



Fernwood Primary and Nursery School

Subject Implementation Overview



F2		
Autumn 1	Spring 1	Summer 1
UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To know and talk about some of the signs of autumn. (Science/Geography) UTW (TNW) To explore the natural world around them, making observations and drawing pictures of animals and plants. To explore and taste some autumn vegetables (spinach, carrot, bell peppers). (Science)	UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To know and talk about some of the signs of winter. (Science/ Geography) UTW (TNW) To explore the natural world around them, making observations and drawing pictures of animals and plants. To explore camouflage and know how this helps animals. (Science)	UTW (TNW) To explore the natural world around them, making observations and drawing pictures of animals and plants. To find and talk about plants in our school grounds. To draw a plant in our school grounds. UTW (TNW) To explore the natural world around them, making observations and drawing pictures of animals and plants. To draw a farm animal.
Autumn 2	Spring 2	Summer 2
UTW (PP) To understand the past through settings, characters and events encountered in books read in class and story telling To know that dinosaurs existed (science) To know that dinosaurs are not all the same (science) To know what dinosaurs ate (science) To know why the dinosaurs died (science/history) UTW (TNW) To 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. To compare different environments (grass, stream, snowstorm, forest, cave, home, sea side, marsh, mud swamps) (Science/Geography) UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To discover small world in ice, plaster, dry sand, wet sand and mud	UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To know and talk about some of the signs of spring. (Science/Geography) UTW (PCC) To explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and -when appropriate – maps. - To know what to pack for a hot and cold place. - To experience the feeling of hot and cold	UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To know and talk about the signs of summer. UTW (TNW) To understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. To know how to be safe in the sun. UTW (TNW) To 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. To name and talk about animals in the sea (shark, fish, jellyfish). To know some things we can do at the sea-side.



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Y1		
Autumn 1 – Animals including humans (senses), Seasons	Spring 1 - Seasons	Summer 1 - Plants
To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. - To name external body parts <i>Observe anatomy (ASK)</i> - To begin to know some facts about internal body parts – heart, brain, lungs) - To label the senses To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. To perform simple tests - To name and talk about the senses (Taste/tongue and smell/nose) - To name and talk about the senses (sight/eyes and hearing/ears) - To name and talk about the senses (Touch/skin) To observe changes across the four seasons. To observe and describe weather associated with the seasons and how day length varies. - To observe and name changes across the seasons. - To describe the weather in Autumn (Wollaton Park walk) *This lesson is our cross curricular Outdoor Learning.*	To observe changes across the four seasons To observe and describe weather associated with the seasons and how day length varies. *Links to Geography topic - To monitor and record the weather on a chart Asking simple questions and recognising that they can be answered in different ways. - To know about winter. To create and label a winter tree. - To make a weather report using NSEW and countries of UK	To identify and describe the structure of a variety of flowering plants, including trees. - To understand what a plant is and to describe the structure of a plant. To know what a seed/bulb is. <i>Observing closely using simple equipment. (WSc)</i> - To describe and compare common garden plants. <i>Asking simple questions and recognising that they can be answered in different ways. (WSc)</i> To identify and name some common wild and garden plants including deciduous and evergreen trees. *Links to Art/Geography Objectives. - To describe the features of common wild plants. <i>To use simple equipment. (WSc)</i> - To identify and name common wild plants. - To observe and draw nature. <i>Observe closely. (WSc)</i> <i>to investigate surroundings (GSk)</i> <i>to make sketches and to take photos (GSk)</i> To identify and describe the structure of a variety of flowering plants, including trees. To identify and name some common wild and garden plants, including deciduous and evergreen trees. - To describe the structure of a tree - To identify and name and compare some common trees including deciduous and evergreen. - To recall what we know about plants and trees. <i>to make sketches and to take photos (GSk)</i>
Autumn 2- Animals including humans	Spring 2 - Seasons	Summer 2 - Materials
To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) *Lessons link to DT objectives - To name and know about different pets. To identify and name some common animals including fish, amphibians, reptiles, birds and mammals To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) - To describe and compare the structure of a variety of animals	To observe changes across the four seasons. To observe and describe weather associated with the seasons and how day length varies. *Links to art objectives - To know about spring and seasonal differences. - To spot signs of spring – <i>To investigate surroundings. (GSk) Use observations and ideas to suggest answers (WSc) to observe and draw nature (ASK)</i>	To distinguish between an object and the material from which it is made To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. To describe the simple physical properties of a variety of everyday materials. To compare and group together a variety of everyday materials on the basis of their simple physical properties. - To name objects and the material from which it is made. - To name everyday materials and describe their properties



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2. To name and sort animals – mammals, birds, fish, reptiles Identify and classify animals 3. To name and sort animals –<i>Gathering and recording data to help answer questions.</i> (Second Week) 1. To describe and compare the structure of a variety of animals 2. To recognise and name animals – herbivores, carnivores and omnivores Identify and classify animals 3. To name and sort animals – herbivores, carnivores and omnivores <i>Gathering and recording data to help answer questions.</i>		3. To sort materials according to their properties. To describe the simple physical properties of a variety of everyday materials. To compare and group together a variety of everyday materials on the basis of their simple physical properties. <i>Use observations and ideas to suggest answers to questions</i> 1. To test which material is waterproof/not waterproof. <i>Perform simple tests (WSc)</i> <i>To observe closely and use simple equipment. (WSc)</i> 2. To design and carry out a test to find out which material is absorbent. <i>Perform simple tests (WSc)</i> <i>To observe closely and use simple equipment. (WSc)</i> 3. To record observations and results Gather and record data to help answer questions (WSc)
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Y2		
Autumn 1 – Animals including humans	Spring 1 – animals including humans, Living Things and their habitats	Summer 1 - Plants
To describe the importance for humans to eat the right amounts of different types of food and hygiene. - To identify and name different food sources. - To describe the importance for humans to eat the right amounts of different types of food. - To know how humans can stay healthy and the importance of washing hands	To describe the basic needs of animals, including humans, for survival (water, food and air). To explore and compare the differences between things that are living, dead, and things that have never been alive. To 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. - To know what animals need to survive (water food and air) - To sort things that are living, dead and things that have never been alive. <i>Identifying and classifying.</i> - To identify that most living things live in habitats.	To identify and name a variety of plants and animals in their habitats, including micro-habitats. To observe and describe how seeds and bulbs grow into mature plants. To experiment and describe how plants need water, light and a suitable temperature to grow and stay healthy. <i>To describe observations using scientific vocabulary</i> <i>Gathering and recording data to help answer questions, observing closely and using simple equipment.</i> <i>Using observations and ideas to suggest answers to questions, asking simple questions and recognising that they can be answered in different ways</i> - To identify plants in the microhabitats around school. <i>Identifying and Classifying</i> - To describe how seeds and bulbs grow into mature plants. - To investigate how plants need water to stay healthy <i>Perform simple tests</i> To identify and name a variety of plants and animals in their habitats, including micro-habitats. To describe how animals obtain their food from plants. To experiment and describe how plants need water, light and a suitable temperature to grow and stay healthy. <i>Using observations and ideas to suggest answers to questions, asking simple questions and recognising that they can be answered in different ways.</i> - To investigate how plants need light to stay healthy. <i>Perform simple tests</i> - To investigate how plants need warmth to stay healthy. <i>Perform simple tests</i>
Autumn 2 - Materials	Spring 2 – Animals, Living Things and their habitats	Summer 2 – Animals including humans
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.	To 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.	To describe the importance for humans to exercise and keep healthy



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To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. - To know objects can be made from different materials and why they are suitable Identifying and Classifying - To find out how some materials can be changed by squashing, bending, twisting and stretching. To perform simple tests. - To experiment with the most suitable materials for a kite. Gathering and recording data to help answer questions	To know that animals, including humans, have offspring which grow into adults. <i>Using observations and ideas to suggest answers to questions.</i> - To create a simple food chain and describe how animals get their food - To know the life cycle of a sheep To 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. To identify and name a variety of plants and animals in their habitats, including micro-habitats. <i>Asking simple questions and recognising that they can be answered in different ways</i> - To identify different habitats - To match animals to their habitats explaining why they live there - To know which plants live in different habitats - To know and identify a microhabitat	- To understand that exercise is important to keep fit and healthy by recording a fitness diary for a week - To observe what happens to our bodies when we exercise (Zumba lesson!)
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Y3		
Autumn 1- Forces and Magnets (Physics)	Spring 1 – Animals Including humans (Biology)	Summer 1 – Plants (Biology)
To compare how objects move on different surfaces. To investigate magnetic and non-magnetic materials. <i>WSc: Classifying data in a variety of ways to answer questions.</i> To conduct an investigation about how magnetic poles behave. <i>WSc: Setting up simple practical enquiries, comparative and fair tests. Using results to draw up simple conclusions.</i>	To know that all animals including humans need the right nutrition. <i>WSc: Identifying differences/similarities/changes related to simple scientific ideas and processes.</i> To understand that animals and humans get nutrition from what they eat. <i>WSc: Identifying differences/similarities/changes related to simple scientific ideas and processes.</i> To understand that humans and animals have skeletons for support, protection and movement. <i>WSc: Record findings using labelled diagrams.</i> To know that humans have muscles and what they are for. <i>WSc: Reporting on findings – oral presentation of results.</i> To investigate how different body measurements impact how far we can jump. <i>WSc: Asking relevant questions/use different types of science enquiries to answer them. Gathering, recording and presenting data in a variety of ways to help answer questions.</i>	To know the functions of different parts of a flowering plant. <i>WSc: Recording findings using labelled diagrams.</i> To explore what a plant needs to grow and how it varies between different plants. <i>WSc: Identifying differences/similarities/changes related to simple scientific ideas and processes.</i> To investigate how water is transported through a plant. <i>WSc: Setting up simple practical enquiries. Record findings using drawings. Reporting on findings – written display.</i>
Autumn 2 – Light (Physics)	Spring 2 – Rocks and Soils (Chemistry)	Summer 2 – Plants (Biology)
To know that light is needed in order to see things and that dark is the absence of light. <i>WSc: Asking relevant questions.</i> To know that light is reflected from surfaces. <i>WSc: Record findings using drawings and labelled diagrams.</i> To know how shadows are formed. (that shadows are formed when the light from a light source is blocked by an opaque object) <i>WSc: Setting up simple practical enquiries.</i> To find patterns in the way that the size of shadows change. <i>WSc: Making accurate measurements using standard units/equipment. Gathering and recording data in a variety of ways to help answer questions.</i> To know that light from the sun can be dangerous and that there are ways to protect their eyes.	To know how fossils are formed. <i>WSc: Presenting data in a variety of ways to help answer questions (flow chart).</i> To compare different kinds of rocks. <i>WSc: Recording findings using simple language.</i> To investigate the permeability and strength of different rocks. <i>WSc: Setting up simple practical fair tests. Gathering, recording and presenting data in a variety of ways. Using results to draw simple conclusion, suggesting improvements and raising further questions.</i> To know that soils are made from rocks and organic matter.	To understand what pollination is. <i>WSc: Asking relevant questions/use different types of scientific enquiries to answer them.</i> To understand the life cycle of a flowering plant. <i>WSc: Recording findings using simple language.</i> To know about seed dispersal. <i>WSc: Reporting on findings – written presentation.</i>



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Y4		
Autumn 1 – States of Matter (Chemistry)	Spring 1 – Animals including humans (Biology)	Summer 5 – Living Things and their habitats (Biology)
To be able to group materials according to whether they are solids, liquids or gases. To observe that some materials change state when heated or cooled. WSc: Recording findings using simple language and drawings. To observe that some materials change state when heated or cooled and measure or research temperatures at which this happens in degrees Celsius. WSc: Making systematic and careful observations/accurate measurements using standard units/equipment. Using results to draw simple conclusions.	To describe the simple functions of the basic parts of the digestive system in humans. WSc: Recording findings using labelled diagrams. To identify the different types of teeth in humans and their simple functions.	To recognise that living things can be grouped in a variety of ways. WSc: Classifying and presenting data in a variety of ways to help answer questions. To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. To explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. WSc: Recording findings using keys. To construct and interpret a variety of food chains, identifying producers, predators and prey. WSc: Reporting on findings – displays. To recognise that environments can change and that this can sometimes pose dangers to living things.
Autumn 2 – Sound (Physics)	Spring 2 – Electricity (Physics)	Summer 2 – States of Matter (Chemistry)
To recognise that vibrations from sounds travel through a medium to the ear. To identify how sounds are made, associating some of them with something vibrating. WSc: Reporting on findings – oral or written. To find patterns between the pitch of a sound and features of the object that produced it. WSc: Setting up practical enquiries, comparative and fair tests. Recording findings using bar charts. To find patterns between the volume of a sound and the strength of the vibrations that produced it. WSc: Setting up practical enquiries, comparative and fair tests. Recording findings using bar charts. To recognise that sounds get fainter as the distance from the sound source increases.	To identify common appliances that run on electricity. To construct a simple series circuit and know whether or not a lamp will light in it. To create a switch and understand its effect in a circuit. To investigate which materials are good insulators of electricity. WSc: Setting up simple practical enquiries, comparative and fair tests.	To understand the processes of evaporation and condensation. WSc: Identifying changes related to simple scientific ideas and processes. To know the stages and processes in the water cycle. To plan an investigation into how temperature affects evaporation. WSc: Making predictions for new values. Setting up simple practical enquiries, comparative and fair tests. To suggest improvements and raise further questions.



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Y5		
Autumn 1 – Materials (Chemistry)	Spring 1 – Earth and Space (Physics)	Summer 1 – Living Things and Their Habitats (Biology)
To compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. WSc: Recording data and results of increasing complexity using scientific tables. To give reasons based on evidence from comparative tests for the uses of everyday materials. WSc: Reporting and presenting findings from enquiries, in oral and written forms such as displays and other presentations. To know that some materials will dissolve in liquid to form a solution. WSc: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. To know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. WSc - Recording data and results of increasing complexity using scientific diagram and labels. Using test results to make predictions to set up further comparative and fair tests.	To describe the movement of the Earth and other planets, relative to the Sun in the solar system. WSc: Investigating scientific evidence that has been used to support or refute ideas or arguments. To describe the movement of the moon relative to the Earth. To understand the orbits of the Earth and Moon. To use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. (Covered as part of the space centre trip).	To describe the life process of reproduction in some plants and animals. To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
Autumn 2 – Materials (Chemistry)	Spring 2 – Forces (Physics)	Summer 2 – Animals Including Humans (Biology)
To use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. WSc - Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. To demonstrate that dissolving, mixing and changes of state are reversible changes. To explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. WSc: Reporting and presenting findings from enquiries, including conclusions and explanations of and degree of trust in results, in written forms.	To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. WSc: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. To identify the effects of air resistance, water resistance and friction, that act between moving surfaces. WSc: Recording data and results of increasing complexity using bar charts and tables. Using test results to make predictions to set up further comparative and fair tests. To report and present findings for causal relationships. To recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect.	To describe the changes as humans develop to old age. WSc: To record and present data using a scatter graph.



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	WSc: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.	
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Y6		
Autumn 1 – Electricity (Physics)	Spring 1 – Evolution and inheritance (Biology)	Summer 1 – Animals including humans (Biology)
To use recognised symbols when representing a simple circuit in a diagram. WSC: Recording data using scientific diagrams and tables. To associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. WSC: Reporting and presenting findings from enquiries, including conclusions in oral and written forms. Recording data and results of increasing complexity using...tables... To compare and give reasons for variations in how components function including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. WSC: Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms.	To recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. To recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. WSC: Identifying scientific evidence that has been used to support or refute ideas or arguments.	To identify and name the main parts of the human circulatory system. To identify and name the main parts of the heart. To understand the role of blood and its components. To investigate what happens to the heart when we exercise and why. WSC: Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. Using test results to make predictions to set up further comparative and fair tests.
Autumn 2 – Light (Physics)	Spring 2 – Living things and their habitats (Biology)	Summer 2 – Animals including humans (Biology)
To recognise and explore that light appears to travel in straight lines. To use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. To explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. To use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. WSC: Reporting on and presenting findings from enquiries. WSC: Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Recording data and results of increasing complexity using bar graphs. Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.	To describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. To give reasons for classifying plants and animals based on specific characteristics. WSC: Recording data and results of increasing complexity using classification keys.	To understand how smoking impacts on our internal organs. To understand how nutrients and water are transported around our bodies and their impact. To understand how sugar impacts our bodies.



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