



Caring, Successful,
Happy Learners

Learning Organiser **Science: Heroes & Heroines**

Year 1
Spring Term

British and School Values				Basic Skills (Reading & Communication)	Personal Development Positive mental and physical well being	Wonderful Words (Vocabulary & Quality Texts)	Memorable Experiences
respect	caring	safety	best				

Working Scientifically

Questioning	Testing	Observing	Gathering & recording data	Identifying & classifying	Suggesting answers to questions
To ask questions using sentence stems such as how and why with support.	-To make suggestions about what to do and what to look for. -To carry out simple tests supported / scaffolded by adults. -To predict what might happen.	-To observe changes over time with an adult modelling.	-With support, to use simple equipment to gather data -To record results through drawing and/or a simple table prepared by the teacher.		-To say what their observations show. They can draw simple conclusions and explain what they did with support. -To begin to use simple scientific vocabulary.

Key Substantive "sticky" Knowledge I know...	Key Disciplinary Knowledge & Skills I can...
<p>Seasonal Changes</p> <ul style="list-style-type: none"> -The length of days gets shorter until mid-winter. It gets longer again until mid-summer. -The change in weather in each season impacts our world. -Describe the general types of weather and changes in day length over the seasons. <p>Animals including humans</p> <ul style="list-style-type: none"> -Animals vary in many ways having different structures e.g. wings, tails, ears etc. They also have different skin coverings e.g. scales, feathers, hair. -These key features can be used to identify them. 	<ul style="list-style-type: none"> -Describe some features of their surroundings that change over the seasons -Can collect information to classify weather and day length in different seasons and present the information in tables or charts to compare the seasons. -Can collect information on features that change with seasons and present in displays. -Name a range of animals which includes animals from each of the vertebrate groups -Label & describe the key features of these named animals -Sort and group animals using similarities and differences -Use simple charts etc. to identify unknown animals

Learning Sequence			
	Substantive knowledge	Disciplinary knowledge	Activity
1	-The length of days gets shorter until mid-winter. It gets longer again until mid-summer. -Describe the general types of weather and changes in day length over the seasons.	-Describe some features of their surroundings that change over the seasons	Recap how our environment has changed over the seasons.
2	-The change in weather in each season impacts our world.	-To make suggestions about what to do and what to look for. -To observe changes over time with an adult modelling. -With support, to use simple equipment to gather data -Can collect information to classify weather and day length in different seasons and present the information in tables or charts to compare the seasons.	Investigation- Q-Is it colder in the morning than after lunch? Children use simple equipment to collect data for the investigation.
3		-To say what their observations show. They can draw simple conclusions and explain what they did with support.	Chn record results in a simple table. Whole class

				-To record results through drawing and/or a simple table prepared by the teacher. -Can collect information on features that change with seasons and present in displays.	discussion on what we have found out.
		4	Name a range of animals which includes animals from each of the vertebrate groups	Name the different vertebrate groups.	Class discussion naming common animals. Sorting animals according to their vertebrate.
		5	-Animals vary in many ways having different structures e.g. wings, tails, ears etc. They also have different skin coverings e.g. scales, feathers, hair.	-To begin to use simple scientific vocabulary. Label & describe the key features of these named animals	Label and describe 2 animals from different vertebrate groups.
		6	-Key features can be used to identify animals	Sort and group animals using similarities and differences. Use simple charts etc. to identify unknown animals	Whole class use of a simple chart to identify animals. Sort animals according to the similarities and differences.

Prior Knowledge I remember	Wonderful Words Key Vocabulary		Planned Investigation, Experiences and Enrichment
	Known Vocabulary	New Vocabulary	
<ul style="list-style-type: none"> -Exploring the natural world around me. -Describing what I see, hear and feel whilst outside. -We have 4 seasons in the year. -We have different types of weather. -In Autumn the weather gets colder. The days are shorter and the nights are longer. -Some trees keep their leaves in Autumn and some trees lose them. -Naming a range of animals. -Experiences of seeing animals first hand – pets, farms, zoo etc 		<ul style="list-style-type: none"> Weather: sunny, rainy, windy, snowy etc. -Seasons: winter, summer, spring, autumn) -Sun, sunrise, sunset, day length Amphibian, birds, reptiles, mammals & fish Other related vocabulary: Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves -Names of animals from each vertebrate group 	<ul style="list-style-type: none"> *Science Week* -Role play areas – weather stations, builders -Sensory and seasonal walks -Link to seasonal work. –What natural objects can we find during different seasons? -Sharing information about the chn’s pets. Vet or a nurse visit. -Creating a creature and categorising it. -How has [a particular tree] changed over the year? (observing changes over time) -What kind of animal is this? [mythical / made up creature] (identifying and classifying) -Design your own creature (identifying and classifying)

Key Substantive “sticky” Knowledge I know...	Key Disciplinary Knowledge & Skills I can...	Learning Sequence			
<p>Materials</p> <p>-Materials can be described by their properties e.g. shiny, stretchy, rough etc.</p> <p>-Some materials e.g. plastic can be in different forms with very different properties.</p>	<p>-Classify materials based on their properties</p> <p>-Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters</p>		Substantive knowledge	Disciplinary knowledge	Activity
		1	-Materials can be described by their properties e.g. shiny, stretchy, rough etc.	-Classify materials based on their properties	Discussion of vocabulary associating to properties. Sorting objects according to their properties.
		2	-Some materials e.g. plastic can be in different forms with very different properties.	-To carry out simple tests supported / scaffolded by adults.	Focus look on plastic objects eg. bottle and a carrier bag. Testing the different properties.
		3		<p>-To ask questions using sentence stems such as how and why with support.</p> <p>-To predict what might happen.</p> <p>-Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters</p>	Testing the properties of materials to see what would make a suitable ___?

Prior Knowledge I remember	Wonderful Words Key Vocabulary		Planned Investigation, experiences and Enrichment
<p>-Common everyday materials; wood, plastic, glass, fabric</p> <p>-Objects are made from one or more materials.</p> <p>-Some objects can be made from different materials – eg. cups can be plastic or glass.</p> <p>-Classifying objects based on their material.</p>	Known Vocabulary	New Vocabulary	<p>*Science Week*</p> <p>-Links with DT objectives.</p> <p>-What material would make the best ___? (comparative testing)</p> <p>-Which material is the most ___? (fair testing)</p>
		<p>Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through</p>	