

Scienc	cience curriculum					
Year	Autumn	Spring		Summer	Vocabulary	
EYFS kr	nowledge and skills: by the end of Re	eception	o places objects m	torials and living things		
	w about similarities and differences	s in relation t	o places, objects, ma	aterials and living things.		
- Know to - Kno ano - Ma	LEDGE by about similarities and difference places, objects, materials and living by about their own immediate envir thow environments might vary from other. ke observations of animals and plar	s in relation things. ronment n one hts	To be able to ask sir To observe animals some things occur They talk about the immediate environ To notice changes a	mple questions and plants and explain why features of their own ment and talk about them	Animals including specific types of bird, fish Plants including specific types, of tree, flower Types of food and liquid Solids such as ice Melting Mixing	

1	- Animals including humans	-Every day materials		- Plants	VOCABULARY
		-Animals (not humans)	- Seasonal change	
Ye	ar 1 Knowledge and skills: By the end of `	Year 1		•	Diale fich enablicities and the associate and
KN			SKILLS		-Birds, fish, amphibians, reptiles, mammals and
Identify and name a variety of common animals that are			To h	e able to ask simple questions	-Feathers scales gills fins hair land water
	hirds fish amphibians rentiles and mar	mmals	To b	e able to recognise that	backbone, skeleton
	Identify and name a variety of common	animals that are	ques	stions can be answered in	-Carnivores, herbivores, omnivores
	carnivores, herbivores and omnivores.		diffe	erent ways.	-Meat, plants
-	Describe and compare the structure of a	a variety of common	To b	e able to identify and classify.	Types of materials: wood, plastic, glass, metal,
	animals (birds, fish, amphibians, reptile	s and mammals, and	To b	e able to observe carefully.	water, rock, brick, fabric, sand, paper, flour,
	including pets).		usin	g simple equipment.	butter, milk, soil Drenenties of metericle, herel/ooft, strateku/oot
	Identify, name draw and label the basic	parts of the human	To b	e able to perform simple tests.	stretchy chiny/dull rough/smooth bendy/not
	body and say which parts of the body is	associated with each	To b	e able to take measurements	bendy transparent/not transparent_sticky/not
	sense.		with	equipment	sticky
	Distinguish between an object and the r	material from which it	To b	e able to gather and record data	Verbs associated with materials: crumble,
	is made.		in a	table to help answer a question.	squash, bend, stretch, twist
-	Identify and name a variety of everyday	materials. including			Senses: touch, see, hear, smell and taste
	wood. plastic. glass. water and rock.				Trees - deciduous, evergreen, ash, birch, beech,
	Describe the simple physical properties	of a variety of			rowan, common lime, oak, sweet chestnut,
	everyday materials.				horse chestnut, apple, willow, sycamore, fir,
•	Compare and group together a variety c	of everyday materials			Wild flowering plants - cleavers, coltsfoot
	on the basis of their physical properties	. , ,			daisy, dandelion, garlic mustard, et.
	Identify and name a variety of common	plants, including			Garden plants – crocus, daffodil, bluebells, etc
	garden plants, wild plants and trees, and	d those classified as			Parts of plants – roots, branch, trunk, stalk,
	deciduous and evergreen				leaf, flower, petal, seeds, bulbs and twigs
	 Identify and describe the basic structure of a variety of 				Seasons: spring summer autumn winter Year
	common plants including roots, stem/trunk, leaves and				months, days. Hot, warm, mild, cold. Sunny,
	flowers.				cloudy, rain, sleet, snow, hail, thunder,
•	Observe changes across the four season	IS			lightning, rainbow. Wet, damp, dry. Windy,
•	Observe and describe weather associate	ed with the seasons			breezy, gust. Temperature – degrees, Celsius,
	and how day length varies.				thermometer, weather vane, anemometer.

2	Animals including humans	Uses of everyday ma	terials	Living things and their habitats	Vocabulary
Voar 2 K	nowledge and skills: By the end of	Voar 2		Plants	Classification - Birds, fish, amphibians, reptiles,
					mammals and invertebrates
KNOWL	EDGE Notice that animals, including hum which grow into adults Find out about and describe the ba including humans, for survival (wat Describe the importance for humar the right amounts of different type Compare the suitability of a variety materials, including wood, metal, p rock, paper and cardboard for parti Find out how the shapes of solid of some materials can be changed by twisting and stretching. Explore and compare the difference are living, dead, and things that hav Identify that most living things live they are suited and describe how d provide for the basic needs of diffe and plants, and how they depend of Identify and name a variety of plan habitats, including micro-habitats Describe how animals obtain their to other animals, using the idea of a si identify and name different sources Observe and describe how seeds an mature plants	ans, have offspring sic needs of animals, er, food and air) ns of exercise, eating s of food, and hygiene. of everyday lastic, glass, brick, icular uses ojects made from squashing, bending, es between things that ve never been alive in habitats to which ifferent habitats rent kinds of animals on each other. ts and animals in their food from plants and imple food chain, and s of food. nd bulbs grow into	SKILLS	To be able to: -ask questions use science to answer questions make careful observations use science equipment carefully do science tests carefully put things into scientific groups collect evidence and data	Classification - Carnivores, herbivores, omnivores Stages of growth of many insects – egg, larva, pupa, adult invertebrates – ladybirds, butterflies, dragonflies, etc amphibians – smooth newt, common frog, toad Stages of life –baby, toddler, child, teenager, adult Life processes – growth, nutrition (feeding), respiration (breathing is part of this) Hygiene – clean, wash, germs Foods – healthy, grow, strong, energy Types of materials: (see Year 1) Living, dead Habitats Dependence Local plants to school Micro-habitats Food chain Sources of food As for Year 1 plus: Need of plants – water, light, heat, temperature
•	Find out and describe how plants n suitable temperature to grow and s	eed water, light and a stay healthy.			Vocabulary

3	Animals including humans	Forces and magnets		Plants	
		Light		Rocks	
KNOWLEDGE			SKILLS		Nutrition
 Identify that animals, including humans, need the 		To be able to:		Diet	
	right types and amount of nutrition, and that they		 ask re 	levant questions using key	vitamins, minerals, rats, proteins and
	cannot make their own food; they a	get nutrition from	words	and my previous experiences in	Functions of skeletons – protect support and
	what they eat		scienc	e enquiry.	aid movement
-	Identify that humans and some ani	mals have	think	up my own enquiries.	
	skeletons and muscles for support,	protection and	set up	comparative tests	
	movement.		 set up 	fair tests where appropriate	Magnets – bar and horseshoe
			 make 	systematic and careful	Attract, repel
	Compare how things move on diffe	rent surfaces	observ	vations	North and south poles
•	Notice that some forces need conta	act between two	 take a 	ccurate measurements using	Magnetic Magnetic field
	objects, but magnetic forces can ac	t at a distance	standa	ard units.	Magnetic field
•	Observe how magnets attract or re	pel each other and	use a	range of equipment carefully.	
	attract some materials and not othe	ers	 use sc 	ientific language and drawings	
•	Compare and group together a vari	ety of everyday	 gather 	r, record, classify and present	
	materials on the basis of whether t	hey are attracted	data ii	n a variety of ways.	Simple comparisons: dark, dull, bright, very
	to a magnet, and identify some mag	gnetic materials	 make 	labelled diagrams	bright
•	Describe magnets as having two po	les	 use ke 	eys.	Comparative vocabulary: brighter, duller, and
	Predict whether two magnets will a	ittract or repel	 use ba 	ar charts.	darker
	each other, depending on which po	les are facing.	 use ta 	bles.	Superlative vocabulary: brightest, dullest, and
			 write 	explanations.	Onaque translucent transparent
•	Recognise that they need light in or	rder to see things	draw	conclusions.	Shadow – block, absence of light
	and that dark is the absence of light	t	 make 	predictions for new enquiry,	Reflect – bounce, mirror, reflection
	Notice that light is reflected from s	urfaces	sugge	st improvements and raise	See – light source
	Recognise that light from the sun ca	an be dangerous	furthe	r questions.	Sun – sunset, sunrise, position
	and that there are ways to protect	their eyes	Iook fe	or differences, similarities or	Names of rocks – Chalk, limestone, granite,
•	Recognise that shadows are formed	d when the light	chang	es in our results	basalt, sandstone, flint, slate, shale, marble
	from a light source is blocked by a s	solid object	 use scientific evidence to answer 		Types of rock – Sedimentary, metamorphic,
•	Find patterns in the way that the si	zes of shadows	questi	ons or to support my findings.	igneous Transa faringada - Calaita faldanan i
	change.				iypes of minerals – Calcite, feldspar, topaz,
	č				diamond, talc, corundum

•	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.
- Identify and describe the functions of different parts of plants; roots, stem, 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 ways in which water is transported within plants.
- Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Properties of rocks – Hard/soft, permeable/impermeable Processes – Heat, pressure, erosion, transportation, deposition, melt, solidify Size of rocks – Grain, pebbles Rock describing words – Crystals, layers Early areas of land – Gondwana, Pangea Land formations – Plates, volcanoes, mountains, valleys

As for Years 1 and 2 plus:

Parts of a flower – petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule)

Processes – pollination, fertilisation, germination

4	Electricity	States of matter		Living things and their	Vocabulary
	Sound	Animals including humans		habitats	
KNOW	KNOWLEDGE		SKILLS		
			 To be able 	to:	Electricity
Ide	ntify common appliances that run	on electricity	 ask relevar 	nt questions using key words	Appliances : fridge, freezer, TV, computer, iron,
Co	nstruct a simple series electrical cir	cuit, identifying	and my pre	evious experiences in science	kettle, etc.
and	naming its basic parts, including c	ells, wires, bulbs,	enquiry.		Series circuit
SW	tches and buzzers		think up m	y own enquiries.	Components: battery, bulb (lamp), bulb (lamp)
■ Ide	ntify whether or not a lamp will lig	ht in a simple	set up com	parative tests	holder, buzzer, crocodile clip, leads, wires,
ser	les circuit, based on whether or no	t the lamp is part	set up fair	tests where appropriate	Describing words: brighter duller slow fast
	a complete loop with a battery		make system	ematic and careful	quiet, loud
- Rec	cognise that a switch opens and clo	ises a circuit and			Conductor, insulator
dss			 take accurate standard u 	nite	Effects of electricity: Light, sound, movement,
■ Rec	cognise some common conductors	and insulators and		a of equipment carefully	heat
ass	ociate metals with being good con	ductors	 use a range use scienti 	fic language and drawings	Switches – open, close
455			■ gather rec	ord classify and present data	Ways to create sound – bang blow shake and
Ide	ntify how sounds are made, associ	ating some of them	in a variety	of ways	pluck
wit	h something vibrating	0	 make label 	lled diagrams	Loudness – quiet, quieter, quietest, loud, louder
Rec	cognise that vibrations from a soun	d travel through a	 use kevs 		and loudest
me	dium to the ear.	-	 use bar char 	arts	Pitch - low, lower, lowest, high, higher, and
Fin	d patterns between the pitch of a s	sound and features	 use tables 		highest
oft	he object that produced it		 write expla 	anations	Source
Fin	d patterns between the volume of	a sound and the	 draw conc 	lusions	
stre	ength of the vibrations that produc	ed it.	 make pred 	ictions for new enquiry,	
Rec	cognise that sounds get fainter as t	he distance from	suggest im	provements and raise further	States of matter - Solid, liquid and gas
the	sound source increases		questions		Examples of gases (at room temperature and
			Iook for dif	ferences, similarities or	pressure) – Oxygen, nydrogen, nelium, carbon diovide, methane
Col	npare and group materials togethe	er, according to	changes in	our results	Examples of liquids (at room temperature and
wh	ether they are solids, liquids or gas	es	- use scient	tific evidence to answer	pressure) – Water, milk, juice, petrol, oil
			questions	or to support my findings.	

	Observe that some materials change state when they are	Examples of solids (at room temperature and
	heated or cooled and measure or research the	pressure) – Wood, rocks, metal, plastic, glass.
	tomporature at which this happens in degrees Colsius	wool, leather, etc
	(°C)	Processes – Melting, condensation,
_		evaporation, solidifying, freezing
	Identify the part played by evaporation and	Water cycle, water vapour, steam, heating,
	condensation in the water cycle and associate the rate of	cooling
	evaporation with temperature.	Digestive system –, oesophagus, stomach, acid,
		small intestine
		Protein, vitamin, mineral, carbohydrate, fats,
		energy, growth, repair. Saliva
		Teeth – Incisors, canines, premolars, molars
	Describe the simple functions of the basic parts of the	Function
	digestive system in humans	Foodchain – producer, consumer, predator,
-	Identify the different types of teeth in hymens and their	prey
	identify the different types of teeth in numaris and their	As familiar and Durling
	simple functions	As for years 1 and 2, plus
-	Construct and interpret a variety of food chains,	Invertebrates – snail, slug, woodlouse, spider,
	identifying producers, predators and prey	beetle, fly, etc
		Pond animals – pond skater, water slater,
		ramshorn snail, pond snail, leech, common frog,
•	Recognise that living things can be grouped in a variety	smooth newt, etc
	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	

5	Animals including humans	Forces		Living things and their	Vocabulary
	Earth and Space	Properties and	changes of	habitats	
		materials			
KNOWI	EDGE		SKILLS		
•	Describe the changes as humans of	develop from	 To different ty 	pes of scientific enquiries to	Gestation, foetus, fertilization, species, baby,
	birth to old age.		answer questi	ons, including recognising and	nuberty hormones nituitary gland
			controlling var	riables where necessary	testosterone. estrogen
•	Describe the movement of the Ea	rth, and other		_	
	planets, relative to the Sun in the	solar system	To take measu	irements, using a range of	Day and night - Earth, axis, rotate
•	Describe the movement of the Mo	oon relative to	scientific equip	pment, with increasing	Solar system – Star = Sun, Planets = Mercury,
	the Earth		accuracy and p	precision, taking repeat	Venus, Earth, Mars, Jupiter, Saturn, Uranus,
•	Describe the Sun, Earth and Moor	n as	readings wher	n appropriate.	Neptune (Pluto was classified as Dwarf planet
	approximately spherical bodies				In 2006)
•	Use the idea of the Earth's rotatio	on to explain	Io record data	a and results of increasing	half moon crescent moon new moon waxing
	day and hight and the apparent m	novement of	complexity usi	ing scientific diagrams and	waning
	the Sun across the sky		labels, classific	cation keys, tables, scatter	Moon's orbit: 29.5 days, lunar month
_			graphs, bar an	d line graphs	Orbit, planets, revolve, sphere
	Farth because of the force of grou	all towards the		cults to make prodictions to	
	Earth because of the force of grav	abiect	 -TO use test re 	somparative and fair tests	Types of forces: gravity, friction, air resistance,
	Identify the effects of air resistant	object	set up fuither	comparative and rail tests	upthrust, weight
-	resistance and friction, that act he	te, water	To report and	procent findings from	Measuring forces: Newton meter, Newtons (N)
	moving surfaces	etween		uding conclusions and causal	Surface area
	Recognise that some mechanisms	including	relationshins		Push, pull
	levers nulleys and gears allow a	smaller force	relationships		Balance
	to have a greater effect	Sindici foree	 -To give explai 	nations of and degree of trust	Mass – grams and kilograms
			in results in o	ral and written forms such as	Mechanical devices – gears, levers, pulleys,
	Compare and group together even	rvdav	displays and o	ther presentations	springs
	materials on the basis of their pro	perties.			thermal conductivity – thermal conductor,
	including their hardness, solubility	V.	To identify science	entific evidence that has been	Electrical conductivity – electrical conductor
	transparency, conductivity (electr	ical and	used to suppo	rt or refute ideas or	electrical insulator
	thermal), and response to magne	ts	arguments		Dissolving – Solvent, solution, solute, soluble,
			-		insoluble, solid, liquid, particles, suspensions

 Understand 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, based on evidence from comparative and fair tests, for the particular 	Separating materials – Sieve, filter, evaporate, condense
 uses of everyday materials, including metals, wood and plastic 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. 	Animals – amphibians, reptiles, birds, mammals, insects, fish Animal development – egg, larva, pupa, nymph, adult, metamorphosis Parts of a flower – petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule)
 Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Describe the life process of reproduction in some plants and animals 	Processes – pollination, fertilisation, germination

6	Electricity	Light		Evolution and inheritance	Vocabulary
	Animals including humans	Living things a	nd their habitats		
KNOWLEDGE			SKILLS		Electricity Volts
According to the brightness of a lamp or the volume			To use different types of scientific enquiries		Series circuit
	of a huzzer with the number and vol	tage of cells	 To use unreferring types of scientific enquines to answer questions, including recognising 		Components : battery, bulb (lamp), bulb (lamp)
	used in the circuit	tage of cens	and controllin	g variables where necessary	holder, buzzer, crocodile clip, leads, wires,
	Compare and give reasons for variat	ions in how		g variables where necessary	switch
	components function including the	hrightness of	 To take measure 	rements using a range of	Describing words: brighter, duller, slow, fast,
	pulbs, the loudness of buzzers and t	ne on/off	scientific equi	pment, with increasing	quiet, loud
	position of switches		accuracy and i	precision, taking repeat	Conductor, insulator
-	Jse recognised symbols when repre	senting a	readings when	appropriate.	Effects of electricity: Light sound movement
	simple circuit in a diagram.	0	0		heat
			 To record data 	a and results of increasing	
-	dentify and name the main parts of	the human	complexity usi	ing scientific diagrams and	Circulatory system – heart, blood, veins,
	circulatory system, and explain the f	unctions of the	labels, classific	cation keys, tables, scatter	arteries, pulse, clotting
	neart, blood vessels and blood		graphs, bar an	d line graphs	Diet – balanced, vitamins, minerals, proteins,
-	Recognise the impact of diet, exercis	e, drugs and			carbohydrates, sugars, fats
	ifestyle on the way their bodies fund	ction	To use test res	sults to make predictions to	cocaine beroine
-	Describe the ways in which nutrients	and water	set up further	comparative and fair tests	Lifestyle – healthy
-	are transported within animals, inclu	iding humans.			Simple comparisons: dark, dull, bright, very
			 To report and 	present findings from	bright
-	Recognise that light appears to trave	el in straight	enquiries, incl	uding conclusions and causal	Comparative vocabulary: brighter, duller, and
	ines		relationships		darker
•	Jse the idea that light travels in stra	ight lines to			Superlative vocabulary: brightest, dullest, and
	explain that objects are seen becaus	e they give out	 To give explan 	ations of and degree of trust	darkest Onaque translucent transparent
	or reflect light into the eye		in results, in o	ral and written forms such as	Shadow – block absence of light
•	Explain that we see things because li	ght travels	displays and o	ther presentations	Reflect – bounce, mirror, reflection
	rom light sources to our eyes or from	m light sources			See – light source
	to objects and then to our eyes	ta bar ita a sa na	Io identify science	entific evidence that has been	Sun – sunset, sunrise, position
•	Use the idea that light travels in stra	ignt lines to	used to suppo	rt or refute ideas or	Classification
	explain why shadows have the same	snape as the	arguments		Vertebrate, invertebrate
	objects that cast them				Kingdoms: animal, plant, 'micro-organism'

	Classes: amphibian, reptile, bird, mammal,
 Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and 	Scales, feathers Flowering plant, non-flowering plant
 animals Give reasons for classifying plants and animals based on specific characteristics 	Evolution, evolve Natural selection Survival Reproduction
 Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	Offspring, parents, siblings Environment Variation Fossils; ammonites, belemnites, micrasters, etc