Holy Trinity Catholic Primary School
Science Overview

Our Changing World sessions to be completed at least 4 times a year.

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
N	**Why am I unique?** **My environment.** **Autumn** OCW how do the changing seasons affect me? Autumn Observe changes across the four seasons.	**Autumn** OCW how do the changing seasons affect me? Autumn Observe changes across the four seasons.	**Winter Wonderland - Changes** OCW how do the changing seasons affect me? Winter Observe, notice and talk about changes in their environment linked to Winter.	**Changes - Caterpillars** Observe, notice and talk about changes in their environment linked to Spring.	**Reach for the Sky – Growth and change growing seeds and plants** To plant seeds and discuss what they will need to grow. Observe, notice and talk about changes in their environment.	**Once Upon a Farm – Animals and Summer** Observe, notice and talk about changes in their environment linked to Summer.
R	**Where do animals live?** **Hibernation** **Autumn** OCW how do the changing seasons affect me? **Autumn**	**Fruits of the World**	**Out of this world – Space** **Changing state – water and Ice** **Astronauts** **Sources of light** OCW how do the changing seasons affect me? **Winter**	**New Life – What's in an egg?** **Bird watch** **Nocturnal Animals** OCW how do the changing seasons affect me? **Spring**	**Where are you?** **Floating and Sinking**	**He's got the whole world in His hands** **Hibernation** **Day and Night** **Recycling and Pollution** **Growing** OCW how do the changing seasons affect me? **Summer**
1	**Super Senses** *Animals, including humans* identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. OCW how do the changing seasons affect me? Autumn Observe changes across the four seasons.	**Material World** Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. Distinguish between an object and the material from which it is made.	**Material World** OCW how do the changing season affect me? Winter Observe changes across the four seasons (Properties of materials) Distinguish between an object and the material from which it is made Describe the simple physical properties of a variety of everyday materials	**Our Animal Kingdom** Identify and name a variety of common animals that are carnivores, herbivores and omnivores. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). Movement, food	**Our Animal Kingdom** OCW how do the changing season affect me? Spring Observe changes across the four seasons Nocturnal Animals Carnivores, herbivores and omnivores Identify and name a variety of common animals that are carnivores, herbivores and omnivores. OCW how do the changing season affect me? Summer Observe changes across the four seasons	**Flower Power** Identify and describe the basic structure of a variety of common flowering plants, including trees. OCW: What can we make with the food that we have grown Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
2	**An Apple a Day** OCW: Animal needs. *Describe the basic needs of animals, including humans, for survival.* *Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.*	**Growing Up** How do we change throughout our lives? Human life cycle. *Know that animals, including humans, have offspring, which grow into adults.* OCW: How do animals change?	**What is in your habitat?** OCW: What lives in a habitat? *Identify and name a variety of plants and animals in habitats.* *Explore and compare 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.* *Describe how different habitats provide for the basic needs of different animals and plants and how they depend on each other.* *Food Chains*	**Garden Gurus** *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.*	**Garden Gurus** *Observe and describe how seeds and bulbs grow into mature plants.* How plants are suited to various habitats. **Materials** *Identify and compare the suitability of a variety of everyday materials, for particular uses.*	**Materials: Shaping up** *Identify and compare the suitability of a variety of everyday materials, for particular uses.* *Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting & stretching.* *Identify and compare the suitability of a variety of everyday materials, for particular uses.*

3	**Rock detectives** *Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.* *Recognise that soils are made from rocks and organic matter.* *Describe in simple terms how fossils are formed when things that have lived are trapped within rocks.*	**The Power of Forces** OCW: How do leaves and trees change through the year? Identify and describe the functions of different parts of plants; roots, stem, leaves and flowers. *Compare how things move on different surfaces.* *Notice that some forces need contact between two objects, but magnetic forces can act at a distance.*	**The Power of Forces** *Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials* *Predict whether two magnets will attract or repel each other, depending on which poles are facing.* *Describe magnets as having two poles* *Observe how magnets attract or repel each other and attract some materials and not others.*	**Amazing bodies** OCW: How do leaves and trees change through the year? *Identify and describe the functions of different parts of plants; roots, stem, leaves and flowers.* *Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat* *Identify that humans and some animals have skeletons and muscles for support, protection and movement* OCW: How do sunflower seeds and plants grow and change over time? Review and update *Explore the requirements of plants for life and growth (air, water, light, nutrients from soil and room to grow) and how they vary from plant to plant.*	**How does your garden grow?** *Identify and describe the functions of different parts of plants; roots, stem, leaves and flowers.* *Investigate the ways in which water is transported within plants.* *Explore the requirements of plants for life and growth (air, water, light, nutrients from soil and room to grow) and how they vary from plant to plant.* *Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.*	**Can you see me?** OCW: How do leaves and trees change through the year? *Identify and describe the functions of different parts of plants; roots, stem, leaves and flowers.* Light *Recognise that they need light in order to see things and that dark is the absence of light.* *Notice that light is reflected from surfaces* *Recognise that shadows are formed when the light from a light source is blocked by a solid object.* *Find patterns in the way that sized of shadows change.* *Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.*
4	**Switched On** **Electrical Circuits** *Identify common appliances that run on electricity.* *Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.* *Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.* *Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.* *Recognise some common conductors and insulators, and associate metals with being good conductors.*	**Good Vibrations** **Sound and Hearing** OCW How can we classify trees by looking at their leaves? *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.* *Identify how sounds are made, associating some of them with some of them vibrating.* *Recognise that vibrations from a sound travel through a medium to the ear.* *Find patterns between the volume of a sound and the strength of the vibrations that produced it.* *Recognise that sounds get fainter as the distance from the sound source increases.* *Find patterns between the pitch of a sound and features of the object that produced it.*	**In a state** **States of matter** **Materials** OCW How can we classify and identify deciduous trees in winter? *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.* *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, and measure or research the temperature at which this happens in degrees Celsius.* *Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Set up simple practical enquires and comparative and fair tests.*	**Where does all that food go?** **Animals and Humans** OCW How to classify plants by looking at flowers? *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.* *Construct and interpret a variety of food chains* *Identify the different types of teeth in humans and their simple functions.* *Identify the different types of teeth in humans and their simple functions.*	**Who am I?** **Living things** *Describe the simple functions of the basic parts of the digestive system in humans.* *Construct and interpret a variety of food chains, identifying producers, predators and prey.* *Recognise that living things can be grouped in a variety of ways.* *Recognise that living things can be grouped in a variety of ways.* *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.* *Invertebrates and Vertebrates*	**Human impact** OCW How to classify plants by looking at flowers? *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.* *Construct and interpret a variety of food chains, identifying producers, predators and prey.* *Recognise that environments can change and that this can sometimes pose dangers to living things.* *Habit destruction and litter*

5	**To Infinity and Beyond** *Describe the Sun, Earth and Moon as approximately spherical bodies.* *Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.* *Time, seasons.* *Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky.* *Describe the movement of the Moon relative to the Earth.*	**May the Force be with you** *Identify the effects of air resistance, water resistance and friction that act between moving surfaces.* *Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.* *Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.*	**Material World** *Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and a response to magnets.* *Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic.* *Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.* *Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.*	**Material World** *Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.* *Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.* *Demonstrate that dissolving, mixing and changes of state are reversible changes.* *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.*	**Reproduction in Plants & Animals** *Describe the difference in the life cycles of a mammal, an amphibian, an insect and a bird* *Describe the life processes of reproduction in some plants and animals*	**Circle of Life** *Describe the difference in the life cycles of a mammal, an amphibian, an insect and a bird* *Describe the changes as humans develop from birth to old age* *Describe the changes as humans develop from birth to old age*
6	**The Nature Library** *Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.* *Give reasons for classifying plants and animals based on specific characteristics.*	**Light Up** *Recognise that light appears to travel in straight lines.* *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.* *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.* *Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.*	**Danger: High Voltage!** *Use recognised symbols when representing a simple circuit in a diagram.* *Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.* *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.* Electricity investigation	**Body Pump** *Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.* *Describe the ways in which nutrients and water are transported within animals, including humans.* *Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.*	**Body Health** *Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.* *Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.*	**Everything Changes** *Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.* *Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.*