Science Progression of Skills-

Adapted from Cornerstones Curriculum

2022- 2023

Big idea	Aspect	Nursery	Reception	Year 1	Year 2
Humankind	Human body	AOL: World The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Identify some of the different body parts from pictures.	AOL: World The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Different body parts are used for different things, such as the eyes are used to see. Draw pictures of the human body and name some of the different body parts.	The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. The five senses are hearing, sight, smell, taste and touch. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch. Draw and label the main parts of the human body and say which body part is associated with which sense. covered	Human offspring go through different stages as they grow to become adults. These include baby, toddler, child, teenager, adult and elderly. Describe the stages of human development (baby, toddler, child, teenager, adult and elderly). covered
	Staying safe	AOL: PSED It is important to listen to adults and follow simple rules to stay safe. Follow simple rules with the help of an adult.	AOL: PSED Rules help to keep us safe in different environments and when using certain equipment. Follow instructions when in different environments and when handling simple equipment, such as scissors. covered optional	It is important to stay safe. Some ways to stay safe include staying safe in strong sunlight (sun cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects) and with household chemicals (not touching, drinking or eating). Describe ways to stay safe in	Humans need water, food, air and shelter to survive. Describe what humans need to survive. covered optional

			some familiar situations. covered	
Healthy lifestyle	AOL: PSED Washing their hands after going to the toilet and before eating helps people to stay healthy. Wash and dry hands after going to the toilet and before eating.	AOL: PSED Washing and drying their hands, especially after using the toilet and before eating, helps stop the spread of harmful germs. Wash and dry hands regularly and say why this is important. covered x 3 optional	Hand washing and good hygiene are important parts of a healthy lifestyle and prevent the spread of germs. Explain why hand washing and cleanliness are important. covered	A healthy lifestyle includes exercise, good personal hygiene, good quality sleep and a balanced diet. Risks associated with an unhealthy lifestyle include obesity, tooth decay and mental health problems. Describe the importance of a healthy lifestyle, including exercise, a balanced diet, good quality sleep and personal hygiene. covered

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Processes	Pattern seeking	AOL: World The weather is colder in winter and warmer in summer. Talk about the weather as being warm or cold. optional	AOL: World The weather can change throughout the day, week and month. The weather is different at different times in the year. Notice and begin to describe patterns of weather in summer and winter. covered x 2 optional	There are four seasons: spring, summer, autumn and winter. Certain events and weather patterns happen in different seasons. Observe changes across the four seasons. covered x 6 optional x 2	The UK has typical weather in each of the seasons. For example, winter is cold and sometimes frosty, whereas summer is warm and sometimes sunny. Describe typical UK seasonal weather patterns. covered optional
	Changes	AOL: World In the winter, the evenings gets darker earlier. In the summer, the evening stay lighter for longer. Talk about things they can do on winter evenings and things they can do on summer evenings and begin to notice the difference in day length. covered optional x 2	AOL: World The number of daylight hours varies throughout the year, according to the season. The days are longer in summer and shorter in winter. Notice and talk about the differences in day length between the seasons. optional x 2	Day length (the number of daylight hours) is longer in the summer months and shorter in the winter months. Observe and describe how day length changes across the year. covered	Some objects and materials can be changed by squashing, bending, twisting, stretching, heating, cooling, mixing and being left to decay. Describe how some objects and materials can be changed and how these changes can be desirable or undesirable. covered

Earth	AOL: World Ways to describe daily weather include sunny, rainy, warm or cold. Weather is warmer in the summer and colder in the winter. Say what the daily weather is like. covered	AOL: World Ways to describe daily weather include sunny, rainy, windy, cloudy, warm or cold. Weather is warmer in the summer with more sunshine and colder in the winter with more snow, hail and rain. Describe simply how weather changes as the seasons change. covered x 5 optional x 6	Different types of weather include sunshine, rain, hail, wind, snow, fog, lightning, storm and cloud. The weather can change daily and some weather types are more common in certain seasons, such as snow in winter. Observe and describe different types of weather. covered x 2	The Earth is spherical and is covered in water and land. When it is daytime in one location, it is night time on the other side of the world. Describe features of Earth using words and pictures. optional
Phenomena	AOL: World Notice and begin to describe natural phenomena, such as weather, rainbows and clouds.	AOL: World Natural phenomena include weather, shadows, rainbows, clouds, flooding and waves. Name and describe natural phenomena, such as the size of shadows, the colours of a rainbow, the speed of clouds moving across the sky and the strength of a wave. covered x 5	A shadow is formed when light from a light source, such as the Sun, is blocked by an opaque object, but not by transparent objects. Explain in simple terms how shadows are formed.	When an instrument is played by plucking, striking or blowing, the air around or inside it vibrates. These vibrations travel as a sound wave to the ear. Explain in simple terms how sounds are made.

Modelling	AOL: World Toys and models that are powered by a battery can be switched on and off. Play with and explore battery-powered toys and models. covered optional	AOL: World Some light sources need electricity or batteries to work, such as a torch, and some do not, such as candles. Explore and describe electrical and non-electrical light sources. covered x 3	Electrical circuits can light lamps or sound a buzzer. A switch turns an electrical circuit off and on. Describe, following exploration, what simple electrical circuits can do.	Models can have moving parts that use levers, sliders, wheels and axles. Make models with moving parts. covered x 3
Forces	AOL: World Some objects float and others sink. Talk about and play with objects that float and sink and describe different forces that they can feel. covered optional	AOL: World Some objects float and others sink. When an object sinks it falls through water to the bottom of the vessel. An object that floats stays at the water's surface. Describe, predict and sort things that float and sink and talk about the forces that they can feel. covered x 4 optional	Simple equipment can be used for measuring weather, such as measuring temperature with a thermometer; identifying wind direction and force with a windsock or measuring rainfall with a rain gauge. Investigate weather using toys, models or simple equipment. covered x 4 optional x 2	Some objects float and others sink. Objects that float are typically light or hollow. Objects that sink are typically heavy or dense. Sort and group objects that float and sink. covered

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Creativity	Report and conclude	AOL: CL Begin to offer simple explanations for why things happen. covered x 4 optional x 3	AOL: World Represent scientific observations by mark making, drawing or creating simple charts and tables. Offer explanations for why things happen, making use of vocabulary, such as, because, then and next. covered x 9 optional x 11	The results are information that has been found out from an investigation. Talk about what they have done and say, with help, what they think they have found out. covered x 8 optional x 4	The results are information that has been found out from an investigation and can be used to answer a question. Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language. covered x 10 optional x 2
	Gather and record data		AOL: Maths Data can be recorded in tables and pictograms. Record data in simple tables and pictograms. covered x 2 optional	Data can be recorded and displayed in different ways, including tables, pictograms and drawings. With support, gather and record simple data in a range of ways (data tables, diagrams, Venn diagrams). covered x 6 optional x 2	Data can be recorded and displayed in different ways, including tables, charts, pictograms and drawings. Use a range of methods (tables, charts, diagrams and Venn diagrams) to gather and record simple data with some accuracy. covered x 9 optional x 5

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Investigation	Questioning	AOL: CL Question words include why, what, when and how. Ask or answer a simple scientific question. covered x 3 optional x 6	AOL: CL Question words include who, why, what, when, where and how. Ask a relevant scientific question to find out more, explain how things work and why they might happen. covered x 15 optional x 18	Question words include what, why, how, when, who and which. Ask simple scientific questions. covered x 6	Questions can help us find out about the world. Ask and answer scientific questions about the world around them. covered x 7 optional
	Measurement	AOL: World Place two to three items in order based on length, height or capacity.	AOL: World Simple equipment can be used to measure distance, height, weight and time. With support, use simple equipment, such as timers, rulers and containers, to measure length, height, capacity and time. covered x 2 optional x 3	Simple equipment is used to take measurements and observations. Examples include metre sticks, measuring tapes, egg timers and hand lenses. With support, use simple equipment to measure and make observations. covered x 8 optional	Simple equipment is used to take measurements and observations. Examples include timers, hand lenses, metre sticks and trundle wheels. Use simple equipment to measure and make observations. covered x 5 optional x 2

Investigation	AOL: Exp A&D Find different ways to do things when playing and exploring and use all their senses in hands on exploration of natural materials. optional x 3	AOL: Exp A&D When we try things out to see if they work, it is called a test. Observe how activities are going and adapt their ideas if necessary. covered x 3 optional x 2	Simple tests can be carried out by following a set of instructions. With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen. covered x 6	Tests can be carried out by following a set of instructions. A prediction is a guess at what might happen in an investigation. Follow a set of instructions to perform a range of simple tests, making simple predictions for what might happen and suggesting ways to answer their questions. covered x 7 optional x 3
Observation	AOL: World Talk about some of the things that they have observed using simple scientific vocabulary. covered x 2 optional x 7	AOL: World With support, observe, record and talk about materials and living things. covered x 17 optional x 18	Objects, materials and living things can be looked at and compared. Observe objects, materials, living things and changes over time, sorting and grouping them based on their features. covered x 7 optional x 2	Objects, materials and living things can be looked at, compared and grouped according to their features. Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining their reasoning. covered x 7 optional x 9

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Materials	Identification and classification	AOL: World Objects are made from different materials. Everyday materials include plastic, wood and glass. Explore and sort everyday items, with support, into groups of the same material. covered optional	AOL: World Objects are made from different materials. Everyday materials include, wood, plastic, glass, fabric, metal and stone. Materials have different properties. Name and sort everyday items into groups of the same material. covered x 4 optional	A material is what an object is made from. Everyday materials include wood, plastic, glass, metal, water, rock, brick, paper and fabric. Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock. covered x 2	Some foods, such as ice and chocolate, melt when heated, but then harden (solidify or freeze) when cooled. Observe what happens when a range of everyday materials, including foods, are heated and cooled, sorting and grouping them based on their observations. covered
	Properties and uses	AOL: World Different materials can be used for different things because they are hard, soft, bendy or waterproof. Waterproof items, such as Wellington boots, raincoats and umbrellas, protect us from the rain. Explore and talk about materials which are waterproof. covered	AOL: World Some materials are magnetic, which means that they are attracted to (pull towards) a magnet. Some metals are magnetic. Other materials are non-magnetic, such as wood, dough and glass. Identify that materials have different properties and explore and sort magnetic and non-magnetic materials through play and exploration. covered x 3 optional	Materials have different properties, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof; magnetic or non-magnetic. Investigate and describe the simple physical properties of some everyday materials, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof and magnetic or non-	A material's physical properties make it suitable for particular purposes, such as glass for windows and brick for building walls. Many materials are used for more than one purpose, such as metal for cutlery and cars. Compare the suitability of a range of everyday materials for particular uses, including wood, metal, plastic, glass, brick, rock, paper and cardboard . covered x 5 optional x 2

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Nature	Identification and classification	AOL: World Plants and trees are living things. Care for growing seeds and plants and describe observable features of different types of plants and trees. covered x 2 optional x 3 AOL: World Animals are living things. There are lots of different types of animals. Pets are animals. Name a variety of domestic and wild animals. covered x 6 optional	AOL: World Plants and trees are living things. They can be identified according to their features, such as leaves, seeds and flowers. Begin to name and group plants and trees according to their observable features. covered x 3 optional x 2 AOL: World Animals are living things. There are different types of animal. Parent and baby mammals include cow and calf, sheep and lamb, and cat and kitten. Parent and baby birds include duck and duckling, chicken and chick, and goose and gosling. Match animals to their young. covered	Plants are living things. Common plants include the daisy, daffodil and grass. Trees are large, woody plants and are either evergreen or deciduous. Trees that lose their leaves in the autumn are called deciduous trees. Examples include oak, beech and rowan. Trees that shed old leaves and grow new leaves all year round are called evergreen trees. Examples include holly and pine. Identify, compare, group and sort a variety of common wild and garden plants, including deciduous and evergreen trees, based on observable features. covered x 8 Animals are living things. Animals can be sorted and grouped into six main groups: fish, amphibians, reptiles, birds, invertebrates and mammals. Identify, compare, group and sort a variety of common animals, including fish, amphibians, reptiles, birds, invertebrates and mammals, based on observable features. covered x 2	Animals have offspring that grow into adults. Different animals have different stages of growth or life cycles. Describe the basic life cycles of some familiar animals (egg, caterpillar, pupa, butterfly; egg, chick, chicken; spawn, tadpole, froglet, frog). covered x 4 optional A habitat is a place where a living thing lives. A microhabitat is a very small habitat. Identify and name a variety of plants and animals in a range of habitats and microhabitats. covered x 6

Parts and functions	AOL: World Parts of a plant include flower, petal, leaf and stem. Begin to talk about and draw plants with attention to their parts. covered optional AOL: World Animals have some similar and some different body parts. Begin to talk about and name the body parts of common animals, including pets. covered	AOL: World Parts of plants and trees include trunk, branch, twig, roots, stem, flowers and leaves. Name and describe basic features of plants and trees. covered x 2 optional x 2 AOL: World Different animal groups have some common body parts, such as birds have wings and fish have fins. Identify common features for different groups of animals, including wild and domestic animals. covered x 6 optional x 3	The basic plant parts include root, stem, leaf, flower, petal, fruit, seed and bulb. Trees have a woody stem called a trunk. Label and describe the basic structure of a variety of common plants. covered x 2 optional Different animal groups have some common body parts, such as eyes and a mouth, and some different body parts, such as fins or wings. Label and describe the basic structures of a variety of common animals, including fish, amphibians, reptiles, birds and mammals. covered x 2	Plants need water, light and a suitable temperature to grow and stay healthy. Without any one of these things, they will die. Describe how plants need water, light and a suitable temperature to grow and stay healthy. covered x 4

Nutrition	AOL: World Animals, including pets, eat different kinds of foods. Describe what a familiar animal or pet eats.	AOL: World Animals eat different kinds of food, including other animals, plants or both animals and plants. Match animals to the foods that they eat. covered	Carnivores eat other animals (meat), herbivores eat plants and omnivores eat other animals and plants. Group and sort a variety of common animals based on the foods they eat. covered	Food chains show how living things depend on one another for food. All food chains start with a plant, followed by animals that either eat the plant or other animals. Interpret and construct simple food chains to describe how living things depend on each other as a source of food. covered x 3
Survival	AOL: World Plants and animals are living things. They need food and water to survive. Begin to talk about ways to care for a plant or animal. covered optional x 2	AOL: World Plants and animals are living things. Plants need water, sunlight and air to survive. Animals need food, water, air and shelter to survive. Describe some ways that plants or animals should be cared for in order for them to survive. covered x 6 optional x 6	Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. Describe how to care for plants and animals, including pets. covered x 2 optional	Animals need water, food, air and shelter to survive. Their habitat must provide all these things. Explain how animals, including humans, need water, food, air and shelter to survive. covered x 5

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Place and space	Habitats	AOL: World A habitat is a place where living things live. Living things, including plants and animals, live in the local environment. Begin to observe and talk about living things in the local environment. covered x 5	AOL: World A habitat is a place where living things live. Local habitats include woodlands, gardens and ponds. Other habitats include hot places, such as deserts, and cold places, such as the Arctic. Observe and describe living things and their habitats within the local environment. covered x 4 optional x 2	The local environment is a habitat for living things and can change during the seasons. Observe the local environment throughout the year and ask and answer questions about living things and seasonal change. covered x 3 optional	Local habitats include parks, woodland and gardens. Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains. All living things live in a habitat to which they are suited and it must provide everything they need to survive. Describe a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts, oceans and mountains) and what all habitats provide for the things that live there. covered x 3

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Comparison	Physical things	AOL: World Make simple comparisons between objects and materials, such as bigger and smaller, and softer and harder. covered	AOL: World Objects can be compared and grouped according to their shape, colour, material or use. Compare and group objects and materials according to simple given criteria. covered x 5 optional x 2	Materials can be grouped according to their properties. Compare and group materials in a variety of ways, such as based on their physical properties; being natural or man-made and being recyclable or non-recyclable. covered optional x 2	Living things are those that are alive. Dead things are those that were once living but are no longer. Some things have never been alive. Compare and group things that are living, dead or have never been alive. covered
	Phenomena	AOL: World Shadows are made on sunny days. They can be big or small and can change shape and size. Play with objects or their own body outside to create shadows. covered optional	AOL: World A shadow is the same shape as the object that makes it. Shadows change during the day. Make a shadow bigger or smaller using toys, play equipment and a light source. covered x 5 optional x 2	Shadows are normally the same shape as the object that cast them. Shadows change during the day as the Sun appears to change position in the sky. Shadows occur where light is blocked by an opaque object. Compare shadows made by different objects and materials.	Volume is how loud or quiet a sound is. Pitch is how high or low a sound is. Compare the volume and pitch of sounds made by instruments, their voices or other objects.

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Change	Living things	AOL: World Living things change and grow. Say how a living thing has changed over time. covered optional	AOL: World Living things change over time. This includes growth and decay. Explore the natural world around them and give simple descriptions, following observation, of changes. covered x 8 optional x 4	All living things (plants and animals) change over time as they grow and mature. Describe, following observation, how plants and animals change over time. covered x 5 optional	Plants grow from seeds and bulbs. Seeds and bulbs need water and warmth to start growing (germinate). As the plant grows bigger, it develops leaves and flowers. Observe and describe how seeds and bulbs change over time as they grow into mature plants. covered x 4