answering their questions for answering their questions for answering their questions Material . Talk about . Talk . Tal	friend, family, boy, girl, man, woman Gathering data - Asking questions - Gathering data - With support, the children develop their ideas for answering their questions Talk about their observations of objects, materials and living things. for answering their questions Talk about their observations when comparing objects, materials and living things. Vith support, the children develop their ideas for answering their questions Talk about their observations when comparing objects, materials and living things. Vith about their observations when comparing objects, materials and living things. Talk about their observations when comparing objects, materials and living things. Look at Me! Winter Wonderland China My Senses Solids, Liquids and Gases The Seasons Weather • Identify, name, draw and label the basic parts of the shapes of solid objects made from some materials basic parts of the human body and say which part of by squashing, the seasons and •	Autumn Spring Autumn Spring Look at Me! Winter Wonderland China Extreme Earth My Senses Solids, Liquids and bout the shapes of and label the human body and say which part of by squashing, • Find out how the shapes of body and say which part of by squashing, • Observe and describe weather assoniated with the scasons and the shapes of body and say which part of by squashing, • Compare how materials	Autumn Gathering data - Talk about their observations of objects, materials and living things. Recording data - Use a camera to take photographs or videos to record their observations. • Talk about their observations of objects, for answering their questions • Talk about their observations when comparing • Record their observations. • Talk about their observations when comparing • Talk about their observations when comparing • Record their observations. • Look at Me! Winter Wonderland China Extreme Earth Local His Warrin My Senses Solids, Liquids and Gases The Seasons Weather • Compare how materials • · Identify, name, draw and label the basic parts of the human body and say which part of by squashing, • Find out how the shapes of solid objects • · Observe changes across the four seasons on describe weather associated with • Compare how materials change over time and in garde different conditions • · Ider	Asking questions - Gathering data - Recording data - Use haspent, the children develop their ideas Draw for answering their questions Talk about their observations of objects, materials and living things. • Talk about their observations when comparing objects, materials and living things. • Record their observations using labelled drawings. • Record their observa

	with coch	Stratahina		e Evolore the	bagia atquatura	
	with each	Stretching		• Explore the		
	sense.	• Observe,		natural	of a variety of	
		measure and		environment	common	
		record how		around us	flowering plants,	
		materials		 Learn about 	including trees	
		change when		the Earth		
		heated				
		and cooled				
		 Describe the 				
		simple physical				
		properties of a				
		variety of				
		everyday				
		materials				
		Compare and				
		• compare and				
		group rogerner				
		a variety of				
		everyddy				
		materials on				
		the basis of				
		their simple				
		physical				
		properties.				
Key	head, body, eyes,	ice, water, frozen,	spring, summer, autumn,	object, material, rock,	leaf, flower, blossom,	push/pushing,
Vocabu	ears, mouth, teeth,	icicle, snow, melt, wet,	winter, seasons, sunny,	brick, clay, hard, soft,	petal, fruit, berry, root,	pull/pulling
lary	leg, tail, wing, claw,	cold, slippery, smooth,	cloudy, hot, warm, cold,	waterproof, rough,	seed, trunk, branch,	
	fin, scales, feathers,	big, bigger, biggest,	shower, raining, storm,	smooth, shiny, dull,	stem, bark, stalk, bud,	
	fur, beak, paws,	smaller, smaller,	thunder, lightning, hail,		names of trees in the	
	hooves, names of	smallest, hard, soft,	sleet, snow, icy,		local area, names of	
	animals experienced	bendy, rigid,	frost, puddles, windy,		garden	
	first-hand from each	wood, plastic, paper,	rainbow, animals, young,		and wild flowering plants	
	vertebrate group	card, metal, strong,	plants, flowers		in the local area	

	wea wate	eak, hot, apply heat, iterproof, soggy, not					
	cha	hange, change back					
Workin	. Asking questions -	- Ga	athering data -	Recording dat	a -	Draw	ving conclusions -
g scienti fically	Use a range of given question such as: what; what if; why; when; wh how; to ask questions about the objects, things and processes they are explor • Construct a question based scenario or story the teacher has prese	on stems, who; and ts, living sed on a essented coring. corin	neir observations of objects, rials and living things. It their observations when comparing naterials and living things. It their observations when describing changes. a magnifying glass, adjust the e magnifying glass in order to see nlarged image clearly. a digital microscope, relate e enlarged view to the object. It comparisons of length and height. olly sticks etc. or paper strips to dard measurements of length. measuring equipment, such as ipettes, rulers, metre sticks etc.	Use a camera to take ph videos to record their observed drawings. Record their observation drawings. Record their observation drawings. Record their observation drawings. Record their observe comparisons writing. Physically group objects living things or their images by Physically group objects according to the data they gather Use data they gather to objects or materials (comparati Add their data to a prej simple Venn diagrar	vations. vations using s using labelled vations or in , materials and y a criterion. s or materials (classifying). physically rank ive testing). pared table or n	Use their of sources (e.g living thing • Recognise worst' e • Give an an question tho have gath • Recognise • Recognise enquiry ques	bbservations and simple secondary g. identification sheets) to name s they find in the local area. e 'biggest and smallest', 'best and etc. from their data. Is wer to their scientific enquiry at is consistent with the data they hered either through observations, ents or from research. e that they can answer scientific stions in different ways.
Trips and			Jodwell Bank		Garden (Centres	
Visits							
Rabbi	Autumn	าท	Spr	Summer			
+							

Scienc			Everyday Materials	Animals including	Docks and Eassila	Light and Colour
e	<mark>Parts of Plants</mark>	<mark>Seasonal Changes</mark>		<mark>Humans</mark>	RUCKS UNU 1 USSIIS	Light and Colour
Key	Identify and describe	Identify the part	Compare and group	• Identify and name	Recognise that living	Recognise that light
Learnin	the functions of	played by evaporation	together everyday	the main parts of the	things have changed over	appears to travel in
9	different parts of	and condensation in the	materials on the basis of	human circulatory	time and that fossils	straight lines.
	flowering plants:	water cycle and	their properties,	system, and describe	provide information	• Use the idea that
	roots; stem/trunk;	associate the rate of	including their hardness,	the functions of the	about living things that	light travels in
	leaves; and flowers.	evaporation with	solubility, transparency,	heart, blood vessels	inhabited the Earth	straight lines to
	• Explore the	temperature.	conductivity (electrical	and blood.	millions of years ago.	explain that objects
	requirements of	Identify temperatures	and thermal), and	 Recognise the 	. Deservice that living	are seen because
	plants for life and	and measure at degree	response to magnets.	impact of diet,	• Recognise that living	they give out or
	growth (air, light,	Celsius	. Know that some	exercise, drugs and	of the same kind but	reflect light into the
	water, nutrients from	Explore the different	materials will dissolve in	lifestyle on the way	normally offspring vary	eye.
	soil, and room to	hemispheres and	liquid to form a solution	their bodies function.	and are not identical to	• Explain that we see
	grow) and how they	compare seasons and	and describe how to	• Describe the ways in	their parents.	things because light
	vary	weather	recover a substance	which nutrients and		travels from light
	from plant to plant.		from a solution.	water are	 Identify how animals 	sources to our eyes
	 Investigate the way 	Identify a monsoon,		transported within	and plants are adapted	or from light sources
	in which water is	dry season, wet season	• Use knowledge of	animals, including	to suit their environment	to objects and then
	transported within	and compare to the 4	solids, liquids and gases	humans.	in different ways and	to our eyes.
	plants.	UK seasons	to decide now mixtures		that adaptation may lead	. Llas the idea that
	• Explore the part		including through		to evolution.	· Use the idea that
	that flowers play in		filtering sieving and			straight lines to
	the life cycle of		, intering, steving and			explain why shadows
	flowering plants		evaporating.			have the same shape
	including pollination		· Give reasons based on			as the objects that
	seed formation and		evidence from			cast them.
	seed dispersel		comparative and fair			
	seed formation and seed dispersal.		evidence from comparative and fair			cast mem.

	 Recognise that living 		tests, for the particular			
	things can be grouped		uses of everyday			
	in a variety of ways.		materials, including			
	 Explore and use 		metals,			
	classification keys to		wood and plastic.			
	help group, identify and name a variety of living things in their local and wider environment. • Recognise that environments can change and that this can sometimes pose dangers to living things.		 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 associated with burning and the action of 			
			acid on bicarbonate of			
			soda			
Key Vocabu Iary	life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers	weather, sunny, rainy, raining, shower, windy, snowy, cloudy, hot, warm_cold_storm	thermal insulator/conductor, change of state, mixture, dissolve, solution	life cycle, foetus, baby, child, adolescent, adult, reproduce, sexual	offspring, sexual reproduction, vary, characteristics, adapted, inherited, species	light, light source, dark, absence of light, surface, shadow reflect
	flowering, non- flowering, mosses, ferns, conifers	thunder, lightning, hail, sleet, snow, icy, frost, puddles, rainbow, seasons, winter,	soluble, insoluble, filter, sieve, reversible/non- reversible change,	sperm, fertilises, egg, live young heart, pulse, rate, pumps, blood, blood	evolve, evolution rock, stone, pebble, boulder, grain, crystals, layers, hard, soft,	mirror, Sun, sunlight, dangerous straight lines, light rays

			summer autumn, Si sunset, c	r, spring, un, sunrise, lay length	burr	ning, rusting, new material	vessels, transpo lungs, oxygen, co dioxide, cycl circulatory sys diet, drugs, life	rted, arbon e, tem, style	texture, abs fossil, bor minerals, ma gran sandstone, s of soil (e.g. p chalky,	orbs water, ne, flesh, rble, chalk, ite, ilate, types eaty, sandy, . clay)		
scienti fically	following a scientific enquiry questions with support following a scientific enquiry, ask questions stimulated	requir the enqu select practi	red to answer e scientific irry question t appropriate ical equipment	already gathe suggest values next read	ered to for the ing.	careful observations measure time in standard units using stopwatches or timers	table they construct themselves record data onto a complex table provided for them	the re differ to h	ecorded data in a rent way in order lelp answer the question.	findings fro practical activ answer th scientific enc question using	om vities e guiry g the	identify ways in which they adapted their method as they progressed or how they could change it to improve
	by what they have just found out.	to gati ider gath requir the engu	ther the data ntify how to ner the data red to answer e scientific niry question			measure length in standard units using rulers, meter sticks, tape measures or trundle wheels	record their measurements directly onto a bar chart with the axes and scales provided			data gather	ed.	the data gathered compare two methods for a test.
		sugge scien the	st the type of Itific enquiry y are using.			measure temperature in standard units using thermometers measure capacity in	record observations and information using a drawing, a labelled diagram					
						standard units using syringes, beakers or measuring cylinders use sensors to take measurements (e.g. light, sound, temperature)						

Trips and Visits	Jodwell Bank, Museum	of Science and Industr	γ					
Badge r	Au	tumn	Spri	ng	Summer			
Scienc e	Parts of Plants	<mark>Seasonal Changes</mark>	Everyday Materials	<mark>Animals including</mark> Humans	Rocks and Fossils	Light and Colour		
Key Learnin g	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.	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 (°C). • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature	Compare and group materials together, according to whether they are solids, liquids or gases. Identify and compare the suitability 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	 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. 	 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. 	 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. 		

	 Explore the part 		stretching			 Find patterns in the
	that flowers play in					way that the size of
	the life cycle of					shadows change.
	flowering plants,					
	including pollination,					
	seed formation and					
	seed dispersal.					
	 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 that this					
	can sometimes pose					
	dangers to living					
	things.					
Key	photosynthesis,	weather, sunny, rainy,	solid, liquid, gas, heating,	digestive system,	rock, stone, pebble,	light, light source,
Vocabu	pollen, insect/wind	raining, shower, windy,	cooling, state change,	digestion, mouth,	boulder, grain, crystals,	dark, absence of
lary	pollination, male,	snowy, cloudy, hot,	melting, freezing, melting	teeth, saliva,	layers, hard, soft,	light, surface,
	temale, seed	thundan lightning hail	point, boiling, boiling	oesophagus, stomach,	forcil borg flock	snadow, reflect,
	dispersal (wind	sleet snow icy frost	condensation	small intestine, large	Tossii, Done, Tiesh,	danaerous
	dispersal animal	51001, 5110W, 10y, 11 051,	condensation,			unger ous

	dispersal, wat dispersal), ai nutrients, miner soil, absorb transport	r, puddles r, season rals, summe , autumn, s sunset,	s, rainbow, s, winter, r, spring, Sun, sunrise, day length	tempei	rature, water cyc	le intestine, rect anus, incisor, cc molar, premol herbivore, carni omnivore, produ predator, pr	tum, anine, lar, ivore, ucer, ey	minerals, ma gran sandstone, s of soil (e.g. p chalky,	minerals, marble, chalk, granite, sandstone, slate, types of soil (e.g. peaty, sandy, chalky, clay)		
Workin g scienti fically	Asking questions – ask scientific enquiry questions with support following a scientific enquiry, ask questions stimulated by what they have just found out.	Planning an enquiry identify the data required to answer the scientific enquiry question select appropriate practical equipmen to gather the data identify how to gather the data required to answer the scientific enquiry question suggest the type o scientific enquiry they are using.	f	lictions hey have ered to s for the ding.	Gathering data make systematic and careful observations measure time in standard units using stopwatches or timers measure length in standard units using rulers, meter sticks, tape measures or trundle wheels measure temperature in standard units using thermometers measure capacity in standard units using syringes, beakers or measuring cylinders use sensors to take measurements (e.g. light, sound, temperature)	Recording data record data in a simple table they construct themselves record data onto a complex table provided for them record their measurements directly onto a bar chart with the axes and scales provided record observations and information using a drawing, a labelled diagram	Prese the re differ to h	esenting data ant, with support, ecorded data in a rent way in order help answer the question.	communicate t findings fro practical activ answer the scientific enq question using data gather	Isions their om vities e juiry g the ed.	Evaluating an enquiry identify ways in which they adapted their method as they progressed or how they could change it to improve the data gathered compare two methods for a test.

Trips and	Jodwell Bank, Museum	of Science and Industr	у			
Visits						
Fox	Au	tumn	Spri	ng	Summ	ner
Scienc e	Parts of Plants	<mark>Seasonal Changes</mark>	Everyday Materials	Animals including Humans	Rocks and Fossils	Light and Colour
Key Learnin g	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.	Identify temperatures and measure at degree Celsius Explore the different hemispheres and compare seasons and weather Identify a monsoon, dry season, wet season and compare to the 4 UK seasons		 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 		

	• Explore the part					
	that flowers play in					
	the life cycle of					
	flowering plants.					
	including pollination.					
	seed formation and					
	seed dispersal.					
	 Recognise that living 					
	things can be arouned					
	in a variety of ways					
	• Explore and use					
	classification keys to					
	help aroup identify					
	and name a variety of					
	living things in their					
	local and wider					
	environment.					
Kev	light shade Sun	weather sunny rainy	opaque transparent	offspring	opaque transparent	light light source
Vocabu	warm, cool, water,	raining, shower, windy,	translucent, reflective,	reproduction, growth,	translucent, reflective,	dark, absence of
lary	space, grow, healthy,	snowy, cloudy, hot,	non-reflective, flexible,	baby, toddler, child,	non-reflective	light, surface,
	bulb, germinate,	warm, cold, storm,	rigid, shape,	teenager, adult, old		shadow, reflect,
	shoot, seedling	thunder, lightning, hail,	push/pushing,	person, names of	rock, stone, pebble,	mirror, Sun, sunlight,
	nhotocunthacic	sleet, snow, icy, frost,	pull/pulling,	animals and their	bouider, grain, crystais,	dangerous
	nollen insect/wind	nuddles rainbow	twist/twisting,	babies (e.g.	texture absorbs water	
	pollination male	seasons winter	sauash/sauashina	chick/chicken,	fossil bone flesh	
	female, seed	summer, spring.	bend/bending.	kitten/cat.	minerals, marble, chalk,	
	formation, seed	autumn, Sun, sunrise,	stretch/stretching	caterpillar/butterfly),	granite,	
	dispersal (wind	sunset, day length	5	survive, survival,		
				water, food, air,		
				exercise, heartbeat,		

	dispersal, anin dispersal, wat dispersal), aiu nutrients, miner soil, absorb, transport	nal er r, rals,					breathing, hygi germs, disease, types (e.g. meat, fish, vegetables, bra rice, pasta, da nutrition, nutria carbohydrate sugars, prote vitamins, miner fibre, fat, wat skeleton, bon muscles, join support, prote	ene, food ead, iry) ents, es, in, es, ts, es, ts, ect, spine	sandstone, s of soil (e.g. p chalky	ilate, types eaty, sandy, , clay)		
Workir	Asking questions -	Planning a	n enquiry	Making pred	ictions	Gathering data	Recording data	Pre	senting data	Drawing conclu	usions	Evaluating an
g scienti fically	ask scientific enquiry questions with support following a scientific enquiry, ask questions stimulated by what they have just found out.	identify t required t the scie enquiry q select app practical e to gather identify gather tl required t the scie enquiry q	the data to answer entific question propriate equipment the data to answer entific question	use the data th already gathe suggest values next read	hey have ered to for the ling.	make systematic and careful observations measure time in standard units using stopwatches or timers measure length in standard units using rulers, meter sticks, tape measures or trundle wheels measure temperature in	record data in a simple table they construct themselves record data onto a complex table provided for them record their measurements directly onto a bar chart with the axes and scales provided record observations	presen the re differ to h	nt, with support, corded data in a ent way in order elp answer the question.	communicate findings fro practical activ answer th scientific eno question using data gather	their om vities e juiry g the ed.	enquiry identify ways in which they adapted their method as they progressed or how they could change it to improve the data gathered compare two methods for a test.

	suggest the type of scientific enquiry they are using.	standard units using a thermometers measure capacity in standard units using syringes, beakers or measuring cylinders use sensors to take measurements (e.g. light, sound, temperature)	drawing, a labelled diagram							
Trips and Visits	Eureka! Museum of Science and Industry									
	KS4 ASDAN Science awards									
Woodp ecker	Autumn	Spring			Summer					
Scienc e	Forces and Motion	Chemical Change			Space Physi	cs				
Key	Explain that unsupported objects fall towards	• Give reasons, base	ed on evidence from	Describe	the movement of	the Earth, and				
Learnin	the Earth because of the force of gravity acting between the Earth and the falling	comparative and fair te	lar other pla Ic	nets, relative to solar system	the Sun in the					
9			d statis	13, 						
	објест.	wood and	a piastic.	• Descri	pe the movement relative to the Eq	ot the Moon arth.				
	• Identify the effects of air resistance, water	Demonstrate that a	dissolving, mixing and		a tha Com Cantle					
	resistance and friction that act between moving surfaces.	 cnanges of state are Explain that some a formation of new mater 	• Descrit appro	approximately spherical bodies.						

	• Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect	of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda • Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), 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.	 Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.
Key Vocabu lary	force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears	solid, liquid, gas, heating, cooling, state change, melting, freezing, melting point, boiling, boiling point, evaporation, condensation, temperature, water cycle thermal insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change, burning, rusting, new material	 Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus, Neptune), spherical, Solar System, rotate, star, orbit Gravity force, weight Our Sun as a star, other stars in our galaxy, other galaxies The seasons and the Earth's tilt, day length at different times of year, in different hemispheres

Workin	Asking questions -	Planning an enquiry	Making predictions	Gathering data	Recording data	Presenting data	Drawing conclusions	Evaluating an	
Workin g scienti fically	Asking questions – independently ask scientific enquiry questions.	Planning an enquiry describe the method they would use to gather data to answer a scientific enquiry question.	Making predictions use the data they have already gathered to suggest further values • use the scientific understanding gained from scientific enquiry to make predictions they can investigate using further comparative and fair tests.	Gathering data make relevant systematic and detailed observations • use a range of equipment to take measurements (e.g. distance, time, temperature, capacity, force) using standard units • select measuring equipment to give appropriately precise results • identify when a sensor can be used to gather evidence • take repeat readings as appropriate.	Recording data choose an appropriate method to record the data they will gather using experience of recording methods (e.g. photographs, videos, drawings, labelled diagrams, writing, tables, keys) • construct, and record data in, a complex table • construct, and record data in, a bar chart • construct, and record data in, a line graph • add data onto a scatter graph with the axes and scales	Presenting data present the recorded data in a different way in order to help answer the question	Drawing conclusions answer the scientific enquiry question using the data gathered • discuss whether other evidence (e.g. from other groups or their scientific understanding) supports or refutes their answer • talk about how their scientific ideas change due to new data that they have gathered • talk about how scientific discoveries have changed scientific understanding in the past and continue to	Evaluating an enquiry evaluate the precision of their measurements • evaluate whether the results are trustworthy enough to answer the scientific enquiry question	
Trips and Visits	Museum of Scier	ace and Industry			provided.		,		
Hawk	< Autumn			Spring			Summer		
Scienc e	c Forces and Motion			Chemical Change			Space Physics		

Key Learnin g	 Compare how things move on dif surfaces. Notice that some forces need contact l two objects, but magnetic forces can a distance. Observe how magnets attract or repe other and attract some materials and not Compare and group together a varie everyday materials on the basis of wheth are attracted to a magnet, and ident some magnetic materials. Describe magnets as having two po Predict whether two magnets will attr repel each other, depending on which pa facing 	ferent between ct at a cl each others. ty of her they tify les. pact or les are	Compare, group and test materials Test temperatures and compare chemical changes of solids and liquids at different temperatures Know that some materials will dissolve in liquid			 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 the apparent movement of the Sun across the sky. 		
Key Vocabu	force, push, pull, twist, contact force,	non- o	opaque, transparent, translucent, reflective, non-reflective flexible rigid shape			light, light source, Sun, sunlight		
lary	bar magnet, ring magnet, button mag	net,	push/pushing, pull/pulling, twist/twisting,			Sun, Moon, Earth, planets (Mercury, Jupiter, Saturn, Venus, Mars, Uranus,		
	horseshoe magnet, attract, repel, mag	netic	squash/squashing, bend/bending,			Neptune), spherical, Solar	System, rotate,
	material, metal, iron, steel, poles, north south pole	n pole,	stret	cn/stretching			STAR, ORDI	T
Workin	Asking questions - Planning an enquiry Making	predictions	Gathering data	Recording data	Presentin	ng data	Drawing conclusions	Evaluating an
g scienti fically	independently ask scientific enquiry questions. describe the method they would use to already gather data to answer a scientific enquiry question. • use the use the data • use the data • use the data • use the use the data • use the output of the use the data • use the • use	data they have gathered to further values he scientific anding gained	e make relevant systematic and detailed observations	choose an appropriate method to record the data they will gather using experience of recording methods	present the data in a dif in order to h the que	e recorded ferent way delp answer estion	answer the scientific enquiry question using the data gathered	evaluate the precision of their measurements

			trom scientific enquiry to make predictions they can investigate using further comparative and fair tests.	 use a range of equipment to take measurements (e.g. distance, time, temperature, capacity, force) using standard units select measuring equipment to give appropriately precise results identify when a sensor can be used to gather evidence take repeat readings as appropriate. 	(e.g. photographs, videos, drawings, labelled diagrams, writing, tables, keys) • construct, and record data in, a complex table • construct, and record data in, a bar chart • construct, and record data in, a line graph • add data onto a scatter graph with the axes and scales provided.	 discuss whether other evidence (e.g. from other groups or their scientific understanding) supports or refutes their answer talk about how their scientific ideas change due to new data that they have gathered talk about how scientific discoveries have changed scientific understanding in the past and continue to do so today. 	• evaluate whether the results are trustworthy enough to answer the scientific enquiry question
Trips and Visits	Museum of Scien	ce and Industry					