

The Sultan's School Year 5 Medium Term Curriculum plan for Science 2017- 18 - Information for parents

Block	Unit	Key Targets and Learning Objectives	Key Activities	Key vocabulary
1	States of matter - Solids, Liquids and Gases	<ul style="list-style-type: none"> ➤ Know that matter can be solid, liquid or gas. ➤ Know that evaporation occurs when a liquid turns into a gas. ➤ Know that condensation occurs when a gas turns into a liquid and that it is the reverse of evaporation. ➤ Connect evaporation and condensation to the water cycle. ➤ Know that the boiling point of water is 100°C and freezing point is 0°C. ➤ Know that when water evaporates from a solution a solid is left behind. 	<ul style="list-style-type: none"> ➤ Test different materials to determine their state. ➤ Carry out an experiment to measure the rate of evaporation from different surface areas. ➤ Observe condensation on the classroom windows and doors and when breathing on a mirror. ➤ Build a model water cycle in a jar. ➤ Grow salt crystals. <p style="background-color: #008000; color: white; padding: 5px;">Going Green Link: Water conservation – Sky well – research forms of reusing or harnessing clean water from the environment.</p>	Solid, liquid, gas, States of matter, properties, temperature, evaporate, surface area, rate, condense , reverse, water cycle, reversible, degrees, thermometer, Celsius, boiling point, melting point, freezing point, solution, solute, dissolve, solvent, saturated solution, crystal
2	Light	<ul style="list-style-type: none"> ➤ Know that shadows are formed when light travelling from a source is blocked. ➤ Know that shadows change in length and position throughout the day. ➤ Explore how opaque materials do not let light through and transparent materials let a lot of light through. ➤ Know that we see light sources because light from a source enters our eyes. ➤ Explore why a beam of light changes direction when reflected from a surface. 	<ul style="list-style-type: none"> ➤ Observe effects and changes when shining a torch on opaque objects from different distances and angles. ➤ Explain how sundials work and why people used them in the past. (Homework make a sundial). ➤ Choose appropriate materials to make an A4 stained glass window. ➤ Draw and label a sketch of an eye / explain how light enters the eye and we cannot see without light. ➤ Draw labeled diagrams to show that the moon reflects light from the sun and build a 	Light, shadow, source, beam, sundial, cast, opaque, transparent, translucent, fuzzy, bounce, reflect, absorb, scatter, angle, periscope

			<p>periscope.</p>	
			<p>Going Green Link: Turn lights off to preserve energy. Homework survey household items that need light ! (Research uses of Solar energy in Oman)</p>	
<p>3 + 4</p>	<p>Flowering Plants</p>	<ul style="list-style-type: none"> ➤ To discuss the factors that affect plant growth. ➤ To identify, label and explain the function of the different parts of a plant. ➤ To explain how plants can disperse seeds in different ways. ➤ To carry out a fair test in which only one factor changes. ➤ Draw conclusions and relate these to scientific knowledge and understanding. ➤ Present observations and measurements using tables and charts. 	<ul style="list-style-type: none"> ➤ To revise prior knowledge of what they know about plant growth. ➤ To dissect and label different flowering parts, sorting them into groups and explaining their function. ➤ To collect seeds and classify and group them according to their structure. ➤ To plant seeds in different conditions to see which will germinate. Make conclusions why seeds have/have not germinated. ➤ To carry out a germination investigation, using fair testing. ➤ To measure accurately, make observations and record their results through drawing, graphs and charts. 	<p>Reproduction, life cycle, stamen, style, stigma, sepal, petal, ovary, pollen, anther, filament, germination, pollination, fertilisation, dispersal</p>
			<p>Going Green Link: Children grow their own food from seedlings (chili) – eco garden. Research the packaging used in shops – prepackaged fruits and veg – is it necessary – bring your own bags for life campaign – persuasive writing.</p>	

5	Space	<ul style="list-style-type: none"> ➤ Day and night. The sun does not move. Its apparent movement is caused by the Earth's rotation on its axis every 24 hrs. ➤ Know that the Earth takes a year to orbit the Sun. ➤ Know the seasons are caused by the Earth's tilt and its orbit around the sun. ➤ Research the lives and discoveries of scientists who explored the Solar System and Stars. ➤ Know that gravity is a pull force which keeps the planets orbiting the sun. 	<ul style="list-style-type: none"> ➤ Use a model Earth (Orange with a kebab stick through it) and sun (torch) to explain day and night. ➤ Use the model (above) marked with coloured pins in Northern Hemisphere. Observe positional changes in day and night during an orbit. ➤ Graph a set of data to show length of day changes in Northern and Southern Hemisphere. ➤ Sequence the planets and graph their speed in orbit. ➤ Explore forces by whirling a bung (representing a planet) on strings of different length. <p>Going Green Link: Satellites – wifi in school use technology rather than printed worksheets. Children make PowerPoint presentations about a space explorer – linked to space timeline.</p>	Sphere, model, horizon, axis, rotate, orbit, equator, planet, moon, constellation, solar system, astronomy, theory, gravity, universe, telescope, Asteroid, comet
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