

Subject Area – Science
Year Group - 1

Term	Autumn One	Autumn Two	Spring One	Spring Two	Summer 1	Summer 2
Knowledge	Animals including humans	Animals including humans	Seasonal Changes	Plants	Everyday materials	Everyday Materials
Scientific enquiry	Classifying	Classifying Researching	Pattern Seeking	Observing over time	Classifying Comparative/fair testing	Researching Comparative/fair testing
Working scientifically skills	To ask scientific questions	To ask scientific questions	To gather/record results	To plan an enquiry To make a prediction To draw a conclusion	To ask scientific questions To observe closely To gather/record results	To observe closely To plan an enquiry
Building science capital	Animals in local environment and school grounds	Watching high quality videos of Olympic athletes and how their bodies move (link to gymnastics)	Pymmes park visit during seasonal change	Grow and eat their own food (Edible Playgrounds project)	Skype with different industries to see how different materials are used e.g., a glassblowing studio, pottery studio, woodworking studio	Visitor/online Q and A with someone involved in recycling Learn how LEGO is made (industry link)
Composite knowledge	What are the 5 groups in the animal Kingdom and how do we classify and name them? What other ways can animals be classified (grouped) i.e., Eating habits? What are the differences and similarities between different animal groups?	What are parts of a human body? What are senses and what body parts are linked to each?	What are seasons? What are the differences and similarities between the seasons? What types of weather will you see in different seasons?	What are plants and how do they work? What do plants need to survive? What are the parts of plants called? What types of trees are there? What types of plants can you see in the UK?	What are the names of everyday materials? What is the difference between an object and the material it is made from? How can I group objects by material?	What materials are used for different objects? What are the similarities and differences between everyday materials? Why are certain materials used for specific uses?

Component knowledge	-identify and name a variety of common animals that are carnivores, herbivores and omnivores -identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals -describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	-identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense	-observe changes across the 4 seasons -observe and describe weather associated with the seasons and how day length varies -compare the weather in the UK to the weather at the equator (Somalia)	-identify and name a variety of common wild and garden plants, including deciduous and evergreen trees -identify and describe the basic structure of a variety of common flowering plants, including trees	-distinguish between an object and the material from which it is made -identify and name a variety of everyday materials, including wood, plastic, glass, metal, brick, fabric, rubber and rock -describe the simple physical properties of a variety of everyday materials -compare and group together a variety of everyday materials on the basis of their simple physical properties	-distinguish between an object and the material from which it is made -identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock -describe the simple physical properties of a variety of everyday materials -compare and group together a variety of everyday materials on the basis of their simple physical properties
Vocabulary	Fish, reptiles, mammals, birds, amphibians (examples for each) Carnivore, herbivore	Leg, arm, elbow, head, ear, nose, back, wings, beak, scales, fin,	Spring, Summer, Autumn, Winter Temperature, weather, light, dark	Plant, tree, bush, flower, stem, leaves, roots, soil, sun, water	Wood, Metal, Plastic, Rubber, Glass, Paper, Water, Fabric, Concrete, Brick, Hard, Soft, Bendy, Stiff, Rough, Smooth, Strong, Weak	Design, test, evaluate Waterproof, durable, transparent, flexible,
Links to prior knowledge	EYFS: Look closely at similarities	EYFS: Beginning to be interested in and describe the texture of things	EYFS: Developing an understanding of growth,	EYFS: Developing an understanding of growth,	EYFS: Beginning to be interested in	EYFS: Manipulates materials to achieve a planned effect

		Shows care and concern for living things and their environment Autumn 1	decay and changes over time.	decay and changes over time. Summer 1 (seasons)	and describe the texture of things	Spring 1
Key knowledge for assessment	Identify and compare animals based on dietary habits. Make comparisons of animals looking at physical structural differences. Identify 5 groups in the animal Kingdom	Identify body parts and their associated senses	Understanding of what seasons are Ability to describe the four seasons in the UK Ability to explain how temperature, weather and length of days change	Knowing what a plant is, and being able to name some types of plant. Being able to describe what a plant needs to grow.	Names of everyday materials Understanding of key vocabulary Identify properties of materials and how to classify (group) objects by material	Uses of different materials – what is the best material How to test a material for durability, flexibility, and waterproof(ness)
Cross-curricular links	My family and Where I live - animals and minibeasts in our local area	PE: Look at how our bodies move and how gymnasts bodies move.	Literacy – compare the seasons in Handa's village to the seasons in Edmonton	Weather and season – Summer 1 Link to Nepal project (food growing in the UK and Nepal)	The Oceans – design a boat and choose appropriate materials	Toys – designing a bath toy Toys – open-ended investigation. Design a toy that will last the longest/be the most durable

Half Termly Planning

Autumn 1	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	LO: To classify mammals, birds and fish.	Group activity – sorting animals into mammals, fish and birds. Using a talking frame to explain how you know - “I know it is a fish because...” Sort pictures in a circle using sorting hoops.	PPT slides with information, pictures of different animals /plastic animals for modelling sorting in circle. Sorting hoops.	Mammals, birds, fish
Lesson 2	LO: To classify mammals, birds and fish.	Independent work in books, sorting animals into mammals, birds and fish. Sorting statements into mammals, birds and fish.	PPT slides with information, pictures of different animals, statements about mammals, birds and fish for sorting, Widgit resources for scaffolding.	Mammals, birds, fish

Lesson 3	LO: To classify reptiles and amphibians.	Group activity – sorting animals into reptiles and amphibians. Using a talking frame to explain how you know - “I know it is a reptile because...” Sorting statements about reptiles and amphibians. Present group work to class.	PPT slides with information, pictures of different animals, plastic animals for modelling sorting in circle. Statements about reptiles and amphibians for sorting, Widgit resources for scaffolding. Large sheets of sugar paper.	Reptiles, amphibians
Lesson 4	LO: To classify reptiles and amphibians	Independent work in books. Choose one reptile, and explain how you know. Choose one amphibian, and explain how you know.	PPT slides with information, pictures of different animals, statements about reptiles and amphibians, Widgit resources for scaffolding.	Reptiles, amphibians
Lesson 5	LO: To classify carnivores and herbivores	Partner work – choose an animal and create a plate of food for them based what they eat (carnivore or herbivore)	PPT with information and retrieval questions about herbivores and carnivores. Pictures of these groups of animals. Pictures of different foods, paper plates.	Carnivores, herbivores
Lesson 6	LO: To classify carnivores, herbivores and omnivores	Independent work – choose an animal and create a plate of food for them based what they eat (carnivore, herbivore or omnivore)	PPT with information and retrieval questions about herbivores, carnivores and omnivores Pictures of these groups of animals. Pictures of different foods, plate template in books	Carnivores, herbivores, omnivores
Lesson 7	LO: To describe similarity and difference	Circle time – use key vocabulary to talk about how pairs on animals are similar, and how they are different.	PPT with information and retrieval questions about mammals, birds, fish, reptiles, amphibians, herbivores, carnivores and omnivores. Images of	Mammals, birds, fish, reptiles, amphibians, carnivores, herbivores, omnivores, similarity, difference

			animals to compare in circle. Pairs of animals for group work.	
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Autumn 2	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	LO: To name some parts of the body	Learn about the moving parts of the body, and what they help us to do.	PPT with information on body parts, videos of children performing gymnastics/PE.	Neck, back, spine, shoulder, elbow, wrist, fingers, hips, knees, ankles, toes.
Lesson 2	LO: To name some parts of the body	Learn about the moving parts of the body, and what they help us to do. Label a picture with all the moving parts of the body. Write about what some body parts help us to do.	PPT with information on body parts, videos of children performing gymnastics/PE. Image to label. Key vocabulary. Sentence starters/widget scaffolds.	Neck, back, spine, shoulder, elbow, wrist, fingers, hips, knees, ankles, toes.
Lesson 3	LO: To learn about the senses	Learn about the five senses, and which body part is associated with each. Circle time – experience the different senses, by passing around things to look at, smell, hear, taste and feel.	PPT with information on the senses. Scented candle, feely bag, box with a small hole in it, fruit for tasting, percussion instruments.	Senses, sight, smell, taste, touch, hearing, eyes, nose, tongue, skin, ears
Lesson 4	LO: To learn about the senses	Record the names of the five senses, and which body part is associated with each. Describe what is happening in a photograph using key vocabulary.	PPT with information on the senses. Photographs of children using different senses. Key vocabulary.	Senses, sight, smell, taste, touch, hearing, eyes, nose, tongue, skin, ears
Lesson 5	LO: To classify ourselves	Retrieval – classification (mammal/bird/fish) (carnivore/omnivore/herbivore). Classify humans using prior knowledge. Explain classification using key vocabulary.	PPT with retrieval information about classification. Pictures of children with key characteristics of mammal/omnivore.	Mammals, birds, fish, carnivore, herbivore, omnivore
Lesson 6	Retrieval week			

Lesson 7	Retrieval week			
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Spring 1	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	To name and describe the four seasons in the UK.	Will be drawing a picture for each season, to show the differences in each season. I.e snowman for winter, leaves falling off tree for autumn, sun shining for summer, flowers for spring.	PPT with information and videos about the four seasons. Discussions about the weather we see in the different seasons and other changes we may see happening (I.e longer days/shorter days, more sunlight, animals hibernating)	Seasons Winter Summer Autumn Spring
Lesson 2	To describe the difference in the weather in all four seasons in the UK.	Will have to label a picture showing differing weather with which season it is showing. Write a sentence or label types of weather we have in each of the four seasons. Challenge – can you name pieces of clothing we may wear in the winter?	PPT showing pictures and information on each of the four seasons. Discussing types of weather we already know and what types of weather we may see in each of the seasons.	Seasons Winter Spring Summer Autumn weather Wind, rain, snow, cold, warm, hot, sunny,
Lesson 3	To explain and describe seasonal clothing for each of the four seasons in the UK.	Cut and stick activity, choose the appropriate clothing for your person for each season. I.e. Winter - hat, scarf, coat, gloves. Summer – shorts, vest, sunglasses.	PPT discussing differing weather in the seasons and appropriate clothing we can wear to stay warm or cool in the four seasons. Will have props (clothing examples) from different seasons for students to look at and touch.	Seasons, winter, summer, spring, autumn, warm, hot, cold,
Lesson 4	To explain why the length in the day changes with the seasons.			
Lesson 5	To observe the changes in the seasons.			

Spring 2	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	To ask questions about what a plant is, and how it works	In groups to ask questions about plants, to have the opportunity to share them and to hear some information	PPT, pictures of plants for tables, think bubbles	How? Why? What? Do? Are?

		that might answer them. To write any unanswered questions into their books.		Plants
Lesson 2	To investigate what a plant needs to grow	Learn about the five things a plant needs to grow. Plant a bean to observe over time.	PPT, information film, beans, compost, plant pots, labels	Sunlight, water, air, soil, nutrients, space to grow
Lesson 3	To make a prediction	Predict what will happen to four plants – one with no light, one with no soil, one with no water and one with no air/space. Write I think/because predictions.	PPT, beans, pots, clear plastic bag, wet tissue, labels	Prediction, I think, because, grow, die, strong, weak, big, small, sunlight, water, air, soil, nutrients, space to grow
Lesson 4	To label the parts of a plant	Learn the main parts of a plant, and what each part does. Look at some real plants and identify those parts. Label a picture and add the function of each part.	PPT, pictures to label, real plants (daffodils), plain paper for drawing	Roots, stem, leaves, petals, seeds
Lesson 5	To name and sort some garden plants	Know that a garden plant is a plant planted on purpose, in a garden, balcony or park. Sort some plants into edible plants and decorative plants. Learn the names of some common garden plants in the UK	PPT, pictures for sorting	Edible, fruits, vegetables, decorative, garden plants
Lesson 6	To identify and name common wild plants	Know that wild plants are plants that grow and reproduce by themselves – nobody has to plant them. Go on a wild plant hunt around the school. Record by drawing or sticking the plants found, and name them where possible.	PPT, pictures, clipboards, plain paper for drawing	Wild plants

Summer 1	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	LO: To name and identify everyday materials	Handle and name some everyday materials – wood, plastic, rubber, metal, paper, cardboard, glass and fabric. In groups, go on a materials hunt around the school looking for things made of each material.	Samples of each material. Material hunt sheet. PPT slides.	Wood, plastic, rubber, metal, paper, cardboard, glass and fabric
Lesson 2	LO: To name and identify everyday materials	Recap the names of everyday materials – wood, plastic, rubber, metal, paper, cardboard, glass and fabric. Discuss what we have seen in our school environment made from each. Record findings in science book. Challenge – consider why the school is made from brick. What would happen if it was made from glass?	Samples of each material. Vocabulary sheet. PPT slides.	Wood, plastic, rubber, metal, paper, cardboard, glass and fabric

Lesson 3	LO: To group objects by their material	Understand the difference between the object and the material – speaking frame. Sort some toys by material – wood, plastic, metal and fabric. Challenge – consider why so many toys are made from plastic.	Toys made from wood, plastic, metal and fabric. Sorting hoops and labels.	Object. Material. Wood, plastic, metal, fabric.
Lesson 4	LO: To sort materials by their properties	Recap the difference between the object and the material – speaking frame. Learn that property means what a material is <u>like</u> . Learn the terms bendy/stiff rough/smooth. Use Venn diagrams to sort wood, plastic, rubber, metal, paper, cardboard, glass and fabric into bendy/stiff (or sometimes both) and rough/smooth (or sometimes both).	Various samples of each material (e.g. stiff metal and bendy metal, smooth wood and rough wood.) Sorting hoops. Labels.	Property, properties. Bendy, stiff, rough, smooth.
Lesson 5				

Summer 2	Lesson Objective	Main Task	Resources	Vocabulary
Lesson 1	To investigate and identify which materials have certain properties (waterproof).	PPT discussing what it means if a material is waterproof. Waterproof test with an old umbrella – to show the water falls off. Absorption test with a sponge – to show what it looks like when a material absorbs water (not-waterproof). Make a class prediction of the materials we think will be waterproof and those that will not. Discuss how we can make sure our test will remain fair (materials in water for 5 seconds each). Students will have a selection of different everyday materials, tray of water and a recording sheet – work as groups to test which materials are waterproof and which are not.	PPT with slides explaining what waterproof means. Water trays Selection of everyday materials Recording sheets Umbrella material Sponge	Waterproof Not waterproof Absorb Fair test prediction
Lesson 2	To investigate and identify which materials are transparent.	PPT with discussion of what transparent means and why we need some materials to be transparent. Students will be investigating which material would be the best to use for a new pair of glasses.	PPT with slides and discussion points about transparency. Cardboard glasses print outs. Selection of materials – silver foil, plastic wrap, fabric,	Transparent Opaque
Lesson 3				
Lesson 4				
Lesson 5				

Lesson 6				
Lesson 7				
Lesson 8				