Uplands Infants School Science Medium Term Plan

NURSERY End of Year Expectations: **Biology** • To observe and talk about what they see • To have an awareness of the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things.	**Chemistry** • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary • Explore and talk about different forces they can feel.
Physics • Explore materials with different properties. • Explore natural materials, indoors and outside. • Use all their senses in hands-on exploration of natural materials. • Talk about what they see, using a wide vocabulary • Explore how things work. • Explore and talk about different forces they can feel.	**Working Scientifically** • Exploring and responding to the world around them (using their senses) • Experiencing and interacting with the world around them • Observing • Talking about what they see, hear, smell, taste • Develop and use new vocabulary to talk about what they see • Developing language to compare – similarities and differences • Understanding questions – what, who, where, how • Asking questions • Investigation skills • Using equipment

In our Early Years Foundation Stage the principles of high quality provision underpin our curriculum. Our practitioners understand that all children are unique in the way and the rate at which they develop therefore progress is not a linear process. Our practitioners will adjust their practice in response to individual children so that our curriculum meets their learning and developmental needs. All Areas of Learning and Development and the Characteristics of Effective Learning are interconnected. As the Prime areas of Learning and Development lay vital foundations in the development of the world Uplands Infant and Nursery school are continuously in action and prioritised throughout the EYFS.
Children within the foundation stage need to explore resources so they can learn what they are and what they do. We want our children to develop a natural curiosity and interest and have a positive good mind set to want to explore, investigate and observe their natural world.

	Key concepts Knowledge categories			Professional roles careers Experiences	Curriculum Drivers
	Biology Humans, Natural world, plants, flowers, trees, Animals – birds farm, wild, sea	**Chemistry**	**Physics** Explore and talk about the different forces they can feel		

		Exploring materials, explore and notice changes between materials, exploring different materials with different properties,	Seasonal changes		
Term 1	**Humans** Name parts of the body and know what they are used for – smell, taste, hear, looking, walking, talking. Hygiene – washing hands **Natural world – plants, flowers and trees** Sensory activities for the children to explore freely using parts of their body– splashing in puddles, standing and playing in the rain; walking through long grass; walking through leaves on the ground; walking on different textures with no shoes – sand, mud, grass. Windy day box Rainy day box Explore and name features of the natural world, developing curiosity – things they are likely to come across when outside **Animals – birds, farm animals, wild animals, minibeasts** Introduce and name – birds, farm animals, wild animals	**Explore materials with different properties** – provide different open ended materials inside and outside where the children can explore textures, sounds smell and tastes. Sensory play – corn flour, bubbles in the water/puddles, ice, play dough, sinking and floating, magnets, natural objects – twigs, conkers, grass, leaves **Explore and notice the differences and change between materials** Provide opportunities to change materials from one state to another Cooking – making toast Making jelly Melting chocolate	Night time Day time What's the difference? How do we know? What might we do? **Autumn** Signs Weather Clothes **Explore the different forces they can feel** Explore using magnets Explore items that sink and float Explore how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing - Sponges - Twigs - Rubber tubes - Cardboard - Items made from foam Play dough Light box – provide different materials where light will shine through and not shine through	Doctor Surgery Park keepers Park visit **Inspirational people** Dr Ranj	Possibilities Environment Diversity
Vocabulary	Trees, Berries, Stones, Sticks, Pebbles, Mud, Sand, Water, Acorns , Conkers, Leaves, spiders, worms, names of birds we see locally, names of farm animals, names of zoo animals, nose – smelling, eyes – looking, ears – listening, hands – touch and feel	Words to talk about textures – bumpy, rough, smooth, slimy, soft, hard	Language to name the signs of autumn, day, night, language to name the weather – raining, frosty, snowing, hailing, windy, cold		
Term 2	**Humans** Identify similarities and differences between themselves now and when they were babies - how they look, what they needed – baby, child, adult Hygiene – teeth cleaning **Natural world - Plants/flowers and trees**	**Explore materials with different properties** Explore collections of materials with similar and/or different properties - Leaves - Rocks - Shells - Wet and dry sand Talk about what they see	Night time Day time Times of the day – Morning Afternoon What's the difference? How do we know? What might we do? **Winter/ Spring** Signs	Farm Dentist surgery Farm visit Owl visit	Possibilities Environment Diversity

	Teaching and naming parts of a flower/plant and tree (features) Introduce how tress, plants, flowers start (seeds). **Animals – birds, farm animals, sea creatures, wild animals** Naming features of animals – birds, farm and zoo animals Naming and matching baby animals with their parents Farm trip Owl visit	**Explore and notice the differences and change between materials** Provide opportunities to change materials from one state to another Cooking – Pancakes Making warm drinks Play dough station Melting and freezing ice	Weather Clothes **Explore and talk about the different forces they can feel** Explore using magnetic toys Explore and talk about what they see when exploring sinking and floating Explore how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing Notice the similarities Light box – provide different materials where light will shine through and not shine through- encourage the children to talk about what they have noticed Explore shadows	**Inspirational people** JB's Farm	
Vocabulary	Baby, child, adult, hygiene, germs, teeth, dentist, toothpaste, parts of a flower, names of baby animals, names of owls, features of a farm	Melting, freezing,	Language to name the signs of winter/ spring, hibernating, day, night, morning, evening, language to name the weather – raining, frosty, snowing, hailing, cold, freezing, warmer, sunny, temperature, dark, light, shadow, names of colours, twisting, crunching, bending, snapping, squashed.		
Term 3	**Humans** Important of staying healthy Meal times – breakfast Lunch Dinner Food – healthy and non- healthy foods Hygiene – washing hands, bath times, cleaning teeth **Natural world Plants/flowers and trees** Look at and investigate what plants, trees and flowers need to stay healthy Observe and comment on what they see.	**Explore materials with different properties** Explore collections of materials with similar and/or different properties - Leaves - Rocks - Shells - Wet and dry sand Talk about what they see – continue to develop and deepen children's language skills so they can talk about and discuss their findings **Explore and notice the differences and change between materials**	Night time Day time Times of the day – Morning Afternoon Evening What's the difference? How do we know? What might we do? **Summer** Signs Weather Clothes	Hospitals Gardner Vets Pet visit **Inspirational people** Jamie Oliver	Possibilities Environment Diversity

	Animals – birds, farm animals, sea creatures, wild animals Name and look at different places where these animals live – farm, sea, park, trees, woods, jungle, and deserts. Notice similarities and differences of these places. What do these animals need to stay healthy – meat eaters, plant eaters, water, a place to live Identify and name adult and baby animal	Provide opportunities to change materials from one state to another Cooking – Rice crispy cakes Making warm drinks Play dough station Melting and freezing ice Light box – provide different materials where light will shine through and not shine through- encourage the children to talk about what they have noticed Explore and talk about shadows	**Explore and talk about the different forces they can feel** Explore using magnets – compare magnetic and non-magnetic items Use language – wood, metal, plastic Explore items that sink and float – investigate and compare Explore how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing - Items made from foam - Play dough - Clay Notice the similarities and differences between these materials Talk about what they see	Fern and Roys vets (cbeebies) Mr Blooms Nursery (cbeebies)	
Vocabulary	Healthy, not healthy, germs, hygiene, meal times, water, sunlight, soil, grow, farm, jungle, zoo, field, pond, sea, woods, forest, baby animal names	Melting, freezing, language to talk about how things have changed, light, dark,	Language to name the signs of summer, day, night, morning, evening, language to name the weather – raining, warm, sunny, hot, temperature, dark, light, shadow, names of colours, twisting, crunching, bending, snapping, squashed, magnetic, non-magnetic, wood, plastic, metal		

RECEPTION End of Year Expectations:

Biology

In reception they will

- Describe what they see, hear, and feel whilst outside
- Explore the natural world around them

ELG –

- Explore the natural world around them, making observations and drawing pictures of animals and plants; -
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class

Chemistry

In reception they will

- Describe what they see, hear, and feel whilst outside
- Explore the natural world around them

ELG –

- Explore the natural world around them, making observations and drawing pictures of animals and plants; -
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.

Physics	**Working Scientifically**
In reception they will • Understands the effects of changing seasons on the natural world around them ELG – • Explore the natural world around them, making observations and drawing pictures of animals and plants; - • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	• Exploring and responding to the world around them (using their senses) • Experiencing and interacting with the world around them • Observing • Talking about what they see, hear, smell, taste • Develop and use new vocabulary to talk about what they see • Developing language to compare – similarities and differences • Understanding questions – what, who, where, how • Asking questions • Investigation skills • Using equipment

	Key concepts **Knowledge categories**				
	Biology **Humans, Natural world, plants, flowers, trees, Animals – birds farm, wild, sea**	**Chemistry** **Exploring materials, explore and notice changes between materials, exploring different materials with different properties,**	**Physics** **Explore and talk about the different forces they can feel** **Seasonal changes**		
Term 1	**Humans** Name parts of the body and know what they are used for Name the 5 senses Develop language to describe the different things they hear, smell, touch and taste **Natural world – plants, flowers and trees** Sensory activities for the children to explore freely using parts of their body– splashing in puddles, standing and playing in the rain; walking through long grass; walking through leaves on the ground;	**Explore and talk about materials with different properties** – provide different open ended materials that foster curiosity and explore textures, sounds smells and tastes. Develop language to discuss what they see, feel, smell and hear. - Magnets - Water play, inside and outside - Sensory play - Wet and dry sand **Observe and talk about the differences and changes between materials**	**Autumn** Notice the features of autumn and the weather Notice and talk about how animals behave **Talk about the different forces they can feel** Using magnets Explore and talk about how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing	Doctor Surgery **Inspirational people** Dr Ranj	Possibilities Environment Diversity

	walking on different textures with no shoes – sand, mud, grass. Windy day box Rainy day box Encourage the children to observe and talk about what they see Name and describe the features of the natural world, developing curiosity – things they are likely to come across when **Animals – birds, farm animals, sea creatures, wild animals** Name and describe – birds, farm animals, wild animals Categorise and group Observational drawings of the natural world, animals and plants	Provide opportunities to change materials from one state to another. Children to observe and comment on what they see. Cooking Melting Heating Cooling	- Sponges - Twigs - Rubber tubes - Cardboard - Items made from foam - Play dough Floating and Sinking Shadows Light travelling through materials		
Vocabulary	Naming natural items outside – conkers, mud, sand, stones, berries, leaves, acorns, puddles, sticks, branch, 5 senses and what these are for, language to describe what they can hear, smell, touch, see, taste.	Freezing, melting, words to describe changes when cooking, words to describe textures, smell and hear	Language to talk about signs of autumn, temperature, types of weather, hibernation, floating, sinking, light, dark, transparent, shadows, twisting, scrunching, bending, snapping, pulling, squashing		
Term 2	**Humans** Compare and describe the similarities and differences between themselves now and when they were babies - how they look, what they needed – baby, child, adult **Plants/flowers and trees** Naming and describing the parts of a flower/plant and tree (features) Introduce how tress, plants, flowers start (seeds). Name and describe different types of flowers Name and describe different types of trees **Animals – birds, farm animals, sea creatures, wild animals**	**Explore and talk about materials with different properties** Explore collections of materials with similar and/or different properties Talk and describe what they see **Notice and talk about the differences and change between materials** Provide opportunities to change materials from one state to another Cooking Melting Heating Cooling Talk and describe what they see	**Spring** Notice the features of spring and the weather Notice and talk about how animals behave Compare with Autumn **Talk and describe the different forces they can feel** Using magnets – compare magnetic and non-magnetic items Explore and talk about how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing - Sponges - Twigs - Rubber tubes - Cardboard	Farm Dentist surgery Farm visit Owl visit Inspirational people JB's Farm	Possibilities Environment Diversity

	Naming and describing features of animals Naming and matching baby animals with their parents – look closely at similarities and differences and use language to talk about these Understand and notice the changes of a life cycle – chicks Observational drawings of the natural world, animals and plants		- Items made from foam - Play dough Talk about the similarities and differences between these materials Floating and Sinking Shadows Light travelling through materials		
Vocabulary	Baby, child, adult, language to talk about how they have changed, trees, flowers, seeds, part of a tree, part of a flower, naming farm, wild and sea animals, naming baby animals, naming different types of local birds, parts of a life cycle, features of animals	Language to talk about what they see, melting, freezing, liquid, solid, boiling,	Language to talk and compare the signs of spring autumn and winter, signs of spring, growth, new life, language to talk about the weather, magnetic, nonmagnetic, attraction, repulsion, wood, plastic, metal, glass		
Term 3	**Humans** Talk about and describe the important of staying healthy Meal times – breakfast Lunch Dinner Food – healthy and non- healthy foods Hygiene – washing hands, bath times, cleaning our teeth **Plants/flowers and trees** Discuss and talk about what plants, trees and flowers need to stay healthy **Animals – birds, farm animals, sea creatures, wild animals** Name and describe and compare the different places where these animals live – farm, sea, park, trees, woods, jungle, and deserts. What do animals need to stay healthy – meat eaters, plant eaters, water, a place to live	**Explore and talk about materials with different properties** Talk about what they see – continue to develop and deepen children's language skills so they can talk about and discuss their findings **Notice and describe the differences and change between materials** Provide opportunities to change materials from one state to another Cooking Heating Freezing Cooling Talk about what they see – continue to develop and deepen children's language so they can talk and discuss their findings	**Summer** Notice the features of summer and the weather Notice and talk about how animals behave Compare with Autumn and spring **Observe and talk about the different forces they can feel** Magnets – compare magnetic and non-magnetic items Explore and observe how materials can be changed by twisting, scrunching, bending, snapping, pulling, squashing - Sponges - Twigs - Rubber tubes - Cardboard - Items made from foam - Play dough - Clay Talk about the similarities and differences between these materials	Hospitals Gardner Vets Pet visit **Inspirational people** Chef Jamie Oliver Fern and Roys vets (cbeebies) Mr Blooms Nursery (cbeebies)	Possibilities Environment Diversity

	Understand and talk about the key features of a life cycle – caterpillars Observational drawings of the natural world, animals and plants		Talk about what they see – continue to develop and deepen children's language Floating and Sinking Shadows Light travelling through materials		
Vocabulary	Healthy, not healthy, germs, hygiene, meal times, water, sunlight, soil, grow, farm, jungle, zoo, field, pond, sea, woods, forest, baby animal names, key features of a life cycle, meat eaters, plant eaters, habitats	Language to talk about what they see, melting, freezing, liquid, solid, boiling, language to talk about what they see, smell, taste and hear	Language to talk and compare the signs of spring autumn and winter, signs of spring, growth, new life, language to talk about the weather, magnetic, nonmagnetic, attraction, repulsion, wood, plastic, metal, glass		

YEAR 1 End of Year 1 Expectations:

Working Scientifically

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely using simple equipment.
- Performing simple tests.
- Identifying and classifying.
- Using their observations and ideas to suggest answers to questions.
- Gathering and recording data to help in answering questions.

Chemistry

Everyday materials

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties

Biology

- **Plants**
  - Identify and name a variety of common, wild and garden plants including deciduous and evergreen trees.
  - Identify and describe the basic structure of a variety of common flowering plants including trees.
- **Animals including humans**
  - Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
  - Identifying a variety of common animals that are carnivores, herbivores and omnivores.
  - Describe and compare the structure of a variety of common animals including fish, amphibians, reptiles, birds and mammal including pets.
  - Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense

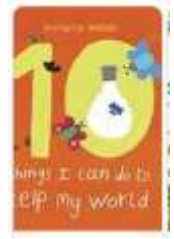
Physics

- **Seasonal changes**
  - observe changes across the 4 seasons
  - observe and describe weather associated with the seasons and how day length varies

Teach **Retrieval** **Non-Statutory** **Working Scientifically**	**Key concepts** **Knowledge categories**			**Curriculum Drivers**	**Vocabulary**
Term 1	Biology	**Chemistry**	**Physics**		

	Plants longitudinal **Identify and name a variety of common wild and garden plants.** **Introduce the names and images of evergreen and deciduous trees**. ***Plants****: Pupils use the local environment to become familiar with common names of flowers, deciduous and evergreen trees.* *Chn to observe growth of flowers and plants they have planted in the atrium and woodland area.* **Working Scientifically** Observe closely, perhaps using magnifying glasses to identify plants and trees. Notice how leaves fall off trees **Animals including humans** **- Introduce the names and images of birds, fish, amphibians, reptiles and mammals.** *Animals:* *Pupils should become familiar with the common names of some fish, amphibians, reptiles, birds and mammals.* **Identify, name, draw and label the basic parts of the human body. To say which part of the human body is associated with which part.** *Pupils should have plenty of opportunities to learn the names of*	**Everyday materials** **Distinguish between an object and the material it is made from.** **Identify and name a range of everyday materials including wood, plastic, glass, metal, water and rock.** Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil. **Working Scientifically** Chn to perform simple tests to explore questions such as 'what is the best material for …a teddy's coat? … a bag for? …	**Seasonal changes** **Observe changes across the four seasons** **Observe and describe weather associated with the seasons and how day length varies** Notice the features of autumn and Winter as well as the weather Use opportunities to record the weather Observe how length of day decreases. **Working Scientifically** Pupils to keep records of how plants have changed over time, for example the leaves falling off trees. Pupils to keep records of how weather changes over time.	**Biology** **Possibilities** *Hobbies:* -Gardening -Growing fruit and veg -Keeping pets *Careers:* veterinary zoology farming medicine physiotherapy midwifery Dietician Optometry Dentistry Animal researcher Aquatic vet Meteorology Horticulturist **People** David Attenborough Steve Backshall (Steve's Deadly 60 on CBBC) Naomi Wilkinson (wild and scary) Dr Rang (CBeebies) Possible Visitors:	**Biology** Plant ,bulb, growth, survival, temperature, climate Deciduous evergreen petals leaves fruit seed bulb Body parts, head, neck, arms, elbows, legs, knees, face, ears, hair, mouth, teeth, skeleton, organs (organ names) **Physics:** Season, Spring, Summer, Autumn, Winter, weather, climate Sunset Sunrise daylight **Chemistry:** suitable, wood, metal,

	the main body parts (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes. *Focus should be on the basic parts of the human body and saying which part of the body is associated with each sense*			Female Landscaper Radiologist Midwife Twycross Zoo Conkers Environment **Environment** What can be grown locally (CP) Responsibility for looking after animals and the planet (in school, at home, locally as well as nationally) Reduce, re use and re cycle Reduce water wastage – through provision – use of water butt 	plastic, glass, brick, rock, paper, cardboard, rubber, tyre, brick, elastics, foil, variety, purpose, properties, suitable, unsuitable hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, opaque, transparent
Year 1 Term 2	**Plants** **Identify and describe the basic structure of a variety of common flowering plants.** **Identify and describe the basic structure of a variety of common trees.** *To become familiar with plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).* **Working Scientifically**	**Everyday materials** **Describe the simple physical properties of a variety of everyday materials on the basis of their simple physical properties.** **Compare and group together a variety of everyday materials on the basis of their simple physical properties**. *To explore, name, discuss and raise and answer questions about everyday materials so that they become familiar with the names and properties such as hard, soft: stretchy/stiff: shiny/dull: rough/smooth: bendy/not bendy: waterproof/not waterproof:*	**Seasonal changes** **Notice the features of Winter and Spring** **Observe weather** **Provide opportunities to record the weather** **Observe how length of day increases.**		

	Compare and contrast familiar plants; describing how they were able to identify and group them, and drawing diagrams showing the parts of different plants including trees. **Animals including humans** **Identify and name a variety of common animals that are carnivores, herbivores, omnivores.** *Pupils to use the local environment throughout the year to explore and answer questions about animals (Pets, animals in woodland and Spinney Hill park, Twycross Zoo)* *Chn to understand how to take care of animals including pets (fish in school)* **Working Scientifically** **Observe animals to identify using their features** **To identify which part of the body is associated with which sense.** *Pupils will have plenty of opportunities to learn the names of the main body parts* (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes. **Working Scientifically** Chn to use their senses to compare different textures, sounds and smells.			Books:   **Diversity** Urban gardening (CP) Importance of trees Sensory impact through gardening Sensory garden Diets – vegan/ Pescatarian Alternate medicine **Chemistry** **Possibilities** *Hobbies:* Upcycling (link with RRR)	

Year 1- Term 3	**Animals including humans** **Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).** **Working Scientifically** Chn to compare and contrast animals first hand, through videos and photographs, describing how to identify and group them.	**Everyday materials** **Compare and group together a variety of everyday materials on the basis of their simple physical properties**	**Seasonal changes** Notice the features of Spring and Summer Observe weather Provide opportunities to record the weather Observe how length of day increases.	Pottery (clay in provision) woodwork origami arts and crafts e.g. candles, soaps, sewing, sketching Stargazing *Careers:* 3D Model Maker Jewellery maker Artist Fashion design (male examples)	**Environment & Diversity:** Climate change and the impact **Diversity:** International eco-friendly buildings. Materials used for buildings around the world. Sculptures in locality and around the world. (e.g. compare materials used for pyramids, Taj Mahal, Burj etc) Djenne Mali Grand Mosque Favelas/ shanty towns/slums

Year 2 Science

YEAR 2 End of Key Stage 1 Expectations:

- **Working Scientifically**
  - Asking simple questions and recognising that they can be answered in different ways.
  - Observing closely using simple equipment.
  - Performing simple tests.
  - Identifying and classifying.
  - Using their observations and ideas to suggest answers to questions.
  - Gathering and recording data to help in answering questions.

Chemistry

- **Everyday materials**
  - Identify and compare the suitability of a variety of everyday materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
  - Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

Biology

- **Living things and their habitats**
  - Explore and compare the differences between things that are living, dead, and things that have never been alive.
  - Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
  - Identify and name a variety of plants and animals in their habitats, including microhabitats.
  - Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.
- **Plants**
  - Observe and describe how seeds and bulbs grow into mature plants.
  - Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
- **Animals including humans**
  - Notice that animals, including humans, have offspring which grow into adults.
  - Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).
  - Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.

Physics

- **Seasonal changes**
  - Observe the apparent movement of the sun during the day.
  - Observe changes across the four seasons
  - Observe and describe weather associated with the seasons and how day length varies

Key: **Teach** **Working Scientifically** **People/Places of Interest**	**Key concepts** (Composite) **Knowledge categories** (Components)			**Vocabulary**	**Curriculum Drivers**
	Biology **Living things and their habitats, Plants, Animals including humans**	**Chemistry** **Everyday materials**	**Physics** **Seasonal changes**		
Year 2 **Term 1**	**Plants:** • **Observe and describe how bulbs grow into mature plants (Longitudinal study)** • *Planting in different environments and observe* • **Find out and describe how bulbs need water, light and a suitable temperature to grow and stay healthy.** • *Bulbs need water to grow but most do not need light; bulbs have a store of food inside them* • **Perform simple tests** • **Observe and record using simple equipment** • **Using their observations and ideas to suggest answers to questions** **Animals including humans:** • **Notice that animals, including humans, have offspring which grow into adults** • *Introduction to reproduction and growth in animals such as a chicken, butterfly, frog, sheep. Including life stages of a human* • **Find out about and describe the basic needs of animals, including**	**Everyday materials:** • **To identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses by identifying the uses of different materials.** • **To identify uses of different everyday materials.**	**Seasonal changes:** • *Organise images or objects from each season into categories. Explain your categories* • **Identifying and classifying** • **Using their observations and ideas to suggest answers to questions**	**Biology:** bulb, germination, growth, survival, temperature, climate nutrition, reproduce, offspring, life stages **Physics:** Season, Spring, Summer, Autumn, Winter, weather, climate	**Possibilities:** *Hobbies:* • vegetable patch, gardening, • keeping pets • Exercise-Outdoor pursuits *careers:* • horticulture agriculture **Alan Titchmarsh** **Poppy Okotcha** **Botanical Gardens** • veterinary • zoology • farming • medicine • physiotherapy • midwifery • pharmacology • dietician • optometry • dentistry **Noel Fitzpatrick** **Chris Packham**

	humans, for survival (water, food and air) • **Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene** • *Importance of exercise and nutrition for humans* • **Asking simple questions** • **Observe closely using simple equipment** • **Observing closely using simple equipment.** • **Identifying and classifying** • **Using their observations and ideas to suggest answers to questions.**				**Gillian Burke Twycross Zoo** • Meteorology **Environment:** • Climate impacts what can be grown • Our responsibility for looking after animals and the planet **Greta Thunberg**
Year 2 Term 2	**Plants:** • **Observe and describe how seeds grow into mature plants (Longitudinal study)** • *Planting in different environments and observe* • **Find out and describe how seeds need water, light and a suitable temperature to grow and stay healthy.** • *seeds need water to grow but most do not need light; bulbs have a store of food inside them* • **Perform simple tests** • **Observe and record using simple equipment** • **Using their observations and ideas to suggest answers to questions**	**Everyday materials:** • **Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses** • *Identify and discuss the uses of different everyday materials and that some materials are used for more than one thing (metal- coins, cans, cars, table legs) and that different materials can be used to make the same thing (Spoons-metal, plastic, wood but not from glass)* • **Observing closely and comparing** • **Identifying and classifying** • **Recording observations**	**Seasonal changes:** • *Show how you might know, roughly, what time it is in a day by looking at the position of the sun.* • *Compare and contrast weather and day length across the four seasons.* • *Identify patterns in day length across the four seasons.* • **Asking simple questions and recognising that they can be answered in different ways.** • **Observing closely using simple equipment.** • **Performing simple tests.** • **Using their observations and ideas to suggest answers to questions.** • **Gathering and recording data to help in answering questions.**	**Biology:** bulb, seed, germination, growth, survival, temperature, climate **Chemistry:** suitable, wood, metal, plastic, glass, brick, rock, paper, cardboard, rubber, tyre, variety,	**Diversity** container gardening in urban areas • unusual pets • diets- vegan, vegetarian, pescatarian **Jamie Oliver** **Possibilities:** *Hobbies:* • upcycling • pottery • woodwork • origami

				purpose, properties, suitable, unsuitable **Physics:** Season, sunrise, sunset, daylight	• arts and crafts • Stargazing **Jay Blades** **Sarah Moore** **Art Ninja** **Brian Cox** **Leicester Museum** *Careers:* • furniture design • architecture • building • carpentry • landscaping • sculpting • product design • Engineering • Astronomy
Year 2 Term 3	**Living things and their habitats:** • **Explore and compare the differences between things that are living, dead, and things that have never been alive** • *All living things have certain characteristics that are essential for keeping them alive and healthy.* • *To become familiar with the life processes that are common to all living things.* • **Identify that most living things live in habitats to which they are suited and describe how different habitats**	**Everyday materials:** • **Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching** • *Explain the properties of materials that make them suitable or unsuitable for particular purposes.* • *Consider unusual and creative uses for everyday materials.* • **Using their observations and ideas to suggest answers to questions** • **Perform simple tests**	.	**Physics:** living, dead, never been alive, habitats, microhabitats, food chain, food source, characteristics, life process, environment, shelter, seashore, woodland, ocean,	**Zaha Hadid** **Will Kirk** **Rosie Edwards** **James Dyson** **John Dunlop** **Curve Theatre** **Environment:** Climate change and the impact pollution has on habitats **Sir David Attenborough**

	provide for the basic needs of different kinds of animals and plants, and how they depend on each other • *'habitat' (a natural environment or home of a variety of plants and animals)* • *'microhabitat' (a very small habitat- woodlice under stones, logs or leaf litter)* • **Identify and name a variety of plants and animals in their habitats, including microhabitats** • *Identify and study a variety of plants and animals within their habitat* • *Compare animals in familiar habitats with animals found in less familiar habitats (seashore, woodland, ocean, rainforest)* • **Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food** • *Construct a simple food chain (grass, cow, human)* • **Identifying and classifying** • **Recording findings** • **Using their observations and ideas to suggest answers to questions.**			rainforest, log, stony path, bushes **Chemistry:** suitable, wood, metal, plastic, glass, brick, rock, paper, cardboard, rubber, tyre, variety, purpose, properties, suitable, unsuitable, eco-friendly, sustainable, construct, manipulate, squashing, bending, twisting, stretching,	**Diversity:** • International eco-friendly buildings • Materials used for buildings around the world • Famous sculptures around the word • **Cambridge Central Mosque** • **Museu do Amanhã** • **18 Robinson** • **The Kelpies** • **Great Sphynx of Giza** • **Dale Chihuly's Summer Sun**