Kobi Nazrul
- PRIMARY SCHOOL -

WHOLE SCHOOL PROGRESSION OF SKILLS AND KNOWLEDGE FOR: SCIENCE

	EYFS	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Animals Including humans (Incl. Y6 Evolution and Inheritance)			Y1: identify and name a variety ofcommon animals that are carnivores, herbivores and omnivores					
			Y1: identify and name a variety ofcommon animals that are carnivores, herbivores and omnivores Y2: Living things and their habitats: describe how animals obtain their food from plants and other animals, using the idea ofa simple food chain, and identify and name different sources of food		Y4: construct and interpret a variety of food chains, identifying producers, predators and prey			

		Y1: describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds andmammals including pets) identify, name, draw and label the basic parts of the human body and say which part of thebody is associated with each sense	Y3: identify that humans and someother animals have skeletons and muscles for support, protection and movement describe the simple functions ofthe basic parts of the digestive system in humans identify the different types ofteeth in humans and their simple functions	Y5: describe the simple functions ofthe basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions Y6: identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels andblood describe the ways in which nutrients and water are transported within animals, including humans

		Y2: notice that animals, including humans, have offspring which grow into adults		Y5: describe the changes as humans develop to old age Y5: Living things and their habitats: describe the differences in the life cycles of a mammal,an amphibian, an insect and a bird Y6: Evolution and inheritance: recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

		Y2: 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 theright amounts of different types of food, and hygiene	Y3: identify that animals, includinghumans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat	Y6: recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function describe the ways in which nutrients and water are transported within animals, including humans
			Y3: Rocks: *describe in simple terms howfossils are formed when thingsthat have lived are trapped within rock*	Y6: 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 identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution

Plants		Y1: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees		
		Y1: identify and describe the basicstructure of a variety of common flowering plants, including trees	Y3: identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers investigate the way in whichwater is transported within plants	
		Y2: observe and describe howseeds and bulbs grow intomature plants	Y3: explore the part that flowers play in the life cycle of floweringplants, including pollination, seed formation and seed dispersal	Y5: living things and their habitats describe the life process of reproduction in some plants and animals
		Y2: find out and describe how plants need water, light and asuitable temperature to grow and stay healthy Y2: identify that most living things live in habitats to which they	Y3: 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 Y4:	

		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 microhabitats 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	recognise that environments can change and that this can sometimes pose dangers to living things Y4: Animals including humans: construct and interpret a variety of food chains, identifying producers, predators and prey)	
Living things and their habitats			Y4: recognise that living things can begrouped in a variety of ways explore and use classification keysto help group, identify and name avariety of living things in their local and wider environment	Y6: 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

		Y2: Animals including Humans: Notice that animals, including humans, have offspring which grow into adults Y2: explore and compare the differences between things that are living, dead, and things that have never been alive		Y5: 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
Materials: Everyday materials (Y1), Uses of everyday materials (Y2), Rocks (y3), States of matter (y4), Properties& changes of materials(Y5)		Y1: everyday 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, and rock Y2: Uses of everyday 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		Y5: Properties and changes of materials: give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic

		Y1: everyday materials: describe the simple physicalproperties of a variety of everyday materials compare and group together a variety of everyday materialson the basis of their simple physical properties	Y3: Rocks: compare and group together different kinds of rocks on the basis of their appearance andsimple physical properties Y4: States of matter: compare and group materials together, according to whetherthey are solids, liquids or gases	Y5: Properties and changes of materials compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
		Y2: uses of everyday materials: find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	Y4: states of matter: observe that some materials change state when they are heated or cooled, and measureor research the temperature at which this happens in degrees Celsius (°C)	Y5 Properties and changes ofmaterials: explain that some changes result in the formation of new materials, and that thiskind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda demonstrate that dissolving, mixing and changes of state are reversible changes

				know that some materials will dissolve in liquid to forma solution, and describe how to recover a substancefrom a solution use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
			Y3: Rocks: describe in simple terms howfossils are formed when thingsthat have lived are trapped within rock recognise that soils are made from rocks and organic matter	Y6: 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
Forces and magnets (y3) Forces (y 5)			Y3: Forces and magnets: compare how things move on different surfaces notice that some forces need contact between 2 objects, but	Y5: Forces: explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object

			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	identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect
Electricity (y4)			Y4: 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 (Objectives moved from Y6): 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, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches use recognised symbols when representing a simple circuit in a diagram	
Light (y3 and y6)			Y3: 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	Y6: Light: 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

			recognise that light from the sun can be dangerous and that there are ways to protect their eyes	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
			recognise that shadows are formed when the light from a light source is blocked by an opaque object	use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them find patterns in the way that the size of shadows change
Sound(y4)			Y4: Sound: 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	
Seasonal		Y1:		Y5:

changes (Y1) Earth and space (y5)		observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies		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

Working Scientifically Skills Progression Grid:

KS1	LKS2	UKS2
• asking simple questions and recognising that they can be answered in different ways	• asking relevant questions and using different types of scientific enquiries to answer them	• planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
• performing simple tests	• setting up simple practical enquiries, comparative and fair tests	• using test results to make predictions to set up further comparative and fair tests
• observing closely, using simple equipment	• making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	• taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
• using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions	• gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	• recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
	• reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	• reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations

• identifying and classifying	• identifying differences, similarities or changes related to simple scientific ideas and processes	• identifying scientific evidence that has been used to support or refute ideas or arguments