Key Skills for Assessment – Saint Clare's Catholic Primary School **Subject – Science**

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Looks closely at similarities, differences, patterns and change. • Children know about similarities and differences in relation to places, objects, materials and living things. • They talk about the features of their own immediate environment and how environments might vary from one another. • They make observations of animals and plants and explain why some things occur, and talk about changes.	▪ **Animals** ▪ Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. ▪ 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, and including pets). ▪ Find out and describe how animals look different to one another. ▪ Group together animals according to their different features. ▪ Recognise similarities between animals: ▪ structure: head, body, way of moving, senses, body covering, tail. ▪ Animals have senses to explore the world around them and to help them to survive. ▪ Recognise that animals need to be treated with care and sensitivity to keep them alive and healthy. Animals are alive; they **move**, **feed**, grow, use their **senses** and reproduce **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, rock *(and brick, paper and cardboard).* ▪ 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.	▪ **Humans** ▪ Find out about and describe the basic needs of 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. ▪ Medicines can be useful when we are ill. ▪ Medicines can be harmful if not used properly **Properties of 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 ▪ Some materials can be found naturally; others have to be made **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. Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. ▪ **Living Things Y2** ▪ . 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 micro-habitats. ▪ 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. ▪ Different kinds of plants and animals live in different kinds of places.	▪ **Animals Inc Humans** ▪ Identify that humans and some other animals have skeletons and muscles for support, protection and movement. ▪ Identify animals (vertebrates) which have a skeleton which supports their body, aids movement & protects vital organs (be able to name some of the vital organs). ▪ Identify animals without internal skeletons/backbones (invertebrates) and describe how they have adapted other ways to support themselves, move & protect their vital organs. ▪ Know how the skeletons of birds, mammals, fish, amphibians or reptiles are similar (backbone, ribs, skull, bones used for movement) and the differences in their skeletons. ▪ Know that muscles, which are attached to the skeleton, help animals move parts of their body. ▪ Explore how humans grow bigger as they reach maturity by making comparisons linked to body proportions and skeleton growth – e.g. do people with longer legs have longer arm spans? ▪ Recognise that animals are alive; they move, feed, grow, use their senses and reproduce. **Forces** ▪ Compare how some things move on different surfaces. ▪ Notice that some forces need contact between two objects but magnetic forces can act at a distance. ▪ Observe how magnets attract or repel each other and attract some materials and not others. ▪ 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. ▪ Describe magnets as having two poles. ▪ Predict whether two magnets will attract or repel each other, depending on which poles are facing. **Living Things In Their Habitats** ▪ 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. ▪ Recognise that environments can change and that this can sometimes pose dangers to living things.	**Plants** Roots grow downwards and anchor the plant. Water, taken in by the roots, goes up the stem to the leaves, flowers and fruit. Nutrients (not food) are taken in through the roots. Stems provide support and enable the plant to grow towards the light. Plants make their own food in the leaves using energy from the sun.-Photosynthesis Flowers –petals-attract insects to aid pollination. Pollination is when pollen is transferred between plants by insects, birds, other animals and the wind. Seeds are formed after the flowers are pollinated. Many flowers produce fruits which protect the seed and/or aid seed dispersal. Seed dispersal, by a variety of methods, helps ensure that new plants survive. Plants need nutrients to grow healthily (either naturally from the soil or from fertiliser added to soil). ▪ **ELECTRICITY.** ▪ 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. ▪ Electricity can be dangerous. ▪ Electricity sources can be mains or battery.	**Materials** ▪ 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. ▪ Changes can occur when different materials are mixed. ▪ Some material changes can be reversed and some cannot. ▪ Recognise that dissolving is a reversible change. ▪ Distinguish between melting and dissolving. ▪ Mixtures of solids (of different particle size) can be separated by sieving. ▪ Mixtures of solids and liquids can be separated by filtering if the solid is insoluble (un-dissolved). ▪ Evaporation helps us separate soluble materials from water. ▪ Changes to materials can happen at different rates (factors affecting dissolving, factors affecting evaporation – amount of liquid, temperature, wind speed). ▪ Freezing, melting and boiling changes can be reversed **Earth & Space Forces** ▪ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. ▪ Describe the movement of the Moon relative to the Earth. ▪ Describe Sun/Earth/Moon as approximately spherical bodies. ▪ Use the idea of the Earth's rotation to explain day and night. ▪ The Earth spins once around its own axis in 24 hours, giving day and night. ▪ The Earth orbits the Sun in one year. ▪ We can see the Moon because the Sun's light reflects off it. ▪ The Moon orbits the Earth in approximately 28 days and changes to the appearance of the moon are evidence of this. ▪ The Sun appears to move across the sky from East to West and this causes shadows to change during the day. Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence supporting the movement of the Earth	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Recognise that characteristics are passed from parents to their offspring and appreciate that variation in offspring over time can make animals more or less able to survive in particular environments. Find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution. Recognise that light appears to travel in straight lines. 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. Explain that we see things because the light that 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 why shadows have the same shape as the objects that cast them. Identify and name the main parts of the human circulatory system, and describe the functions of the heart (major organ and made of muscle), blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (All medicines are drugs, not all drugs are medicines.)

	▪ **Seasons** ▪ Observe and describe changes across the four seasons. ▪ Observe and describe weather associated with the seasons and how day length and temperature varies. ▪ **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. ▪ Recognise that humans are animals. ▪ Compare and describe differences in their own features (eye, hair, skin colour, etc.) ▪ Recognise that humans have many similarities.	▪ There are different kinds of habitat near school which need to be cared for ▪ Habitats provide the preferred conditions for the animals/plants that live there (compare local habitats and less familiar examples). ▪ **Electricity** ▪ To identify devices that use an electrical source either mains, battery powered or recyclable batteries. ▪ To identify sources of electricity including mains, battery, nuclear, wind power, hydro and coal etc ▪ To explain why a particular device requires a particular battery ▪ To highlight the importance for electrical safety and identify ways in which electricity and batteries might be dangerous ▪ To construct a simple circuit using wires, battery, bulb and buzzer.	Use and make identification keys for plants and animals. **Sound** Pupils should be taught to: • identify how sounds are made, associating some of them with something vibrating • recognise that vibrations from sounds travel through a medium to the ear • find patterns between the pitch of a sound and features of the object that produced it • 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 ▪	▪ Batteries 'push' electricity round a circuit and can make bulbs, buzzers and motors work. ▪ Faults in circuits can be found by methodically testing connections. ▪ Drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until UKS2). ▪ **STATES OF MATTER** ▪ 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 (°C). ▪ Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. ▪ Solids, liquids and gases can be identified by their observable properties. ▪ Solids have a fixed size and shape (the size and shape can be changed but it remains the same after the action). ▪ Liquids can pour and take the shape of the container in which they are put. ▪ Liquids form a pool not a pile. ▪ Solids in the form of powders can pour as if they were liquids but make a pile not a pool. ▪ Gases fill the container in which they are put. ▪ Gases escape from an unsealed container. ▪ Gases can be made smaller by squeezing/pressure. ▪ Liquids and gases can flow. ▪ ▪ ▪ **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 light from the sun can be dangerous and that there are ways to protect their eyes. ▪ Recognise that shadows are formed when the light from a light source is blocked by a solid object. ▪ Find patterns in the way that the size of shadows change**.** ▪ **ROCKS** ▪ Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. ▪ Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	**Animals Inc Humans** • describe the changes as humans develop to old age ▪ ▪ **Living Things In Their Habitats** ▪ Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. ▪ Describe the life process of reproduction in some plants and animals. ▪ ▪ . ▪ ▪ ▪ .	**Evolution and Inheritance** • recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents • identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution **Animals Inc Humans** The heart pumps blood around the body through vessels and this can be felt as a pulse and through the lungs to obtain a supply of oxygen. Describe the ways in which nutrients and water are transported within animals, including humans. Blood carries oxygen/essential materials to different parts of the body. Animals are alive; they move, feed, grow, use their senses, reproduce, breathe/respire and excrete. An adequate, varied and balanced diet is needed to help us grow and repair our bodies (proteins), provide us with energy (fats and carbohydrates) and maintain good health (vitamins and minerals). **Living Things In Their Habitats** 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 - Living things can be grouped into micro-organisms, plants and animals. Vertebrates can be grouped as fish, amphibians, reptiles, birds and mammals and invertebrates can be

								▪ Recognise that soils are made from rocks and organic matter. ▪ Rocks and soils can feel and look different. ▪ Rocks and soils can be different in different places/environments.				grouped as snails and slugs, worms, spiders and insects. **Plants** Plants can be grouped as flowering plants (incl. trees and grasses) and non-flowering plants (such as ferns and mosses). Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. **Electricity** 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. Use recognised symbols (at least: cells, wires, switches, bulbs, buzzers and motors) when representing a simple circuit in a diagram. Use and interpret circuit diagrams to construct a variety of more complex circuits predicting whether they will 'work'. Construct simple series circuits, to help them answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors. Represent a simple circuit in a diagram using recognised symbols
Working Towards	**Greater Depth**	**Working Towards**	**Greater Depth**	**Working Towards**	**Greater Depth**	**Working Towards**	**Greater Depth**	**Working Towards**	**Greater Depth**	**Working Towards**	**Greater Depth**	**Working Towards**	**Greater Depth**