

QCB Science Progression – Knowledge and Skills

EYFS – Understanding the World		
Past & Present	People, Culture & Communities	The Natural World
I can talk about the people I know. I know the jobs and what my family and familiar adults do. I can say how life was the same for my Grandparents (and my Mummy and Daddy) to my life now. I can say how life was different for my Grandparents in the past. I know how seaside holidays have changed from the past. I can talk about the things I have done.	I can talk about what I have seen around my school. I can talk about the places I can see on a map. I know things that are the same and different around my school to in a book we are reading. I know that we are all different. I can talk about my visit to the school Church. I know how Christmas is celebrated. I know how Divali is celebrated. I can talk about Chinese New Year. I can talk about different countries. I know some countries which are hot/cold. I can talk about places I see on a map/globe.	I can talk about what I see in the Nature area/church yard/school field. I can explain why leaves change colour and fall in Autumn. I can use words to describe the weather. I can draw a recognisable animal. I can draw a recognisable plant. I know why an object is melting. I can sort objects into magnetic and non-magnetic. I know what helps a plant to grow. I can order the life cycle of a frog/caterpillar. I know how a tree changes over the four seasons.

Area of Science	KS1 By the end of Year 2	LKS2 By the end of Year 4	UKS2 By the end of Year 6
Plants Living things and their habitats	I can name a variety of common wild and garden plants. I can name the petals, stem, leaf and root of a plant. I can identify things that are living, dead and never lived. I know the basic needs of a living thing. I know that most living things live in habitats that suit their needs. I can describe how different habitats provide the basic needs for different animals. I know that living things depend on each other to survive. I can explain a basic food chain. I can identify and name a variety of plants and animals that live in different habitats.	I understand the functions of different parts of flowering plants and trees. I can investigate and describe the needs of different plants for their survival. I know and can explain how water is transported in plants. I know how the plant life cycle works. I can group living things in different ways. I understand how to classify living things into different groups. I know how different plants survive in different environments. I know how different animals survive in different environments.	I can describe the life cycles of different living things: mammal, amphibian, insect and bird. I can describe the process of reproduction in plants. I can identify the parts of a flower I can describe the process of reproduction in animals. I know about the work of Sir David Attenborough – the naturalist. I can classify living things into groups according to characteristics. I know what the difference is between an invertebrate and vertebrate. I know how to classify plants and animals into different groups according to their characteristics.
Animals including Humans	I can name a variety of animals including fish, amphibians, reptiles, birds and mammals. I can classify and name animals by what they eat (carnivore, herbivore and omnivore).	I can explain the importance of a nutritious and balanced diet and the impact on my body. I understand how nutrients, water and oxygen are transported around the body of animals and humans.	I can identify and name the main parts of the human circulatory system. I can describe the function of the heart, blood vessels and blood. I know the positive and negative impact of diet, exercise, drugs and

	I can sort animals into categories (including fish, amphibians, reptiles, birds and mammals). I know the body parts of some animals. I can explain how an animal is structured. I can name the basic parts of the human body. I know which part of the body is linked to each sense. I can match the adult animals to their babies. I can order the stages of human life cycle. I know what an animal and human needs to survive. I know the importance of a balanced diet. I can identify foods which are healthy and unhealthy. I know that exercise is important to keep healthy. I can explain how and why we need to keep our bodies clean.	I know that humans and some animals have skeletons and muscles for support, protection and movement of their bodies. I can name the parts of the human digestive system. I can describe the simple functions of how the organs work in the human digestive systems. I know the different types of teeth in humans. I can explain the functions of the different teeth in humans.	lifestyle on the way my body functions. I can describe in detail the ways in which nutrients and water are transported in animals including humans. I can describe the changes as humans develop to old age.
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Evolution and Inheritance			I Know that living things have changed overtime. I can describe the information fossils provide about living things that inhabit the earth million of years ago. I know how fossils form and can describe how insects and animals form fossils. I can describe how animals and plants adapt to their environment. I can apply my learning and knowledge of adaptations to create my own imaginary creature. I can explain what the word offspring means. I know living things produce offspring of the same kind but normally they vary and are not identical to their parents.
Light		I know that I need light to see things. I know that dark is the absence of light. I know and can explain which surfaces reflect light. I can explain how mirrors work in reflecting light.	I can explain how light travels. I can explain and demonstrate how we see objects. I can explain why shadows have the same shape as the object that casts them. I can explain how simple optical instruments work, e.g. periscope,

		I know that light from the sun can be dangerous to our eyes. I can explain how we can protect our eyes from the dangers of the sun. I know how a shadow is formed. I can explain which is the best material to block light to form shadows. I can explain how the size of shadows change.	telescope, binoculars, mirror, magnifying glass etc.
Sound		I can describe how sound is made. I can explain how sound travels from a source to our ears. I can explain the place of vibration in hearing. I know how the feature of an object can change the pitch of a sound. I can find patterns between the volume of the sound and the strength of the vibrations that produced it. I understand how sound travels over distance. I can explain how distance affects the sounds we hear.	

Forces and Magnets		Can describe how objects move on different surfaces. I know that some forces require contact and some do not. I can explain how magnets repel and attract each other? I know that magnets attract some materials and not others and can explain this. I can tell you how magnets work. I know that magnets have two poles. I can predict whether objects will be magnetic and carry out an enquiry to test this. I can predict whether magnets will attract or repel and explain why.	I can explain what gravity is and its impact on our lives. I can identify and explain the effect of air resistance. I can identify and explain the effect of water resistance. I can identify and explain the effect of friction. I can explain how levers, pulleys and gears allow a smaller force to have a greater effect.
Seasonal Changes	I can explain the changes I see in the different seasons. I can tell you the type of weather I might see in Autumn, Spring, Summer and Winter. I know that the length of the day changes in the different seasons.		
Rocks		I know how to group together different kinds of rocks. I can do this using their appearance and physical properties. I know how fossils are formed .	I can explain how fossils provide information about living things that inhabited the earth millions of years ago.

		I know that soil is made from rocks and organic matter.	I can recognise that living things have changed over time.
Electricity		I can identify and name appliances that need electricity to work. I know how to make a series circuit. I can name the basic parts of the circuit. I know that I need a complete circuit for a bulb to light. I know that a switch open and closes a circuit. I understand that when the circuit is closed the bulb will light. I can name some conductors and insulators.	I can explain how the number and voltage of cells in a circuit links to the brightness of a lamp or the volume of a buzzer. I can compare and give reasons for why components work and do not work in a circuit. I can draw circuit diagrams using the correct symbols.
Earth and Space			I can describe and explain the movement of the Earth and other planets relative to the Sun. I can describe and explain the movement of the Moon relative to the Earth. I can explain and demonstrate how night and day are created. Can describe the Sun, Earth and Moon (using the term spherical).

Materials	Everyday Materials I can name different materials and tell you what is made from wood, plastic, glass, metal, water and rock. I can use words such as hard/soft, shiny/dull to describe physical properties of everyday materials. I know how to group everyday materials and explain why I have grouped them in that way.	States of Matter I can group materials together to show if they are solids, liquids or gases. I can explain what happens to some materials when they are heated or cooled. I understand that temperature affects what happens to some materials. I can explain how the water cycle works.	Properties and changes of materials I can compare and group materials based on their properties (e.g. hardness, solubility, transparency, conductivity, [electrical & thermal], and response to magnets). I can describe how a material dissolves to form a solution; explaining the process of dissolving. I can describe and show how to recover a substance from a solution I can describe how some materials can be separated. I can demonstrate how materials can be separated (e.g. through filtering, sieving and evaporating). I know and can demonstrate that some changes are reversible and some are not. I can explain how some changes result in the formation of a new material and that this is usually irreversible. I can discuss reversible and irreversible changes. I can give evidenced reasons why materials should be used for specific purposes
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