Science Progression mapping KS1

	Autumn 1	Spring 1	Summer 1
Year A	**What is a plant? Identifying plants** **Core skills** Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Identifying and classifying. **Knowledge** Can the children identify plants including garden plants? Can the children describe the features of different plants? Can the children identify similarities and Differences between plants? Can the children name wild plants? Ask questions such as , "Which is your favourite plant and why?" Which is your least favourite and why? Encourage children to use 'because' when describing what the plants are like. Identify and describe a range of trees. Know the terms evergreen and deciduous. Identify the different parts of a plant and know their functions Guess which flower comes from which plant. Make observations of growing plants. Children describe and make observations about plants changing: drawings and use of camera.	**What are things made of and why?** Everyday Materials **Core skills** Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.: Identifying and classifying. **Knowledge** Be able to identify a number of everyday materials. Be able to identify objects made from those materials. Do children know what a material is? • Can children identify a variety of common materials? • Do children know where some materials come from? Can children distinguish between an object and the material from which it is made? Be able to describe materials according to their properties. Can children use a variety of appropriate words? Describe what various materials are like. • Can children match materials to various properties? • Can children group objects and materials according to their properties? Be able to describe why some materials suit certain objects better than others. Can children identify materials that are suitable for a particular purpose? Carry out an experiment to find out which materials are waterproof.	**How, where and why do seeds grow and plants live?** **Living in Habitats (Year 2)** **Core skills** Asking simple questions and recognising that they can be answered in different ways. Performing simple tests. **Knowledge** To be able to identify things that are living, things that are dead and things that have never been alive. To understand that living things need to live in suitable habitats. Explore the plants and animals that live in seaside habitats. Can children identify some animals in a seaside habitat? • Can children identify some plants in a seaside habitat? • Do children recognise how animals and plants in a seaside habitat live together? Be able to explore plants and animals in an unfamiliar habitat. Answer questions such as, "would a lion be happy living in a field in Tipton?" 'Would a whale be happy in the River Otter?" Can children compare habitats and the animals and plants that live in them? Be able to explore and describe a micro-habitat. Explore food chains in a habitat. Do children know that animals and plants in a habitat are dependent on each other for food? • Can children construct a simple food chain? • Can children construct food chains that include humans? Be able to explore and describe a micro-habitat; why do we need mini-beasts?

	Autumn 2	Spring 2	Summer 2
	What is an animal? **Classification Seasonal changes** **Core skills** Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions.: collect data about animals and their needs in order to be able to answer questions. **Knowledge:** Be able to identify, describe and name a variety of common animals (pet and farm). Be able to identify, describe and name a variety of UK mammals. Can the children identify, name and compare various mammals? Be able to identify, name and compare a variety of common UK birds and reptiles. Learn about true and false statements. Be able to identify and compare a variety of common UK fish and amphibians.. Learn how to draw a life cycle and compare two different life cycles. Identify and sort carnivores, herbivores and omnivores and know what each group eats. Understand and be able to explain a food chain. Know how to take care of animals. Identify and explain different animals' needs. Record information from data collected about animals in a table or a graph. Which season is it now? How do we know? (At start and end of term) What has changed? Day length changing Fall Back	**How do I sense things?** **My body Seasonal Changes** Day length changing: SPRING forward. **Science Week** **Core Skills** Performing simple tests. Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions. **Knowledge** Be able to identify, name and label body parts. Play a game of 'Simon Says' with the class , including body parts, such as lips, hair & toes. Explore what parts of our bodies we use for different activities. Explain that we often use different parts of our bodies at the same time. Can you rub your tummy and pat your head at the same time? Next, tell children to sit on a chair. Can you draw a figure 8 with your foot while drawing a 6 in the air with your finger? Give children some time to practise these tricky activities! Find out about the five senses, in particular the sense of sight. Look carefully using your eyes to see things. What do you think happens when you close one eye? Does it make it easier or harder to see things? Does it make any difference? Explore the sense of touch. (investigate our senses and reflexes and how germs are transferred. Super Scientists lessons 4 and 5) Find out about other parts of the body that sense touch other than hands…hot and cold, wet and dry pin prick feather stroke etc. why do we wear different clothes in different seasons or weather or countries? Explore the sense of smell and associate smells with memories. Explore the sense of taste and link to Maths with favourite foods. Link to literacy with vocabulary to describe tastes. Explore the sense of sound. Link to music, loud and soft sounds and can they identify voices…who is speaking or instruments…what is playing?	**What does interdependence mean?** **Habitats (No PLANBEE unit)** **Seasonal Changes** **Core Skills** Asking simple questions and recognising that they can be answered in different ways. Performing simple tests. **Knowledge** **Describe characteristics of the four seasons.** Observe and describe weather associated with the seasons and how day length varies. **Interdependence: What's That?** What do you think this oxpecker and giraffe have to do with one another? Can you think of any other animals that live together because they depend on each other? How do crocodiles keep their teeth clean? Who or what depends upon: Water, Air (oxygen), Soil, Sun, Food, Shelter (home, buildings, schools) How do things depend on each other? How do they use each other for food, water and protection to survive. How clever the honey guide is to get the badger to break open the hive.  What habitats are there in our school grounds? What depends on what! Why are there some places where things don't grow? How do the trees spread their seeds? Does the woodlouse prefer dry or damp conditions? Do some plants prefer the shade?

Year B	Autumn 1	Spring 1	Summer 1
	What in the world is alive or dead? **Growing plants** **Core Skills** Observing closely, using simple equipment. Identifying and classifying. Using their observations and ideas to suggest answers to questions **Knowledge** Explore and compare the differences between things that are living, dead, and things that have never been alive. observe and describe how a plant changes as it matures. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Recap on Summer two and extend. Understand that different seeds grow into different plants and describe them. Do the children know seeds grow into plants? Plan, carry out and evaluate an investigation into the conditions that affect germination. Can the children name any plants that grow from seeds and those that grow from bulbs, corms or runners? Do the children understand seed packets tell us what seeds need to grow including where to grow them? Do they know which seeds we eat and are safe to eat? Look at some plants that grown from bulbs. Why do they need to grown from bulbs. Plant some ready for spring. Identify and name a variety of plants and animals in their habitats, including micro- habitats. By going out into the school grounds and seeing what is there locally. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. Which birds and insects might visit our grounds in order to obtain food? Explain how seeds are dispersed.	**Why are toys made from different materials? Materials: What are toys made from?** **Core Skills** Asking simple questions and recognising that they can be answered in different ways. Performing simple tests. Gathering and recording data to help in answering questions. **Knowledge** Be able to identify a number of everyday materials. Be able to identify objects made from those materials. To be able to identify and name a variety of everyday materials used to make toys and compare what they are made from now with what they used to be made from years ago. Explore and describe wooden toys and their properties.. Can children describe the material wood? Can children talk about the properties of wood relating to its purpose? Explore and describe plastic toys and their properties. Can the children describe and talk about plastic toys when comparing to similar toys made from a different material? i.e. 2 toy cars. **REMEMBER** **To monitor the growth of bulbs planted in the autumn** **Talk about the different seasons and what changes from one season to the next. (Think about change in temperature.)** Observe and describe how a plant changes as it matures.	**What's that growing in the hedgerow?** **Growing plants continued** **Core Skills** Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions. **Knowledge** Observe and describe how seeds and bulbs grow into mature plants. Plant some summer bulbs in pots which can be taken home if not in bloom by July. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Plan and carry out an investigation into what happens if a plant is deprived of one of light, air or water. Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees . (recap on previous learning.) Identify and describe the basic structure of a variety of common flowering plants, including TREES . (Recap on previous learning.)

	Autumn 2	Spring 2	Summer 2
	Who lives where and why? **OCEAN ANIMALS and a study of dinosaurs** **Seasons** **Core Skills** Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions. Gathering and recording data to help in answering questions. **Knowledge** Which season is it now? How do we know? (At start and end of term) What has changed? Day length changing Fall Back Be able to identify, describe and classify a variety of ocean animals using careful observations. Can children describe some basic differences between mammals, reptiles, fish and birds of the oceans? Be able to identify and describe the structure of a variety of ocean animals. Consider how ocean animals are suited to the environment in which they live. Be able to identify, describe and classify a variety of dinosaurs using careful observations. Understand that mammals, reptile, fish and birds evolved from dinosaurs. Compare the structure of some dinosaurs with lizards, chickens etc. Know that dinosaurs lay eggs. What else do they know that lays eggs? Know different structures of dinosaur teeth and how that helps us to know what they liked to eat. Compare the nautilus with the structure of the ammonite and suggest how an ammonite may have moved?	**Toys continued:** **Why are products made from different materials?** **Knowledge** Explore and describe metal toys and their properties. Can children identify a variety of common materials? • Can children describe the material metal when comparing? (i.e. can they bring out a metal toy from a feely bag and another toy made from a contrasting material?) Explore and describe fabric toys and their properties. Can children describe the material fabric? • Can children talk about the properties of fabric relating to its purpose? Answer question such as: Why do you think pillows are made out of feathers and fabric instead of plastic or wood? Why do you think bottles are made out of plastic or glass instead of wood or metal? Why do you think coins are made out of metal instead of cardboard? Explain about thinking about and discussing toy safety. Discuss how toys are made safely and how they'll have labels on for the intended appropriate age range. Why is this important? Why might some toys say not appropriate for 0-3-year-old children. Mention small parts of toys and choking hazards. • Provide children with a Toy Safety Poster each and a toy. Children to examine the toy with magnifying glasses, then draw the toy and poster with headings and labels explaining what age range the toy is suitable for and any possible dangers the toy may have.	**What does survival mean?** **Growth and Survival** **How can the findings of scientists help me to understand physical phenomena?** Super Scientists **Core Skills:** Asking simple questions and recognising that they can be answered in different ways. Observing closely, using simple equipment. Performing simple tests. Identifying and classifying. Using their observations and ideas to suggest answers to questions Gathering and recording data to help in answering questions. **Knowledge** Find out about the offspring of a variety of different animals. Can children match a variety of adult animals to their offspring? • Do children know that growth from offspring to adult is a gradual process. Compare different life cycles. Does the baby look like the adult? Find out about the different ways in which animals reproduce. (i.e. gives birth to live young or lays eggs.) Explore how humans grow as they get older. Find out what animals, including humans, need to survive. Explore the environment as a factor of survival for animals, including humans. Find out how to eat a healthy, balanced diet. Find out why exercise is important to keep our bodies healthy. Investigate the effect gravity has on everyday objects. Investigate what happens to light when it passes through different transparent objects. Investigate whether sound can pass through different materials. Investigate circuits to make a light bulb light up.