Honesty Empathy Aspiration Respect Teamwork

Knowledge and skills document

SCIENCE
FS1
Knowledge: Human body Use senses to explore and investigate the world around them Begin to identify similarities and differences and use simple terms to describe these eg 'it's hot' Name/ label the most common body parts Vocab: Eyes, nose, mouth, ears, hands, hot, cold, leg, arm, head, face, foot, fingers, toes, chest
Knowledge: Plants and Animals Name the basic parts of a plant- stem, leaf and root Observe, name and draw the key features of a plant or animal Understand the key features of the life cycle of a plant and an animal Sort and classify animal types• Know about animals relevant to them e.g. pets Begin to understand the need to respect and care for the natural environment and all living things Vocab: Names of common animals, egg, hatch, stem, leaf, root, fur, pet, born
Knowledge: Growth Know in simple terms what a plant or animal needs to live Grow some plants and vegetables looking after them and maintaining their growth Understand the key features of the life cycle of a plant and an animal Vocab: Water, sunshine, soil, seed, vegetable, fruit, grow, born
Knowledge: Materials Know and use the language of materials eg hard, sort, waterproof Talk about the differences between materials and changes they notice Select materials appropriate to task Vocab: Hard, soft, waterproof, shiny
Knowledge: Forces Explore and talk about different forces they can feel Vocab: hard, soft, strong
Knowledge: Working Scientifically Talk about what they see and how things work using a wide vocabulary Experiment with a variety of materials identifying change and simple properties e.g. 'it's bendy' Know that information can be represented in different ways Ask and answer simple how, what, why and where questions Vocab: magnifying glass, view, pour, fill, container

Curriculum Drivers

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Knowledge and skills document

SCIENCE
FS2
Knowledge: Human body Select which sense to use to explore and investigate the world around them Discuss similarities and confidently describe features etc using more complex vocabulary (use of adjectives) Identify likes and dislikes from the world around them Name and label the different parts of the body Know the major organs and understand why we need to look after them Know why we need to lead a healthy lifestyle Know how to lead a healthy lifestyle Vocab: Skeleton, blood, heart, breathe, pump, exercise, healthy, blood, baby, toddler, child, bones, tongue, skin, adult, See, smell, taste, touch, hear
Knowledge: Plants and Animals Know the different plants that grow in Cyprus Identify which fruit and vegetables grow in Cyprus and know whether they grow on a tree on in the ground etc Observe plants and use observational drawing to record the key features and any changes Describe the similarities and differences of plants using key scientific vocabulary eg stem, root, petal etc Classify and describe different animal types and describe the key features Know animals which are indigenous to Cyprus Vocab: bird, fish, reptile, mammal, name farm animals and animals found in Cyprus, feathers, claws, wings, gills
Knowledge: Growth Know the different stages of a human life Know some simple life cycles Vocab: baby, toddler, child, teenager, adult, infant
Knowledge: Materials Draw on prior knowledge of materials to be able to select suitable materials for a variety of purpose Make adaptions to the materials and methods used Justify the changes made Vocab: strong, design, experiment, materials, wood, bricks, hard, soft Plastic, cardboard, paper
Knowledge: Working Scientifically Use different methods to represent data Confidently ask and answer how, what, why and where questions Use simple labelling strategies Observe and identify change eg decay Vocab: Experiment, equipment, observe, watch, record, magnifying glass, hunt, test out, same, different, look, listen, smell, touch, tools, describe, why

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SCIENCE	
Y1	SKILLS
Final product Plants. Knowledge Pupils should be taught to: identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees Vocab: Common names of flowers, examples of deciduous and evergreen trees, and plant structures (including leaves, flowers (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem).	Questioning by adults – model questions and scientific thinking (provision and whole class teaching) Link questions to specific science blocks (progression from FS2) Experiments: Chn to be provided with the opportunity to complete simple experiments in both class activities and provision (to be modelled and supported by staff both in provision and within whole class teaching). Observations: Verbally discuss what they see (as they observe it) Begin to discuss why they think that might have happened Chn to begin to record simple observations – videos/photos etc Adult questioning/modelling discussion Recording of experiments: Record findings from provision and a specific investigation (progression from FS) to help in answering questions. Use of videos/pictures Drawing and simple labels Classifying: Sorting real life objects into sets with adult led activities. Chn will begin to use pictorial representations. Chn can record this using pictures/videos and pictorial representations with adult support.
Final product Animals, including humans. Knowledge Pupils should be taught to: identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense Vocab: common names of some fish, amphibians, reptiles, birds and mammals, including those that are kept as pets. Parts of the human body - head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth	
Final product Everyday materials. Knowledge Pupils should be taught to: 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 describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties Vocab: Names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent	
Final product Seasonal changes. Knowledge Pupils should be taught to: observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies Vocab: summer, spring, autumn, winter Changes in weather conditions e.g. raining, sunny, cold, hot, warm, windy, stormy, snow, lightening, thunder etc (Cyprus Storms Live is a fantastic tool to observe incoming weather) Length of day time – dark, light, night, day	

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SCIENCE	
Y2	SKILLS
Final product Living things and their habitats Knowledge: Pupils should be taught to: • explore and compare the differences between things that are living, dead, and things that have never been alive • identify that most living things live in habitats to which they 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 Vocab: Habitat, microhabitat, sorting and classifying (understand how to sort and classify)	Questioning Encourage chn to identify their own questions to understand the importance of why. Staff to model scientific questioning using why Experiments: Begin to understand why we use specific equipment. What should we use? Why? Carry out simple and specific tests with an understanding of why. Introduce fair testing. Is it fair? Observations: Observe a sequence of change Discuss observations – chn to be encouraged to develop more questions from observations Create a simple record of the different stages of the experiment Recording of experiments: Use of testing model – Question, equipment/method, prediction, simple test, record findings (structure provided for children) Focus on one or two aspects – the rest can be provided Videos, pictures, labels and a simple written recording Classifying: Sorting real life and pictorial representations both child and adult led. Chn can record this using pictorial and written representations and tables.
Final product Plants Knowledge: Pupils should be taught to: • observe and describe how seeds and bulbs grow into mature plants • find out and describe how plants need water, light and a suitable temperature to grow and stay healthy Vocab: Germination, growth, survival, reproduction	
Final product Animals, including humans Knowledge: Pupils should be taught to: • notice that animals, including humans, have offspring which grow into adults • 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 the right amounts of different types of food, and hygiene Vocab: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep. Growing into adults can include reference to baby, toddler, child, teenager, adult.	
Final product Uses of everyday materials Knowledge: Pupils should be taught to: • identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses • find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching Vocab: squashing, bending, twisting and stretching	

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SCIENCE	
Y3	SKILLS
Final product Plants. Knowledge: Pupils should be taught to: 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 Vocab: roots, stem, nutrition, support, leaves, flowers, reproduction	Questioning: Specific questioning linked to science topics What might we need to do to find out? Experiments: Complete specific experiments and learning about fair testing. What is it? Begin to use it in their experiments. How can we make this a fair test? Understand the difference between different types of scientific enquiries. Observations: Complete more specific observations linked to the initial investigation (question) using specific scientific vocabulary. Use the completed observations to form ideas and discussion of further investigation Begin to observe and record using measurements Recording of experiments: Begin to use more detail and record the whole experiment (structure to be completed more independently Begin to draw conclusions (guided) from the data and make further predictions Suggest improvements Begin to use evidence to support findings Begin to use drawings, labelled diagrams, keys, bar charts and tables Classifying: Moving onto more overlapping sets and determining set labels. Record using tables and diagrams e.g Venn and Carroll.
Final product Animals, including humans. Knowledge: Pupils should be taught to: 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 Vocab: main body parts associated with the skeleton and muscles, healthy diet	
Final product Rocks. Knowledge: Pupils should be taught to: 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 Vocab: Names of different rocks (igneous, sedimentary, and metamorphic), organic matter, fossils	
Final product Light. Knowledge: Pupils should be taught to: 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 changes. Vocab: Reflect, opaque, shadow, light source	
Final product Forces and magnets. Knowledge: Pupils should be taught to: compare how things move on different surfaces notice that some forces need contact between two 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 two poles predict whether two magnets will attract or repel each other, depending on which poles are facing Vocab: Magnetic forces, poles, attract, repel, uses of different magnets (for example, bar, ring, button and horseshoe)	

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SCIENCE	
Y4	SKILLS
Final product Living things and their habitats. Knowledge: Pupils should be taught to: recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things. Vocab: Classification key, vertebrate animals (such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.)	Questioning: Chn to develop and explain their understanding of why these questions are relevant Experiments: Begin to independently plan and set up simple practical enquiries and demonstrate a deeper understanding of why they are doing it. Understand why fair testing is necessary and relevant. Observations: Complete more systematic observations Use more accurate measurements Begin to use standard units Recording of experiments: Begin to present data using explanations Begin to present information from an investigation in a simple presentation Make simple conclusions and predictions using findings as evidence Identify what they could have done differently and why Identify similarities and changes throughout the experiment Use drawings, labelled diagrams, keys, bar charts and tables Classifying: As Y3 but making choices on which method to use.
Final product Animals, including humans. Knowledge: Pupils should be taught to: describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey Vocab: Function, digestive system, producers, predator, prey	
Final product States of matter. Knowledge: Pupils should be taught to: compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature Vocab: Solids, liquids, gases, evaporation, condensation	
Final product Sound. Knowledge: Pupils should be taught to: 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 Vocab: Vibrations/vibrating, medium, pitch	
Final product Electricity. Knowledge: Pupils should be taught to: identify common appliances that run on electricity 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 Vocab: Circuit, cells, conductors, insulators	

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SCIENCE	
Y5	SKILLS
Final product Living things and their habitats. Knowledge: Pupils should be taught to: 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 Vocab: Amphibian, sexual, asexual	Questioning: Develop increasing scientific language in questioning. Experiments: Begin to plan experiments in more detail Become more careful and precise when carrying out tests and develop a deeper understanding of why they are carrying out the test. Children to explain their experiments Observations: Begin to compare whilst observing Use these comparisons within the investigation Recording of experiments: Using increasing scientific vocab in their recordings Begin to record using scatter graphs. diagrams, classification keys and line diagrams. Identify if all/part of the experiment needs to be repeated and explain why Collate different results and compare Question if the result can be trusted and explain why Use their own findings and other scientific evidence to record and support findings Classifying: As Y4 using more complex data tables and diagrams.
Final product Animals, including humans. Knowledge: Pupils should be taught to: describe the changes as humans develop to old age Vocab: growth, development, puberty, gestation	
Final product Earth and space. Knowledge: Pupils should be taught to: 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 Vocab: Resistance, friction, pulleys, gears, Earth rotation	
Final product Forces. Knowledge: Pupils should be taught to: explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object 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 Vocab: air resistance, levers, pulleys	

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SCIENCE	
Y6	SKILLS
Final product Living things and their habitats. Knowledge: Pupils should be taught to: 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 Vocab: Classification system, common observable characteristics, organisms	Questioning: Develop increasing scientific language in questioning Experiments: Apply all skills learnt through each year group in a more independent, confident, structured, clear and scientific manner. Recognise and control variables. Observations: Apply all skills learnt through each year group in a more independent, confident, structured, clear and scientific manner Recording of experiments: Apply all skills learnt through each year group in a more independent, confident, structured, clear and scientific manner. Using scientific diagrams, classification keys, scatter graphs and line graphs Classifying: As Y5 and additionally providing reasons for specific classification
Final product Animals including humans. Knowledge: Pupils should be taught to: identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood 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 Vocab: skeletal, muscular and digestive system, blood vessels	
Final product Evolution and inheritance. Knowledge: Pupils should be taught to: recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution Vocab: Adaptation, inhabited, evolution	
Final product Light. Knowledge: Pupils should be taught to: 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 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 use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them Vocab: Light sources, shadow	
Final product Electricity. Knowledge: Pupils should be taught to: 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 Vocab: Light sources, shadow	

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