

Science Curriculum

King Edwin Primary



Year 1

Year 1				
Biology			Chemistry	Physics
Animals, including Humans	Animals, including Humans	Plants	Everyday Materials	Seasonal Change
<ul style="list-style-type: none"> • Name common animals • Carnivores, etc 	<ul style="list-style-type: none"> • Human body and senses 	<ul style="list-style-type: none"> • Common plants • Plant structure 	<ul style="list-style-type: none"> • Properties of materials • Grouping materials 	<ul style="list-style-type: none"> • The four seasons • Seasonal weather
<ul style="list-style-type: none"> • Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds • Know and classify animals by what they eat (carnivore, herbivore and omnivore) • Know how to sort by living and non living things 	<ul style="list-style-type: none"> • Know the name of parts of the human body that can be seen • Know about the five senses. 	<ul style="list-style-type: none"> • Know and name a variety of common wild and garden plants • Know and name the petals, stem, leaves and root of a plant • Know and name the roots, trunk, branches and leaves of a tree 	<ul style="list-style-type: none"> • Know the name of the materials an object is made from • Know about the properties of everyday materials 	<ul style="list-style-type: none"> • Name the seasons and know about the type of weather in each season

Year 2

Biology			Chemistry	
All living things and their habitats	Animals, including Humans	Plants	Everyday Materials	
<ul style="list-style-type: none"> • <i>Alive or dead</i> • <i>Habitats</i> • <i>Adaptations</i> • <i>Food chains</i> 	<ul style="list-style-type: none"> • <i>Animal reproduction</i> • <i>Healthy living</i> • <i>Basic needs</i> 	<ul style="list-style-type: none"> • <i>Plant and seed growth</i> • <i>Plant reproduction</i> • <i>Keeping plants healthy</i> 	<ul style="list-style-type: none"> • <i>Identify different materials</i> • <i>Name everyday materials</i> • <i>Properties of materials</i> 	<ul style="list-style-type: none"> • <i>Compare the use of different materials</i> • <i>Compare movement on different surfaces</i>
<ul style="list-style-type: none"> • Classify things by living, dead or never lived • Know how a specific habitat provides for the basic needs of things living there (plants and animals) • Match living things to their habitat • Name some different sources of food for animals • Know about and explain a simple food chain 	<ul style="list-style-type: none"> • Know the basic stages in a life cycle for animals, (including humans) • Know why exercise, a balanced diet and good hygiene are important for humans 	<ul style="list-style-type: none"> • Know and explain how seeds and bulbs grow into plants • Know what plants need in order to grow and stay healthy (water, light & suitable temperature) 	<ul style="list-style-type: none"> • Know how materials can be changed by squashing, bending, twisting and stretching 	<ul style="list-style-type: none"> • Know why a material might or might not be used for a specific job

Year 3

Year 3					
Biology			Chemistry	Physics	
Animals, including humans	Plants	Plants	Rocks	Forces	Light
<ul style="list-style-type: none"> • <i>Skeleton and muscles</i> • <i>Nutrition</i> • <i>Exercise and health</i> 	<ul style="list-style-type: none"> • <i>Plant life</i> • <i>Basic structure and functions</i> 	<ul style="list-style-type: none"> • <i>Life cycle</i> • <i>Water transportation</i> 	<ul style="list-style-type: none"> • <i>Fossil formation</i> • <i>Compare and group rocks</i> • <i>Soil</i> 	<ul style="list-style-type: none"> • <i>Different Forces</i> • <i>Magnets</i> 	<ul style="list-style-type: none"> • <i>Reflections</i> • <i>Shadows</i>
<ul style="list-style-type: none"> • Know about the importance of a nutritious, balanced diet • Know how nutrients, water and oxygen are transported within animals and humans • Know about the skeletal and muscular system of a human 	<ul style="list-style-type: none"> • Know the function of different parts of flowering plants and trees 	<ul style="list-style-type: none"> • Know how water is transported within plants • Know the plant life cycle, especially the importance of flowers 	<ul style="list-style-type: none"> • Compare and group rocks based on their appearance and physical properties, giving reasons • Know how soil is made and how fossils are formed • Know about and explain the difference between sedimentary, metamorphic and igneous rock 	<ul style="list-style-type: none"> • Know about and describe how objects move on different surfaces • Know how a simple pulley works and use to on to lift an object • Know how some forces require contact and some do not, giving examples • Know about and explain how magnets attract and repel Predict whether magnets will attract or repel and give a reason 	<ul style="list-style-type: none"> • Know that dark is the absence of light • Know that light is needed in order to see and is reflected from a surface • Know and demonstrate how a shadow is formed and explain how a shadow changes shape • Know about the danger of direct sunlight and describe how to keep protected

Year 4

Biology		Chemistry	Physics	
Animals, including humans	All living things and their habitats	States of Matter	Electricity	Sound
<ul style="list-style-type: none"> • Digestive system • Teeth • Food chains 	<ul style="list-style-type: none"> • Grouping living things • Classification keys • Adaptation of living things 	<ul style="list-style-type: none"> • Compare and group materials • Solids, liquids and gases • Changing state • Water cycle 	<ul style="list-style-type: none"> • Uses of electricity • Simple circuits and switches • Conductors and insulators 	<ul style="list-style-type: none"> • How sounds are made • Sound vibrations • Pitch and Volume
<ul style="list-style-type: none"> • Identify and name the parts of the human digestive system • Know the functions of the organs in the human digestive system • Identify and know the different types of human teeth • Know the functions of different human teeth • Use and construct food chains to identify producers, predators and prey 	<ul style="list-style-type: none"> • Use classification keys to group, identify and name living things • Know how changes to an environment could endanger living things • Group materials based on their state of matter (solid, liquid or gas) 	<ul style="list-style-type: none"> • Know the temperature at which materials change state • Know about and explore how some materials can change state • Know the part played by evaporation and condensation in the water cycle 	<ul style="list-style-type: none"> • Identify and name appliances that require electricity to function • Construct a series circuit • Identify and name the components in a series circuit (including cells, wires, bulbs, switches and buzzers) • Predict and test whether a lamp will light within a circuit • Know the function of a switch • Know the difference between a conductor and an insulator; giving examples of each 	<ul style="list-style-type: none"> • Know how sound is made, associating some of them with vibrating • Know how sound travels from a source to our ears • Know the correlation between pitch and the object producing a sound • Know the correlation between the volume of a sound and the strength of the vibrations that produced it • Know what happens to a sound as it travels away from its source

Year 5

Biology		Chemistry	Physics	
All living things and their habitats	Animals, including humans	Properties and changes in materials	Forces	Earth and Space
<ul style="list-style-type: none"> • <i>Life cycles – plants and animals</i> • <i>Reproductive processes</i> • <i>Famous naturalists</i> 	<ul style="list-style-type: none"> • <i>Changes as humans develop from birth to old age</i> 	<ul style="list-style-type: none"> • <i>Compare properties of everyday materials</i> • <i>Soluble/ dissolving</i> • <i>Reversible and irreversible substances</i> 	<ul style="list-style-type: none"> • <i>Gravity</i> • <i>Friction</i> • <i>Forces and motion of mechanical devices</i> 	<ul style="list-style-type: none"> • <i>Movement of the Earth and the planets</i> • <i>Movement of the Moon</i> • <i>Night and day</i>
<ul style="list-style-type: none"> • Know the life cycle of different living things e.g. mammal, amphibian, insect and bird • Know the differences between different life cycles • Know the process of reproduction in plants • Know the process of reproduction in animals 	<ul style="list-style-type: none"> • Create a timeline to indicate stages of growth in humans 	<ul style="list-style-type: none"> • Compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets • Know and explain how a material dissolves to form a solution • Know and show how to recover a substance from a solution • Know and demonstrate how some materials can be separated (e.g. through filtering, sieving and evaporating) • Know and demonstrate that some changes are reversible and some are not • Know how some changes result in the formation of a new material and that this is usually irreversible 	<ul style="list-style-type: none"> • Know what gravity is and its impact on our lives • Identify and know the effect of air and water resistance • Identify and know the effect of friction • Explain how levers, pulleys and gears allow a smaller force to have a greater effect 	<ul style="list-style-type: none"> • Know about and explain the movement of the Earth and other planets relative to the Sun • Know about and explain the movement of the Moon relative to the Earth • Know and demonstrate how night and day are created • Describe the Sun, Earth and Moon (using the term spherical)

Year 6

Biology			Physics	
Animals, including humans	All living things and their habitats	Evolution and Inheritance	Electricity	Light
<ul style="list-style-type: none"> • <i>The circulatory system</i> • <i>Water transportation</i> • <i>Impact of exercise on body</i> 	<ul style="list-style-type: none"> • <i>Classification of living things and the reasons for it</i> 	<ul style="list-style-type: none"> • <i>Identical and non identical off-spring</i> • <i>Fossil evidence and evolution</i> • <i>Adaptation and evolution</i> 	<ul style="list-style-type: none"> • <i>Electrical components</i> • <i>Simple circuits</i> • <i>Fuses and voltage</i> 	<ul style="list-style-type: none"> • <i>How light travels</i> • <i>Reflection</i> • <i>Ray models of light</i>
<ul style="list-style-type: none"> • Identify and name the main parts of the human circulatory system • Know the function of the heart, blood vessels and blood • Know the impact of diet, exercise, drugs and lifestyle on health • Know the ways in which nutrients and water are transported in animals, including humans 	<ul style="list-style-type: none"> • Classify living things into broad groups according to observable characteristics and based on similarities and differences • Know how living things have been classified • Give reasons for classifying plants and animals in a specific way 	<ul style="list-style-type: none"> • Know how the Earth and living things have changed over time • Know how fossils can be used to find out about the past • Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents) • Know how animals and plants are adapted to suit their environment • Link adaptation over time to evolution • Know about evolution and can explain what it is 	<ul style="list-style-type: none"> • Compare and give reasons for why components work and do not work in a circuit • Draw circuit diagrams using correct symbols • Know how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer 	<ul style="list-style-type: none"> • Know how light travels • Know and demonstrate how we see objects • Know why shadows have the same shape as the object that casts them • Know how simple optical instruments work e.g. periscope, telescope, binoculars, mirror, magnifying glass etc.