

Kentmere Academy and Nursery- Knowledge and Skills-Science

Nursery

Term	Learning objective	Skills	Knowledge
<u>Autumn 1</u>	To discuss the similarities and differences between themselves and others.	I can talk about how we are different. I can talk about myself. I can talk about others.	I know that everybody is different. I know what makes me special. I know that some people look different to me.
	To understand the function of the human body.	I can name different body parts. I can sing head, shoulders, knees and toes. I can talk about what my body can do.	I know the name of some body parts. I know what my body can do for me. I know that my body belongs to me.
<u>Autumn 2</u>	To explore the world around me using my senses.	I can use my senses to explore the world around me. I can talk about different foods. I can talk about different smells. I can talk about what I can see. I can listen to different sounds.	I know that my tongue is used to taste. I know that my hands can touch and feel. I know that my nose can smell. I know that my eyes are used for looking. I know that my ears can hear different sounds.

		I can talk about what I can feel.	
<u>Spring 1</u>	To explore the changes that happen in Winter.	I can explore ice. I can talk about how ice feels. I can melt ice using different tools. I can use key vocabulary such as cold, frozen and icy.	I know that Winter is a cold season. I know that ice is made from water. I know that ice can melt. I know that water can freeze.
<u>Spring 2</u>	To understand growth and change - Plants	I can plant a seed. I can care for a plant. I can talk about what I can see. I can name parts of a plant.	I know that plants grow. I know what a plant needs to grow. I know how to care for a plant.
<u>Summer 1</u>	To understand how to look after animals and the environment - life cycles	I can name different animals. I can talk about how animals change over time. I can talk about the life cycle of an animal.	I know that animals change over time. I know that animals grow. I know that baby animals turn into adults. I know what a life cycle is.
<u>Summer 2</u>	To know some similarities and differences between	I can name different animals. I can talk about animals that live in England. I can talk about where different animals live.	I know that some animals live in different countries/environments. I know that some animals fly.

	the natural world around them.	I can talk about the environment I live in.	I know that some animals swim.
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Reception

Term	Learning objective	Knowledge	Skills
<u>Autumn 1</u>	To discuss the similarities and differences between themselves and others. To name body parts and understand the function of them.	I know that people grow and change as they get older. I know the names and functions of different body parts.	I can recognise similarities and differences between myself and others. I can explain how people might change as they get older. I can sequence pictures of how people change as they get older. I can discuss some of the things the body can do. I can identify and label some of the different parts of the body. I can explain some of the functions of our body parts.

	To identify the 5 senses.	I know the names of the 5 senses. I know which sense is linked to which body part. I know how each sense is used.	I can name the senses. I can talk about how I use each sense. I can use my senses to describe things I like and dislike.
<u>Autumn 2</u>	To understand the changes in Autumn.	I know the four seasons. I know the typical weather associated with each season. I know some of the changes I will see in Autumn.	I can describe the effects of Autumn. I can observe the natural environment to explain what happens in Autumn. I can suggest ways that Autumn affects animals.
	To understand how to stay healthy	I know how food can affect our bodies. I know ways to keep my body healthy.	I can discuss some ways to stay healthy. I can discuss the types of food I need to eat to stay healthy. I can identify healthy and unhealthy food
<u>Spring 1</u>	To understand the changes in Winter.	I know the four seasons. I know the typical weather associated with each season. I know some of the changes I will see in Winter.	I can describe the effects of Winter. I can observe the natural environment to explain what happens in winter. I can suggest ways that winter affects animals. I can identify water in liquid and solid states.

		I know how water can change with the change in temperature.	I can explain what happens to water when it freezes or melts.
<u>Spring 2</u>	To understand what plants need to grow.	I know that plants are a living thing I know what plants need to grow.	I can explore the natural environment and look for things of interest and explain what I found. I can recognise what plants need to grow. I can talk about the life cycle of plants. I can make careful observations.
<u>Summer 1</u>	To understand the life cycle of a hen/butterfly.	I know how animals change over time. I know the life cycle of a hen/butterfly.	I can explore the natural environment and look for things of interest and explain what I found. I can explain how animals change over time. I can explain the different stages within a life cycle. I can make careful observations.
<u>Summer 2</u>	To know some similarities and differences between the natural world around them and	I know that animals live in certain places around the world. I know some similarities and differences between life in this country and life in other countries. I know that the weather is different around the	I can name the seven continents of the world and can name some animals living there. I can describe what they look like and what they eat.

	contrasting environments.	world.	I can suggest why they live in other countries and not the United Kingdom. I can compare the weather in different countries.
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Cycle A- Year 1/2

Year Group	Theme and Subject Driver	Week	Learning Objective	Knowledge	Skills
<u>Year 1/2</u> Animals including humans	Dinosaurs and Fossils (English driver)	Autumn 1 Week 1	To categorise animals based on common features.	I know that animals have different structures (wings, fur, tails, feathers, scales, ears).	To sort a variety of photographs into groups by their common features. (Identifying fish, birds, amphibians, mammals, reptiles)
	Dinosaurs and Fossils	Autumn 1 Week 2	To know the key characteristics of mammals.	Mammals are warm blooded Mammals live on land or in water Mammals often have hair or fur Mammals have skeletons on the inside of their bodies	I can identify and name different mammals To complete a table based on key characteristics (Yes/No)

	(English driver)			Mammals give birth to live babies which drink their mother's milk	
	Dinosaurs and Fossils (English driver)	Autumn 1 Week 3	To compare the key characteristics of mammals and fish.	To know the key characteristics of mammals and fish To know how to make comparisons Fish are cold blooded Fish live in water Fish have fins to move and gills to breathe Fish have skeletons on the inside of their bodies Fish lay eggs in water	I can identify and name different fish To make comparisons using similarities and differences Sort statements into a venn diagram identifying similarities and differences
	Dinosaurs and Fossils (English driver)	Autumn 1 Week 4	To compare the key characteristics of mammals, fish and birds.	To know the key characteristics of mammals, fish and birds To know and make comparisons Birds are warm blooded Birds live on land and water Birds have feathers, wings and a beak Birds have skeletons on the inside of their bodies	I can identify and name different birds To make comparisons using similarities and differences Sort photographs and statements for each animal group To complete a kahoot quiz to recap knowledge

				Birds lay eggs	
	Dinosaurs and Fossils (English driver)	Autumn 1 Week 5	Trip to Ponderosa		
	Dinosaurs and Fossils (English driver)	Autumn 1 Week 6	To compare the key characteristics of mammals, fish, birds and reptiles.	To know the key characteristics of mammals, fish, birds and reptiles. To know and make comparisons Reptiles are cold blooded Reptiles live on land and in water Reptiles have scales, ear holes and dry skin Reptiles have skeletons on the inside of their bodies Reptiles lay eggs	I can identify and name different reptiles To record simple sentences about reptiles To compare key characteristics of a reptile with other animal groups (eg. Reptiles are cold blooded, like fish)
	Dinosaurs and Fossils (English driver)	Autumn 1 Week 7	To compare the key characteristics of mammals, fish, birds, reptiles and amphibians.	To know the key characteristics of mammals, fish, birds, reptiles and amphibians. To know and make comparisons Amphibians are cold blooded	I can identify and name different amphibians To compare the structure of common animals including pets

				Amphibians live on land and water Amphibians have moist skin and webbed feet Amphibians have skeletons on the inside of their bodies Amphibians lay eggs	
<u>Year 1/2</u> Animals including humans		Autumn 2 Week 1	Identify and name a variety of common animals that are carnivores.	I know what animals (including humans) need for survival (food, water, air) A carnivore has a diet consisting of meat. Carnivores have sharp teeth to tear food (incisors) To know some of the common features of a carnivore and that not all carnivores are the same	I can identify some physical characteristics of a carnivore I can write bullet points to describe a range of carnivore photographs (dog, cat, lion, owl, shark, crocodile, snake)
		Autumn 2 Week 2	Identify and name a variety of common animals that are herbivores.	I know what animals (including humans) need for survival (food, water, air) A herbivore has a diet consisting of plants	I can identify some physical characteristics of a herbivore To sort and categorise photographs and teeth into herbivores or carnivores from their physical appearance

				Herbivores have flat, blunt teeth for grinding food (molars) To know some of the common features of a herbivore and that not all herbivores are the same	
		Autumn 2 Week 3	Identify and name a variety of common animals that are omnivores.	I know what animals (including humans) need for survival (food, water, air) An omnivore has a diet consisting of both meat and plants Omnivores have a mixture of sharp teeth (incisors) and flat, blunt teeth (molars)	I can identify some physical characteristics of an omnivore To sort common animals and their diet into a venn diagram
		Autumn 2 Week 4	To know that animals including humans have offspring that grow into adults.	I know that animals including humans have offspring which grow into adults I know the names of some animals and their offspring	I can name some of the offspring of animals I can match the animals and their offspring
		Autumn 2 Week 5	To sequence the life cycle of amphibians.	To know what a life cycle is To know that a life cycle can be continuous	I can order the life cycle of amphibians

				I can explain the life cycle of amphibians	I can verbally present my findings of a specific amphibian I can present the life cycle using a diagram
		Autumn 2 Week 6	To sequence the life cycle of reptiles.	To know what a life cycle is To know that a life cycle can be continuous I can explain the life cycle of reptiles	I can order the life cycle of reptiles I can present the life cycle using a diagram
Y1/2 Seasonal Changes	London and the UK (Geography driver)	Spring 1 Week 1	To recognise the differences between the four seasons.	I can name the four seasons. I can discuss the typical weather features of each season. I know what changes I would see throughout the year I can talk about what happens in my local environment around me during the four seasons.	I can identify seasons by typical features in the weather I can use my prior knowledge and observations of the world around me to identify changes across the four seasons I can match the seasons with the typical weather features
		Spring 1 Week 2	To observe changes as the season changes from Autumn to Winter.	I can name the four seasons. I can discuss the typical features of Winter I know what changes I would see as Autumn changes to Winter	I can identify how typical weather patterns change from Autumn to Winter

				I can talk about what happens in the local environment around me during the season of Winter.	I can use my prior knowledge and observations of the world around me to identify changes I can observe changes and use scientific vocabulary.
		Spring 1 Week 3	To record the temperature over a week.	I understand that temperatures change with the seasons I know that a thermometer is used to measure temperature I know how to use a thermometer	I can use symbols or writing to record my results. I can use a thermometer with increasing accuracy to observe I can gather and record data to help answer questions
		Spring 1 Week 4 & 5	To understand why animals hibernate during the winter.	I know that hibernation means being asleep for the winter I know some animals that hibernate in the winter I know that their temperature drops and their heart rate slows down	I can name some animals that hibernate through the winter I can listen to a story about hibernation I can explain why some animals hibernate I can research animals that hibernate and how they have adapted
		Spring 1	Assessment week		

		Week 6			
<u>Year 1/2</u> Living Things and their Habitats	London and the UK (Geography driver)	Spring 2 Week 1	To know the life processes of living things	I know that something is living because of life processes M- Movement R - Respiration S - Sensitivity G- Growth R - Reproduction E - Excretion N - Nutrition	I can name some of the life processes.
	London and the UK (Geography driver)	Spring 2 Week 2	To know the characteristic differences between things that are living, dead and have never been alive.	I know characteristics of things that are living, dead or have never been alive.	I can explain how life processes (MRS GREN) can tell us if something is living, dead or has never been alive. I can compare the differences between things that are living, dead and have never been alive.
	London and the UK (Geography driver)	Spring 2 Week 3	To explore a range of habitats (urban and woodland) (Forest schools link)	I know what a habitat is. I can start to name a range of habitats.	I can classify objects as those that are living, dead and those that have never been alive.

				To know that most living things live in habitats to which they are suited. I know that different habitats provide the basic needs for survival.	I can identify and name a variety of plants and animals in their habitats. I can present my findings in a pictogram
	London and the UK (Geography driver)	Spring 2 Week 4	To explore a range of habitats (urban, woodland and pond)	To know that most living things live in habitats to which they are suited. I know that different habitats provide the basic needs for survival.	I can identify and name a variety of plants and animals in their habitats.
	London and the UK (Geography driver)	Spring 2 Week 5	To be able to identify living things in their microhabitat.	I know what a microhabitat is I know the living things that can be found in a microhabitat	I can suggest where you might find microhabitats. I can find microhabitats. I can identify and name the living things I find there I can sort photographs of living things into the microhabitat that they are suited to

	London and the UK (Geography driver)	Spring 2 Week 6	To investigate where a living thing is in a food chain from its diet.	I know that living things in a habitat depend on each other. I know some sources of food. I know that a food chain shows how animals get their food. I understand the terms consumer and predator.	I can explain what carnivores, herbivores and omnivores are. I can give examples of carnivores, herbivores and omnivores.
<u>Year 1/2</u> Plants	Plants and the Environment (Science driver)	Summer 1 Week 1	To label the main parts of a plant.	I know the main parts of the plant (roots, stem, leaves, fruit, flower, bulb, petals) I know the function of each part of the plant	I can take part in discussions about plants and explain my answers. I can discuss what is similar and different when comparing parts of plants. I can label the parts of a plant.
	Plants and the Environment (Science driver)	Summer 1 Week 2	To identify and name a variety of common wild and garden plants.	I know some garden plants. I know some wild plants.	I can use a key to find out the names of plants. I can sort the plants by type. I can ask simple questions
	Plants and the Environment	Summer 1 Week 3	To know the names of some common trees.	I know what is meant by 'deciduous' and 'evergreen'.	I can identify the basic structure of a tree.

	(Science driver)			I know the names of some common trees.	I can investigate types of leaves and match them to their tree. I can group trees according to their qualities.
	Plants and the Environment (Science driver)	Summer 1 Week 4	To know the life-cycle of a plant.	I know that seeds and bulbs grow into a mature plant I know that plants die I know the stages of a plants development	I can record the order of a plant life cycle. I can discuss the lifecycle of a plant
	Plants and the Environment (Science driver)	Summer 1 Week 5	To investigate what a plant needs to survive	To know that a plant needs water, light and a suitable temperature to grow and stay healthy	I can ask simple questions and recognise they can be answered in different ways I can observe changes over time I can ensure that it is a fair test I can gather data to answer an investigation question
<u>Year 1/2</u>	Greater Manchester	Summer 2	To identify and name a variety of everyday materials.	I know what material the object is made from.	I can name a variety of everyday materials (wood, plastic, glass, metal, water and rock)

Everyday materials	(Geography driver)	Week 1		I know the difference between an object and a material.	I can name the object and the material it is made from. I can classify the objects by materials. I can match the material to the label. I can name some of the properties of materials.
	Greater Manchester (Geography driver)	Summer 2 Week 2	To distinguish between an object and the material it is made from.	I know the difference between an object and a material. I know what material the object is made from. I know that objects can be made from mixed materials.	I can name the object and the material/ materials it is made from.
	Greater Manchester (Geography driver)	Summer 2 Week 3	To describe the physical properties of everyday objects.	I know the simple physical properties of everyday materials	I can match the correct scientific word to describe the physical property, to the correct object. I can use scientific words to describe the physical properties of objects.

					I can identify and classify the simple physical properties of everyday objects
	Greater Manchester (Geography driver)	Summer 2 Week 4	To describe and compare the physical properties of everyday objects.	I know the simple physical properties of everyday materials I know how to compare objects in a comparative test	I can test different objects to find their physical properties (waterproof or not waterproof) I can use scientific words to describe the physical properties of objects.
	Greater Manchester (Geography driver)	Summer 2 Week 5	To carry out a fair investigation to find which material will be the most waterproof. (modelled)	I know what waterproof means. I know the types of materials that are waterproof.	I can ask simple questions and recognise they can be answered in different ways. I can make a prediction. I can carry out a fair test. I can gather data to answer an investigation question I can explain my findings
	Greater Manchester (Geography driver)	Summer 2 Week 6	To carry out a fair investigation to find which materials are absorbent. (intermediate)	I know what absorbent means. I know the types of materials that are absorbent.	I can ask simple questions and recognise they can be answered in different ways. I can make a prediction. I can carry out a fair test.

					I can gather data to answer an investigation question I can explain my findings
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Cycle B- Year 1/2

Year Group	Theme and Subject Driver	Week	Learning Objective	Knowledge	Skills
Year 1/2 Animals including Humans	Changes over Time, Family and Community (History driver)	Autumn 1 Week 1	To identify, name and label parts of the body	I know the main body parts. I know what animals (including humans) need for survival (food, water, air) I know what the different body parts help me to do	I can identify, name and label the main parts of the body I can draw parts of the body I can talk about what different parts of my body help me to do.

	Changes over Time, Family and Community (History driver)	Autumn 1 Week 2	To describe the importance of eating the right amounts of different types of food.	I know what animals (including humans) need for survival (food, water, air) I know there are different food groups I know there are foods that are healthy and unhealthy	I can name different types of food. I can start to name different food groups. I can explain why it is important to eat the right amounts of different foods I can sort the food into different groups
	Changes over Time, Family and Community (History driver)	Autumn 1 Week 3	To understand the importance of exercise, by finding out why humans need to exercise.	I know that humans need to exercise to stay healthy I know some different types of exercise	I can say a reason why humans need to exercise. I can say one effect that exercise has on the human body. I can investigate which exercise raises the heart rate the most. I can write a prediction for the investigation I can record information about exercise. I can use the information to answer questions

	Changes over Time, Family and Community (History driver)	Autumn 1 Week 4	To describe the importance for humans of hygiene, by learning about good hygiene habits.	I know it is important to maintain good hygiene and keep myself clean I know what I can do to keep myself clean.	I can give at least one reason why humans should keep themselves clean. I can use scientific equipment to make observations (magnifying glass and UV light) I can create a poster for school to advise children on keeping their hands clean
	Changes over Time, Family and Community (History driver)	Autumn 1 Week 5	To investigate the changes that happen as we get older.	I understand the life cycle of a human. I know the changes that happen as I get older.	I can recognise the differences between myself and my peers. I can order the life cycle of a human. I can talk about the changes that happen as I get older. I can make links between getting older and growing. I can label a diagram about the human life cycle.
	Changes over Time, Family and Community	Autumn 1 Week 6	To know how body parts are linked to our 5 senses.	I know the 5 senses. I know which body part is linked to each of the senses I know what each sense is used for.	I can label the senses and the linking body parts I can explain how I use my 5 senses

	(History driver)				
	Significant Individuals in Space (History Driver)	Autumn 2 Week 1	To know some key facts about our planet, Earth.	I know that the earth is a planet I know that earth is small and rocky I know that the earth is made up of land and sea/ oceans. I know that earth has an atmosphere so living things can live on it It is the only planet in our solar system that supports life To know that the earth rotates I know that earth has a day and night	I can listen to a story about the earth I can research facts about earth I can present my research in a fact file I can explain why we have day and night
	Significant Individuals in Space (History Driver)	Autumn 2 Week 2	To know some key facts about the moon.	I know that the moon is not a planet I know that the moon travels around the earth in orbit. I know that the moon has no atmosphere, wind or weather	I can listen to a story about the moon I can explain the simple phases of the moon I can label the phases of the moon

				I know that the moon is not a light source.	
	Significant Individuals in Space (History Driver)	Autumn 2 Week 3	To know some key facts about the sun.	I know that the sun is a star I know that the sun is a source of heat and light that provides conditions for living things to survive I know that the sun is a natural light source I know that the sun is so bright that it could damage your eyes I know that the sun provides daylight for the earth	I can listen to a text about the sun and remember key facts I can sort facts about the earth, sun and moon.
	Significant Individuals in Space (History Driver)	Autumn 2 Week 4	To sort and order the planets in the solar system	I know that the solar system is made up of 8 planets and the sun I know that the sun is at the centre of the solar system I know that all planets and the sun in the solar system are shaped like balls.	I can name some of the planets in the solar system I can order some of the planets in the solar system

	Significant Individuals in Space (History Driver)	Autumn 2 Week 5	To create a fact file on a planet.	I know that each planet has its own features I know where some planets are in the solar system	I can research a planet in groups I can find out about the size, colour, appearance and position in the solar system. I can present my findings
	Significant Individuals in Space (History Driver)	Autumn 2 Week 6	To explore how everyday materials are used for rockets. (STEM)	I know what a rocket is I know what a rocket is used for I know some simple physical properties and uses of everyday materials	I can explore the materials used on a rocket I can describe the properties used on a rocket and why it is suited. I can choose which material would be best suited for a model rocket.
<u>Year 1/2</u> Everyday materials	Design, Structures and Materials (D&T driver)	Spring 1 Week 1 Everyday Materials	To identify, group and sort everyday materials according to their simple physical properties.	I know what material the object is made from. I know the difference between an object and a material. I know how different materials are used for different purposes.	I can name a variety of everyday materials (wood, plastic, glass, metal, water, rock, brick, paper and cardboard) I can describe the properties of materials using scientific vocabulary. I have my own ideas about how to sort materials. I can explain my choices.

					I can sort materials according to their physical properties
	Design, Structures and Materials (D&T driver)	Spring 1 Week 2	To identify and compare everyday materials according to their use.	I know what different objects are made from I know that materials can be used for different purposes	I can find everyday materials in the classroom and local environment I can compare the similarities and differences in the uses of materials I can compare the uses of everyday materials that I find
	Design, Structures and Materials (D&T driver)	Spring 1 Week 3	To investigate how the shape of some materials can be changed by twisting, bending, squashing and stretching.	I know the difference between an object and a material. I know that materials can be changed by twisting, bending, squashing and stretching.	I can look at a selection of materials and make predictions about which could be changed. I can test my predictions. I can comment on my results. I can perform simple tests and talk about the results. I can suggest ways in which to use materials in unusual and creative ways
	Design, Structures and Materials	Spring 1 Week 4	Modelled Investigation To investigate how to change the consistency of materials to	I know that I can change the consistency of different materials. I know a variety of everyday materials (wood, plastic, glass,	I can look at a material and make predictions about how it could be changed.

	(D&T driver)		make it suitable for a specific purpose.	metal, water, rock, brick, paper and cardboard)	I can describe the impact of the changes made to the material. I can test my predictions. I can comment on my results. I can perform simple tests and talk about the results.
	Design, Structures and Materials (D&T driver)	Spring 1 Week 5	To understand the process of recycling.	I know the materials that can be recycled. I understand the reasons why we need to recycle and the effect on the environment.	I can explain how you recycle materials. I can explain how plastic materials are sorted and changed into new products. I can explain why we need to recycle.
	Design, Structures and Materials (D&T driver)	Spring 1 Week 6	To investigate the lives of people who have invented new materials.	I know that John McAdam was an engineer and inventor I know the name of the new process John McAdam invented I know other significant inventors and the inventions they created.	I can explain how his invention has impacted on life today I can tell you two interesting facts about John McAdam's life I can talk about the inventions of other significant inventors.

Year 1/2 Plants	Design, Structures and Materials (D&T driver)	Spring 2 Week 1	To identify what plants need to grow.	I know that plants need water, light and a suitable temperature to grow and stay healthy. To know the 7 life processes of living things (MRS GREN)	I can identify when a plant is healthy. I can suggest ways to find out what plants need to stay healthy. I can perform a simple investigation. I can make observations about what I see. I can suggest answers to questions based on observations.
	Design, Structures and Materials (D&T driver)	Spring 2 Week 2	To identify the parts of the seed that will grow into a plant.	I know the conditions that are needed for a seed to grow into a healthy plant. I know which parts of the seed that will grow into a plant. I know what the word germination means.	I can explain what germination means. I can identify the parts of the seed that will begin to grow. I can explain what a seed needs to grow.
	Design, Structures and Materials	Spring 2 Week 3	To describe the life cycle of a plant.	I know that a plant goes through different stages of growth. I know how a plant changes as it grows.	I can explain which stage of its life cycle a plant is in. I can put the stages of a plant's life cycle in order.

	(D&T driver)				
	Design, Structures and Materials (D&T driver)	Spring 2 Week 4	To know seed disperse in different ways	I know that seeds can be dispersed in a number of ways. I know seed dispersal is part of the life cycle of a plant I know some of the different ways seeds can be dispersed. I know that seeds grow into new plants.	I can explain the life cycle of a plant. I can explain some of the ways the seeds can be dispersed. I can identify how some seeds from different plants are dispersed.
	Design, Structures and Materials (D&T driver)	Spring 2 Week 5	To understand what plants need to stay healthy.	I can recognise healthy and unhealthy plants. I know a plant needs water, light and a suitable temperature to stay healthy.	I can identify a healthy and an unhealthy plant. I can suggest what a plant looks like if it has not had everything it needs and what it needs to be healthy again. I can perform simple tests I can present the information.

	Design, Structures and Materials (D&T driver)	Spring 2 Week 6	To understand how plants are suited to their habitat.	I know that plants have different features that make them suited to where they live. I know different species of plants live in hot, dry, cold or wet places. I know how plants can adapt to their habitat.	I can explain how plants have different features that make them suited to where they live. I can explain how I know which type of habitat each plant grows in.
<u>Year 1/2</u> Seasons	Weather and the Seasons (Geography driver)	Summer 1 Week 1	To identify changes across the four seasons.	I know that there are 4 seasons in a year. I know the types of clothes to wear in each season. I can identify changes between the seasons.	I can name the 4 seasons. I can sort the types of clothes for each season. I can describe and explain how the trees change between the seasons.
	Weather and the Seasons (Geography driver)	Summer 1 Week 2	To explore how day length varies as the seasons change.	I know the four seasons I know that the length of the day changes throughout the seasons. I know that Summer has the longest days I know that Winter has the shortest days	I can describe how day length changes throughout the seasons. I can sort facts about the seasons and length of day.

	Weather and the Seasons (Geography driver)	Summer 1 Week 3	To observe, record and discuss the weather associated with the seasons.	I know the four seasons and the weather associated with them. I understand how the observed weather is typical of the weather for the season.	I can name the four seasons in order. I can create a collage of the seasons, weather and wildlife I can use my observations and ideas to suggest answers to questions.
	Weather and the Seasons (Geography driver)	Summer 1 Week 4	To observe and record wind direction and notice the changes in direction.	I know that wind is the natural movement of the air. I know that wind changes direction. I know how to use a windsock to observe the direction of the wind. I know how to use a wind gauge to observe the speed of the wind.	I can observe and describe weather associated with the seasons I can use simple equipment I can use a windsock to observe wind direction I can use a wind gauge to observe wind speed I can measure wind speed using the Beaufort Scale I can use the scientific vocabulary: wind, direction, data and explain what they mean. I can record the wind direction and speed in a table.
	Weather and the	Summer 1	To observe and record rainfall over time and notice patterns	I know that rainfall changes with the seasons	I can observe and describe weather associated with the seasons

	Seasons (Geography driver)	Week 5	between rainfall and wind direction within seasons.	I know how to read a scale on a measuring jug.	I can use simple equipment I can use measuring equipment to collect rainfall. I can use scientific vocabulary; rainfall, scale, data and pattern. I can gather and record data to help answer the question I can record the rainfall in a table.
	Weather and the Seasons (Geography driver)	Summer 1 Week 6	To observe and record simple data.	I know the four seasons and the weather associated with them. I know what a pictogram is	I can use data collected to create a weather pictogram. I can gather and record data to help answer the question I can interpret data and create my own conclusion about the weather in Spring.
<u>Year 1/2</u> Living Things and their Habitats	Coastal Regions Across the UK (Geography driver)	Summer 2 Week 1	To compare the differences between things that are living, dead and things that have never been alive	I know the features of those things that are living, dead and things that have never been alive I know some of the 7 life processes of living things (MRS GREN)	I can observe, identify and explain the differences between things that are living, dead and things that have never been alive using nature I can find, classify and label specimens into categories.

	Coastal Regions Across the UK (Geography driver)	Summer 2 Week 2	To identify and name a variety of plants and animals in their habitats including microhabitats	I know that different habitats provide basic needs for different animals and plants I know the living things that can be found in a microhabitat I know that living things live in a habitat to which they are most suited	I can make a prediction. I can observe closely using simple equipment I can explore microhabitats in the local surroundings making and recording my observations I can identify a variety of microhabitats observing the different features and conditions I can suggest how the living things living in the microhabitats are suited to them
	Coastal Regions Across the UK (Geography driver)	Summer 2 Week 3 and 4	To investigate habitats on the coastline	I know how living things living in the habitats are suited to them I know that different habitats provide basic needs for different animals and plants	I can observe using simple equipment I can identify and classify animals and plants I can ask simple questions I can explain the similarities and differences between the habitats in the local surroundings and those on the coastline

					I can identify a variety of habitats observing the different features and conditions
	Coastal Regions Across the UK (Geography driver)	Summer 2 Week 5	To explore and compare two contrasting habitats.	I know some of the 7 life processes of living things (MRS GREN) I know the names of a variety of living things and habitats	I can describe how habitats provide the basic needs for different kinds of living things I can identify and name a variety of animals and plants in their habitats (including microhabitats). I can compare two contrasting habitats I can sort living things into the habitat in which they are most suited
	Coastal Regions Across the UK (Geography driver)	Summer 2 Week 6	To investigate where a living thing is in a food chain.	I know that living things in a habitat depend on each other. I know some sources of food. I know that a food chain shows how animals get their food. I understand the terms consumer and predator.	I can describe a simple food chain I can explain how the living things depend on each other I can explain what carnivores, herbivores and omnivores are. I can give examples of carnivores, herbivores and omnivores.

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Cycle A- Year 3/4

Year Group	Theme and Subject Driver	Week	Learning Objective	Knowledge	Skills
Year 3/4 Living things and their Habitats	The Stone Age to the Iron Age (History driver)	Autumn 1 Week 1	To understand that organisms can be grouped in a variety of ways.	I know what an organism is. I know some ways to classify organism. I know the difference between vertebrates and invertebrates. I know what the vocabulary exoskeletons and endoskeletons mean. I know the 7 life processes (MRS GREN)	I can categorise living things into groups by their characteristics. I can sort living things into a Venn diagram and Carroll diagrams.
	The Stone Age to the Iron Age (History driver)	Autumn1 Week 2	To compare the features of organism groupings within my local environment.	I know the main classification groups for animals. I know some animals for each group.	I can compare and classify different organisms in my local environment based on shared characteristics. I can interpret a classification key.

	The Stone Age to the Iron Age (History driver)	Autumn1 Week 3	To explore and use classification keys to help group, identify and name a variety of living things in their wider environment by creating classification keys.	I know the characteristics of living things I know how to sort living things using a classification key. I know why it is useful to classify living things. I understand why it is important to make accurate observations when describing features of living things.	I can observe features of living things in the wider environment and sort them into different groups I can show the characteristics of living things in a table. I can interpret a classification key. I can construct my own classification key.
	The Stone Age to the Iron Age (History driver)	Autumn1 Week 4	Modelled Investigation To carefully observe, record and classify the invertebrates in the local area.	I know what a habitat and microhabitat is I know what an invertebrate and vertebrate is. I know which classification key is best suited to the enquiry.	I can make a prediction based on the scientific enquiry question. I can use my knowledge to plan an enquiry into the population of vertebrates in a local area. I can choose an area that will be rich in invertebrates. I can conduct a scientific enquiry to find species of invertebrates in my local environment. I can record my findings. I can compare my findings with others.

	The Stone Age to the Iron Age (History driver)	Autumn1 Week 5	Modelled Investigation To investigate if we can classify an animal based on the remains left in faeces.	I know what a carnivore, herbivore and omnivore is. I know the animal groups and their key characteristics. I know which classification key is best suited to the enquiry. I understand why scientists use animal waste to learn about animals.	I can make an independent prediction I can generate questions about animals and their diet from the faeces they produce. I can identify the diet of an animal using a key. I can use the findings to form a conclusion.
	The Stone Age to the Iron Age (History driver)	Autumn1 Week 6 & 7	To recognise that environments can change and that this can sometimes pose dangers to living things.	I know that a habitat provides an environment in which living things are suited I know that humans can impact both positively and negatively on the environment I know some ways that humans have impacted positively on the local environment: Nature reserves (Hollingworth Lake, Watergrove Reserve), garden ponds, ecologically planned parks. I know some of the ways in which humans have impacted negatively on	I can explain how changing environments poses a danger to species. I can research the dangers and the impacts on animal habitats using secondary sources. I can present my findings from my research.

				the local environment: pollution, litter, development, flooding	
Autumn 2 Forces	Forces and Magnets (Science driver)	Autumn 2 Week 1	To identify the forces acting on objects.	I know that a force is a push or a pull that starts or stops an action I know that gravity pulls objects down I know that forces often need contact I know some different types of forces. I know that gravity is a force that doesn't need contact.	I can identify when a push or pull is acting on an object. I can show the different ways forces can act in different sports. I can explore forces and explain that gravity can act without contact.
	Forces and Magnets (Science driver)	Autumn2 Week 2	To explore the effects of friction on different surfaces.	I know that a force is a push or a pull that starts or stops an action I know that friction is a force that acts between two surfaces or objects that are moving (or trying to move) I know how to use a data logger	I can compare how things move on different surfaces I can present my findings I can use a data logger with adult support I can draw a conclusion based on my findings

	Forces and Magnets (Science driver)	Autumn2 Week 3	Modelled Investigation To compare and group magnetic materials and non-magnetic materials.	I know that magnets produce a force that attracts some materials. I know some magnetic materials and some non-magnetic materials. I know what characteristics a magnetic material has.	I can use a bar magnet to separate items that are magnetic and non-magnetic. I can compare and categorise everyday materials based on whether they are attracted to a magnet. I can ask relevant questions to set up an investigation. I can make a prediction based on the scientific enquiry question. I can use the findings to form a conclusion.
	Forces and Magnets (Science driver)	Autumn 2 Week 4	To observe whether magnets attract or repel from each other.	I know the 2 poles of a magnet. I know which poles repel or attract. I know what attract, repel and poles mean I know the difference between a force and a magnetic force	I can predict whether two magnets will attract or repel, depending the poles I can explain that magnetism can act without contact. I can explain how magnetic forces can move things at a distance without forces touching.

					I can make systematic and careful observations.
	Forces and Magnets (Science driver)	Autumn 2 Week 5	Intermediate Investigation To investigate the strength of magnets.	I know the 2 poles of a magnet. I know which poles repel or attract. I know what attract, repel and poles mean I know the names of different types of magnets	I can ask relevant questions to set up an investigation. I can make a prediction based on the scientific enquiry question. I can set up a simple comparative enquiry I can make systematic and careful observations. I can discuss the findings to help answer the question. I can record the results accurately. I can present my results in a graph. I can draw on results to form a conclusion.
	Forces and Magnets (Science driver)	Autumn 2 Week 6	Research To research the life of Isaac Newton and explain the impact of his work.	I know that Isaac Newton is a significant individual in Science I know that Isaac Newton had a significant impact on our understanding of the world	I can summarise using the facts researched some of the work Isaac Newton contributed to. I can explain Newton's three scientific laws of motion and what led to his hypothesis.

					I can use secondary sources to research the life of Isaac Newton. I can present my research findings.
Year 3/4 Light	Roman Britain (History driver)	Spring 1 Week 1	To recognise that we need light in order to see things and that dark is the absence of light.	I know that dark is caused by the absence of light. I know that humans need light to see things. I know what a light source is	I can identify a range of light sources. I can classify sources of light in a Venn diagram. I can explain and give examples of natural light and manmade light.
	Roman Britain (History driver)	Spring 1 Week 2	To explore whether lights can travel through all, some or no materials.	I know what translucent, opaque and transparent means. I know how light travels.	I can sort different materials according to whether they are opaque, transparent or translucent. I can complete a results table based on my findings.
	Roman Britain (History driver)	Spring 1 Week 3	To recognise that a shadow is formed when the light from a light source is blocked by an opaque object	I know that shadows are formed when the light from a light source is blocked by an opaque object. I know that light travels in straight lines.	I can explain how a shadow is formed. I can label a diagram to explain how a shadow is formed

					I can explain how a shadow changes when the light sources moves
	Roman Britain (History driver)	Spring 1 Week 4	Modelled investigation To find patterns in the way that the size of shadows changes.	I know how to use a ruler I know how to use measuring tape I know how to conduct an accurate pattern seeking investigation	I can plan and conduct an enquiry about the way shadows change size. I can use measuring apparatus which are appropriate to the investigation. I can take careful readings and identify patterns in the way shadows change size. I can explain the patterns I find.
	Roman Britain (History driver)	Spring 1 Week 5	To notice that light is reflected from surfaces.	I know that light travels in straight lines. I know that reflection is where light hits the surface of an object and bounces back into our eyes. I know how surfaces might reflect light.	I can make careful observations. I can observe whether different surfaces reflect light I can identify reflective surfaces. I can identify the properties of materials that reflect light.
	Roman Britain (History driver)	Spring 1 Week 6	Research	I know the dangers that sunlight can have on our eyes	I can explore a range of sunglasses

			To recognise that light from the sun can be dangerous and that there are ways to protect our eyes.	I know some of the ways to protect our eyes in the sun I know why it is important to protect our eyes	I can research the protective features needed for a pair of sunglasses I can describe ways to protect our eyes from the sunlight. I can design a poster for an opticians to inform people of ways to protect their eyes in the sun
Year 3/4 Rocks and soils	Rocks, Volcanoes and Earthquakes (Geography driver)	Spring 2 Week 1	To explore what happens in the rock cycle.	I know rocks are underneath all surfaces but may not be seen. I know how rocks can change over time. I know that these changes can produce different types of rocks. I know the 3 rock types produced.	I can explain the rock cycle. I can apply my knowledge about rocks to plan a practical enquiry into how rocks change over time. I can make careful observations. I can record my observations using scientific vocabulary. I can report my findings.
	Rocks, Volcanoes and Earthquakes (Geography driver)	Spring 2 Week 2	To know there are different types of rocks.	I know there are three types of rocks, igneous, sedimentary, metamorphic I know that rocks vary in appearance and can be classified from their appearance.	I can classify rocks into 3 categories from their appearance. I can identify man made rocks and natural rocks. I can use microscopes and magnifying glasses to help me make careful observations .

					I can describe and compare different types of rock and group them accordingly into igneous, sedimentary or metamorphic.
	Rocks, Volcanoes and Earthquakes (Geography driver)	Spring 2 Week 3 & 4	To understand how fossils are formed	I know that a fossil is formed when things that have lived is trapped in a rock I know the difference between bones and fossils I know that fossils take millions of years to produce. I know the meaning of; decompose, sediment, fossilisation, decay, compression and erosion.	I can order the steps of how fossils are formed. I can explain why fossils are important in science and how this links to geography and history.
	Rocks, Volcanoes and Earthquakes (Geography driver)	Spring 2 Week 5	Research To understand the role of a palaeontologist and explain the contributions of Mary Anning to palaeontology.	I can explain what a palaeontologist does. I can explain why Mary Anning's fossil findings were important. I can describe how palaeontology has changed our understanding of prehistoric animals.	I can use secondary sources to research the life of Mary Anning. I can use the research to write a biography about Mary Anning.

	Rocks, Volcanoes and Earthquakes (Geography driver)	Spring 2 Week 6	To recognise that soils are made from rocks and organic matter	I know that soil is a mixture of tiny particles of rock, dead plants and animals, air and water. I know that organic matter comes from a recently living organism I know that there are different types of soil I know that there are different layers of soil	I can study a variety of soil samples I can describe a variety of soil samples
Year 3/4 Sound	Anglo Saxons and Vikings (History driver)	Summer week 1	To identify how sounds are made, associating some of them with something vibrating.	I know that sound is made from something vibrating	I can listen carefully for different sounds in the environment and explain what might be making them. I can use appropriate vocabulary to describe the sounds. I can identify and describe sound sources from the local environment I can begin to associate sounds with something vibrating. I can make predictions about which areas in the environment will be noisy and quiet and explain my reasoning.

	Anglo Saxons and Vikings (History driver)	Summer week 2	To identify how sounds are made, associating them with vibrating.	I know sound is made through vibrations from a source. I know what; transmit, medium, source and sound waves mean. I know that there are many kinds of sound and that there are many ways of making sound. I know that sound travels through different mediums and can name the 3 mediums.	I can identify how sounds are made, associating some of them with something vibrating. I can identify and explain sounds made by different instruments. I can use appropriate vocabulary to describe the sounds.
	Anglo Saxons and Vikings (History driver)	Summer week 3	To explore if our ears can detect the direction a sound travels from.	I know that vibrations make sounds. I know that vibrations from sounds travel through a medium to the ear.	I can compare the distance of the sound to the volume of the sound. I can record the findings. I can present my findings in a graph
	Anglo Saxons and Vikings (History driver)	Summer week 4	To understand how we hear sound.	I know that vibrations from sounds travel through a medium to the ear. I know some parts of the internal and outer ear and their function.	I can explain how the sound travels through the ear. I can research how our ears work using secondary sources. I can take notes from the research

					I can label a diagram to show the different parts of the internal ear. I can order the sequence of sound travels through the outer ear
	Anglo Saxons and Vikings (History driver)	Summer week 5	Intermediate Investigation To understand how the size of the vibration affects the volume of sound.	I know that vibrations from sound travel through a medium to the ear. I know what; transmit, particles, vibrations mean.	I can explain how sound travels through a string telephone. I can make a prediction based on the scientific enquiry question. I can record the findings in a table. I can use the findings to form a conclusion. I can explain how the sound has been affected by the string's tautness as a result of the vibrations
	Anglo Saxons and Vikings (History driver)	Summer week 6	To explain how the sound gets fainter as the distance from the sound source increases.	I know that the volume is sound is affected by the distance from the sound source I know how to use a data logger	I can explain how the distance from the sound source impacts the volume of sound I can use regular increments of measurement

					I can suggest ways in which to make it a fair test I can record the volume of sound from a variety of distances I can write an explanation to describe my findings I can use a data logger to record the volume
Year 3/4 Sound	Anglo Saxons and Vikings (History driver)	Summer 2 week 1	Revision and Kahoot retrieval practice - Sound		
	Anglo Saxons and Vikings (History driver)	Summer 2 Week 2	To find patterns between the pitch of a sound and features of the object that produced it.	I know the difference between pitch and volume. I know how the sound is made from the object. I know the links between the features of an object and the pitch it makes.	I can explore a range of musical instruments to recognise patterns between pitch and volume. I can use the results to explain a pattern. I can order the objects from the pitch they make high to low.

	Anglo Saxons and Vikings (History driver)	Summer 2 week 3	To explore ways to change the pitch of a sound.	I know what pitch, frequency and amplitude mean. I know that sound is a form of energy and that the more energy put into creating a sound the louder the sound is made. I know the patterns identified between the pitch and volume of a sound and the shape of the wave it makes.	I can identify and describe high and low sounds. I can observe and describe patterns between the pitch of a sound and features of the object that made the sound. I can create a musical instrument and explain how it makes high and low sounds. I can investigate the pitch and volume by exploring the instrument and the sound it makes.
	Anglo Saxons and Vikings (History driver)	Summer 2 Week 4	To explain how sound can damage our hearing and ways we can protect ourselves.	I know that decibels is the unit of measure used for sound. I know which levels of sound are dangerous to our hearing. I know some ways in which we can protect our hearing.	To research how you can protect your hearing and keep yourself safe against noise pollution. To be able to estimate the decibel level of noises.

	Anglo Saxons and Vikings (History driver)	Summer 2 week 5	Independent investigation To investigate ways to absorb sound.	I know that absorb means to take in the energy that sound makes I know that sound needs something to travel through. I know that sound can travel through all three states.	I can predict which material will make the best soundproof and explain the reason why. I can explain why some materials might absorb sounds better than others. I can use the results of the investigation to discuss differences and similarities of the materials. I can investigate the best material for absorbing sound. I can use equipment appropriate to the investigation. I can make careful observations. I can record my findings accurately from a data logger. I can report my findings. I can use the findings to form a conclusion.
	Anglo Saxons and Vikings (History driver)	Summer 2 week 6	Consolidation of Science		

Cycle B					
Year group	Theme and Subject Driver	week	Learning Objective	Knowledge	Skills
<u>Year 3</u> <u>Animals including Humans</u>	Healthy Eating (D&T driver)	Autumn 1 Week 1 & 2	To identify that a healthy diet is needed in order to stay healthy.	I know what humans need to enable them to grow, move and be healthy. I understand what is meant by the term 'balanced diet'. I know which food groups we should eat the most of and which we should eat less of. I know that humans cannot make their own food, they get nutrition from what they eat.	I can sort foods into different food groups by the types of nutrients they contain. I can plan a healthy meal which contains the correct amounts of each food group.
	Healthy Eating (D&T driver)	Autumn 1 Week 3	Modelled Investigation To predict and find out which fruit and vegetable contain the most water.	I know that animals including humans need water for survival. I know what hydrate and dehydrate mean. I know how to set up a fair test.	I can set up a simple, practical comparative enquiry I can make a prediction based on the scientific enquiry question. I can use equipment to collect data. I can record accurately the weight of the fruit and vegetables using weighing scales.

					I can record the results as a graph. I can report back my findings.
	Healthy Eating (D&T driver)	Autumn 1 Week 4	To identify that humans and some other animals have skeletons and muscles for support, protection and movement.	I know some parts of the body and explain their purpose. I know the three keys. functions of the human skeletal system. I understand that muscles are needed to help the movement, support and protection of the skeleton.	I can research the correct names of bones in the human body. I can use some common and some scientific names of the bones. I can construct the human skeletal system and correctly label it.
	Healthy Eating (D&T driver)	Autumn 1 Week 5	Intermediate Investigation To investigate if different bones in the human body are proportional.	I know some bones in the body using scientific and common names. I know the location of specific bones in the body. I know that the skeleton protects the organs in the human body.	I can explain what the vocabulary proportional and ratio mean. I can ask relevant questions. I can locate specific bones in the body. I can take accurate measurements using standard units using a tape measure. I can identify patterns and proportional relationships between bones.

	Healthy Eating (D&T driver)	Autumn 1 Week 7	To understand why we need muscles to move.	I know how muscles support the body. I know how muscles allow movement. I know how muscles protect the body. I understand the difference between voluntary and involuntary muscles.	I can identify pairs of muscles in the human body. I can identify when a muscle is contracting or relaxing. I can label the muscles in the human body.
<u>Year 3/4</u> States of Matter	Properties of Materials (Science driver)	Autumn 2 Week 1	To compare and group solids, liquids and gases.	I know there are three states of matter. I know each state has different properties.	I can group materials together according to whether they are solids, liquids or gases. I can orally present my findings about solids, liquids and gases.

	Properties of Materials (Science driver)	Autumn 2 Week 2	To compare and group solids, liquids and gases.	I know there are three states of matter. I know each state has different properties.	I can group materials together according to whether they are solids, liquids or gases. I can orally present my findings about solids, liquids and gases.
	Properties of Materials (Science driver)	Autumn 2 Week 3	Modelled Investigation To investigate whether different chocolates melt at the same temperature.	I know that chocolate-like some solids- can turn from a solid to a liquid. I know that this change can be reversed. I know that heat can cause chocolate to change into a liquid and how cooling can change the liquid back into a solid.	I can conduct an investigation into how chocolate changes its state. I can measure the temperatures of melting chocolate using a data logger. I can conduct a fair test I can observe how some materials change state when they are heated or cooled. I can measure the changes of temperature in degrees celsius at the point of change.
	Properties of Materials (Science driver)	Autumn 2 Week 4	Teacher demonstration To investigate how water changes its state.	I can know the different states water can be in. I know the temperature at which water changes state.	I can identify and observe the processes that cause water to change state.

				I know that evaporation is when a liquid turns to a gas. I know that condensation is when water vapour cools down. I know what a reversible change is.	I can label evaporation and condensation. I can ask relevant questions and use scientific enquiry to answer them. I can make systematic and careful observations and take accurate measurements using a data logger.
	Properties of Materials (Science driver)	Autumn 2 Week 5	Independent Investigations To explain the effect of temperature on the process of evaporation.	I know how temperature affects the evaporation process. I know that the higher the temperature, the faster the evaporation process.	I can plan an investigation to discover how water evaporates. I can carry out a comparative test. I can make systematic, careful and accurate observations and measurements and report my findings. I can use my results to draw a simple conclusion.
	Properties of Materials (Science driver)	Autumn 2 Week 6	Research To understand the process of the water cycle.	I know the processes involved in the water cycle. I know that the processes in the water cycle are evaporation and condensation.	I can draw a diagram of the water cycle. I can write about the water cycle in the correct order using scientific vocabulary; evaporation,

				I know that evaporation and condensation have a part to play in the water cycle.	condensation, precipitation, collection.
<u>Year 3/4</u> Electricity	The Ancient Greeks (History driver)	Spring 1 Week 1	To recognise producers and consumers of electricity.	I know that electricity is a flow of charged particles. I know that an electrical consumer uses electricity. I know that an electrical producer provides electricity.	I can classify items as being a source of electricity consumers or producers. I can give examples of methods that generate electricity. I can explain the difference between renewable and non-renewable sources and give examples.
	The Ancient Greeks (History driver)	Spring 1 Week 2	To explore the difference between mains and battery powered circuits.	I can identify common electrical appliances and non-electrical appliances. I know how to keep safe when using mains circuits	I can categorise given appliances by finding a key feature. I can classify appliances into mains or battery powered circuits using a Venn diagram. I can sort appliances based on whether they use mains or battery circuits.

					I can explain why main circuits are dangerous.
	The Ancient Greeks (History driver)	Spring 1 Week 3	To explore a simple circuit.	I know the basic parts of a simple circuit (bulb, cell, wire) I know the correct scientific vocabulary when explaining how to make a complete circuit.	I can identify the basic parts of a simple circuit and match them to their scientific symbol. I can construct a simple circuit. From my observations I can record my findings using a diagram and key. I can explain what creates a complete circuit and what is an incomplete circuit.
	The Ancient Greeks (History driver)	Spring 1 Week 4	To identify what makes a complete or incomplete circuit.	I know the basic parts of a simple circuit (bulb, cell, wire) I know the correct scientific vocabulary when explaining how to make a complete circuit.	I can draw simple circuits, identifying whether it is complete or incomplete. I can give reasons as to why it is complete or incomplete.
	The Ancient Greeks (History driver)	Spring 1 Week 5	To explore the brightness of a bulb on a simple circuit.	I know that the brightness of the bulb is dependent on the amount of electricity. I know the basic parts of a simple circuit (bulbs, cell, wire)	I can explain why a bulb does/does not light up in some circuits. I can explain what is needed to make a bulb light brighter.

					I can construct a simple circuit.
	The Ancient Greeks (History driver)	Spring 1 Week 6	To explore some common conductors and insulators, and associate metals with being good conductors.	I know the vocabulary insulates and conducts means. I know the purpose of conductors and insulators. I know why some materials conduct electrical currents and why others don't. I know that some metals make good conductors.	I can sort materials by their properties into conductors or insulators. I can test materials to check if they are conductors or insulators. I can report back my findings. I can identify metals that are good conductors.
<u>Year 3/4</u> Electricity	The Ancient Greeks (History driver)	Spring 2 Week 1	To explain how a switch works and why they are needed.	I know that a switch turns the electric current on and off and can associate this with whether a lamp lights in a simple circuit. I know the function of a switch. I know that a circuit with a switch is not the same as an incomplete circuit.	I can create a circuit containing a switch. I can investigate whether the position of the switch affects the current in a circuit.

	The Ancient Greeks (History driver)	Spring 2 Week 2	Intermediate Investigation To plan, conduct, record and report on an investigation into switches.	I know that a switch turns the electric current on and off. I can associate this with whether a lamp lights or a buzzer sounds. I know the function of a switch. I know that a circuit with a switch is not the same as an incomplete circuit.	I can use my knowledge on electricity to plan a fair test. I can create a range of switches for a circuit. I can accurately record my findings in a table. I can use the findings to form a conclusion
	The Ancient Greeks (History driver)	Spring 2 Week 3 & 4	Research To explore when the light bulb was invented and research who was the true inventor of the commercial light bulb.	I know some of the different inventors of the light bulb. I know the impact that the invention of the bulb had on modern day life. I know how the light bulb has changed over time.	I can debate who I believe was the true inventor of the lightbulb. I can summarise using the facts researched, who is the rightful inventor of the bulb. I can research how the light bulb was invented. I can produce a timeline and fact file of the invention of the light bulb.

	The Ancient Greeks (History driver)	Spring 2 Week 5	STEM To construct a working circuit which includes a range of electrical components.	I know how to ensure that the circuit is complete and functional in my product [circuits incorporating switches, bulbs, buzzers and motors]. I can identify the basic parts of a simple series electrical circuit (cells, bulb, wires, buzzers, switches).	I can use the STEM engineering process to plan, design, evaluate and improve my product. I can use research and develop design criteria to inform the design of an innovative, functional, appealing product that is fit for purpose, aimed at particular individuals or groups. I can select and use a wider range of materials and components, according to their functional properties and aesthetic qualities. I can evaluate my ideas and product against a design criterion and consider the views of others to improve my work.
	The Ancient Greeks (History driver)	Spring 2 Week 6	Consolidation and assessment of science - retrieval practice		

Year 3/4 <u>Plants</u>	Rivers (Geography driver)	Summer 1 Week 1	To know the different parts of a flowering plant.	I can name the different parts of a flowering plant. I know the function of different parts of flowering plants.	I can label the parts of a plant I can explain its function. I can identify the different parts of some plants which give us food.
	Rivers (Geography driver)	Summer 1 Week 2	To identify the different parts that support pollination and seed formation.	I know the part that flowers play in the life cycle of a flowering plant. I know that pollination and seed formation are part of the life cycle of a flowering plant.	I can dissect a flowering plant I can explain how each part of the flowering plant has a part to play in pollination and seed dispersal.
	Rivers (Geography driver)	Summer 1 Week 3	To understand and order the stages of the life cycle of a flowering plant	I know what a life cycle is I know the processes of pollination, fertilisation and germination. I know the process of seed dispersal and why it is important for the plants survival I know some of the methods of seed dispersal.	I can order the different stages of the life cycle of a flowering plant. I can act out the methods of seed dispersal.

	Rivers (Geography driver)	Summer 1 Week 4	Modelled Investigation To set up an investigation to find out what seeds need to germinate.	I know some of the needs for a plant to live and grow (air, light, water, nutrients from soil, room to grow) I know that these needs may vary from plant to plant.	I can make a prediction based on the scientific enquiry question I can explore the requirements of plants for life and growth. I can set up my comparative investigation carefully I can conduct the enquiry making careful observations. I can record my findings using simple drawings. I can compare my findings with others.
	Rivers (Geography driver)	Summer 1 Week 5 and 6	To explore the way in which water is transported within plants.	I know that plants need water in order to make their own food. I know that water is transported through the stem. I know some of the needs for a plant to live and grow (air,	I can discuss the requirements of plants for life and growth. I can make systematic and careful observations. I can present my observations using a simple drawing.

				light, water, nutrients from soil, room to grow)	I can draw simple conclusions about how water is transported in plants.
<u>Year 3/4</u> Animals including Humans Year 4	The Human Body (Science driver)	Summer 2 Week 1	To identify the different types of teeth in humans and their simple functions.	I know the different types of teeth. I know the simple functions of each type. I know how they are different. I can discuss how to keep teeth healthy.	I can identify and label different types of teeth. I can explain the importance of keeping teeth healthy. I can explain their function and why they are different.
	The Human Body (Science driver)	Summer 2 Week 2	To identify the different types of teeth in carnivores and herbivores and their simple functions.	I know what a carnivore is. I know that a herbivore is. I know what an omnivore is. I know the different types of teeth. I know the simple functions of each type.	I can explain how teeth types vary from human to animal and animal to animal. I can compare the teeth of a herbivore and carnivore and explain why they are different.

					I can use evidence from an animal's teeth to identify whether they are a herbivore, carnivore or omnivore.
	The Human Body (Science driver)	Summer 2 Week 3	To become familiar with the basic parts of the human digestive system.	I know some of the basic parts of the digestive system. I know the simple functions of each part. I know that the digestive system is all connected.	I can name some parts of the digestive system, using scientific vocabulary. I can order the digestive system and label accurately.
	The Human Body (Science driver)	Summer 2 Week 4	To know the basic parts of the human digestive system.	I know some of the basic parts of the digestive system. I know the simple functions of each part.	I can explain what digestion is. I can describe simple functions of the basic parts of the human digestive system. I can identify and label parts of the human digestive system.
	The Human Body (Science driver)	Summer 2 Week 5	To construct and interpret a variety of food chains, identifying producers, predators and prey.	I know what a food chain is. I know the vocabulary producer, predator and prey. I know which living things are producers, predators and prey.	I can make links between plants and animals in food chains. I can interpret a food chain. I can construct a food chain. I can draw and label my own food chain.

					I can discuss the impact of changes to food chains. I know humans have a responsibility to care about the impact on food chains.
	The Human Body (Science driver)	Summer 2 Week 6	Consolidation and retrieval practice - Science		

Cycle A- Year 5/6

Year Group	Theme and Subject Driver	Week	Learning Objective	Knowledge	Skills
Year 5/6 Light	The World of Technology (Computing driver)	Autumn 1 Week 1	To recognise that light appears to travel in straight lines.	I know that light travels in straight lines I know that a light bulb is a source of artificial light.	I can explain how light travels. I can show how light travels in straight lines by drawing a diagram I can identify sources of light.
	The World of Technology (Computing driver)	Autumn 1 Week 2	To explain that objects are seen because they give out or reflect light into the eye.	I know that objects can be seen when they reflect or give out light. I know how light is reflected to help us to see. I understand that our eyes can be tricked.	I can name some parts of the eye. I can describe how our eyes change to adjust to light.
	The World of Technology	Autumn 1	To understand how mirrors can reflect light.	I know that we see things because light travels from a light source to our eyes.	I can explain how light reflects from mirrors. I can explain the law of reflection.

	(Computing driver)	Week 3		I know that we can see things when light travels from light sources to objects and then to our eyes. I know that a periscope allows you to see around obstacles by using mirrors and the reflection of light.	I can design and make a periscope that reflects light so that objects can be seen. To explain how the periscope works
	The World of Technology (Computing driver)	Autumn 1 Week 4	Modelled investigation To investigate the shape of the shadow changes to the shape of an object.	I know that shadows cast the same shape as the objects that cast them. I know that the angle of the light can alter the shape of the shadow cast by the object.	I can explain why shadows cast the same shape as the object. I can use the idea that light travels in straight lines to explain the creation of shadows. I can make a prediction linking to the question of the enquiry. I can take accurate measurements and record data in cm. I can record my results in a bar graph.
	The World of Technology	Autumn 1	Intermediate Investigation To explore and explain refraction in terms of light travel.	I know that refraction is the bending of light.	I can explain what I can see. I can explain refraction in my own words.

	(Computing driver)	Week 5			I can make careful observations when refraction happens. I can set up a comparative enquiry to answer a scientific question. I can report and present my findings. I can use the results to present a conclusion.
	The World of Technology (Computing driver)	Autumn 1 Week 6	To explore and explain refraction in terms of light travel and explain how light can be bent.	I know that refraction is the bending of light. I know that light can be bent through a transparent object. I know what transparent means. I know that when light is caught in water, this is called an internal reflection.	I can explain what I can see. I can explain the refraction through water in my own words. I can make careful observations when refraction occurs. I can use my observations to draw a conclusion.
	The World of Technology	Autumn 1 Week 7	Consolidation and retrieval practice		

	(Computing driver)				
<u>Year 5/6</u> Earth and Space	Earth and Space (Science driver)	Autumn 2 Week 1	To learn about the Solar System and the creation of rocky planets.	To know what our Solar System is. To know what the Solar System comprises. To understand how the rocky planets were created. I know that Mercury, Venus, Earth and Mars are the rocky planets. I know that the rocky planets are closer to the sun. I know that rocky planets are made up of rocks or metals. I know that their core is made of iron.	I can name the 8 planets of the Solar System. I can draw a diagram which shows the position of the rocky planets in relation to the sun. I can ask relevant questions to extend my knowledge and understanding. I can memorise an acronym for remembering the order of the planets from the sun.
	Earth and Space	Autumn 2 Week 2	To learn about the Solar System and the creation of gas planets.	To know what our Solar System is. To know what the Solar System comprises.	I can name the 8 planets of the Solar System.

	(Science driver)			To understand how the gas planets were created. I know that Jupiter, Saturn, Neptune and Uranus are the gas planets. I know that the gas planets are further away from the sun. I know that gas planets have a solid core with swirling gases above.	I can draw a diagram which shows the position of the gas planets in relation to the sun. I can ask relevant questions to extend my knowledge and understanding.
	Earth and Space (Science driver)	Autumn 2 Week 3	Modelled Investigation To create an outdoor Solar System	To know the actual distance (km) of each planet from the sun. To know the actual diameter (km) of the sun and each planet. To understand the relative size of each planet compared to the size of the sun.	I can describe the movement and position of the Earth, and other planets, relative to the Sun in the solar system. I can work as a team to re-create the Solar System.
	Earth and Space	Autumn 2	Intermediate Investigation To investigate how the Earth, Sun and Moon are approximately spherical bodies.	To know that the Earth, Sun and Moon are approximately spherical and why.	I can identify scientific evidence that has been used to support or refute ideas or arguments.

	(Science driver)	Week 4		To know that gravity is the key force responsible for Earth. To understand past evidence used to deduce the shape of the Earth before space travel.	I can plan a scientific enquiry to answer questions, including recognising and controlling variables where necessary. I can use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas.
	Earth and Space (Science driver)	Autumn 2 Week 5	To learn about the movement of the Moon relative to the Earth.	To know the position and movement of the moon, relative to the Earth and Sun. To know what a moon is and how they maintain an orbit around a planet. To understand that the Sun lights up only one side of the Moon. To know the different names for the phases of the Moon.	I can physically demonstrate the relationship between the Sun, Earth and Moon with a group. I can name some of the different names for the phases of the Moon. I can draw and label a diagram showing the movement of the moon.

	Earth and Space (Science driver)	Autumn 2 Week 6	To learn how the Earth's rotation and movements affects day and night.	To know that the Earth rotates once every 24 hours. To know that the earth's rotation on its axis creates day and night. I know that the position of the sun affects different time zones across the world.	I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. I can identify where on the earth it is day and where it is night. I can explain why it is day and night based on the location of the sun. I can research different countries and their time zones.
<u>Year 5/6</u> Forces	World War II (History driver)	Spring 1 Week 1	To learn about air resistance and gravity.	To know that unsupported objects fall towards the Earth because of the force of gravity. To understand that air resistance is a type of friction between the air and another material. To know that gravity and air resistance are opposing forces. To know how Newton and Galileo first discovered gravity and air resistance.	I can identify and define the opposing forces that act upon objects moving through the air. I can explain the simple physics involved when describing how a parachute works.

	World War II (History driver)	Spring 1 Week 2	To identify the effects of air resistance on different shaped canopies.	To understand that the surface area of the parachute is important in creating significant air resistance. To know the shape of an effective and ineffective parachute.	I can describe the effects of air resistance on a parachute. I can design parachutes using my scientific knowledge. I can predict the speed with which parachutes of different surface areas will fall through the air. I can predict the reason for any difference in terms of the forces acting on the parachutes.
	World War II (History driver)	Spring 1 Week 3	Modelled Investigation To investigate descent velocity.	I know that descent velocity is the rate in which an object falls towards the earth. I know that surface area affects the descent velocity.	I can explain the effects of air resistance by observing how different shaped objects fall. I can compare the speed with which canopies of different shapes and surface area fall using a stopwatch. I can take measurements with precision, taking repeat readings for accuracy. I can explain the forces acting on the parachutes.

					I can record data and results in a line graph.
	World War II (History driver)	Spring 1 Week 4	To learn about aerodynamics, specifically relating to airplanes.	To understand what aerodynamics are. To know how air pressure and air resistance affects aerodynamic shapes To know the forces that act up on an airplane in motion. I know that streamlined designs create the least resistance.	I can use my knowledge of aerodynamics to select an appropriate design for my investigation. I can plan a scientific investigation to answer questions and recognise where to control variables.
	World War II (History driver)	Spring 1 Week 5	Independent Investigation To investigate aerodynamics.	To know the forces that act upon an airplane in motion are air resistance, upthrust and gravity. To know why some designs are aerodynamic. I know that streamlined designs create the least resistance.	I can explain why my design was successful I can suggest further improvements to my investigation based on the success of the enquiry. I can accurately record my results. I can report and present my findings

	World War II (History driver)	Spring 1 Week 6	Consolidation and retrieval practice		
<u>Year 5/6</u> Forces	World War II (History driver)	Spring 2 Week 1	To explore water resistance	I understand what water resistance is. I know the effects of water resistance on moving objects. I know what sinking velocity is and how it can be measured.	I can identify the effects of water resistance on moving objects. I can observe water resistance closely. I can explain what I can see. I can use scientific vocabulary to write an explanation.
	World War II (History driver)	Spring 2 Week 2	To learn about upthrust and buoyancy.	I know that upthrust is a force where something is forced to be pushed upwards. I know that buoyancy is an object's ability to float in water or air. I know why some objects float.	I can use my prior knowledge of surface area and water resistance to predict if an object is buoyant. I can describe the effects of upthrust and buoyancy on the objects. I can write a short explanation about the effects.

	World War II (History driver)	Spring 2 Week 3	To learn about mechanisms.	I know what a mechanism is and why they are used. I know that a lever, gear and pulley are types of mechanisms. I understand the forces involved with each mechanism. I know that mechanisms allow a smaller force to have a greater effect.	I can name some real-life examples of different mechanisms. I can explain the similarities and differences between the lever, gear and pulley mechanism.
	World War II (History driver)	Spring 2 Week 4	Modelled Investigation To investigate the pulley mechanism.	I know what a pulley is. I understand how a pulley works. I know that a pulley allows a smaller force to have a greater effect. I know how to use a Newton Meter.	I can take measurements using a Newton Meter. I can take repeat readings where appropriate. I can identify scientific evidence that has been used to support or refute ideas.
	World War II (History driver)	Spring 2 Week 5	Intermediate Investigation To investigate friction.	I know that friction is a force. I know that a Newton Meter measures friction and that it was named after Sir Isaac Newton.	I can plan a scientific enquiry to answer a question. I can take measurements using a Newton Meter.

				I know that the unit of measure is called a Newton and it is abbreviated to an N. I understand which surfaces create more friction and why. I understand that the higher the Newton, the higher the friction.	I can take measurements with increasing accuracy and precision, taking repeat readings when appropriate.
	World War II (History driver)	Spring 2 Week 6	Consolidation - Retrieval Practice		
<u>Year 5/6</u> Animals including Humans	Mexico (Geography driver)	Summer 1 Week 1	To explore the changes as humans develop to old age.	I understand that ageing is a continual process over time I know the main development stages that take place between birth and old age.	I can identify the changes that take place from birth to old age I can classify the changes according to physical and other changes. I can distinguish between facts and stereotypes about old age. I can order the development stages that take place between birth and old age.

	Mexico (Geography driver)	Summer 1 Week 2	To identify and name parts of the human circulatory system.	I know of four systems in the human body (circulatory, digestive, respiratory, reproductive) I know the main parts of the circulatory system (heart, blood, blood vessels) I know that blood vessels are made up of arteries, veins and capillaries.	I can identify the parts of the circulatory system (heart, blood vessels and blood). I can identify the different types of blood vessels and their function.
	Mexico (Geography driver)	Summer 1 Week 3	To identify and name parts of the heart.	I know the main parts of the circulatory system (heart, blood, blood vessels) I know that the heart receives deoxygenated blood. I know that the heart pumps out oxygenated blood. I know that the heart is made up of a left and right side. I know that the heart is made up of atriums and ventricles.	I can explain the function of the parts in the circulatory system. I can label parts of the heart. I can explain the functions of each part of the heart.

	Mexico (Geography driver)	Summer 1 Week 4	To explore how water and nutrients are transported within humans.	I know that the circulatory system transports water and nutrients around the body. I understand how the digestive system breaks down nutrients in the stomach and intestines. I know that blood transports nutrients around the body.	I can explain the role of the circulatory system in transporting nutrients and water in the body. I can create a diagram of how water and nutrients are transported. I can present my findings.
	Mexico (Geography driver)	Summer 1 Week 5	To explore how water and nutrients are transported within animals.	I know that the circulatory system transports water and nutrients around the body. I know that not all animals have the same circulatory system.	I can compare the circulatory systems of mammals, fish and insects using a Venn diagram. I can explain the role of the circulatory system in transporting nutrients and water in the body of animals.
	Mexico (Geography driver)	Summer 1 Week 6	To recognise the impact of diet and exercise and the impact this can have on the way our body functions.	I know the impact of diet on the human body. I know what exercise is and the effect different exercises can have on the body.	I can sort healthy and unhealthy foods in a Venn diagram. I can explain the impact of a healthy diet and regular exercise. I can identify what a healthy lifestyle consists of.

				I know how nutrients support the human body.	I can report and present my findings.
	Mexico (Geography driver)	Summer 1 Week 7	I can recognise the impact of drugs and lifestyle and the impact this can have on the way our bodies function.	I know what drugs are and the effect different drugs can have on the body. I know what alcohol is and the effect alcohol can have on the body. I know what smoking is and the effect smoking can have on the body.	I can identify the parts of the body affected by drugs. I can identify the parts of the body affected by alcohol. I can identify the parts of the body affected by smoking. I can explain the impact of drugs and alcohol on the body. I can describe how scientific evidence highlighted the dangers of smoking.
<u>Year 5/6</u> Evolution and Inheritance	Agricultures (Geography driver)	Summer 2 Week 1	To understand and explain the scientific concept of inheritance.	I know that living things produce offspring. I know that characteristics are passed from parents to their offspring.	I can identify inherited characteristics that are passed on from parent to offspring. I can match the parents to their offspring in different mammals.

				I can explain how inherited characteristics can vary and are not identical to their parents.	
	Agricultures (Geography driver)	Summer 2 Week 2	To understand adaptations in animals.	I know that animals are adapted to suit their environment. I know that adaptations are mutations that can lead to evolution.	I can identify how animals are suited to their habitats. I can explain some ways in which adaptation has occurred in different species. I can explain how species that have not adapted can become extinct.
	Agricultures (Geography driver)	Summer 2 Week 3	To understand adaptations in plants.	I know that plants are adapted to suit their environment. I know that adaptations are mutations that can lead to evolution.	I can identify how plants are suited to their habitats. I can explain some ways in which adaptation has occurred in different plants. I can explain how plants that have not adapted can become extinct.
	Agricultures (Geography driver)	Summer 2	To investigate how adaptations can result in both advantages and disadvantages.	I know that human intervention affects evolution.	I can identify advantages and disadvantages of specific interventions.

		Week 4		I know that some living things have acquired more adaptive traits than others. I know some of the issues raised by human intervention in the evolutionary process.	I can identify how humans have created new varieties of living things through selective breeding.
	Agricultures (Geography driver)	Summer 2 Week 5	To explore that fossils provide evidence from the past.	I know that living things have changed over time. I know that fossils provide information about living things that lived on Earth millions of years ago. I can explain how living things can provide information from the past. I can explain why some living things have more fossils than others.	I can order the fossilisation process. I can examine fossil evidence. I can explain what different fossils tell us about living things in the past.

Cycle B- Year 5/6

Year Group	Theme and Subject Driver	Week	Learning Objective	Knowledge	Skills
<u>Year 5/6</u> Living things and their habitat Year 5	The Tudors (History driver)	Autumn 1 Week 1	To understand the characteristics of a living organism.	I know that a living organism is a living thing. I know the difference between living and non-living organisms.	I can use the acronym MRS GREN to help classify living organisms. I understand the acronym MRS GREN and can explain the seven characteristics of living organisms.
<u>Year 5/6</u> Living things and their habitat Year 5	The Tudors (History driver)	Autumn 1 Week 2 & 3	To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	I know the 7 life processes of living things (MRS GREN). I know that a life cycle is the different stages of life for a living thing.	I can research the life cycle of a mammal, amphibian, insect or a bird. I can verbally present my research. I can describe the differences in the life cycles.
	The Tudors (History driver)	Autumn 1 Week 4	I can explore and classify mammals based on how they reproduce.	I know the different mammal groups. I know the differences between animals and how they reproduce.	I can research the different animal groups. I can give examples of each animal group.

					I can name the different mammal groups by classification of how they reproduce (marsupial, monotreme and placental).
	The Tudors (History driver)	Autumn 1 Week 5	To be able to name the reproductive parts and functions of a flower.	I know the purpose of a flower on a plant. I know the female and male part of the flower.	I can identify and explain the main functions of a flower. I can explain how flowering plants reproduce.
	The Tudors (History driver)	Autumn 1 Week 6	To explain how pollination aids the reproduction and ecology of flowering plants.	I know that pollination is the transfer of pollen grains from the male anther of a flower to the female stigma to produce a seed. I know that pollination helps the flowering plant to reproduce. I know that insects support plants to pollinate. I understand how and where pollen is produced in a flowering plant.	I can explain the role of each part of the flower in pollination. I can explain other ways that plants are pollinated.

Year 5/6 Living things and their habitat Year 6	The Polar Regions (Geography driver)	Autumn 2 Week 1	To plan and carry out an investigation looking at the characteristics and classification of vertebrates.	I know and understand the five ways of classifying vertebrates. I understand how to carefully and scientifically carry out an investigation; measurements are accurate, and variables are controlled to ensure it is a fair test.	I can use and understand a classification chart to decide which classification a vertebrate belongs to. I can make a scientific prediction and explain why I think this. I can use research questions to discover scientific facts.
	The Polar Regions (Geography driver)	Autumn 2 Week 2	To be able to classify plants giving reasons for the classification based on specific characteristics.	I know that living things can be classified in different ways. I know how to classify a wide range of plants based on observable characteristics. I know that plants can be classified based on their similarities and differences.	I can explain ways into which trees and plants can be classified I can make a scientific prediction and explain why I think this I can give reasons for the classification based on specific characteristics
	The Polar Regions	Autumn 2 Week 3	To be able to classify microorganisms, giving reasons for the classification based on specific characteristics.	I know that a microorganism is a microscopic sized living thing.	I can explain ways into which microorganisms can be classified I can make a scientific prediction and explain why I think this

	(Geography driver)			I know how to classify a wide range of living things based on observable characteristics. I know that microorganisms can be classified based on their similarities and differences.	I can give reasons for the classification based on specific characteristics
	The Polar Regions (Geography driver)	Autumn 2 Week 4	To identify and classify organisms in the local area.	I know how to classify organisms. I know how to classify a wide range of living things based on observable characteristics. I understand how to carefully and scientifically carry out an investigation; measurements are accurate, and variables are controlled to ensure it is a fair test.	I can make systematic and careful observations. I can classify a range of organisms. I can make a specific prediction and explain why I think this. I can use a classification chart to decide which classification to use.
	The Polar Regions (Geography driver)	Autumn 2 Week 5	Independent Investigation To plan and carry out an investigation into the effects of handwashing.	I know that a microorganism is a microscopic sized living thing. I know some scientific examples of microorganisms.	I can identify bacteria I can use my findings to explain how bacteria is transferred and reduced I can use a UV light to observe the distribution of bacteria

				I know items that contain useful microorganisms. I know some items that contain harmful microorganisms. I know that UV light can cause microorganisms to fluoresce and can be detected.	I can explain the causal relationship between handwashing and bacteria spreading.
		Autumn 2 Week 6	To plot and interpret data from a line graph.	I know how to interpret data to draw a conclusion. I know how to represent data on a line graph.	I can record data using a line graph. I can plot data onto a line graph accurately. I can interpret the data on the line graph.
<u>Year 5/6</u> Year 5 Properties and changes of materials	The Victorians (History driver)	Spring 1 Week 1	To compare and group everyday materials based on their properties.	I know that materials can be grouped together in different ways. I know that hardness means how resistant a material is to force. I know that solubility means the ability to dissolve into another substance.	I can make careful observations. I can compare and group together everyday materials on the basis of their properties. I can explain the reasons for my groupings. I can record and explain my findings .

				I know that transparency means that light can completely pass through a material. I know that conductivity means the ability to transport an electric or thermal charge. I know that certain materials respond to magnets.	
	The Victorians (History driver)	Spring 1 Week 2	Modelled investigation To investigate the solubility of materials.	I know that some materials will dissolve in a liquid to form a solution. I know that reversible changes can occur after dissolving some substances. I know that a solute is a substance that will dissolve into a liquid. I know that a solvent is the liquid in which a substance is dissolved. I know the process of dissolving. I know the difference between soluble and insoluble.	I can make different solutions. I can identify that some solvents dissolve in liquid. I can make careful observations. I can record the results accurately on a comparison table. I can use scientific evidence to support or refute ideas. I can report and present my findings using a conclusion. I can describe how to recover a substance from a solution.

				I know that some substances can be recovered from a solution.	
	The Victorians (History driver)	Spring 1 Week 3	Intermediate Investigation To investigate how mixtures could be separated by filtering.	I know that a filter is a device used to separate materials. I know why filtering is needed and can give some examples.	I can make systematic and careful observations. I can record data and results using scientific diagrams. I can use scientific evidence to support or refute ideas.
	The Victorians (History driver)	Spring 1 Week 4	Independent Investigation To investigate how mixtures can be separated by sieving, filtering and evaporating.	I know which separation method is appropriate to use depending on the materials. I know why filtering is needed and can give some examples. I know that evaporation is the process of turning liquid into gas. I know that sieving is a method used to remove small particles from larger particles.	I can plan a scientific enquiry to answer a question. I can separate a range of materials using sieving, evaporating and filtering processes. I can select an appropriate method to report my findings.
	The Victorians	Spring 1 Week 5	To identify reversible and irreversible changes.	I know what reversible and irreversible means.	I can identify irreversible chemical changes. I can identify reversible chemical changes,

	(History driver)			I know that some changes in materials result in the formation of new materials. I know that some changes can be reversed through mixing, dissolving and changes of state.	I can describe what new materials are created in irreversible chemical change. I can sort reversible and irreversible materials.
	The Victorians (History driver)	Spring 1 Week 6	To explore that some changes result in the formation of new materials.	I know that some changes in materials result in the formation of new materials. I know that the formation of new materials is sometimes irreversible.	I can cook and bake, observing the irreversible changes that occur. I can identify the processes as changes take place. I can explain that some changes in materials result in the formation of new materials.
	The Victorians (History driver)	Spring 2 Week 1	To explore the properties and everyday uses of metal	I know that metal is a solid material. I know metal is typically hard, strong and shiny with good electrical and thermal conductivity. I know the everyday uses of metal	I can explain why metal is a suitable material for everyday purposes. I can explain the properties of metal. I can research and present my findings.

	The Victorians (History driver)	Spring 2 Week 2	To explore the properties and everyday uses of wood	I know that wood is a solid material derived from trees. I know that wood is typically strong and a good heat and sound insulator. I know the everyday uses of wood.	I can explain why wood is a suitable material for everyday purposes. I can explain the properties of wood. I can research and present my findings
	The Victorians (History driver)	Spring 2 Week 3	To explore the properties and everyday uses of plastic	I know that plastic is man-made material. I know that plastic is easily shaped, moulded and durable. I know that plastic has a variety of uses and is used in many everyday products.	I can explain why plastic is a suitable material for everyday purposes. I can explain the properties of plastic. I can research and present my findings
	The Victorians (History driver)	Spring 2 Week 4 and 5	To plan a scientific enquiry that compares the suitability of metal, wood and plastic for a particular purpose.	I know the properties of metal wood and plastic I know the everyday uses of metal wood and plastic.	I can give reasons based on evidence for the particular uses of everyday materials including metal, wood and plastic. I can compare the suitability of metal, wood and plastic for everyday uses. I can report and present findings from enquiries.

	The Victorians (History driver)	Spring 2 Week 6	Consolidation and retrieval practice		
<u>Year 5/6</u> Electricity	Ancient Egypt (History driver)	Summer 1 Week 1	To understand, build and draw simple circuits.	I know what a circuit needs in order for it to work. I know the circuit symbols.	I can draw a simple circuit using the correct symbols. I can build simple circuits using a range of components.
	Ancient Egypt (History driver)	Summer 1 Week 2	To understand, build and draw simple circuits.	I know that a switch can be used to make or break a circuit to turn things on or off. I know that an insulator is a material that does not allow electricity or heat to flow through easily. I know that a conductor allows electricity and heat to flow through easily.	I can explain how my switch works. I can create my own circuit with a switch. I can explain what materials conduct electricity. I can draw conclusions about why some materials conduct electricity and some don't.

	Ancient Egypt (History driver)	Summer 1 Week 3	Modelled Investigation To investigate if wire length affects the brightness of a bulb.	I know that the length of a wire can affect the brightness of a bulb. I know that the greater the length of the circuit the further the electricity has to travel which results in a dimmer light bulb.	I can carry out a scientific comparative enquiry. I can make a prediction and provide a reason to support this. I can use my results to inform further comparative tests. I can observe if the length of the wire affects the brightness of the bulb.
	Ancient Egypt (History driver)	Summer 1 Week 4	Intermediate Investigation To investigate if total voltage affects the brightness of a bulb.	I know that the higher the voltage, the brighter the bulb. I know which factors affect the brightness of a bulb.	I can create a circuit with different variables and predict the brightness of the bulb. I can explain why the brightness of the bulb was affected. I can carry out a scientific comparative enquiry. I can record the results accurately I can draw on the results to form a conclusion

	Ancient Egypt (History driver)	Summer 1 Week 5	Independent Investigation To conduct an investigation with a buzzer.	I know that the higher the voltage, the louder the buzzer. I know how components affect the variables within a circuit.	I can create a circuit with different variables and predict the volume of the buzzer. I can explain why the volume of the buzzer was affected. I can carry out a scientific comparative enquiry. I can record the results accurately I can draw on the results to form a conclusion
	Ancient Egypt (History driver)	Summer 1 Week 6	To know how to work safely with electricity.	I understand why electricity can be dangerous. I know the necessary precautions when working with electricity. I know some everyday tasks involving electricity that can be dangerous.	I can warn children about the dangers of electricity. I can spot electrical hazards and know how to rectify them. I can produce an informative, eye-catching poster to warn others of the dangers of electricity.
<u>Year 5/6</u> Revision of Animals including	Structures and Forces (D&T driver)	Summer 2 Week 1	I can recall and apply my knowledge of adaptation, evolution and inheritance to explore Darwin's Theory of evolution.	I know that living things produce offspring of the same kind. I know that the offspring of living things are not identical to their parents.	I can give examples of how living things have changed over time. I can explain how living things have evolved and adapted to suit their environment.

humans/ living things and their habitats and evolution and inheritance				I know what a living thing is. I know that living things change over time. I know that adaptation may lead to evolution. I know Charles Darwin's theory of evolution.	I can describe the changes as humans develop through evolution
Earth and Space	Structures and Forces (D&T driver)	Summer 2 Week 2	I can activate my prior knowledge of Earth and Space to complete a variety of retrieval tasks.	I know that our solar system has eight planets. I know that the sun, earth and moon are approximately spherical bodies I know the rocky and gas planets within our solar system. I know that the earth's rotational axis links to day and night across the planet.	I can describe the movement of the earth and other planets relative to the sun in the solar system. I can describe the movement of the moon relative to the sun.
Forces	Structures and Forces	Summer 2	I can activate my prior knowledge of Forces to complete a variety of retrieval tasks.	I know that there are a variety of forces	I can identify the effects of a variety of forces I can explain the causal resistance and how it works.

Light	(D&T driver)	Week 3		I know that unsupported objects fall towards the earth due to the force of gravity I know that mechanisms allow a smaller force to have a greater effect.	I can identify a force in action. I can define levers, pulleys and gears.
	Structures and Forces (D&T driver)	Summer 2 Week 4	I can activate my prior knowledge of light to complete a variety of retrieval tasks.	I know that light appears to travel in straight lines. I know what a light source is I know how the position of the sun can affect shadows and alter their shape and size. I know that the position of the sun relates to the time of the day. I know what a sundial is. I know what a compass is and how to use one.	I can explain how the position of the sun affects the shape and size of shadows. I know the approximate time of day based on the position of the sun. I can explain how a sundial works I can use a compass to identify the position of the sun I can use a compass to help me to identify the time of day.
Electricity	Structures and Forces	Summer 2	To construct a working circuit which includes a range of electrical components. STEM	I know the engineering process behind a working circuit.	I can apply my knowledge of electricity to fulfil a design brief.

Properties and changes of materials	(D&T driver)	Week 5		I know the different electrical components needed for a radio (cell, wires, speaker, switch). I know how to make a complete and functional circuit that incorporates switches, resistors and amplifiers.	I can use the engineering design process to build a complete circuit which fulfils the design brief. I can construct a functional working radio.
	Structures and Forces (D&T driver)	Summer 2 Week 6	Research enquiry To research inventors who have developed useful new materials	I know what an inventor is. I know what a useful material is and its purpose in the modern world. I know some inspirational inventors whose inventions have impacted the modern world today.	I can research inventors of new materials using secondary sources. I can explain the impact of new and useful materials. I can name some inventors and the materials they have developed. I can explain how this invention has impacted life today. I can report and present my findings from the enquiry.