Science Progression Maps

Substantive Progression Overview

See Knowledge Organisers for further details

EYFS Substantive Knowledge progression

Nursery	**Autumn 1 – Who am I?** ***To be able to talk about their body parts and what the function is of each part*** What do my body parts do? ***To draw silhouettes and orally label body parts*** Where are my body parts?	**Autumn 2 – What can you hear?** What can you listen to with your ears? What sounds can you make? Which animals hears the best?	**Spring 1 – Where does it come from?** ***To listen to stories such as Oliver's vegetables and talk about plants. Plant their own seeds and check how tell the plants grow*** Where do vegetables come from? ***To know that different animals and birds produce food that we consume and there are different people who make food that we can buy in the supermarket*** What can you grow yourself? ***To begin to understand the importance of looking after our environment and living things and where we can collect natural resources from*** Where does it go when we've finished with it? What would make the best teapot? ***To know living things follow a similar growth pattern and make comparisons*** How does it grow?		**Summer – Where do animals live?** ***To listen to stories such as the Three Little Pigs and talk about their habitats*** ***To know that different creatures live in different places*** ***Make comparisons between habitats of farm animals and wild animals*** Where do these animals live? ***To know the difference between farm animals and wild animals*** ***To be able to categorise animals by their characteristics*** How are animals different? ***Talk about the life cycle of a plant and animals*** How does it grow?	
Reception	**Autumn 1 – Who am I?** ***To know the different names of the body parts*** Where are my body parts? ***To talk about how they have changed since they were a baby*** How old am I? ***To talk about the changes they observe In their environment – seasons link*** What is it like outside?	**Autumn 2 – Will you tell me a story?** ***To know some animals are nocturnal*** Which animals only come out at night? ***To understand the importance of oral health*** What do our teeth do?	**Spring 1 – How do we travel?** ***To know similarities and differences between modes of transportation*** How can you travel over water? Which car can travel the furthest? ***To know some foods are unhealthy*** ***To know the names of common fruit and vegetables*** What is the best thing to eat? ***To know that humans and other animals can grow*** What does a baby turn into?	**Spring 2 – Where can we go?** What is the weather like?	**Summer 1 – What can we find?** ***To select appropriate materials according to their properties*** What do magnifying glasses do? ***To create animal habitats using resources*** ***To explore minibeasts and their homes*** Where do minibeasts live? What do minibeasts eat? ***Talking about the life cycle of a plant and animals and what they need to survive*** How does it grow?	**Summer 2 – What are mega beasts?** Where did dinosaurs come from? What makes a dinosaur? Can you make a fossil? ***Exploring a range of habitats, looking at why the animals lives like that*** Where do these animals live? ***To name and identify a range of materials to know how they are used in familiar environments*** What are things made out of?

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To investigate living things	What things are living, dead and never alive? Where do different animals live? What do different animals eat?	How do we know if something is alive? Where do animals live? What do animals eat?	How are animals classified? How does a habitat support the living things that live there?	What are the differences between each plants an animal's classification group? How do changes in environment affect those that live there?	What are the life cycles of different animals? How does an animal reproduce?	Do all animals have the same life cycles? How does an animal reproduce?
To understand plants	What are the names of common plants? What are the names of the parts of a flowering plant? What will happen when we plants a bulb and plant a seed? What do plants need to survive?	What are the differences between evergreen and deciduous trees? What are the different parts of a flowering plant? What are the differences and similarities in the growth of a bulb and a seed? How could you help to revive a plant?	What are the functions of the parts of a flowering plant? Do all plants grow the same? How do plants disperse their seed?	If a plant has no mouth, how does it eat? Do all plants grow in the same in the same conditions? What is pollination?	How do plants survive in different climates? How are living things different?	How do plants survive in different climates? How are living things different?
To understand animals and humans	What are the types of animals that live on the Earth? What do animals eat? What are the parts of an animal? What are the parts of a human body and what do they do? Who are the parents? How can we survive?	How are fish, birds, amphibians, reptiles, mammals and invertebrates different? How does an animal's diet affect it? How are mammals different to other types of animals? How do people without a sense survive? How are adults and their offspring different? What food do we need to survive?	What is nutrition and why is it beneficial? Where does a food chain start and end? How do humans move? How does food travel around our body?	What nutrition does a human or plant need to survive? Why do food chains always begin with sunlight? How do muscles move? How does the human digestive system work?	How does age affect humans? How does blood move and why is it important? How do nutrients get into our body?	How do humans change as they get older? How does the circulatory system work? How does the circulatory system help transport nutrients and water?
To understand evolution and inheritance	Do children look similar to their parents?	How do children look similar to their parents?	How do animals and plants resemble their parents? How are different animals adapted to their environment?	How do family members resemble each other? How are animals adapted to suit their environment?	What did the Earth look like in the past? How are living things and their offspring similar? How have animals adapted to their environment?	How are fossils different? How are living things and their offspring similar? How have animals adapted to their environment?
To understand electrical circuits	What things use electricity? Can you build a circuit?	Are all electrical appliances the same?	Where does electricity come from?	Is electricity all the same?	What happens when you add more cells?	How can you make a bulb brighter and dimmer?

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		What happens if you add different components to an electrical circuit?	What can electricity travel through? How does an electrical circuit work?	Which materials can electricity flow through? How many ways can we make an electrical circuit?	How will more components in a circuit change it?	How will more components in a circuit change it?
To understand Earth's movement in Space	How can the sun tell us what time it is? Do all the seasons look the same? Is day time always 12 hours?	How can the sun tell us what time it is? Do all the seasons look the same? Is day time always 12 hours?	Where is the Earth in the solar system?	How does the moon's movement affect the Earth?	How does Earth move through our solar system? What is the moon? How does our solar system work? What happens when the Earth rotates?	Why does the Earth have seasons? How does the moon's movement affect the tides of oceans? Why are the Sun, Moon and Earth almost spherical? How does a sun dial work?
To understand light and seeing	Where does light come from?	How do we stop light?	How does light help us see? What is reflection? What are shadows and how do they work? How do shadows change throughout the day?	How does the amount of light affect our ability to see? How does light reflect on different surfaces? What are shadows and what are their uses? Why do shadows change size?	How does light travel? How does light affect how we see? How does light affect how we see?	Why are shadows longer in the winter? Can we see around corners? Why can't we always see the moon?
To understand movement, forces and magnets	What happens if objects are pushed? How can things be moved?	How can we get an object to move further? How do different vehicles move differently?	How do objects move on slopes? What are contact forces? Which materials are magnetic? How do poles on a magnet affect how it works?	What is friction? How can we use magnet? How do magnets work?	How do poles on a magnet affect it? What is gravity? How do drag forces act on moving surfaces? Why do objects slow down? How can gears and pulleys help us life more? How do bicycle help us move quicker?	Why do magnets have poles? Does gravity affect everything in the same way? Why is friction helpful? How can drag forces be helpful? Can you make a working mechanism? How can a small force become a big force?
To understand sound and hearing	What made that sound?	How are sounds different?	How are sounds made? How does sound travel?	What have vibrations got to do with sound? How well does sound travel through different materials?	How are different pitches produced? What impact do vibrations have on volume?	
To investigate materials	What do we make things out of? What are things made out of? What are the properties of different materials?	What are objects made from? How can we use different materials base upon their properties?	What is a rock? How are igneous, metamorphic and sedimentary rocks different? How are fossils formed?	Are all rocks the same? How can we identify different types of rock? Where are fossils found? How are soils different?	How can materials be categorised? What happens to solutes and solvents? How can we separate mixed up materials?	How can we group materials through testing? Does sugar disappear when put into water? How can we separate mixed up materials?

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	How are different groups classified? How are materials affected by force? What use could different materials have?	Which materials is best for a purpose? How are materials affected by force? What uses could different materials have?	Is all soil the same? What is the difference between solids, liquids and gasses? How does temperature affect everyday objects? What happens in the water cycle?	What are the different states of matter? What is the relationship between the three states of matter? What is the relationship between temperature and evaporation?	What are reversible and irreversible changes? What changes are irreversible?	What are reversible and irreversible changes? What changes are irreversible?