

CHALKHILL PRIMARY SCHOOL SCIENCE OVERVIEW

Year Group	AUTUMN		SPRING		SUMMER	
	1	2	1	2	1	2
Nursery	<p>Ourselves Name parts of the body Explore the world around us using the sense of touch</p>	<p>Seasons Light and dark <i>Begin to understand the seasons and their features</i></p>	<p>Materials Discover the variety of different material around us Begin to discuss the properties of different materials Explore different sound produced by different materials Investigations using a variety of materials</p>	<p>Growing <i>Babies grow and change</i> <i>Begin to understand that we need food and water to stay healthy</i></p>	<p>Mini beasts <i>Begin to understand animals and their environment</i></p>	<p>Hot cooking Irreversible/reversible change plants</p>
Reception	<p>Materials <i>Under that there are many materials in the world around us</i> <i>Similarities and differences between in a variety of materials</i> <i>Recognise the different properties of a range of materials</i> Materials have variety of uses Materials change their form</p>	<p>Ourselves <i>Recognise and name parts of the body</i> <i>Similarities and differences between themselves</i> <i>Explore the world around us using the sense of sight</i></p>	<p>Growing Know how <i>Begin to understand that babies grow and change</i> <i>Need food and water to stay healthy</i> <i>Medicines can us feel better when we are ill</i></p>	<p>Seasons <i>to understand the seasons and their features</i> know how the changing seasons affect the environment changing seasons affect the birds and animals</p>	<p>Mini beasts Know about the variety of animals in the environment</p>	<p>Hot cooking Irreversible/reversible change Push and pull</p>

Year1	<p>Animals, including humans</p> <ul style="list-style-type: none"> -Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense -identify and name a variety of common animals including birds, fish, amphibians, reptiles and mammals -describe & compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) -identify and name a variety of common animals that are carnivores, herbivores & omnivores 	<p>Seasonal Changes (going observations and recording throughout the term)</p> <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 <p>Working Scientifically</p> <ul style="list-style-type: none"> -ask simple questions and recognising that they can be answered in different ways -observing closely -identifying and classifying using their observations and ideas to suggest answers to questions -gathering and recording data to help in answering questions -simple equipment performing simple tests 	<p>Everyday Materials</p> <ul style="list-style-type: none"> -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 everyday materials -compare and group together a variety of everyday materials on the basis of their simple physical properties <p>Working Scientifically</p> <ul style="list-style-type: none"> -gathering and recording data to help in answering questions 	<p>Seasonal Changes (going observations throughout the term)</p> <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 <p>Working Scientifically</p>	<p>Plants</p> <ul style="list-style-type: none"> -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 <p>Working Scientifically</p>	<p>Seasonal Changes (going observations throughout the term, plus an amalgamation of what they have learnt across the year, making comparisons between seasons and generalisations about each season)</p> <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 <p>Working Scientifically</p>
Year2	<p>Uses of everyday materials</p> <ul style="list-style-type: none"> -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 SF – compare, observe, classify, record, explain 	<p>Working Scientifically</p> <ul style="list-style-type: none"> -ask simple questions and recognising that they can be answered in different ways -observing closely, using simple equipment -identifying and classifying -performing simple tests -using their observations and ideas to suggest answers to questions -gathering and recording data to help in answering questions 	<p>Animals, including humans</p> <ul style="list-style-type: none"> -notice that animals, including humans, have offspring which grow in to adults -find out about and describe the basic needs of animals, including 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 <p>Working Scientifically</p>	<p>Plants</p> <ul style="list-style-type: none"> -observe and describe how seeds and bulbs grow in to mature plants -find out and describe how plants need water, light and suitable temperature to grow and stay healthy <p>Working Scientifically</p>	<p>Living things and their habitats</p> <ul style="list-style-type: none"> -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 	<ul style="list-style-type: none"> -identify and name a variety of plants and animals in their habitats, including micro-habitats -describe how some animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name the different sources of food <p>Working Scientifically</p>

<p>Year3</p>	<p>Rocks</p> <ul style="list-style-type: none"> -Compare and group together kinds of rocks on the basis of their appearance and properties. -describe in simple terms how fossils are formed when things that have lived are trapped within rock -recognise that soils are made from rocks and organic matter SF – observe, classify, test, group, compare 	<p>Animals, including Humans</p> <ul style="list-style-type: none"> -identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food; they get nutrition from what they eat -identify that humans and some other animals have skeletons and muscles for support, protection and movement SF – observe, label, compare, group, explain 	<p>Forces and Magnets</p> <ul style="list-style-type: none"> -compare how 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 SF – full investigation, observe, measure, group 	<p>Light</p> <ul style="list-style-type: none"> -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 SF – full investigation, observe, measure, record, explain, generalising 	<p>Plants</p> <ul style="list-style-type: none"> -identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers -explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant 	<ul style="list-style-type: none"> -investigate the way in which water is transported within plants -explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal SF – full investigation, measure, record
<p>Year 4</p>	<p>Electricity</p> <ul style="list-style-type: none"> -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 SF – observing patterns, sorting, explaining, record 	<p>Animals, including Humans</p> <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 simple functions -construct& interpret a variety of food chains, identifying producers, predators and prey. SF – observe, compare, explain, label 	<p>Living things & habitats</p> <ul style="list-style-type: none"> -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 SF – observe, classify, explain 	<p>Sound</p> <ul style="list-style-type: none"> -identify how sounds are made, associating some of them with 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 SF – identifying patterns, compare, explain, generalise 	<p>States of Matter</p> <ul style="list-style-type: none"> -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 	<ul style="list-style-type: none"> - identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature SF – full investigation, sorting, explain, measure, record, generalise ** over two ½ terms to allow for lots of investigative work Working scientifically

Year5	<p>Properties and changes of materials</p> <ul style="list-style-type: none"> -compare and group materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical & thermal) and response to magnets -know that some materials 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 	<ul style="list-style-type: none"> -give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic -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 SF – full investigation, fair test, explain, measure, record ** over two ½ terms to allow for lots of investigative work Working scientifically 	<p>Forces</p> <p>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</p> <p>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</p>	<ul style="list-style-type: none"> - recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect SF – full investigations, observe, measure, record, explain, generalise ** over two ½ terms to allow for lots of investigative work Working scientifically 	<p>Living things and their habitats</p> <p>Describe the differences in life cycles of a mammal, an amphibian, an insect and a bird</p> <p>describe the life processes of reproduction in some plants and animals</p> <p>Animals, including humans</p> <p>Describe the changes as humans develop to old age</p> <p>SF – observe, compare, asking questions, explain</p>	<p>Earth and Space</p> <ul style="list-style-type: none"> -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 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 SF – compare, explain
Year6	<p>Living things and their habitats</p> <ul style="list-style-type: none"> -Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants & animals -give reasons for classifying plants and animals based on specific characteristics SF – observe, compare, explain, group 	<p>Animals, including humans</p> <ul style="list-style-type: none"> -identify & name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood -recognise the impact of diet, exercise, drugs & lifestyle on the way their body functions -describe the ways in which nutrients & water are transported within animals, including humans SF – full investigation, measure, record + 	<p>Light</p> <ul style="list-style-type: none"> -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 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 why shadows have the same shape as the objects that cast them SF – full investigation, observe, record, explain, generalise 	<p>SATS preparation</p>	<p>Electricity</p> <p>Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of the cells used in the circuit.</p> <p>Identify and name parts of a circuit</p> <p>Compare and give reasons variations in component functions</p>	<p>Evolution and inheritance</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 earth millions of years ago -recognise that living things produce offspring of the same kind, but normally offspring vary & are not identical to their parents -identify how animals & plants are adapted to suit their environment in different ways and that adaptation may lead to evolution SF – observe, compare, explain