

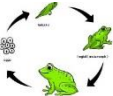












<p>Plants</p>  <p>Children will observe the growth of different plants and experience what is needed for germination, growth and survival, as well as the process of reproduction in plants.</p>	<p style="text-align: center;"> Cranmere Primary School Science 2018-2019</p>	<p>Animals, including humans</p> <p>Children will learn about the basic needs of animals and how animals, including humans, grow and change.</p> 
<p>Seasonal changes</p> <p>Children will investigate and explore the changes in weather and how this links to the four seasons.</p> 		<p>At Cranmere Primary School our vision is to ignite pupils' natural curiosity by providing them with opportunities to independently and confidently explore the world in which they live in. Our children will explore, classify, prove, wonder, ask questions, sort, measure, predict, investigate and discover connections. It is our mission for children to understand the role of science in this ever changing world, developing and applying transferable skills within a variety of contexts.</p>
<p>Light & shadows</p> <p>Children will identify different light sources and explore what happens when light reflects off of reflective surfaces. They will recognise when shadows are formed and find patterns in the way that the size of the shadows change.</p> 	<p>Living things & their habitats</p>  <p>Children will learn that all living things have certain characteristics that are essential for keeping them alive and healthy. They will learn about habitats and microhabitats by identifying and studying a variety of plants and animals within our local environment. They will observe how living things depend on each other for survival by constructing food chains.</p>	<p>Electricity</p> <p>Children will construct simple series circuits, trying different components to create simple devices. They will recognise common conductors and insulators and draw their circuits as pictorial representations.</p> 
<p>Rocks</p> <p>Children will explore a range of rocks and soils by comparing and grouping them based on their appearance and physical properties. They will learn about fossils and recognise that rocks and soils are made from organic matter.</p> 	<p>States of Matter</p> <p>Children will explore, compare and group a variety of everyday materials based on their states of matter. They will observe the changing of state and identify reversible and irreversible changes.</p>	<p>Sound</p> <p>Children will explore and identify the way sound is made through vibrations and find out about how the pitch and volume of sounds can be changed in a variety of ways.</p> 
<p>Forces & magnets</p> <p>Children will observe magnetic forces and identify which materials are magnetic. They will identify the force of gravity and identify the effects of friction and air/water resistance.</p> 	<p>Earth & Space</p> <p>Children will learn that the sun is a star at the centre of our solar system and it has eight planets. They will be able to explain day and night using models of the sun and Earth and describe the movement of the sun and different planets in our solar system.</p> 	<p>SOLID Liquid GAS</p>
<p>Everyday materials</p>  <p>Children will explore, name, discuss and raise and answer questions about a wide range of materials and develop an understanding of their properties. They will understand how some materials are used and which of the properties make them suitable or unsuitable for a particular purpose.</p>	<p>Working scientifically</p> <p>Children are given the opportunity to explore the world around them and raise their own questions. Children will record and communicate their findings in a range of ways and begin to use scientific language.</p>	

	Autumn Term	Spring Term	Summer Term
Nursery	<ul style="list-style-type: none"> •Enjoys playing with small-world models such as a farm, a garage, or a train track. •Notices detailed features of objects in their environment 	<ul style="list-style-type: none"> •Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world. •Can talk about some of the things they have observed such as plants, animals, natural and found objects. •Talks about why things happen and how things work. •Developing an understanding of growth, decay and changes over time. •Shows care and concern for living things and the environment 	<ul style="list-style-type: none"> • Children can talk about the features of their own immediate environment and how environments might vary from one another.
Reception	<ul style="list-style-type: none"> • Children can talk about the features of their own immediate environment and how environments might vary from one another. 	<ul style="list-style-type: none"> • Children know about the similarities and differences in relations to places, objects, materials and living things. • Children can talk about the features of their own immediate environment and how environments might vary from one another. • Children make observations of animals and plants and explain why some things occur and talk about changes. • Children show some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health. • Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. • Children eat a healthy range of foodstuffs and understands need for variety in food. 	<p><u>EARLY LEARNING GOALS</u></p> <ul style="list-style-type: none"> • Children know about the similarities and differences in relations to places, objects, materials and living things. • Children can talk about the features of their own immediate environment and how environments might vary from one another. • Children make observations of animals and plants and explain why some things occur and talk about changes. • Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe.
Year 1	<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies • 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 	<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies • 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, mammals 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. 	<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies • 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

Year 2	<ul style="list-style-type: none"> Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene Identify and compare the suitability of a variety of everyday material, including wood, plastic, metal, 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 	<ul style="list-style-type: none"> Explore and compare the differences between things that are alive, once alive and never alive Describe how living things are suited to their habitats and how plants and animals in them depend on each other Identify and name a variety of plants and animals in their habitats/microhabitats Describe how animals obtain their food from plants and other animals; use the idea of a simple food chains 	<ul style="list-style-type: none"> 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
Year 3	<ul style="list-style-type: none"> Recognise we need light to see and dark is the absence of light Notice that light is reflected from surfaces Recognise that light from the sun can be dangerous and the need to protect their eyes Recognise that shadows are formed when light from a source is blocked; identify patterns in how the size of a shadow changes Compare and group rocks according to appearance and simple physical properties Describe in simple terms how fossils are formed Recognise that soil is made from rocks and organic matter 	<ul style="list-style-type: none"> Identify and describe the functions of different parts of a plant: root, stem/trunk, flowers, leaves Explore the requirements of plants for life and growth (air, light, water, nutrients, space) and how they vary from plant to plant Investigate how water is transported in plants Explore the part flowers play in plant life cycles, including pollination, seed formation and seed dispersal Identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<ul style="list-style-type: none"> Compare how things move on different surfaces Notice that magnetic force can act at a distance Observe how magnets attract or repel each other and attract some materials and repel others Compare and group materials according to if they are magnetic Describe magnets as having two poles and use this to predict if they will attract or repel
Year 4	<ul style="list-style-type: none"> Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their function Construct and interpret a range of food chains; identify producers, predators, prey Identify common appliances that run on electricity Construct a simple series circuit; identify and name its parts Recognise that a component will only work if the circuit is complete and that a switch open and closes a circuit Identify common conductors and insulators 	<ul style="list-style-type: none"> Identify how sounds are made and recognise that vibrations from sounds travel to the ear Find patterns between the pitch of a sound and the object that makes the sound Find patterns between the volume of a sound and the strength of the vibrations Recognise that sounds get fainter as the distance from the source increases 	<ul style="list-style-type: none"> Compare and group materials according to whether they are solid, liquid or gas Observe that some materials change state when they are heated or cooled and measure the temperatures at which these changes happen Identify evaporation and condensation in the water cycle and link the rate of evaporation with temperature Recognise that living things can be grouped in a variety of ways Explore and use classification keys to group, identify and name a variety of living things in the local and wider environment Recognise that environments can change and that this can sometimes pose dangers to living things

<p>Year 5</p>	<ul style="list-style-type: none"> • Explain that unsupported objects fall to earth because of the force of gravity acting between the Earth and the falling object. • Identify the effects of air resistance, water resistance and friction, that act between moving surfaces • Recognise that levers, pulleys and gears allow a smaller force to have a greater effect • 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 earth • Describe the Sun, Earth and Moon as approximately spherical bodies • Use the idea of the earth's rotation to explain day and night and the apparent movement of the sun across the sky 	<ul style="list-style-type: none"> • Compare and group properties on the basis of their properties (hardness, solubility, transparency, magnetism and conductivity – electrical and thermal) • Know that some materials will dissolve and describe how to recover them from a solution • Use knowledge of solids, liquids and gases to separate mixtures of materials • Give reasons for particular uses of materials • Demonstrate that dissolving, mixing and changes of state are reversible • Explain that some changes are irreversible and result in the formation of new materials 	<ul style="list-style-type: none"> • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • Describe the process of reproduction in some plants and animals • Describe the changes as humans develop from babies to old age
<p>Year 6</p>	<ul style="list-style-type: none"> • 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 offspring vary from and are not identical to their parents • Identify how animals and plants are adapted to suit their environment and that this may lead to evolution • Describe how living things are classified into groups according to observable characteristics based on similarities and differences, including micro-organisms, plants and animals • Give reasons for classifying plants and animals based on specific characteristics 	<ul style="list-style-type: none"> • Identify and name the main parts of the circulatory system and describe their functions • Recognise the impact of diet, exercise, drugs and lifestyle on body function • Describe how nutrients and water are transported within animals including humans • Recognise that light travels in straight lines and that we see things when objects give out or reflect light into the eye • Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then our eyes • Use the idea that light travels in straight lines to explain the shapes of shadows 	<ul style="list-style-type: none"> • 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 • Use recognised symbols in simple circuit diagrams