Science End Points

EYFS	End points/questions	Key Vocabulary
Animals including Humans (Humans)	Understand that we change physically as we grow. (How have you changed from being a baby? Can you tell me how you are different to a baby? What can you do that a baby cannot?) Know the different parts of the body. (What is this part of the body called? Point to your arms/legs etc. can you label a picture of yourself?) Know the five senses. (How many senses can you name? How many senses are there? What sense is your nose associated with?) Know which foods are vegetables and which are fruit. (What is an apple? What is a carrot? Can you sort these foods into fruit and vegetables?) To know which food is healthy. (Which food could you choose for a healthy breakfast/lunch? Can you sort the foods into what is healthy and what you should only have a little of?)	Name body parts, senses, hear, smell, sight, touch, taste, healthy, unhealthy, baby, toddler, child,
Animals including Humans (Animals)	End points / questions Know that all plants and animals go through a life cycle. (What is a lifecycle? Can you tell me what stages a human goes through in its life?) Know that a lifecycle starts with birth. (How does a lifecycle start? Can you tell me what is at the start of this lifecycle?) Understand how to sequence a simple lifecycle. (Can you order and sequence a simple lifecycle? Can you draw the lifecycle of the ducklings we have in class? Can you label this lifecycle?) Know some farm animals and their young. (Can you match the baby to its adult? What is a baby cow/sheep/dog called?)	Lifecycle, birth, order, growth, hatch. Duckling, chick, lamb, calf, foal, kid, piglet, puppy and kitten, tadpole.
Living Things and Their Habitats Animals – Mini beasts	End points / questions Know different animals that live in different habitats. (What animal would live here? Can you name any minibeasts? What is this minibeast called?) Understand that some environments are different to the one they live in. (Where would you find a woodlouse, beetle etc.? Can you match the mini beast to the habitat? Do you recognise which mini beast would live here?) Know the names of plants and animals in our school grounds and local environment. (What would we find in our pond? What are the trees called in our grounds? What will we find under this log?) Understand how to care for animals outside their natural habitat. (How can we care for our fish? How do we look after stick insects?)	Minibeast, insect, spider, beetle, caterpillar, ant, worm, woodlouse, frog, fox, bird, hedgehog, owl, habitat, environment. nocturnal, hibernate.
Living Things and their Habitats Plants	End points / questions Know the main parts of a plant. (Can you name the parts of this plant? Draw and label a plant in our grounds.) Know how to care for a plant. (What does this plant need to grow? What will happen to this plant if you do not water it?) Know some plant names that we see in our grounds/gardens. (What is this plant/tree? How many animals can you name in your garden?) Understand that the same plant can be found in different areas of the grounds/local environment. (Have we seen this plant before? Where? Why do you think it grows in both places?)	Seed, bulb, compost, flower, petal, stem, leaf root.
Earth and Space	End points / questions Know that the sun is at the centre of the solar system and the planets orbit the sun (a star). (What is at the centre of our solar system? What do the planets orbit? Is the sun a planet of a star?) Know that there are 8 planets in the Solar System. (How many planets are in the Solar System? What are the names of some of our planets? What is the moon?) Know and understand that the planet Earth is made up of land and water. (Can you draw a picture of the Earth? Can you colour the seas blue? Can you colour the land green?) Know that planet Earth is the only planet to have life. (Why does Earth have living things on it? Can you breathe on the moon? Why not?) Understand why we have day and night and events that occur in the day / night. (What time of day do we e.g. Wake up, brush teeth, go to school, have tea, go to bed. How do you know if it is day time / night time?)	World, star, moon, crater, space, orbit, gravity, planet, rocket, astronaut,
Seasonal Changes (Ongoing)	End points / questions Know there are four seasons. (What are the four seasons? Can you tell me two things about each season? Tell me about each season?) Understand that there are differences between each season. (What season is it now? How do you know? What happens to the trees in the Autumn? Spring? Go on walks and use the senses to describe the season.) Know that different weather can be seen in each season. (What is the temperature like? Is it hot or cold in the summer? When do we usually see snow? Why do we go on trips to the beach in the summer?) Know that different animals behave in different ways in each season. (What animals might you see in Spring? What animals will you not see in the winter?)	Winter, Spring, Summer, Autumn, change, seasons, weather, trees, temperature.

Light	End points / questions	Sun, sunny, light, shadow, shady, clouds, torch, source, pale, dark, transparent.
	Know what a light source is and where the light is coming from. (Where is the light coming from? What is making the room light? Know when shadows can be seen in the playground. If we stand on the playground on a sunny day what can we see on the ground? What is it? Will it move if we move?) Understand that an object in front of a light source creates a shadow. (What happens if I put a torch behind this tower? Can you make shadows using other objects? Know that shadows change during the day. (What happens to your shadow on the playground during the day? How long/short is your shadow now?)	
Materials Including changing materials.	End points / questions	Ice, freeze, melt, mix, strong, brick, straw, sticks, waterproof, light weight, weak, float, sink, heavy.
	Know the names of some common materials. (What is this toy made from? What is the window made from? What are the walls made from?) Know that different materials have different properties. (What material is best to make a house for the Three Little Pigs? Are best for a water vessel for Jack and his crew? Which materials is waterproof? How do you know?) Understand that some materials can be changed. (What happens when we take an ice lolly out of the freezer? What happens when we bake bread? Know that some materials will float or sink. (What will happen if I put this stone in the water? What will happen if we put this stick in the water. Can you group these materials into those that float and those that sink?)	
Forces	End points/ questions	float, sink, surface, fly, turn, spin, fast, slow, faster, slower, fastest, slowest, further, furthest, blow, bounce
	Understand that some objects will either float of sink. (What happens if I put this boat in the water? What will happen to this stone if I drop it in the tanks? Why?) Know that cars will move faster when pushed down a ramp. (Will this car move faster or slower on the ramp? What would slow it down?) Understand that a ball can bounce in different ways/heights. (If you bounce the ball gently will it bound high? Can you make your ball bounce higher than mine? How?) Know objects will fall to the ground from the air and that they can be slowed down. (What happens if you throw this toy in the air? What will happen if we make it a parachute?)	
Sound	End points/questions	Sound, noise, listen, hear, traffic, sirens, thunder, high, low, loud, quiet, soft, volume, crackle, thunder, hum, buzz, roar
	Know the sources of different sounds. (What is making that sound? What sounds can we hear on the playground? In the classroom?) Understand how to make different sounds. (How did you make that sound? What was it you hit/blew/shook to make that sound?) Know how to describe a sound? (What does that sound like? What else do you know that makes a sound like that? Understand that you can still hear a sound as the source moves away from you? (Can you hear the siren? Is it getting louder/fainter? Where is the police car/fire engine?)	

Year 1	End points / questions	Key Vocabulary
Animals including humans (humans)	Know the basic parts of the human body. (Can you point out _____ on yourself or your friend? Can you label this body with its parts?) Know the function of basic body parts. (What would you use your _____ for?) Understand which part of the body is associated with each sense. (What would you use your _____ for?) Know the 5 senses (What are our senses? How do we use our sense?)	Body parts, senses, hear, smell, sight, touch, taste, Function, texture, torso, brain.
Animals including humans (animals)	End points / questions Know a variety of common animals including: fish, amphibians, reptiles, birds and mammals (Can you name some groups that animals belong to? What is the name of the group that lions/snakes/frogs/parrots/clown fishes belong to?) Know some features of different varieties of animal. (What can you tell me about birds/mammals etc? What do all birds/reptiles/mammals etc have in common?) Know common animals that are carnivores, herbivores and omnivores. (What differences exist between a herbivore and a carnivore? How can we group animals according to what we eat?) Know the structure and features of a range of animals (Can you describe a fish etc using scientific words?) Know and understand the similarities and differences between different animals. (How is a mammal different to an amphibian?)	Habitat, environment. Wing, Claw, Tail, Beak, Fur, Feather, Fin, Scales, Amphibians, Reptiles, Mammals Carnivores, Herbivores Omnivores, diet, vertebrate, invertebrate, adult.
Everyday Materials	End points / questions Know the names of range of everyday materials, including wood, plastic, glass, metal, water and rock. (How many different materials can you name? Which of these can you find just as they are? Which ones has somebody had to make?) Understand the difference between an object and the material from which it is made. (Show picture – What is this? What material is it made from? Can some objects be made from more than one material? Can you give an example?) Know the properties of everyday materials such as hard, soft strong weak etc (What words could you use to describe glass? Metal? Wood?) Understand that everyday materials can be compared and grouped together based on their simple physical properties. (Can you sort these objects and explain why you have sorted in this way)	Ice, freeze, melt, mix, strong, brick, straw, sticks, light weight, weak, float, sink, heavy. Absorb, absorbent, Material, manufactured, property, recycle, reuse, rigid, flexible, transparent, waterproof.
Plants	End points / questions Know a variety of common wild, garden plants and trees. (How can we recognise a plant? Can you name and describe any plant that grows in the garden/wild? What is the difference between a wild and garden plant?) Know the difference between deciduous and evergreen. (How are deciduous trees different evergreen trees) Know that plants need light, water, soil and warmth to grow. (What do plants need in order to grow?) Understand and know the basic structure of a variety of common flowering plants, including trees. (Name some of the different parts of a plant) Know and understand the basic functions of some parts of a plant. (What do different parts of a plant do? Stem? Leaves? Etc. Why does a plant need roots?)	Seed, bulb, compost, flower, petal, stem, leaf, root. Names of locally found garden plants / wild plants / trees, vegetables and name of, name of plants grown, blossom, fruit, berry, nut, trunk, bark, branch, stem, stalk, bud.
Seasonal Changes	End points/ questions Know the 4 seasons and recognise some changes that happen across them (Can you identify and name the seasons? How are summer and winter the same/different in England?) Know the length of day and night, and the times at which they occur change throughout the year. (Which season has the shortest/longest day?) Understand that humans change their behaviors in different seasons e.g. clothes worn/activities (What would we wear in _? What activities are associated with _?) Know the different weather types associated with each season. (How does the weather change in each season? Describe the weather in summer) Understand weather conditions can be measured using different equipment (Why is it helpful to know things about the weather?) Know which months are in which seasons. (Can you name the months in summer?)	Change, seasons, weather, temperature Deciduous, evergreen, Nest, names of common: weather, features, days, hours, months. **Working Scientifically Vocabulary Year 1** Bar chart, classify, diagram, group, identify, magnifier, observe observation, pattern, rank, test.

Year 2	End points / questions	Key Vocabulary
Animals including humans	Know that animals including humans have offspring which grow into adults (What are the different ways in which baby animals can be born?) Understand the basic needs of animals including humans for survival (water, food, air) (What would happen if a basic need wasn't met?) Understand the importance for humans of exercise (Why is exercise important for keeping healthy?) Understand that it is important for a human to have a balanced diet (Which food group does cereal go into? Does all cereal fit into this group?) Understand that it is important for humans to have a good level of hygiene (What would happen if you didn't brush your teeth?)	Body parts, senses, hear, smell, sight, touch, taste, Function, texture, torso, brain. Adult, birth, life cycle, hygiene, healthy, unhealthy, diet, survive.
Living things and their habitats	End points / questions Know and understand the differences between things that are living, dead and have never lived (How can you tell if something is living or non-living?) Know that most living things live in a habitat to which they are suited (What lives in an oak tree? Why does a fish live in the pond?) Know and understand how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other (Why does a squirrel live in a woodland?) Know a variety of plants and animals in habitats, including micro-habitats (Name a micro-habitat in the school grounds) Understand a simple food chain, and name different sources of food. (What's the same about all food chains? Do all animals eat meat?)	Habitat, environment, mini beasts, Living, non-living, never-lived, dead, move, grow, feed, breathe, have young, shelter, conditions, adaptation, survive, food-chain, consumer, producer, omnivore, herbivore, carnivore.
Plants	End points / questions Know what seeds and bulbs are, where they come from and how they are different (How is a bulb different to a seed?) Understand what is needed for seeds and bulbs to grow into mature plants (What is the best way to grow a healthy plant?) Know the different methods of seed dispersal (Why do plants need to disperse their seeds?) Know how to grow a plant from a seed (What equipment will you need? What will you do with the seed? How do we look after it?) Understand that a plant grows differently under different conditions. (What happens to a plant if it is kept in the dark?)	Seed, bulb, compost, flower, petal, stem, leaf, root. Names of locally found garden plants / wild plants / trees, vegetables and name of, blossom, fruit, berry, nut, trunk, bark, branch, stem, stalk, bud. Germinate, germination, Seedling, shoot, fully-grown, growth, healthy, soil, earth, water, light, temperature, nutrients, dispersal,
Materials	End points / questions Know the name of an object and what material it is made from. (What is X made from?) Understand why a material was chosen for a specific object. (What makes glass suitable for windows?) Understand that the shapes of solid objects made from different materials can be changed by squashing, bending, twisting and stretching. (What will happen if you stretch an object too much?) Know and understand that a material is chosen for its suitability for the object. (Which material is best for a bouncy ball? Why is a window made from glass?)	Ice, freeze, melt, mix, strong, brick, straw, sticks, light weight, weak, float, sink, heavy. Absorb, absorbent, material, manufactured, property, recycle, reuse, rigid, flexible, bend, bouncy, elastic, squashy, stretchy, stiff, rigid, transparent, waterproof, reflective, non-reflective, opaque, translucent, shape, changes.
Working Scientifically Vocabulary Year 2		**Bar chart, sort, diagram, group, identify, magnifier, observe/observation, pattern, rank, test, explain, measure, predict, results.**

Year 3	End points / questions	Key Vocabulary
Rocks and Soils	Know that rocks have different characteristics. (How could you sort rocks into groups? How are these rocks similar or different? What could you use this rock to build? Why?) Understand that rocks change overtime. (How does weather effect how rocks change?) Understand how fossils are formed. (How do fossils help to tell us about the past?) Know that soils are made from rocks and organic materials. (What can we see in this soil sample? What is organic material? Can you make your own compost? How?)	Rock, stone, pebble, boulder, absorb, soil, fossil, grains, crystals, layers, texture, molten magma, granite, marble, sandstone, slate, weathering, erosion, sharp, soft, rough,
Forces and Magnets	End points / questions Understand the force of friction. (When would friction be useful? Or not useful?) Understand that objects move on different surfaces. (Would a toy car travel faster on the grass or in the corridor?) Know that magnets have two poles and attract and repel each other. (What would happen if you pushed two south poles together?) Know that materials are either magnetic or not. (How do you test that materials are magnetic? How do you know this material is not magnetic?)	Rough, smooth, friction, gravity, push, pull, strength, attract, repel, magnet, magnetic, metal, poles, North Pole, South Pole.
Animals including Humans	End points / questions Know and understand why humans have a skeleton. (What would happen if you did not have a skeleton? What is your skeleton for?) Know why humans have muscles. (Can you explain how your arm moves? How would you move if you did not have muscles?) Understand that humans need a specific amount and type of nutrition. (What does a human need to live? Why is important to eat food from different food groups?) Know the different food groups. (Why is important to eat food from different food groups?) Understand the importance of exercise. (Why do we need to exercise? What would happen to our bodies if we did not exercise?)	Vertebrate, invertebrate, diet., healthy, unhealthy, brain. Skeleton, skull, rib, backbone, bicep, tricep, joints, sockets, bones, tendons, heart, endoskeleton, carbohydrate, calcium, fruit and veg, protein, dairy, fats and sugars, vitamins, minerals, fibre, food groups,
Plants	End points / questions Know the parts of a plant. (Name and label this plant. What are the jobs of the various parts of the plants? How does a plant take in water?) Understand what a plant needs to survive. (What would happen if your plants were kept in a cupboard/did not have water?) Understand how plants change throughout the seasons. (How would a tree look different in Autumn compared to Spring?) Understand the pollination process. (Why are insects important for pollination? How does a plant make seed? How do plants disperse their seeds? Can you work out, by looking at a seed, how it is dispersed?) Know that plants make their own food? (Where does a plant get its food from? Why do we use compost? Why do we use plant food?)	Seed, bulb, compost, flower, petal, stem, leaf, root, habitat Fruit, berry, nut, trunk, bark, branch, stem, stalk, bud. Seedling, shoot, fully-grown, growth, healthy, soil, earth, water, light, temperature, nutrients, dispersal, Transported, pollination, seed formation, seed dispersal, insect, nectar, pollen.
Light	End points / questions Know that we need light to see and dark is the absence of light. (Can you name a light source that would help you to see in the dark?) Know that light can be reflected off surfaces. (Why do people have reflectors on their bikes?) Understand that the light from the sun can be dangerous. (Why do we wear sunglasses in the summer? Why do we not look at the sun?) Know that shadows are formed when the light, from a light source, is blocked by a solid object. (What happens when I put a book in front of this torch beam? What can you see on the ground when we stand on the playground on a sunny day? Why?) Know that shadows change shape and size depending how close/far away the light source is. (What would happen to a shadow puppet if it were moved closer to a light and away from a light? If we measured our shadows on the playground during the day what changes do you think you would see?)	Sun, sunny, light, shadow, shady, clouds, torch, source, pale, dark, transparent. Reflective, non-reflective, opaque, translucent, Light source, dark / darkness, reflect, mirror, block / absorb, direction of light, bright, dim, light beam, sunlight.
Working Scientifically Vocabulary Year 3		Bar chart, classify, diagram, group, identify, magnifier, observe/observation, pattern, rank, test, explain, measure, observe, predict, results. Investigate, evidence, research, comparative test.

Year 4	End points / questions	Key Vocabulary
States of Matter (Materials)	Know the three states of matter. (Can you name the three states of matter?) Explain the differences between the three states of matter. (How can you tell if something is a liquid? A solid? A gas? What are the properties of the three states of matter? Can you draw a simple diagram to explain the particles in the three states of matter? Think about something such as a book you can hold in your hand. How is the book different from something you pour? How is it different from the air you breathe?) Know that the temperature can cause water to change state. (How can water change state? What are the different states of water? What is boiling point? What is freezing point?) Know that other materials can change state when heated or cooled. (Do any other materials change state when heated / cooled? Can you name any?) Understand the water cycle with focus on evaporation and condensation. Can you draw and label a simple diagram of the water cycle? What evidence is there that evaporation and condensation are involved in the water cycle?)	Ice, freeze, melt, liquid, solid, gas, boiling point, changes state, particles, water vapour, water cycle, heating /cooling, degree Celsius, melt, freeze, boil, evaporation, condensation
Teeth and Digestion (Animals including humans)	End points / questions Know the parts of the digestive system. (Describe the journey a grape takes when you eat it.) Know the functions of the digestive system. (Do the stomach and the large intestine do the same job?) Know the names of the teeth. (What are the three types of teeth humans have?) Know the functions of the teeth. (Which teeth do you use when eating an apple / a chicken drumstick / a raisin?) Know the parts of the food chain. (Can you name any producers? Why can a fish be a predator and prey?)	Healthy, unhealthy, carnivores, herbivores, omnivores, diet, consumer, producer, digestive system, digestion, saliva, oesophagus, stomach, small intestine, large intestine, rectum, predator, prey, canines, incisors, pre-molars, molars, cavities, plaque, fluoride, tooth decay, gums, nerves, enamel.
Classification (Living Things and Their Habitats)	End points / questions Know that living things can be grouped in a variety of ways. (How can living things be sorted?) Know the names of the five vertebrate groups. (How are vertebrates different to invertebrates?) Understand how to use a classification key to identify living things. (How could you find out which group a living thing belonged to? (How are living things in our area similar / different to each other?) Know that environments can change and this can sometimes pose dangers to living things (How do humans / natural disasters affect plant and animal habitats?)	Habitat, environment, amphibians, fish reptiles, birds, mammal, carnivores, herbivores omnivores, diet, vertebrate, invertebrate, living, non-living, never-lived, dead, move, grow, feed, breathe, have young, shelter, conditions, adaptation, survive, food-chain, consumer, producer, food web, classification keys, human impact, natural disaster.
Electricity	End points / questions Know that common appliances in the home and at school run on electricity (Which appliances use electricity to produce light / heat / sound / movement?) Know and understand what a simple series electrical circuit is. (Identify and name the basic parts of an electrical circuit, including cells, wires, bulbs and switches. Which components are needed to make a bulb light up and how do you connect them?) Know how to light a lamp in a simple series circuit. (Can you make a circuit to include a lamp and light it? How do you know when an electrical circuit is incomplete?) Understand that a switch is a controlled break which stops electricity flowing to all parts of the circuit. (What happens to the lamp when we turn off the switch? Why are switches needed in a circuit?) Know which materials are used for common conductors and insulators. (Why is it important for us to know which materials conduct or insulate electricity? How do you know if a material is a good conductor or insulator?).	Electricity, electrical device / appliances, mains, plug, components, conductor, insulator, circuit symbol, cell, battery, wire, bulb, switch, buzzer, motor connection, electrical / simple circuit, positive, negative, crocodile clip

Sound	End points / questions Know how sounds are made, associating some of them with something vibrating (When is a sound produced?) Understand that vibrations from sounds travel through a medium to the ear (How do we hear sounds?) Understand that there are patterns between the pitch of a sound and features of the object that produced it (How can you change the pitch of an instrument?) Understand there are patterns between the volume of a sound and the strength of the vibrations that produced it (How can you make a sound louder?) Understand that sounds get fainter as the distance from the sound source increases (What happens to sound as you move further away from it?)	Sound, noise, listen, hear, traffic, sirens, thunder, high, low, loud, quiet, soft, volume, crackle, thunder, hum, buzz, roar Sound source, vibrate / vibration, travel, sound wave, pitch, volume, loud / quiet, tune, high / low, echo, tuning fork, insulation, instrument, percussion, string, brass, woodwind, tunes instrument.
Working Scientifically Vocabulary Year 4		Bar chart, classify, diagram, group, identify, magnifier, observe/observation, pattern, rank, test, explain, measure, observe, predict, results. Investigate, evidence, research, comparative test, control variable, branching key, classifying.

Year 5	End points / questions	Key Vocabulary
Animals including Humans	Know the changes that humans go through as they develop to old age. (What are the changes a human goes through as they age?) Know and understand the stages in the growth and development of humans. (What are the stages of human development? How does the human body change physically over time? How can you tell how old somebody is? How have you changed since you were born? What has stayed the same?) Know about the life cycle stage of puberty in girls. (What are the signs of puberty? Can you name three changes a girl goes through during puberty?) Know about the life cycle stage of puberty in boys. (What are the signs of puberty? Can you name three changes a boy goes through during puberty?) Know what gestation is and understand that different mammals have different lengths of gestation. (How fast does a human baby grow in the womb compared to another mammal? Why do animals have different gestation periods? If all animals had the same gestation period how would this affect different species?)	Baby, toddler, child, lifecycle. Adult, birth, survive. Pre-teen, teenager, old age. Life expectancy Childhood Adolescence Adulthood Early adulthood Middle adulthood Late adulthood. Male, female. Gestation, pregnancy, offspring, puberty, menstruate.
Living things and their habitats.	End points / questions Understand what is meant by a Life Cycle. (What is a life cycle? Can you draw a life cycle of a …?) Know the differences between the life cycles of mammals, amphibians, insects and birds. (Can you compare the life cycle of a bird with a dog? What is different about the life cycles of insects and amphibians to mammals? Can you explain the process of metamorphosis in amphibians?) Understand how flowering plants reproduce. (What is reproduction? What is sexual reproduction in flowering plants? What is the role of the flower? What would happen if one of the parts of the flower was missing?) Understand that not all plants reproduce by producing seed. (Are there other ways of growing new plants other than from seed? Can we plant bulbs to produce spring flowers (daffodils)? What are plantlets? How does our Spider plant reproduce? What are tubers? What is asexual reproduction?)	Seed, bulb, compost, flower, petal, stem, leaf, root, habitat Germinate, germination, Seedling, shoot, fully-grown, growth, dispersal. Transported, pollination, seed formation, seed dispersal, insect, nectar, pollen. Stamen, Stigma, anther, filament, style, sepal, carpel, Plantlets corms, sexual, asexual, metamorphosis,
Materials: Properties of materials.	End points / questions Understand how to group materials based on their properties. (What properties can different materials have? (E.G Tell me the properties of glass, paper, brick, fabric) What criteria could you use to group everyday materials?) Understand that materials can take different forms and that the same material can be used for a variety of purposes. How many ways can different materials be compared based on their properties? EG, is paper as flexible as a ruler? Is cotton as transparent as glass?) Understand the reasons for particular uses of everyday materials, including metals, wood and plastic. (A water pipe is made of metal. What would happen if it was made of cardboard? Why isn´t the bottom of a hammer made of glass? Using scientific vocabulary explain why glass is used for windows.) Know how different materials react to magnets. (How can you tell if an object is magnetic or not? Since you can't see magnetism how can you tell if materials react to it? How can I separate a mixture of sand and paper clips?)	Ice, freeze, light weight, weak, float, sink, heavy. Absorb, absorbent, material, manufactured, property, recycle, reuse, rigid, flexible, bend, bouncy, elastic, squashy, stretchy, stiff, rigid, transparent, waterproof, reflective, non-reflective, opaque, translucent, shape, changes. Attract, repel, magnet, magnetic. Characteristics, suitability purpose.
Materials: States of matter	End points / questions Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. (What does dissolving mean? What is a substance? What is a solution? What is the connection between mixing and dissolving?) Know the methods of how mixtures might be separated (filtering, sieving and evaporating). (How are the processes filtering, sieving and evaporating different? How would we set an experiment to demonstrate evaporation?) Understand the meaning of reversible and irreversible changes and give examples. (What happens if you put sugar in water? How can we reverse the change and get the sugar back? If sugar 'disappears' when added to water, how come we can get it back?) Know 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. (What is a chemical reaction? Toast a slice of bread. In how many ways has the bread changed? Are these reversible or non-reversible changes?)	Ice, freeze, melt, liquid, solid, gas, boiling point, changes state, particles, water vapour, water cycle, degree Celsius, evaporation, condensation. Solution, solvent, solute substance, filtering, sieving, dissolving, mixing, reversible, irreversible, chemical reaction.

Earth and Space	End points / question Know how the Earth, and other planets in the solar system move relative to the Sun. (What does orbit mean? How long does it take for the Earth to orbit the sun? Approximately what shape are the planets orbits?) Know the name of the planets in our Solar System. (How many planets are in our solar system? Can you name them in order?) Know how the moon moves in relation to the Earth and understand why the moon has different shapes at different times of the month. (Does the Moon move around the Earth or does the Earth move around the moon? How long does it take for the Moon to orbit the Earth? What shape is the moon? Why does the moon appear to change shape?) Understand that the Sun, Earth and Moon are approximately spherical bodies. (What shape is the Sun/Earth/Moon? What evidence is there that that the Sun/Moon/Earth is spherical?) Understand that the Earth's rotation explains day and night and the apparent movement of the sun across the sky. (Why do we have day and night? Is it daytime everywhere in the world now? Explain your answer. Why is it light and warmer in the day? Why is it dark and colder at night?)	World, star, moon, crater, space, orbit, gravity, planet, rocket, astronaut, Winter, Spring, Summer, Autumn, change, seasons, temperature Days, hours, months. North Pole, South Pole. Spherical, elliptical orbit, axis, rotation, phases of the solar system.
Forces	End points / question Know that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. (What is gravity? Can you see gravity? How do you know it exists? I dropped a crumpled piece of paper and flat piece of paper- which one will reach the ground first? If it had the same mass, would the weight change based on the gravitational pull?) Understand that air resistance, water resistance and friction are forces that act between moving surfaces. (What is air resistance? What is water resistance? What is friction? If I dropped a flat piece of paper and a scrunched-up piece of paper which one would reach the ground first? Explain why? How do we know air/water resistance exists? What would happen if a human jumped from an aeroplane without a parachute? What would happen if they had a parachute?) Understand that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. (What is a lever, pulley, gears? How can they show forces? Describe how they work and the force that acts upon it. How are pulleys and gears useful?) Know that we can measure forces using specific equipment such as a Newton Meter. (What is the measurement we use to measure friction? Can you explain how to read a Newton Meter?)	Rough, smooth, friction, gravity, force, push, pull, strength, attract, repel, magnet, magnetic, metal, poles, North Pole, South Pole. Air resistance, water resistance, mechanisms: gears, pulleys, levers, Newton/Force Meter, newtons.
Working Scientifically Vocabulary Year 5		Bar chart, classify, diagram, group, identify, magnifier, observe/observation, pattern, rank, test, explain, measure, results. Investigate, evidence, research, predict, fair/comparative test, control variable, branching key, classifying. Conclusion, line graph, scale, model.

Year 6	End points / questions	Key Vocabulary
Living Things and Their Habitats – Evolution and Inheritance	Know what DNA is (Why is DNA important? Do all living things look the same and why?) Understand what inheritance is, including characteristics and traits (Do offspring always look identical to the parent?) Understand what adaptation is. (How can adaptation lead to evolution?) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (How do invertebrates show adaptation to the environment they live in?) Know what a fossil is? (What do they tell us? Explain briefly how they are formed.) Understand what is meant by evolution. (How have humans, and other organisms, changed over time?)	Habitat, environment, conditions, adaptation, survive, invertebrates, vertebrates, Fossil, human impact, natural disaster. Offspring, characteristic. Evolution, genes, DNA, inherit, natural selection, survival of the fittest, trait.
Animals – Exercise, health and the Circulatory System	End points / questions Know what the circulatory system is? (Why is it called circulatory?) Know the main parts of the human circulatory system and understand what the functions of the heart, blood vessels and blood are. (Do all parts of the circulatory systems do the same job? How are they different?) Know what blood is and what its role is in the human body. (Which parts of the heart pump blood? Where to?) Understand how nutrients and water are transported within animals and humans? (How do nutrients get into our blood? What waste products does blood transfer?) Understand that diet, lifestyle and exercise have an impact on our bodies? (Is Reuben being healthy if he takes some vitamins to give him more strength? Are all drugs medicines?)	Healthy, unhealthy, torso, brain, nutrients, Circulatory system, Blood vessels, capillaries, arteries, Veins, Red blood cells, white blood cells, oxygen, carbon dioxide, ventricles, aorta, pulmonary vein / artery
Living Things and Their Habitats – Classification	End points / questions Understand that living things are classified into groups. (Why are you grouping those organisms together?) Understand that plants and animals are classified based on specific characteristics (What is similar or different about these organisms?) Know that broad groupings, such as micro-organisms, plants and animals can be subdivided (How can we further refine our groupings?) Know how to classify vertebrates and invertebrates (Why do some animals have a backbone and some do not?) Understand that micro-organisms can be both beneficial and dangerous? (Explain how bacteria can be both good and bad)	Habitat, environment, vertebrate, invertebrate Classification keys, classify, organism, micro-organism, bacteria, fungus.
Electricity	End points / questions Know that the brightness of a lamp or the volume of a buzzer is associated with the number and voltage of cells used in the circuit. (If you put a second battery in a simple circuit, how will it affect the volume of a buzzer?) Understand there are and give reasons for variations in how components function. (Ruby has connected two bulbs across two batteries in a simple circuit. How can she make the bulbs dimmer? Why will this happen?) Understand there are recognised symbols to use when representing a simple circuit in a diagram. (Which of these circuits will work and why?) Know how to construct simple series and parallel circuits. (How can you make this simple series become parallel?)	Electricity, electrical device / appliances, mains, plug, components, conductor, insulator, circuit symbol, cell, battery, wire, bulb, switch, buzzer, motor connection, electrical / simple circuit, positive, negative, crocodile Series circuit, voltage, volume, current, resistance, circuit diagrams, parallel circuits.
Light	End points / questions Know the parts of the eye (How is your eye connected to your body?) Know that light appears to travel in straight lines. (Can light travel round corners? How could you prove or disprove your answer?) Understand that light takes a specific path from a light source to our eyes. (Does light reflect off all objects exactly the same? Which objects reflect the most light?) Understand that shadows have the same shape as the objects that cast them because light travels in straight lines. (Why don't shadows have features?)	Source, pale, dark, transparent. Reflective, non-reflective, opaque, translucent. Transparent. Light source, dark / darkness, reflect, mirror, block / absorb, direction of light, bright, dim, light beam, sunlight. Lenses, prism, rainbow, refraction, spectrum, iris, pupil, cornea, retina, optic nerve
Working Scientifically Vocabulary Year 6		Bar chart, classify, diagram, group, identify, magnifier, observe/observation, pattern, rank, test, explain, measure, results. Investigate, evidence, research, predict, fair/comparative test, control variable, branching key, classifying. Conclusion, conclude, line graph, scale, model, enquiry, anomaly.