VBENNERLEY FIELDS SCHOOL

How my World Works? Science Stage 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Topic:** Autumn Leaves	**Topic:** Sparkle and Shine	**Topic:** Once Upon a Time…	**Topic:** Spring Time	**Topic:** Minibeasts	**Topic:** What's at the beach?
Coverage:	**Coverage:** **Plants**- Name variety of plants **Animals-** Name common animals found in woodland **Seasonal changes-** observe changes that occur in Autumn **Everyday Materials-** Name a variety of everyday materials found outside distinguish between object and material	**Coverage:** **Everyday Materials-** Name a variety of everyday materials, exploring properties of shiny materials, distinguish between object and material. **Seasonal changes-** Observe changes that occur in Winter	**Coverage:** **Plants**- Name variety of plants, simple food chain, growing seeds for food to eat **Everyday Materials-** Properties of materials e.g. floating and sinking,	**Coverage:** **Animals**- Have offspring that grow, find out about the basic needs of animals **Seasonal changes-** Observe changes in spring	**Coverage:** **Animals**- Find out about the basic needs of animals, explore mini beast habitats and food chains.	**Coverage:** **Plants**- Name variety of plants in rock pools **Animals**- Find out about the basic needs of animals that live in rock pools. **Seasonal changes-** Observe changes that occur in summer
Knowledge:	**Knowledge:** I know a variety of plants and identify similar and different varieties. (B) I know some common animals found in the woodland. (B) I know the outside environment changes during Autumn. (P) I know natural materials that are found outside and know they are different. (P)	**Knowledge:** I know what a shiny or non-shiny material or object is. (C) I know materials and an object made of the material. (C) I know there are environmental changes during winter. (P)	**Knowledge:** I know a variety of plants and identify similar and different varieties. (B) I know a simple food chain e.g. Leaf-Insect-frog. (B) I know how a plant grows. (B) I know floating and sinking materials. (P)	**Knowledge:** I know animals grow from a baby. (B) I know that animals need food, water and shelter. (B) I know the outside environment changes during Spring. (P)	**Knowledge:** I know what a mini beast is. (B) I know where mini beasts live. (B) I know where to look for mini beasts. (B)	**Knowledge:** I know different plants found in rock pools. (B) I know animals that you may find in a rock pool. (B) I know the outside environment changes during Summer. (P)
Skills:	**Skills:** I can Identify that leaves grow on plants. I can choice a woodland animal when prompted. I can point to the main feature on an animal when asked. I can observe changes that occur during autumn.	**Skills:** I can explore objects and materials that I am given. I can sort objects by a given criterion when contrasts are obvious. I can look at collection of similar objects and may give a property to classify	**Skills:** I can explore differences between plant life, e.g., flowers and leaves, trees and other plants. I can plant a seed and watch it grow e.g. cress. I can observe simple food changes.	**Skills:** I can sort pictures onto baby and adult animals. I can match pictures of infant animals to adult animals. I can observe changes and use my senses to explore what happens during Spring.	**Skills:** I can sort picture of different mini beasts. I can use outdoor materials to create a bug hotel. I can look for and match different features of an insect.	**Skills:** I can notice and respond to plants in my local environment. I can explore plants on water using my senses. I can explore the differences of animals that can be found in rock pools.

	I can use my senses to explore the differences in natural materials.	them, e.g., different coins are all shiny. I can observe changes and use my senses to explore what happens during winter.	I can observe objects that sink and float in water.			I can observe changes and use my senses to explore what happens during Summer.
Investigation:	**Investigation:** What is the difference between crunchy and soft? **Observe** • Do the children show an interest in observing changes over time? • Can they describe what they see happening?	**Investigation:** Is it shiny? **Observe** • Can the children show an interest when the Sun shines on the objects? • Do they notice similarities and differences between the objects?	**Investigation:** How does a plant grow? **Observe** • Do the children show an interest in observing changes over time? • Can they describe what they see happening	**Investigation:** Is it alive? **Observe** • Do the children show an interest in observing changes over time? • Can they describe what they see happening	**Investigation:** What is an insect? **Observe** • Can the children identify the different parts of the insect? • Do the children experiment with the effects of magnification?	**Investigation:** What lives in a rock pool? **Observe** • Can they describe what they can see, touch and smell? • Can the children describe how the animals are the same or different
Year 2	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Topic: Explorers	**Topic:** Light and Shade	**Topic:** Let it Snow!	**Topic:** Let's Build!	**Topic:** Going on Safari	**Topic:** At the Seaside
Coverage:	**Coverage:** **Everyday Materials** Sort materials using texture, feel, similarities and differences. **Plants**- Name variety of plants found in the local environment **Animals-** Name common animals found in woodland	**Coverage:** **Everyday Materials** Explore light and dark, using torches and lights. Demonstrate how light is used to make shadows. **Seasonal changes-** Observe changes that occur in spring	**Coverage:** **Everyday Materials** Explore how materials change in different conditions e.g. ice to water. Name materials and how clothes to keep warm. **Animals**- Animals that hibernate **Seasonal changes-** Observe changes that occur in Winter	**Coverage:** **Everyday Materials** Sorting everyday materials. Explore by texture, firmness etc.	**Coverage:** **Animals** Match noises of African animals. Animal recognition of wild animals. Matching animals and their young.	**Coverage:** **Everyday Materials** Explore floating and sinking **Seasonal changes-** Observe changes that occur in summer **Plants and animals-** Name plants and animals that are found at the seaside.
Knowledge:	**Knowledge:** I know different textures and similarities and differences between these textures. (P) I know a variety of different plants found in my local environment. (B) I know different animals that live in the woodlands. (B) I know how to explore maps and paths around school. (P)	**Knowledge:** I know how to explore light and dark using torches. (P) I know how to make a shadow using my torch. (P) I know changes that occur in Spring. (P)	**Knowledge:** I know what clothes keep me warm. (P) I know changes in different conditions e.g. ice to water. (P) I know different animal's habitat .(B) I know changes in the winter. (P)	**Knowledge:** I know different textures and materials. (P) I know how to match different textures. (P)	**Knowledge:** I know different animal's noises and sounds. (B) I know different animals. (B) I know the difference between young and old animals. (B)	**Knowledge:** I know how to explore floating and sinking. (P) I know about the natural world. (P) I know different plants at the seaside. (B) I know different animals on the beach. (B)
Skills:	**Skills:**	**Skills:**	**Skills:**	**Skills:**	**Skills:**	**Skills:**

	I can point to the main feature on an animal when asked. I can identify that leaves grow on plants. I can demonstrate curiosity in the outside world.	I can use a torch to light up an area. I can express curiosity for the outside world.	I can choose appropriate clothes for the weather. I can observe and focus on experiments. I can express curiosity and interest in the environment.	I can show an interest in different textures and materials I can use sensory exploration for different materials	I can make animal noises/react to sound I can use matching to match babies and adults I can differentiate between different adults	I can express interest in floating objects I can engage in water play I can use sensory exploration for the different aspects of the beach
Investigation:	**Investigation:** Why do materials feel different? **Observe** • Are the children confident to touch different materials? • Can they talk about the details and features of different objects and materials?	**Investigation:** Why does the snow melt? **Observe** • Can the children engage and interact about what happens as the ice melts? • Do they notice similarities and differences between the objects?	**Investigation:** What is a shadow? **Observe** • Do the children show an interest in playing with the torches? • Can they describe what they see?	**Investigation:** Why do buildings stay up? **Observe** • Do the children show an interest in playing with the lego/bricks? • Can they describe what they see?	**Investigation:** What is that animal? **Observe** • Can the children name the animals in the pictures? • Do the children notice any similarities and differences between the animals? • Can the children use appropriate adjectives to describe the animals' fur, claws, patterns and colours?	**Investigation:** What can we find at the beach? **Observe** • Can the children talk about the different aspects of a beach?
Year 3	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Topic: Healthy Choices	**Topic:** Hibernating	**Topic:** Our Colourful World	**Topic:** Knights and Dragons	**Topic:** Splash!	**Topic:** Take me on a Journey
Coverage:	**Coverage:** **Everyday Materials** Explore food through smell, texture, taste. Changing materials by melting/ hardening.	**Coverage:** **Animals** Explore routines and sleep patterns of animals and humans **Seasonal changes-** observe changes that occur in Winter. Use of binoculars and telescope to see the world.	**Coverage:** **Plants** Explore colour and texture through plants and food. **Animals** Explore colour through animals Colour change investigations	**Coverage:** **Animals** Name different animals found in castle- farmyard animals **Plants** **Seasonal changes-** observe changes that occur in spring.	**Coverage:** **Everyday Materials** Demonstrate melting and freezing. Demonstrate and explore materials that float and sink. Explore bubbles and bubble blowing.	**Coverage:** **Everyday Materials** Explore how vehicles move on different surfaces and materials. Explore different ways of travelling, e.g. water, road etc. **Seasonal changes-** observe changes that occur in summer
Knowledge:	**Knowledge:** I know different types of food through taste, texture and smell (B) I know about the melting and freezing of food (P)	**Knowledge:** I know about night and day for animals (B) I know changes in winter weather (p) I know how to use binoculars and telescopes to see the world (P)	**Knowledge:** I know how to explore different colours (C) I know how to explore different textures through food (C) I know about different plants (B) I know different animal colours (B)	**Knowledge:** I know about different dragons (B) I know different animal textures (B) I know different farmyard animals (B) I know changes that take place in spring (P)	**Knowledge:** I know about melting and freezing (P) I know how to use water play to explore sinking and floating (P) I know how to explore bubbles and how to blow them (P)	**Knowledge:** I know how different vehicle's move (P) I know different textures through sensory exploration (P) I know different ways of travelling (P) I know summer weather changes (P)
Skills:	**Skills:** I can eat a range of different foods	**Skills:** I can take an interest in binoculars and telescopes	**Skills:** I can explore different food textures	**Skills:**	**Skills:** I can express interest in floating objects	**Skills:**

	I can explore different food textures	I can observe the effect of light and dark I can explore hot and cold items	I can point to different animal colours I can point to different parts of a plant	I can find the birds, fish or people from a range of pictures I can identify a range of common animals	I can engage in water play I can use sensory exploration for the different aspects of the sea	I can touch different surfaces with various textures I can respond to different vehicle's
Investigation:	**Investigation:** What is that smell? **Observe** • Do the children notice the different smells? • Can they talk about the similarities and differences between the smells?	**Investigation:** What does that animal do at night? **Observe** • Do the children know the names of the animals? • Can the children explain what 'nocturnal' means? • Can the children describe similarities and differences between the animals?	**Investigation:** Why do colours change? **Observe** • Can the children name the colour? • Do they make comparisons between the different colours and changes?	**Investigation:** Do dragons exist? **Observe** • Can the children identify a dragon? • Can they differentiate it from a real animal?	**Investigation:** Why is water wet? **Observe** • Can the children use the tools provided to make water painting? • Do they notice the different features of the water?	**Investigation:** How do vehicles move? **Observe** • Do the children show an interest in a particular type of vehicle? • Are they interested in how it works? • Can they say how the vehicles are the same or different?

BENNERLEY FIELDS SCHOOL

Science Stage 2

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Building on stage 1 learning: Understanding animals Identifying that people/animals age and change over time	Building on stage 1 learning: Being able to make different sounds Understanding what our ears do	Building on stage 1 learning: Observing experiments Exploring melting and freezing	Building on stage 1 learning: Understanding of animals living in different places Understanding that people grow and change over time	Building on stage 1 learning: Being able to explore different textures Observing experiments	Building on stage 1 learning: To understand push and pull To explore how things fall
	Topic: Me and My Memories	**Topic:** Make some Noise!	**Topic:** Let's Get Fit!	**Topic:** Exploring our Neighbourhood	**Topic:** Nature Detectives	**Topic:** Colourful Carnivals
Coverage:	**Coverage:** **Biology** **Animals, including humans:** **Evolution and Inheritance:** Label and human body and senses, human development	**Coverage:** **Physics** **Sound:** How sounds are made and travel through the ear, pitch and volume.	**Coverage:** **Physics** **Forces and Magnets** Exploring gravity through pushing and pulling and friction.	**Coverage:** **Chemistry** **States of Matter:** Understanding of solids and liquids and how they change.	**Coverage:** **Biology** **Animals, including humans:** **Living things and their habitats:** **Evolution and Inheritance** Habitats, basic needs of animals, life cycles	**Coverage:** **Chemistry** **Everyday Materials and uses of everyday materials.** Identify and compare physical properties, how materials can be changed
ENGAGEMENT PATHWAY **Knowledge:**	**Knowledge:** I know different animals that live in the woodlands. (B) I know how to explore different textures and feel similarities and differences. (P) I know the different senses.	**Knowledge:** I know how to explore different animal's noises and sounds. (B) I know where I hear sounds.	**Knowledge:** I know how to explore pushing and pulling. I know that a ball falls to the ground when dropped.	**Knowledge:** I know how to explore floating and sinking. (P) I know how to take an interest in the natural world. (P) I know how to explore freeze or melt.	**Knowledge:** I know what clothes keep me warm. (P) I know how to observe changes in different conditions e.g. ice to water. (P) I know explore different animal's habitats.(B)	**Knowledge:** I know how to explore different textures and materials. (P) I know how to match different textures. (P)
Skills:	**Skills:** I can point to the main feature on an animal when asked. I can demonstrate curiosity in the outside world.	**Skills:** I can give a single property of an instrument, e.g. loud I can make animal noises/react to sound.	**Skills:** I can find that objects roll if I push them. I can try to stick magnets to different objects.	**Skills:** I can express interest in floating objects I can engage in water play.	**Skills:** I can choose appropriate clothes for the weather.	**Skills:** I can show an interest in different textures and materials I can use sensory exploration for different materials.
Knowledge:	**Knowledge:**	**Knowledge:**	**Knowledge:**	**Knowledge:**	**Knowledge:**	**Knowledge:**

	I know key animals in an environment I know that certain characteristics are inherited I know the different senses I know that I grow and change	I know how sounds are made I know that sound travels to the ear I know the difference between pitch and volume	I know the effects of pushing and pulling I know friction when performing an activity I know about gravity	I know properties of a liquid and solid I know how to conduct experiments of melting and freezing I know how and why materials freeze or melt	I know the different habitats animals live in I know the different needs animals need for survival I know the human life cycle	I know the physical properties of materials I know how materials can be changed I know how different materials can be used
Skills:	**Skills:** I can describe simply what I have seen an animal do or eat, e.g. by saying the word, picking a picture, imitating the action or noise, etc. I can find the birds, fish or people from a range of pictures I can notice that some animals have similar features, e.g. points to the eyes/mouth of different animals	**Skills:** I can give a single property of an instrument, e.g. loud I can identify a sound source when an object is out of view I can watch the string of an instrument as it is plucked I can point to my ear on request	**Skills:** I can find that objects roll if I push them I can try to stick magnets to different objects I can select different objects to try to balance on top of one another I can find an item in my immediate environment that can be pulled	**Skills:** I can describe how the temperature of the water feels in simple terms, e.g. hot or cold I can observe and respond to the result of putting water in the freezer I can select pictures of items I think will melt I can observe and respond to the results of putting ice in the Sun	**Skills:** I can point out something found when exploring a habitat, e.g. I can point out a bug found in soil I can identify an attribute of a habitat, e.g. the Arctic is "Cold" I can match pictures of infant animals to adult animals I can identify that different pets or animals eat different things	**Skills:** I can identify one property of a material being handled, e.g. cold, hard, shiny, etc. I can manipulate an object in my hand to find out properties I can find materials with a specific property, e.g. feels different objects in the garden to find a collection of rough items I can observe and respond to a floating balloon
Investigation:	**Investigation:** What can you remember?	**Investigation:** Can water make music?	**Investigation:** How does it move?	**Investigation:** Can we find treasure?	**Investigation:** Does a snail have a nose? Where do snails live?	**Investigation:** Do all balls bounce?
Year 2	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 2	Building on stage 1 learning: To understand what a shadow is To be able to create and explore shadows	Building on stage 1 learning: To understand that plants need light and water To understand that plants can be eaten	Building on stage 1 learning: To differentiate between two materials To be able to successfully use and manipulate a material	Building on stage 1 learning: To show awareness of danger To explore how electricity is switch on and off	Building on stage 1 learning: To understand that animals eat different things to humans To understand that animals live in different places to humans	Building on stage 1 learning: To be able to differentiate between a rock and earth To explore and identify simple change
	Topic: Whatever the weather	**Topic:** Down in the woods	**Topic:** London Life	**Topic:** In the Past	**Topic:** The Animal Kingdom	**Topic:** Beach Explorer
Coverage:	**Coverage:** **Physics** **Seasonal changes:** **Light:** Changes across the seasons Shadows and how they change in relation to the sun Simple equipment. Used for measuring the weather	**Coverage:** **Biology** **Plants:** **Living things and their habitats:** Identifying and classifying a range of plants, identifying habitats including food and food chains.	**Coverage:** **Chemistry** **Everyday materials and uses of everyday materials.** Identify and explore how materials can be used for more than one thing. Changes of materials	**Coverage:** **Physics** **Electricity:** Recognising dangers, sources of electricity.	**Coverage:** **Biology** **Animals, including humans:** **Living things and their habitats** Identify and name a range of animals, herbivores, carnivores and omnivores. Explore habitats and food chains.	**Coverage:** **Chemistry** **Rocks** Everyday materials: rocks and erosion, changes to rocks over time.

ENGAGEMENT PATHWAY Knowledge:	**Knowledge:** I know that light can change across seasons. I know what a shadow is. I know what a thermometer is.	**Knowledge:** I know some different plants I know of a food chain. I know that plants need food.	**Knowledge:** I know how materials can be used for more than one purpose. I know how materials can change I know two purposes of a material	**Knowledge:** I know of some sources of electricity. I know that electricity can be dangerous	**Knowledge:** I know animals live in different places. I know that animals eat different things. I know different animal habitats and some of their features	**Knowledge:** I know some rocks found in my environment.
Skills:	**Skills:** I can explore some changes in the weather I can recognise something that I might see outside in autumn. I can recognise different types of weather, with support. I can recognise that the Sun is seen during the day.	**Skills:** I can begin to identify that plants need seeds, with support e.g. by pointing to the soil when shown a range of items I can begin to identify different leaves e.g. flower, grass, pine needles, etc. I can begin to differentiate between plant life, e.g. flowers and leaves, trees and other plants I can notice plants in their local environment	**Skills:** I can begin to sort materials into a simple group, e.g. rough with support. I can identify if I can pull, bend, or squash a material after manipulating it with support. I can test new/unfamiliar objects, e.g. through manipulation/squeezing.	**Skills:** I can choose an electrical object that will give light, with support. I can choose an electrical object that will move, with support. I can point to/find the electrical sockets in the room, with support. I can begin to show an understanding of how simple electronic objects work, e.g. pushes buttons to make a car move forward	**Skills:** I can name some animals and recognise some animal habitats, with support. I can communicate what I can hear in the environment. I can echo a member of staff to produce animal sounds.	**Skills:** I can match rocks with support. I can find different types of rocks outside. I can carry out simple adult led tests on rocks and minerals.
Knowledge:	**Knowledge:** I know that light changes across the seasons I know what a shadow is and know how the sun and light effect it I know how to use a thermometer for measuring temperature	**Knowledge:** I know a range of plants I know how to investigate food chains I know that plants need food/how they use it	**Knowledge:** I know how materials can be used for more than one purpose I know how materials can change I know two purposes of a material	**Knowledge:** I know immediate and potential dangers I know how electricity works I know that electricity can be dangerous	**Knowledge:** I know a range of animals in different locations I know that animals eat different things and why they do. I know different animal habitats and their features	**Knowledge:** I know rocks found in my environment. I know that rocks change over time I know why rocks change
Skills:	**Skills:** I can show an awareness of changes in the weather I can identify something that I might see outside in winter and summer I can name different types of weather I can identify that the Sun is seen during the day	**Skills:** I can identify that plants need seeds e.g. by pointing to the soil when shown a range of items I can identify leaves in a variety of situations, e.g. flower, grass, pine needles, etc. I can differentiate between plant life, e.g. flowers and leaves, trees and other plants I can notice and respond to plants in their local environment	**Skills:** I can communicate about pliable material activity in terms of changing shapes I can sort materials into a simple group, e.g. rough I can identify if I can pull, bend, or squash a material after manipulating it I can test new/unfamiliar objects, e.g. through manipulation/squeezing	**Skills:** I can select an electrical object that will give light I can select an electrical object that will move I can point to/finds the electrical sockets in the room I can demonstrate an understanding of how electronic objects work, e.g. pushes buttons to make a car move forward	**Skills:** I can comment and asks questions about the natural world I can communicate what they can hear in the environment I can give creatures an appropriate name, e.g. bird if flying I can echo a member of staff to produce animal sounds	**Skills:** I can match rocks by size with support I can find and comment on different types of rocks outside I can carry out simple adult led tests on rocks and minerals, e.g. pouring water on different materials to see if the water I can match rocks by texture with support
Investigation:	**Investigation:** How big is a raindrop?	**Investigation:** How do leaves change?	**Investigation:** How do you make bread?	**Investigation:** What is a circuit?	**Investigation:** Can you leap like a frog?	**Investigation:** How wild is the wind?

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Building on stage 1 learning: To recognise the moon To explore day and night	Building on stage 1 learning: To explore different types of food through taste To identify simple body parts	Building on stage 1 learning: To explore mixing To be able to differentiate between materials	Building on stage 1 learning: To understand what a plant is To understand plants, need water and light	Building on stage 1 learning: To observe sinking and floating	Building on stage 1 learning: To understand that magnets stick To be able to use a magnet effectively
Topic:	**Topic:** Blast off!	**Topic:** I Need a Hero!	**Topic:** Messy Mixtures	**Topic:** In the Garden	**Topic:** A Pirate Life	**Topic:** On the Coast
Coverage:	**Coverage:** **Physics** **Earth and Space:** Explore a range of materials and their properties. Identify the phases of the moon explore the planets.	**Coverage:** **Biology** **Animals including humans:** Eating healthily, exploring the senses of the body, exploring functions of different part of the body.	**Coverage:** **Chemistry** **Properties and changes of State:** Changes of state of materials, properties of materials and changes through mixing.	**Coverage:** **Biology** **Plants:** Life cycles of plants, functions and parts of flowers and plants.	**Coverage:** **Chemistry/Physics** **Everyday materials and uses for everyday materials.** **Forces** Sinking and floating, using/ investigating a variety of materials to make a boat.	**Coverage:** **Physics** **Forces and Magnets** Investigate magnets and the use of magnets.
Knowledge:	**Knowledge:** I know that the moon changes I know different materials and their properties I know that there are different planets besides us	**Knowledge:** I know healthy and unhealthy foods I know the different senses and what they do I know the different functions of the body	**Knowledge:** I know how to mix different materials together I know when a material has changed state I know when the property of a material has changed	**Knowledge:** I know that plants live and die I know the function of different parts of the plant I know the difference between flowers and plants	**Knowledge:** I know how to observe and conduct objects sinking and floating I know how to find and investigate materials to make a boat I can know materials that will sink and float	**Knowledge:** I know the effects of magnets on each other I know that magnets stick to different materials and why I know how to explore forces
Skills:	**Skills:** I can notice the moon in the sky I can identify that the Moon can be seen at night I can identify that the Sun and Moon are in the sky I can communicate about something I do during the day and night	**Skills:** I can recognise the main body parts, e.g. leg, arm I can point to the main features on a person's face when asked I can point to parts of my body when asked I can draw a person with a head	**Skills:** I can find materials with a specific property, e.g. feels different objects in the garden to find a collection of rough items I can test which items I think will melt with assistance I can communicate about pliable material activity in terms of changing shapes I can explore objects and materials I am given	**Skills:** I can observe the results of putting a plant in the dark I can identify leaves in a variety of situations, e.g. flower, grass, pine needles, etc. I can differentiate between plant life, e.g. flowers and leaves, trees and other plants I can identify one characteristic of a plant or seed, e.g. small	**Skills:** I can select materials to use from a given collection I can observe and respond to a floating balloon I can put objects I have tested in a group	**Skills:** I can try to stick magnets to different objects I can put objects that stick to a magnet in a group I can find an item in my immediate environment that can be pulled
Investigation:	**Investigation:** What keeps us dry?	**Investigation:** Why do we have teeth?	**Investigation:** What is stickier?	**Investigation:** Can seeds grow anywhere?	**Investigation:** Why do boats float?	**Investigation:** Can you be a superhero?
Year 4	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**

	Building on stage 1 learning: Understanding animals Identifying that people/animals age and change over time	Building on stage 1 learning: Observing experiments Exploring melting and freezing	Building on stage 1 learning: To differentiate between two materials To be able to successfully use and manipulate a material	Building on stage 1 learning: To differentiate between two materials To be able to successfully use and manipulate a material	Building on stage 1 learning: To understand what a plant is To understand plants, need water and light	Building on stage 1 learning: To understand that plants need light and water To understand that plants can be eaten
Topic:	**Topic:** A Land Before Time	**Topic:** The Big Freeze!	**Topic:** Mighty Machines	**Topic:** Brilliant Buildings	**Topic:** Let's Get Growing!	**Topic:** All About Africa
Coverage:	**Coverage:** **Biology** **Animals, including humans:** **Living things and their habitats:** **Evolution and Inheritance:**Investigate a range of fossils identifying whether they are plant or animal. Explore reptiles and how they have adapted to their environment.	**Coverage:** **Chemistry** **Properties and Changes of State** Changes of state of materials through freezing, thawing and evaporating	**Coverage:** **Physics** **Forces:** Friction impacting on speed of vehicles on ramps	**Coverage:** **Physics** **Forces:** Building bridges	**Coverage:** **Biology** **Plants:** Life cycles of plants, functions and parts of flowers and plants.	**Coverage:** **Biology** **Animals, including humans:** **Living things and their habitats:** **Evolution and Inheritance:** Habitats, basic needs of animals, life cycles
Knowledge:	**Knowledge:** I know different types of fossils, such as bones, teeth, shells, imprints, or preserved plants. I know that that fossils can provide information about the past and help us learn about extinct plants and animals. I know the names of common reptiles, such as turtles, snakes, lizards, and crocodiles. I know basic characteristics of reptiles, including scaly skin, cold-bloodedness, and laying eggs. I know how to describe the habitats where reptiles are typically found, such as deserts, rainforests, or grasslands. I know the different body parts of reptiles, such as legs, claws, tails, and heads with distinct features.	**Knowledge:** I know that some materials can change state when heated or cooled, and recognize the effects of these changes. I know how to describe simple processes involved in the changes of state, such as freezing, melting, boiling, and condensation. I know and use basic scientific vocabulary related to changes of state, such as solid, liquid, gas, freeze, melt, boil, and condense I know everyday examples of changes of state, such as water turning to ice, steam rising from a boiling kettle, or condensation forming on a cold surface.	**Knowledge:** I know how to identify and describe different surfaces and materials that cause friction, such as rough and smooth objects. I know that friction is a force that opposes motion when two surfaces rub against each other. I know that some materials produce more friction than others, leading to slower movement.	**Knowledge:** I know how to identify and describe different types of forces such as pushing, pulling, twisting, and stretching. I know that forces have both magnitude and direction. I know that objects move due to the effect of forces. I know how to recognize and explain properties of materials.	**Knowledge:** I know how to identify the basic parts of a plant: roots, stem, leaves, and flowers. I know that plants need light, water, and nutrients from the soil to grow. I know that plants have a life cycle: from seed to germination, growth, flowering, and fruit production. I know how to describe the different ways that seeds can disperse (e.g., wind, water, animals). I understand that plants play an important role in providing us with food.	**Knowledge:** I know how to identify and name some common animals, including mammals, birds, fish, reptiles, and amphibians related to the topic. I know that animals have offspring that grow into adults, which is part of their life cycle. I know how to sequence the basic stages of a simple life cycle of a frog, in chronological order. I know that animals have specific needs to survive and grow, including food, water, and shelter. I know the different habitats where animals live and understand why certain animals inhabit specific habitats.

	I know the different ways reptiles move, such as crawling, slithering, or swimming.					
Skills:	**Skills:** I can identify and describe similarities and differences between fossils and living organisms. I can understand how and why reptiles shed their skin as they grow. I can compare and contrast reptiles with other groups of animals, such as mammals or birds, noting their unique features and adaptations. I can develop observational skills to identify and classify various reptiles based on their physical characteristics.	**Skills:** I can Identify and name common materials which can change from one state to another, e.g., ice melting into water, water boiling into steam. I can observe and discuss the characteristics of different materials in different states, including their appearance and behaviour. I can compare the differences between solids, liquids, and gases, and understand that these states can change due to external factors like temperature. I can conduct basic investigations to explore and observe changes in state, for example, by heating ice cubes and observing the water changing from solid to liquid.	**Skills:** I can explain the effects of friction on everyday objects, such as why a car's tires grip the road or why it is harder to slide on a carpet compared to a polished floor. I can conduct simple experiments to investigate how friction affects motion, such as rolling objects down a ramp made of different materials and observing the differences in speed. I can learn about ways to reduce friction, such as using lubricants like oil or grease to make surfaces smoother.	**Skills:** I can investigate the effects of different forces on bridges, including how they make objects stop, move faster, or slow down. I can explore different materials and predict which ones are more effective.	**Skills:** I can care for common plants in the environment. I can observe and explain how plants change and grow over time. I can investigate the different conditions needed for plants to survive and grow (e.g., sunlight, water, temperature). I can grow plants for food.	**Skills:** I can observe and describe how animals undergo changes as they grow, including physical changes. I can match animals with what they need to survive. I can match animals to their habitats.
Investigation:	**Investigation:** **Why do we have teeth?**	**Investigation:** **How do leaves change?**	**Investigation:** **How does it move?**	**Investigation:** **Where do worms live?**	**Investigation:** **Can seeds grow anywhere?**	**Investigation:** **What is the life cycle of a ladybird?**

BENNERLEY FIELDS SCHOOL

Science Stage 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Building on stage 2 learning: Understand and explain what a habitat is. Identifying that animals and plants are linked	Building on stage 2 learning: Understand what earth is at its features Understand that there are other planets besides us	Building on stage 2 learning: Understand what gravity is Explore the effects of pushing and pulling	Building on stage 2 learning: To know that rocks change over time To be able to identify different types of rocks	Building on stage 2 learning: To identify different material properties To understand how different materials can be used	Building on stage 2 learning: Understand a range of different plants To begin to understand food chains
Topic:	**Topic:** **The Blue Planet**	**Topic:** **Ancient Egypt**	**Topic:** **The Battle of Hastings**	**Topic:** **Natural Disasters**	**Topic:** **Good vs Bad**	**Topic:** **Farm to Fork**
Coverage:	**Coverage:** **Biology** **Living things and their habitats** **Animals, including humans** Classifying and sorting animals, food chains, food webs and aquatic habitats	**Coverage:** **Physics** **Earth and Space**	**Coverage:** **Physics** **Forces** Investigate forces, push, pull and friction, gravity.	**Coverage:** **Chemistry** **Rocks** Identifying and investigating rocks	**Coverage:** **Chemistry** **Properties and change of materials.** Investigating the change of materials through making solutions.	**Coverage:** **Biology** **Living things and their habitat** **Plants** Life cycles; Plant reproduction; Growing plants;
Knowledge:	**Knowledge:** I know key vocabulary related to classifying, food chains and food webs. I know how to identify groups and sub groups for sorting animals and living things according to their characteristics such as appearance and diet. I know the concept of a food chain and the role of the producer, consumer and decomposer. I know how to identify the differences between food webs and chains.	**Knowledge:** I know the earth orbits the sun and this makes day and night. I know how to identify the planets in the solar system. I know the major characteristics of the sun including how it provides heat and light for the earth. I know the moon changes shape each month.	**Knowledge:** I know that forces can be described by push and pull. I know objects move by different means, e.g. a windup toy, or a push along toy. I know the terms force, gravity, friction, air resistance. I know different surfaces affect friction. I know that air resistance affects the movement of objects.	**Knowledge:** I know different categories of rocks. I know the properties of different rocks. I know how different types of rocks are used. I know what a fossil is. I know fossils are found underground. I know group fossils. I know what erosion is. I know why rocks have eroded.	**Knowledge:** I know that solutions are formed when solutes dissolve in solvents. I know that there are different factors that affect the rate of dissolving such as temperature, surface area, stirring. I know how to safely make a solution. I know some changes are irreversible but there are methods of separation.	**Knowledge:** I know the names of the different parts of a common plant including roots, stem, trunk, leaves, flowers, and fruit. I know the basic needs of plants for survival. I know the life cycle of a plant. I know how plants reproduce including pollination and seed dispersal. I know that plants thrive in different habitats e.g.

	I know the features of an aquatic habitat and the organisms that live in them including fresh water and marine. I know the importance of conservation and the impact humans can have on aquatic habitats. I know that animals and plants that live in water have different features to survive.	I know that telescopes and satellites are used to explore the universe.	I know gravity makes things fall.			woodlands, meadows and gardens.
Skills:	**Skills:** I can use key vocabulary related to classifying, food chains and food webs. I can sort animals and living things into different groups and sub groups according to their characteristics such as appearance and diet. I can make a chain and the role of the producer, consumer and decomposer. I can compare the features of an aquatic habitat and the organisms that live in them including fresh water and marine. I can research the importance of conservation and the impact humans can have on aquatic habitats. I can explore some of the physical features of animals and plant that live in water.	**Skills:** I can connect the earth orbiting the sun with our day and night. I can order the planets in the solar system. I can explain why the sun is important by referring to its major characteristics including how it provides heat and light for the earth. I can explain why the moon appears different at different times. I can research and explore how telescopes and satellites are used to explore the universe.	**Skills:** I can demonstrate push and pull forces. I can explore and make different means of moving objects. I can explore friction through moving objects on different surfaces. I can respond to the term 'gravity', e.g. when commenting on any object falling to the ground. I can show how pushing and pulling can change the shape of an object, e.g. using malleable material.	**Skills:** I can look at examples of rock formations and comments on the shapes/colours and use the information to categorise them. I can explain why different rocks have different uses. I can suggest where they might find different rocks in their environment. I can explain what a fossil is and why they are important. I can sort different types of fossils by investigating their properties. I can explore the impact of erosion.	**Skills:** **I can make a solution using the scientific terms.** I can investigate what happens when you mix materials together. I can experiment with different solutions and understand the dangers of mixing. I can separate mixtures, e.g. using a filter paper.	**Skills:** I can state the function of different part of the plant. can state that flowers make seeds. I can order the reproduction cycle of a plant. I can explore pollination and seed dispersal. I can observe and describe changes that occur in plants over time including growth, flowering and fruit production. I can observe and order the life cycle of a plant. I can investigate the impact of different environments on plants including temperature, light and soil types.
Investigation:	**Investigation:** How does pollution affect habitats?	**Investigation:** Why does milk go off?	**Investigation:** How far can an arrow travel?	**Investigation:** What is sand?	**Investigation:** Are all mushrooms deadly?	**Investigation:** Why are trees tall?
Year 2	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Building on stage 2 learning: To identify different material properties To understand how different materials can be used	Building on stage 2 learning: To understand the different functions of the body To understand the different senses	Building on stage 2 learning: To understand that plants need water and light To understand why we stand up	Building on stage 2 learning: To understand what friction is To be able to identify what gravity is	Building on stage 2 learning: To understand the properties of solids, liquids and gases Be able to conduct experiments with freezing and melting	Building on stage 2 learning: To understand how light changes across the seasons To understand how the sun effects shadows
Topic:	**Topic:**	**Topic:**	**Topic:**	**Topic:**	**Topic:**	**Topic:**

	All Things Delicious!	Our Bodies	Food Chains	Vicious Vikings	The Water Cycle	Marvellous Mountains
Coverage:	**Coverage:** **Chemistry** **Properties and how changes of materials**	**Coverage:** **Biology** **Animals, including humans** **Evolution and inheritance** Teeth types; Tooth decay and hygiene; The digestive system	**Coverage:** **Biology** **Living Things and their Habitats** Food chains	**Coverage:** **Physics** **Forces** Floating and sinking, forces needed to move a sail boat.	**Coverage:** **Chemistry** **States of Matter,** Investigating solids, liquids and gases.	**Coverage:** **Physics** Light
Knowledge:	**Knowledge:** I know the different properties of certain materials I know how mixtures can make a cake I know how materials can change when heated/cooled	**Knowledge:** I know different tooth types I know the impact of tooth decay and potential problems I know how the digestive system works when we eat food	**Knowledge:** I know what a predator and prey is I know what a food chain is. I know the sun provides the energy in a food chain I know what a producer is. I know what a consumer is. I know what a herbivore and carnivore is I know how energy moves through a food chain. I know what a food web is	**Knowledge:** I know why something floats or sinks I know what forces are needed to move a boat I know why a boat does not sink	**Knowledge:** I know how to explore solids liquids and gases I know what a solid liquid and gas is I know what happens when things change state	**Knowledge:** I know how light works I know the effect light has on different objects
Skills:	**Skills:** I can understand simple safety rules when near heat/flames I can watch water boil and observes and describes the steam I can give two (or more) properties of a material	**Skills:** I can give examples of some of the life processes inherent to humans I can compare or match the body shape and skeleton of different animals I can observe and makes simple comments about obvious changes over time	**Skills:** **I can identify a predator and a prey** I can construct a food chain. I can explain the flow of energy. I can identify a herbivore and a carnivore in a food chain I can identify and construct a food web I can explore the effect of humans on the food chain.	**Skills:** I can predict whether an object will float or sink I can describe why some objects float and others sink I can explain the role of buoyancy in floating.	**Skills:** I can state which property and will sort materials before starting an activity I can communicate about how or if I can change a material back to its original state I can explain, using simple language, the differences between two materials	**Skills:** I can observe the shadows change I can create shadows using different shapes, e.g. with their hands or objects I can list some of the colours they see in a rainbow I can select a shiny object
Investigation:	**Investigation:** Which is the juiciest fruit?	**Investigation:** Is it safe to eat?	**Investigation:** What do owls eat?	**Investigation:** How do Vikings dye their clothes?	**Investigation:** How fast does water flow?	**Investigation:** What are sunglasses for?
Year 3	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Building on stage 2 learning: To understand how sound is made	Building on stage 2 learning:	Building on stage 2 learning:	Building on stage 2 learning:	Building on stage 2 learning:	Building on stage 2 learning:

	To differentiate between pitch and volume	To identify how electricity works To understand the dangers of electricity	To understand how light changes across the seasons To understand how the sun effects shadows	To understand the different functions of the body	To understand why an object freezes or melt	To understand what magnets do To understand what materials magnets attract
Topic:	**Topic:** **Press Play!**	**Topic:** **Stars and Stripes**	**Topic:** **Urban Life**	**Topic:** **The Roman Empire**	**Topic:** **Hubble, Bubble, Toil and Trouble**	**Topic:** **Magnificent Metal**
Coverage:	**Coverage:** **Physics** **Sound** Investigate sound, how it is made, how it transits and how the ear hears sound.	**Coverage:** **Physics** **Electricity** Understanding electricity, making circuits.	**Coverage:** **Chemistry/Physics** **Everyday Materials and used of everyday materials.** **Light**	**Coverage:** **Biology** **Animals including humans,** **Evolution and inheritance.**	**Coverage:** **Chemistry** **Properties and change of materials.** **States of matter** Enhancing knowledge of uses of materials and observing changes in materials in a range of conditions.	**Coverage:** **Physics** **Forces and magnets**
Knowledge:	**Knowledge:** I know the different elements of sound I know how sound is made I know how the ears hear sound	**Knowledge:** I know how electricity is made I know what an electrical circuit is and how to build one. I know what electricity does.	**Knowledge:** I know what sources and reflectors are. I know the impact the sun can have on our skin. I know what is and isn't transparent I know the meaning of opaque.	**Knowledge:** I know how joints work. I know the purpose of the skeletal system I know how the human body changes over a lifetime.	**Knowledge:** I know how to observe changes to materials. I know how to identify changes in a range of conditions I know how to enhance my knowledge of different materials	**Knowledge:** I know the names of different metals and some of their properties. I know the strengths of materials I know what magnetic fields are.
Skills:	**Skills:** I can match pictures of sounds I hear to their sound source I can give an example of how I can try to stop sound getting to my ears I can investigate how to make sounds on different instruments I can suggest if the sounds I hear are near or far away	**Skills:** I can demonstrate an awareness of some of the dangers of electricity I can describe, in simple terms, what a cell or battery may do, e.g. "Make it work" I can sort objects into groups that show if they use mains electricity I can relate the size of battery to an object, e.g. a watch has a small battery and a car has a bigger battery, etc	**Skills:** I can suggest what produces the light outside I can notice myself in a shiny object I can ask for more information to aid my understanding	**Skills:** I can identify that different people are different ages I can name the main parts of a human body I can sequence a series of three pictures showing human life cycle I can demonstrate how different parts of my body move, e.g. arms can go: up, down, around, backwards, forwards, etc.	**Skills:** I can demonstrate an awareness of the purpose of a variety of materials I can identify what they did to change a material I can identify which equipment I could use to separate mixtures when offered a selection	**Skills:** I can describe an object I am familiar with, giving several properties I can independently explore objects, finding and communicating simple differences I can start to use more reasoning skills as well as trial and error
Investigation:	**Investigation:** Can we block sounds?	**Investigation:** How do plugs work?	**Investigation:** Why do shadows change?	**Investigation:** What are joints for?	**Investigation:** Are all liquids runny?	**Investigation:** How mighty are metals?

BENNERLEY FIELDS SCHOOL

Science Stage 4

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Building on stage 3 learning: • Construct and interpret a variety of food chains, identifying producers, predators and prey. • Identify that humans and some animals have skeletons and muscles for support, protection and movement. • Describe the simple functions of the basic parts of the digestive system in humans. • Identify the different types of teeth in humans and their simple functions.	Building on stage 3 learning: • Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. • Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. • Investigate the way in which water is transported within plants.	Building on stage 3 learning: • Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Compare and group materials together, according to whether they are solids, liquids or gases. • Observe that some materials change state when they are heated or cooled,	Building on stage 3 learning: • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock.	Building on stage 3 learning: • Set up simple, practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment, e.g. thermometers • Gather, record, classify and present data in a variety of ways to help in answering questions.	Building on stage 3 learning: • Set up simple, practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment, e.g. thermometers • Gather, record, classify and present data in a variety of ways to help in answering questions.
	Topic: Animals including humans	**Topic:** Plants	**Topic:** Properties and change of material	**Topic:** Rocks	**Topic:** Forces and magnets	**Topic:** Earth and Space
Coverage	**Coverage:** **Biology** Animals including humans Plants	**Coverage:** **Biology** Animals including humans Plants	**Coverage:** **Chemistry** Properties and change of materials Rocks	**Coverage:** **Chemistry** Properties and change of materials Rocks	**Coverage:** **Physics** Forces & Magnets Earth & Space	**Coverage:** **Physics** Forces & Magnets Earth & Space
Pre entry	**113922 Life Cycles**	**113599 Plant variation**	**72172 Materials and there properties**	**116938 Learning about and exploring rocks**	**117330 Starting to explore forces**	**111714 Introduction to space and our world**
Knowledge:	**Knowledge:** I know that some animals produce eggs and some give birth to live young	**Knowledge:** I know the different parts of a plant, ie roots, stem, leaves and flower.	**Knowledge:** I know three natural and three man-made materials.	**Knowledge:** I can understand floating and sinking I can explore different colours and textures	**Knowledge:** I know how magnets react I know how different surfaces effect force	**Knowledge:** I know the land and sea when looking at globes and maps

	I can understand a life cycle and what that means					I know the terms light and dark.
Skills:	**Skills:** I can draw the life cycle of a butterfly I can name two animals that produce eggs I can name two animals that produce live young I can match a picture of a foal to a horse I can match a picture of a puppy to a dog	**Skills:** I can identify a similarity between two plants I can identify a difference between two plants I can sort plants into categories given a single criterion, eg flowering plants or non-flowering plants	**Skills:** I can name five different materials, e.g. plastic, glass, wood, metals, paper I can classify five objects by the material they are made from e.g. window-glass I can match five materials to their properties I can investigate the conditions for rusting	**Skills:** I can match given rocks by size with support I can match given rocks by colour with support I can match given rocks by texture with support	**Skills:** I can observe and start to identify objects floating and sinking I can stick magnets to at least two different objects I can find a minimum of two objects in their immediate environment that stick to magnets, with support I can make at least two objects move slower or faster	**Skills:** I can identify pictures of the earth, moon and sun I can sort pictures of day and night
Lower entry	**114691 Life cycles**	**40406 Plant growth and survival**	**76077 Materials and their properties**	**74591 Introduction to rocks**	**117331 What are forces and magnets?**	**115762 Introduction to earth and space**
Knowledge:	**Knowledge:** I know that animals and plants change as they age I know the that human ageing can be divided into six stages I know the main bodily changes humans go through as they age	**Knowledge:** I know what plants need to survive I can identify different parts of the plant I can identify elements of a food chain	**Knowledge:** I know a range of materials I know different properties of materials I can understand dissolving and heating	**Knowledge:** I can begin to understand the weathering process I know that rocks can be classified	**Knowledge:** I know what gravity is I know what repel and attract are.	**Knowledge:** I know the type of rocket that is needed to put things in space I know the three things that are required for a person to survive on the moon I know the fact that the sun is the centre of our solar system
Skills:	**Skills:** I can draw a detailed life cycle diagram I can identify the main features of the human body	**Skills:** I can explore recognise and sort different plant parts to a given criterion using a picture chart I can identify plant parts and what plants need to survive by observation I can recognise the physical changes that occur during the growth of a plant in the absence of specific ingredients I can observe and identify key components of a simple food chain.	**Skills:** I can identify common materials, i.e. wood, metal, paper, rock, plastic, fabric I can sort a given selection of materials according to properties, eg texture, flexibility, transparency I can sort and name a given selection of materials according to their physical state, ie gas, liquid or solid I can investigate the buoyancy of at least five given materials I can sort a selection of materials into materials that dissolve and those that do not dissolve I can investigate the hardness of at least three given objects, e.g. a ball, block of wood, rock I can investigate the effect of heating a variety of	**Skills:** I can group given rocks on the basis of their characteristics, e.g. colour, texture I can recognise which of the given rocks are the hardest and the softest using the scratch test I can state three causes of weathering I can identify one example of weathering in the local environment.	**Skills:** I can use the word gravity when commenting on objects falling I can sort given objects into magnetic and non-magnetic categories I can use the signs 'magnetic' and 'non-magnetic' when making predictions and observing I can start using the terms 'attract' and 'repel' appropriately I can describe magnets as having two poles, i.e. north and south I can find items or surfaces that help to create more friction to stop them slipping	**Skills:** I can launch a model rocket I can recognise from photographs the moon, the sun, the earth, a planet and the stars I can explore how craters on the moon are made

			materials, eg ice, chocolate			
Higher entry	**114691 Life cycles**	**72174 Biology: Plants**	**114817 Materials and their properties**	**74591 Introduction to rocks**	**117331 What are forces and magnets?**	**76661 Space, planets and the earth**
Knowledge:	**Knowledge:** I know how the bodies of boys and girls change as they go through puberty I know the names given to the life stages of at least two other animals I know the life cycle of a frog I know that animals and plants change as they age I know the that human ageing can be divided into six stages I know the main bodily changes humans go through as they age	**Knowledge:** I know the conditions needed for seeds to germinate I know the life cycle of a bean.	**Knowledge:** I know how to group materials according to characteristics such as hardness, bendiness and shininess I know the fact that certain substances will dissolve in water and can be retrieved by evaporation I know the properties of at least two materials which make them suitable for particular purposes I know the fact that mixing and dissolving do not make new substances and are reversible processes I know the fact that chemical reactions produce new substances and may not be reversible	**Knowledge:** I know how the weathering process works. I know that rocks can be classified	**Knowledge:** I know what gravity is I know what repel and attract mean.	**Knowledge:** I know the different moon phases by keeping a ten-day record I know the names of planets I know the fact that the sun is the centre of our solar system
Skills:	**Skills:** I can draw a detailed life cycle diagram I can identify the main features of the human body	**Skills:** I can name at least three parts of a plant, e.g. stem, leaf, root I can record the change in height of a bean plant over a period of at least two weeks I can draw a bar chart to show the change in height over a period of at least two weeks I can classify at least five vegetables according to the part of the plant we eat, eg leaf, root, stem	**Skills:** I can separate a mixture of substances by sieving, filtration, dissolving and evaporation	**Skills:** I can group given rocks on the basis of their characteristics, e.g. colour, texture I can recognise which of the given rocks are the hardest and the softest using the scratch test I can state three causes of weathering I can identify one example of weathering in the local environment	**Skills:** I can use the word gravity when commenting on objects falling I can sort given objects into magnetic and non-magnetic categories I can use the signs 'magnetic' and 'non-magnetic' when making predictions and observing I can start using the terms 'attract' and 'repel' appropriately I can describe magnets as having two poles, ie north and south I can find items or surfaces that help to create more friction to stop them slipping	**Skills:** I can identify the planets in the solar system I can recognise from photographs the moon, sun, Earth, another planet and stars I can use a video camera to make a space tourist advert
Investigation	**Investigation:** Why do we grow and change?	**Investigation:** What is the life cycle of a plant?	**Investigation:** What material is best for a solid structure?	**Investigation:** How are fossils formed?	**Investigation:** Why do magnets attract?	**Investigation:** Why do we have a moon?
Year 2	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
	Building on stage 3 learning: • Construct and interpret a variety of food chains,	Building on stage 3 learning:	Building on stage 3 learning:	Building on stage 3 learning:	Building on stage 3 learning:	Building on stage 3 learning:

	identifying producers, predators and prey. • Identify that humans and some animals have skeletons and muscles for support, protection and movement. • Describe the simple functions of the basic parts of the digestive system in humans. • Identify the different types of teeth in humans and their simple functions.	• Construct and interpret a variety of food chains, identifying producers, predators and prey. • Identify that humans and some animals have skeletons and muscles for support, protection and movement. • Describe the simple functions of the basic parts of the digestive system in humans. • Identify the different types of teeth in humans and their simple functions.	• Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock. • Compare and group materials together, according to whether they are solids, liquids or gases. • Observe that some materials change state when they are heated or cooled,	• Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock. • Compare and group materials together, according to whether they are solids, liquids or gases. • Observe that some materials change state when they are heated or cooled,	• Set up simple, practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment, e.g. thermometers • Gather, record, classify and present data in a variety of ways to help in answering questions.	• Set up simple, practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment, e.g. thermometers • Gather, record, classify and present data in a variety of ways to help in answering questions.
Topic	**Topic:** Living things and their habitats	**Topic:** Evolution and inheritance	**Topic:** States of matter	**Topic:** Everyday materials and their uses	**Topic:** Light and sound	**Topic:** Electricity
	Coverage: **Biology** Living things and their habitats Evolution and inheritance	**Coverage:** **Biology** Living things and their habitats Evolution and inheritance	**Coverage:** **Chemistry** States of matter Everyday materials and their uses	**Coverage:** **Chemistry** States of matter Everyday materials and their uses	**Coverage:** **Physics** Light & Sound Electricity	**Coverage:** **Physics** Light & Sound Electricity
Pre entry	**11720 Living things and their habitats**	**114507 Environment, Inheritance and evolution**	**72669 Introduction to solids, liquids and gases**	**113526 Introduction to everyday materials**	**84391 Introduction to light and sound**	**111848 Electricity and what uses it**
Knowledge:	**Knowledge:** I know at least two things I may find living in the soil or garden I know at least two places where I may find common animals or birds	**Knowledge:** I know the elements plants need for survival	**Knowledge:** I know the meaning of the terms solid, liquid, gas, condensation, boiling point, freezing point and evaporation I know the boiling point and the freezing point of water	**Knowledge:** I know the properties of different materials I know different methods of manipulating materials	**Knowledge:** I know different light sources I know the different elements of sound. I know what reflection is	**Knowledge:** I know what electricity is I know how to use electrical devices safely
Skills:	**Skills:** I can take photos of at least two different things I may find in my locality I can use photographs to select at least two animals with similar characteristics I can use photographs to show at least two different habitats for animals.	**Skills:** I can use given objects, symbols or photographs to identify parts of a plant I can pot a plant using the correct equipment I can identify the food of three animals I can use smell to identify at least two different foods	**Skills:** I can identify at least three solids, three liquids and three gases I can show in a diagram, how particles are arranged in solids, liquids and gases I can identify at least two changes in states of matter, which are reversible and two	**Skills:** I can give a simple statement about how given materials change shape, e.g. smaller, bigger I can find at least two materials of the same texture, e.g. rough, smooth, hard, soft	**Skills:** I can identify at least three different sources of light I can identify at least three different sources of sound I can listen to the six different types of sound, i.e. high, low, loud, quiet, fast and slow	**Skills:** I can link at least three everyday appliances to their purpose, e.g. a hairdryer for drying wet hair I can name at least five electrical appliances I can identify at least two dangers of electricity

			changes which are non-reversible.	I can group given materials into at least two simple groups, e.g. rough and smooth I can find materials of a given texture with the support of visual prompts I can understand what 'pull', 'bend' and 'squash' mean with visual prompts I can manipulate given materials to make them bigger or smaller.	I can look at the reflection of light using a mirror I can turn at least three light sources on and off using a single switch I can turn at least three sound sources on and off using a single switch. I can co-operate with a staff partner, e.g. through eye contact, vocal response, reaching and grasping in at least three situations.	I can identify at least three appliances that produce heat, sound, light I can name the main parts of an electrical circuit, e.g. bulb, wire, plug, battery
Lower entry	**111722 Living things and their habitats**	**114826 Evolution and inheritance**	**114810 States of matter**	**111780 Exploring everyday materials and their properties**	**84391 Introduction to light and sound**	**11332 Electricity with support**
Knowledge:	**Knowledge:** I know the physical features of at least three living things and begin to group them by these features I know what at least three different animals eat in their habitats	**Knowledge:** I know how living things have changed over time I know how fossils provide evidence for life in the past I know the fact that certain characteristics are inherited and that variation exists within siblings I know how living things possess characteristics which adapt them to their surroundings I know how adaptations can lead to evolutionary changes in living things.	**Knowledge:** I know that all substances can exist in three states, i.e. solid. liquid, gas I know that some substances behave in ways that suggest they are in a different state I know that substances will change state if heated I know the terms used to describe the changes in state of water I know the terms used to describe the states of matter for water as used in weather I know how extreme weather can cause rapid changes of state and temperature.	**Knowledge:** I know the properties of different materials	**Knowledge:** I know different light sources I know the different elements of sound I know what reflection is	**Knowledge:** I know at least three dangers of electricity
Skills:	**Skills:** I can record at least three living things I have found in my locality I can record or draw the habitat in which I have found a living thing	**Skills:** I can explore different fossils I can identify similarities and differences	**Skills:** I can identify different types of weather and temperature I can explore different elements	**Skills:** I can recognise and name at least six everyday materials I can distinguish between an object and the material(s) from which is it made I can become familiar with at least eight different properties of everyday materials I can group together given everyday objects based on their properties	**Skills:** I can identify at least three different sources of light I can identify at least three different sources of sound I can listen to the six different types of sound, ie high, low, loud, quiet, fast and slow I can look at the reflection of light using a mirror I can turn at least three light sources on and off	**Skills:** I can identify at least five household appliances that use electricity I can complete a diagram of a given circuit I can use a circuit diagram to construct a circuit I can make a safety poster showing the dangers of electricity

				I can recognise that one material can be used to make many different objects, i.e. metal can be used to make coins, cans, cars and table legs I can state why a material is useful or non-useful for a particular purpose I can experiment with different given materials to find out which is best for a particular purpose, ie what is the best material for making an umbrella.	using a single switch I can turn at least three sound sources on and off using a single switch. I can co-operate with a staff partner, e.g. through eye contact, vocal response, reaching and grasping in at least	
Higher entry	**82042 Living things in their environment**	**114826 Evolution and inheritance**	**114810 States of matter**	**116347 Introduction to everyday materials**	**70357 Science: Sound and Light**	**121320 Learning the Basics of Electricity**
Knowledge:	**Knowledge:** I know at least three different global habitats and the plants and animals found there	**Knowledge:** I know how living things have changed over time I know how fossils provide evidence for life in the past I know the fact that certain characteristics are inherited and that variation exists within siblings I know how living things possess characteristics which adapt them to their surroundings I know how adaptations can lead to evolutionary changes in living things.	**Knowledge:** I know that all substances can exist in three states, i.e. solid. liquid, gas I know that some substances behave in ways that suggest they are in a different state I know that substances will change state if heated I know the terms used to describe the changes in state of water I know the terms used to describe the states of matter for water as used in weather I know how extreme weather can cause rapid changes of state and temperature	**Knowledge:** I know which materials can be 'pulled', 'bent' and 'squashed' I know language such as 'malleable' and 'flexible'	**Knowledge:** I know that sound is made by vibration. I know that sound can be absorbed or reflected. I know the way light rays travel. I know the terms ‘white light’ and ‘spectrum.’ I know that light can be scattered or reflected. I know that light direction can be bent by refraction.	**Knowledge:** I know at least two dangers of electricity. I know whether an object requires a battery or mains power. I know the process of how electricity is produced. I know what a parallel circuit is. I know key symbols linked to electricity. I know what an electrical circuit plug is.
Skills:	**Skills:** I can match at least six plants and animals to their habitats I can group pictures of animals on the basis of their physical characteristics I can use a key to identify at least six plants or anima I can compile data on simple human variations within a group of children, e.g. hair colour, eye colour I can use Information Technology to produce a bar	**Skills:** I can explore different fossils I can identify similarities and differences	**Skills:** I can identify different types of weather and temperature I can explore different elements	**Skills:** I can give a simple statement about how given materials change shape, using language such as 'malleable' and 'flexible' I can find at least four materials of the same texture, eg rough, smooth I can group given materials into at least	**Skills:** I can make sounds using vibrations. I can explore how sound can be absorbed or reflected. I can explore the way light travels. I can understand how light can be scattered or reflected. I can understand how light direction can be bent by refraction.	**Skills:** I can identify at least two dangers of electricity. I can identify whether at least two objects require either a battery or mains power. I can identify and label the process of the production of electricity. I can draw and label a parallel circuit. I can identify the key symbols linked with

	chart of collected data on variations			four simple groups, eg malleable or hard I can find at least two materials of a given texture I can find at least two materials that can be made bigger or smaller, e.g. through manipulation.		electricity, including references to safety. I can investigate an electrical circuit plug on at least one occasion.
Investigation	**Investigation:** Why can't a polar bear live in the desert?	**Investigation:** What do fossils show us?	**Investigation:** Where does the water go?	**Investigation:** What can I use to build a tower?	**Investigation:** Why do we see the lightening before we hear the thunder?	**Investigation:** How can I build a robot?