

Primary Science Syllabus

Year 5

Sharing Our World

Strand	Learning Outcome	Notes and additional guidelines
5.1.1	Know that animals grow and reproduce.	<ul style="list-style-type: none"> • Know that animals differ from non-living things in that they grow and reproduce. • Know about the human life cycle as well as about some other animal life cycles such as the life cycle of a frog, butterfly, dragonfly or grasshopper ✓ <i>The main stages of the lifecycle to include birth, growth, reproduction and death.</i> ✓ <i>Know the lifecycles of mammals e.g. humans; birds e.g. chicken; amphibians e.g. frog; reptiles e.g. snake; fish (egg, larva, fry, adult); insects e.g. butterfly</i>
5.1.2	Group animals according to common features.	<ul style="list-style-type: none"> • Be aware of the basic classification of animals into two broad categories: animals with / without backbone. • Know about the most common subgroups such as insects, birds, fish, mammals ... ✓ <i>Vertebrates (animals with a backbone); Invertebrates (animals without a backbone)</i> ✓ <i>Classification to include Vertebrates (examples of mammals, birds, amphibians, reptiles & fish) and Invertebrates (examples of insects – know that insects have 6 legs).</i>
5.2.1	Know that plants have a life cycle.	<ul style="list-style-type: none"> • Know that plants differ from non-living things because they reproduce. • Know about the life cycle of certain plants such as the bean plant.

5.2.2	Group plants according to common features.	<ul style="list-style-type: none"> ✓ <i>Carry out a simple investigation of how a bean plant grows.</i> ✓ <i>Emphasise importance of growth and reproduction in the life cycle of plant.</i> • Know that plants vary from each other. • Group plants according to observable characteristics e.g. evergreen/deciduous trees; leaf shape ✓ <i>Investigate or gather a collection of different types of leaves.</i> ✓ <i>Look at different types of plants which grow in different habitats on the Maltese islands e.g. Holm Oak and Aleppo Pine in Woodlands; shrubs and bushes in maquis; Thyme in garigue; thin grass in sand dunes etc. – This can be explored through a fieldwork activity.</i>
5.3.1	Observe that habitats change and that these changes effect plants and animals.	<ul style="list-style-type: none"> • Know that a habitat can change naturally e.g. seasonal changes, natural disaster or else is changed by man’s actions. ✓ <i>Man’s action include pollution, trespassing, vandalism, construction, deforestation etc.</i> • Know that these changes have an effect on animal and plant life and that these changes may even lead to the extinction of certain species. ✓ <i>Know what endangered and extinct animals are.</i> ✓ <i>To identify causes of animals becoming endangered or extinct e.g. hunting, pollution and cutting down of trees etc.</i>
5.4.1	Know that the weather has an effect on the lives of people and other living things.	<ul style="list-style-type: none"> • Give examples how weather can drastically effect living things through storms, flooding, gales, hurricanes ... • Give examples how living things adapt their lives to the different weather conditions they find themselves in e.g. type of clothes worn, type of houses built, lifestyles, migration...

		<ul style="list-style-type: none"> ✓ <i>Know about the way animals and plants adapt to severe weather conditions e.g. adaptations of polar bear has fur to be protected from cold weather; the camel has two layers of eyelashes to protect the eyes during a sandstorm. Other animals may include penguins, snow owl/burrowing owl, elephant, barrel cactus, oak trees etc.</i> ✓ <i>Identify similarities or differences in the way houses are built in relation to the weather conditions e.g. flat roof / sloping roof / igloo.</i> ✓ <i>Know about how the weather affects us humans e.g. hurricanes, tornadoes, typhoons, blizzards.</i>
Energy		
Strand	Learning Outcome	Notes and additional guidelines
5.5.1	Know that there are forces between magnets which push or pull.	<ul style="list-style-type: none"> • Know that magnets can have different shapes. ✓ <i>Explore and observe different magnet shapes include round/ring magnet, bar magnet, horseshoe magnet, spherical magnets and sizes.</i> ✓ <i>Magnetic strength does not depend on size.</i> ✓ <i>Explore how to make ring magnets float.</i> • Know that magnets are materials which attract certain metals. ✓ <i>Carry out a simple investigation to identify magnetic and non-magnetic objects.</i> ✓ <i>Know that not all metals are magnetic. Some magnetic metals include iron (e.g. in paper clips), nickel (in coins) and cobalt (in stainless steel)</i> • Know that magnets have two ends a north and south-pole.

		<ul style="list-style-type: none"> • Know that a north pole attracts a south pole and vice versa and that like poles repel. ✓ <i>Relate the north and south-pole to Earth's north and south pole and Earth's magnetic field.</i>
5.6.1	Know that we can use different components in a circuit to do different jobs.	<ul style="list-style-type: none"> • Identify components of a circuit e.g. bulb, switch, battery, motor (fan), buzzer etc. • Set up simple circuits using a buzzer or a motor to realise that electricity does not only make a bulb light but for example can make a motor turn. ✓ <i>Consolidation of previous years (Year 3 and 4)</i> ✓ <i>Carry out simple experiments on how energy can be converted to sound, light, movement, heat (by product).</i> ✓ <i>Know that a battery has the positive (plus) and negative (minus) poles and these affect the way a component works e.g. a buzzer will work one way; a fan will turn the other way round if wires are connected the other way round.</i> ✓ <i>Mention alternative means of producing electricity e.g. solar panels can create electricity.</i> ✓ <i>Investigations may include more than 1 battery.</i>
5.7.1	Know that sound can travel through materials.	<ul style="list-style-type: none"> • Demonstrate how sounds can be heard through solids e.g. partitions, string etc. ✓ <i>Carry out a simple investigation using a tuning fork (strike the tuning fork. Can you see the vibrations? Can you hear them? Strike the tuning fork again. This time touch an object. What happens? Can you hear the vibrations?)</i> • Know that sound consists of vibrations and objects vibrate when they produce sound.

5.7.2	Know that when an object vibrates it produces sound.	<ul style="list-style-type: none"> • Demonstrate how sound travels through solids, liquids and gases ✓ <i>Carry out simple investigations to explore vibrations in sound.</i> ✓ <i>Demonstrate a sound wave using a slinky spring.</i>
5.8.1	Know how to use mirrors to see behind things	<ul style="list-style-type: none"> • Be able to use mirrors to devise ways of seeing things which cannot be seen directly. ✓ <i>Carry out simple investigations to use mirrors to see behind things e.g. design and make a periscope.</i> ✓ <i>Give everyday life examples of uses of mirrors e.g. the words ambulance and fire are very often printed inverted on the vehicle to be able to read it correctly when viewed in a mirror; curved mirrors can be used to see around blind corners.</i>

Materials

Strand	Learning Outcome	Notes and additional guidelines
5.9.1	Know that some materials can dissolve.	<ul style="list-style-type: none"> • Know that when some materials are mixed with water they dissolve. ✓ <i>Carry out simple investigations to demonstrate materials dissolving in water.</i> • Realise that when materials dissolve, they are still present in a liquid. • Know how to use the technical word dissolve correctly. • Realise that materials can dissolve in other liquids than just water. • <i>Give other examples (videos/simulations/demonstrations) to demonstrate materials dissolving in other liquids.</i>

		<ul style="list-style-type: none"> • Know that things which dissolve are called soluble while those which do not dissolve are known as insoluble. ✓ <i>Give examples of soluble and insoluble materials in everyday life.</i>
5.10.1	Discover that things are manufactured using materials.	<ul style="list-style-type: none"> • Identify the different materials used in a particular product. e.g. a car has a metal body, plastic parts, metal components, rubber tyres... ✓ <i>Learn about the manufacturing of different objects through video clips or actual site visits e.g. plastic moulding (Playmobil), glass blowing (Mdina Glass) etc.</i>
5.10.2	Know that in the manufacture of things materials are chosen for their special properties.	<ul style="list-style-type: none"> • Give reasons for the use of different materials in a product... e.g. a car is made of metal to be strong; clothes are made of material to be comfortable to wear. • Compare two similar things made from different materials and list advantages/disadvantages of these things e.g. aluminium/wooden apertures; plastic whiteboard/wooden blackboard; metal/plastic cutlery ✓ <i>Relate to everyday examples and uses. Can be done through design and technology project to test e.g. waterproof, stretchability, flexibility, transparent, strength.</i>
5.11.1	Know that the Earth turns completely once a day.	<ul style="list-style-type: none"> • Know that the earth takes 24 hours to turn completely and that this movement is responsible for night /day pattern. ✓ <i>Know that the Earth turns anti-clockwise.</i> ✓ <i>Mention differences in summer and winter in the Northern and Southern hemispheres.</i> ✓ <i>Briefly mention time-zones (keep it simple).</i>
5.11.2	Know that the Earth completes its orbit round the sun once a year.	<ul style="list-style-type: none"> • Know that apart from turning on its own axis, the Earth is moving along its orbit round the sun.

- ✓ *Mention that Earth is tilted and that is how we get seasons.*
- ✓ *Mention Equator.*
- ✓ *Understand what a leap year is.*
- Realise that the other planets in our solar system are all orbiting around the sun and that they take different times to complete their orbit.
- ✓ *Know names of planets and their order in relation to their orbit around the sun.*