SCIENCE PROGRESSION OF SKILLS MAP

Pinner Wood School

SCIENCE	Nursery	Reception	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Animals including humans	• I can talk about what I see, using a wide vocabulary • I can begin to make sense of my own life-story and family's history. • I can continue to develop positive attitudes about the differences between pe • I can make connections to the features of their family and other families.	• I can name parts of our bodies (nose, mouth, eyes, ears • I can say which part of the body is associated with each sense. • I can use all their senses in hands-on exploration of natural materials. • • Know and talk about the different factors that support their overall health and wellbeing:	• I can name, draw and label the basic parts of the human body and say which part of the body is to do with each sense. • I can spot and name a variety of common animals including fish, amphibians, reptiles, birds and mammals • I can spot and name a variety of common animals that are carnivores, herbivores and omnivores.	• I can describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. • I can notice that animals, including humans, have offspring which grow into adults • I can describe	• I can 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. • I can explain why humans and some other animals have skeletons and muscles for support, protection and movement.	• I can describe the simple functions of the basic parts of the digestive system in humans • I can explain the different types of teeth in humans and what they do. • I can construct and interpret a variety of food chains, identifying producers, predators and prey.	• I can describe the changes as humans develop into old age.	• I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. • I can recognise the impact of diet, exercise, drugs and lifestyle on the way the body functions. I can

		- regular physical activity - healthy eating - toothbrushing - having a good sleep routine -	• I can describe and compare the structure of a variety of common animals fish, amphibians, reptiles, birds and mammals, including pets)	the basic needs of animals, including humans, for survival (water, food and air)				describe the ways in which nutrients and water are transported within animals, including humans.
Living things and their habitats	• I can comment and ask questions about aspects of my familiar world such as the place where I live or the natural world.	• I can talk about some of the things they have observed such as plants, animals, natural and found objects. • I can show care and		• I can explain the differences between things that are living, dead and things that have never been alive. • I can explain	• I can show that living things can be grouped together in various ways. • I can explore and use classification keys to help group, identify and name a variety of living things in their		• I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. • I can describe the life process of reproduction in some plants and animals	• I can describe how plants, animals and micro-organisms are classified into broad groups according

	• I can begin to understand the need to respect and care for the natural environment and all living things.	concern for living things and the environment. • I can begin to recognises some environments that are different to the one in which they live.		that most living things live in habitats which suit them. • I can describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other • I can name some plants and animals in their habitats including micro-habitats.	local and wider environment. • I can explain that environments can change and that this sometimes means that living things are put in danger.			to common observable characteristics and based on similarities and differences including microorganisms, plants and animals • I can give reasons for classifying plants and animals based on specific characteristics.

				• I can explain how animals get their food from plants and other animals using a simple food chain and identify and name different sources of food.				
Materials	• I can use all my senses in hands-on exploration of natural materials. • I can explore collections of materials with similar and/or different properties.	• I can understand some important processes and changes including changing states of matter. • I can know the properties	• I can tell the difference between an object and the material from which it is made. • I can name a variety of everyday materials, including wood, plastic, glass,	• I can name and group materials. • I can identify and compare the suitability of a variety of everyday		• I can group materials together, according to whether they are solids, liquids or gases including tricky ones like gels, foams, mists and pastes.	• I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and	

	• I can talk about the differences between materials and changes I notice	of some materials and can suggest some of the purposes they are used for. • I am familiar with basic scientific concepts such as floating, sinking, experimentation. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of	metal, water and rock. • I can describe the simple physical properties of a variety of everyday materials • I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • I can say why I would choose a material for a particular job. • I can explain how objects made from some materials can be changed.		• I can demonstrate and explain that some materials change state when they are heated or cooled • I can measure or research the temperature at which this happens in degrees Celsius (°C). • I can correctly talk about the part played by evaporation and condensation in the water cycle. • I can show a link between the rate of evaporation and temperature.	thermal), and response to magnets. • I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • I can demonstrate that dissolving, mixing and changes of state are reversible changes. • I can explain that some changes result in the formation of new materials, and that this kind of change is not usually	

		matter.		I can find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.			reversible, including changes associated with burning and the action of acid on bicarbonate of soda • I can explain that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. • I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. •	

Forces	• I can explore how things work. • I can explore and talk about different forces I can feel.				• I can compare how things move on different surfaces. • I can see that some forces need contact between two objects, but magnetic forces can act at a distance • I can observe how magnets attract or repel each other and attract some materials and not others • I can compare and group some materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • I can describe magnets as		• I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • I can demonstrate the effects of air resistance, water resistance and friction that act between moving surfaces. • I can show that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	

					having two poles • I can predict whether two magnets will attract or repel each other, depending on which poles are facing.			
Plants	• I can plant seeds and care for growing plants. • I can understand the key features of the life cycle of a plant and an animal. • I can begin to understand the need to respect and care for the natural environment and all	• I can explore the natural world around me • I can make observations and drawing pictures of animals and plants • I can explain why some things occur, and talk about changes from a seed to a plant and the changes in	• I can name some common wild and garden plants, including deciduous and evergreen trees. I can name and describe the basic structure of a variety of common flowering plants, including trees. • I can name some common wild and garden plants,	• I can explain how seeds and bulbs grow into plants. • I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	• I can identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • • I can explore the requirements of plants for life and growth and how they vary from plant to plant. • I can investigate the way in which water is			

	living things. • I can make observations of animals and plants	seasons. • I can talk about some of the things they have observed such as plants, animals, natural and found objects. • I can begin to explore the natural world around them, making observations and drawing pictures of animals and plants.	including deciduous and evergreen leave. • I can name and describe the basic structure of a variety of common flowering plants, including trees.		transported within plants. • I can explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.			
Rocks				• .	• I can examine and do practical experiments on various types of rocks in order to group them on the basis of			

					their appearance and simple physical properties. • I can simply describe how fossils are formed when things that have lived are trapped within rock. I can explain that soils are made from rocks and organic matter.			
Light				• I can explain that I need light in order to see things and that dark is the absence of light. • I can show that light is reflected from surfaces.				• I can show that light appears to travel in straight lines. • I can explain that light travels in straight lines and that objects are seen because

				• I can explain that light from the sun can be dangerous and that there are ways to protect eyes. • I can show how shadows are formed when the light from a light source is blocked by a solid object. • I can find patterns are in the way that the size of shadows change.				they give out or reflect light into the eye. • I can demonstrate and 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. • I can demonstrate that light travels in straight lines to show why shadows

								have the same shape as the objects that cast them.
Sound					• I can explain how sounds are made, and show that some of them are linked to vibrations. • I can explain that vibrations from sounds travel through a medium to the ear. • I can find patterns between the pitch of a sound and features of the object that produced it. • I can show that there is a pattern between the volume of a sound and the			

					strength of the vibrations that produced it. • I can show that sounds get fainter as the distance from the sound source increases.			
Electricity					• I can talk about common appliances that run on electricity. • I can construct and draw with labels a simple series electrical circuit which includes cells, wires, bulbs, switches and buzzers. • I can predict if a lamp will light or not in a simple series circuit, based on whether or not the lamp is part of a complete			• I can show that the brightnes s of a lamp or the volume of a buzzer depends on the number and voltage of cells used in the circuit. • -I can compare and give reasons for

					loop with a battery. • I can explain that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • I can show that some materials are conductors and some are insulators, and can explain that metals are good conductors.			variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. • I can draw a diagram using recognised symbols to represent a simple circuit.
Earth & Space							• I can describe the movement of the Earth, and other planets,	

							relative to the Sun in the solar system. • I can describe the movement of the Moon relative to the Earth. • I can describe the Sun, Earth and Moon as approximately spherical bodies. • I can explain day and night, and the apparent movement of the sun across the sky, using the idea of the Earth's rotation.	
Evolution & Inheritance								• I can explain that the kinds of living things that live

								on the earth now are different from those that inhabited the Earth millions of years ago and that fossils provide this informati on. • I can explain that living things produce offspring of the same kind, but normally offspring vary and are not identical

								to their parents. • I can give examples of how animals and plants are adapted to suit their environment in different ways • I can explain that adaptation may lead to evolution.
Key Vocabulary