



Year 3 Science

Science Unit	Substantive Knowledge	Vocabulary	Disciplinary Knowledge: Working scientifically
Animals including Humans <u>Key Scientists</u> Adelle Davis(20thCentury Nutritionist)Marie Curie(Radiation / X-Rays)	<ul style="list-style-type: none"> 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 other animals have skeletons and muscles for support, protection and movement 	Nutrition, vitamins, minerals, calcium, food groups, balanced diet, healthy, fat, sugar, fruit, vegetables, protein, carbohydrates, fibre, water, skeleton, function, support, protection, names of bones, muscles, tendon, cartilage, organs, brain, heart, lungs	<ul style="list-style-type: none"> (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (WS) Asking relevant questions and using different types of scientific enquiries to answer them (WS) Setting up simple practical enquiries, comparative and fair tests (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (WS) Using straightforward scientific evidence to answer questions or to support their findings.
Forces and Magnets <u>Key Scientists</u> William Gilbert(Theories on Magnetism)Andre Marie Ampere(Founder of Electro-Magnetism)	<ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between 2 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 2 poles predict whether 2 magnets will attract or repel each other, depending on which poles are facing 	Force, contact force, non contact force, magnetic force, magnet, strength, bar/ring/button/horseshoe magnets, attract, repel, magnetic material, metal, iron, steel, non-magnetic, poles, north/south pole	<ul style="list-style-type: none"> (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (WS) Setting up simple practical enquiries, comparative and fair tests (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (WS) Using straightforward scientific evidence to answer questions or to support their findings. (WS) Identifying differences, similarities or changes related to simple scientific ideas and processes (WS) Asking relevant questions and using different types of scientific enquiries to answer them
Light and Shadows <u>Key Scientists</u> James Clerk Maxwell(Visible and Invisible Waves of Light)	<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 an opaque object find patterns in the way that the size of shadows change 	Light, dark, light source, reflector, shiny, shadow, materials, opaque, translucent, transparent, blocked, silhouette	<ul style="list-style-type: none"> (WS) Setting up simple practical enquiries, comparative and fair tests (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (WS) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
Plants <u>Scientist</u> Wangari Muta Maathai : First African woman to win a Nobel Prize through the Green Belt Movement. The campaign led to 30 million trees being planted. A good book to read would be "Wangari's Trees of Peace	<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 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 	leaf, flower, blossom, petal, fruit, root, bulb, seed trunk, branch, stem, stigma, anther, water, light, air, nutrients, soil, fertiliser, grow, healthy, transported, life cycle, pollination, seed formation, seed dispersal	<ul style="list-style-type: none"> (WS) Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions (WS) Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (WS) Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions (WS) Identifying differences, similarities or changes related to simple scientific ideas and processes (WS) Setting up simple practical enquiries, comparative and fair tests (WS) Using straightforward scientific evidence to answer questions or to support their findings. (WS) Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions (WS) Asking relevant questions and using different types of scientific enquiries to answer them
Rocks <u>Key Scientists:</u> Mary Anning(Discovery of Fossils)Inge Lehmann(Earth's Mantle)	<ul style="list-style-type: none"> 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 recognise that soils are made from rocks and organic matter 	Rocks, soils, grains, crystals, fossils, sedimentary, pebbles, stones, chalk, igneous, metamorphic, palaeontologist, plant particles, marble, granite, clay, sandstone.	<ul style="list-style-type: none"> (WS) Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers (WS) Setting up simple practical enquiries, comparative and fair tests

