

The Sultan's School Year 6 Medium Term Curriculum plan for Science 2017- 18 - Information for parents

Block	Unit	Key Targets and Learning Objectives	Key Activities	Key vocabulary
1	Humans and animals	<ul style="list-style-type: none"> ➤ Use scientific names for some major organs of body systems. ➤ Identify the position of major organs in the body. ➤ Describe the main functions of the major organs of the body. 	<ul style="list-style-type: none"> ➤ Identifying which body parts are used during different activities. ➤ Prepare talks about the different systems in the body. ➤ Create games which require the player to position the organs correctly. ➤ Create a 'job description' for the brain. ➤ Produce leaflets about heart health. ➤ Investigate what happens to breathing when we exercise. ➤ Investigate how the stomach and intestines work. <p>Going Green Link: Explain problems related to air quality. Research the benefits of having more green plants at home.</p>	structure function organism nervous system circulatory system respiratory system digestive system nerves stimulus response pump blood vessels oxygen carbon dioxide digestion absorb
2	Living things in their environment	<ul style="list-style-type: none"> ➤ Explore how humans have positive and negative effects on the environment. ➤ Explore a number of ways of caring for the environment. ➤ Know how food chains can be used to present relationships in a habitat. ➤ Know that food chains begin with a plant, which uses energy from the sun. ➤ Understand the terms <i>producer, consumer, predator</i> and <i>prey</i>. 	<ul style="list-style-type: none"> ➤ Explore and investigate different environmental issues. ➤ Research conservation efforts. ➤ Design posters about how we can make a difference. ➤ Research local food chains. ➤ Investigate what happens when something disappears from a food chain. <p>Going Green Link: Research environmental issues in Oman. Compare and contrast man-made environments and natural environments</p>	habitat species extinction conservation food chain feeding relationships producer photosynthesis consumer herbivore carnivore omnivore predator prey

3	<p>Material Changes</p>	<ul style="list-style-type: none"> ➤ Understand how properties of materials in a mixture may be used to separate them. ➤ Understand that dissolving and evaporation are reversible and inverse reactions. ➤ Understand the difference between a mixture and a solution. ➤ Explain how to separate solids from liquids by filtering and evaporation. ➤ Learn how to plan and set up a fair test. ➤ Learn how to discuss, evaluate, adapt and overcome difficulties. ➤ Describe changes that take place when materials are mixed and identify reversible and irreversible changes. ➤ Know that new materials can be made by mixing chemicals. 	<ul style="list-style-type: none"> ➤ Use filters to separate soluble and insoluble materials. ➤ Prepare a fair test to compare the effectiveness of filters. ➤ Plan and carry out a fair test into the dissolving of solids and their recovery by evaporation. ➤ Investigate irreversible changes by mixing a range of chemicals, to create new materials. ➤ Consider and investigate slower irreversible changes, such as rusting and those caused by acid rain. <p>Going Green Link: What is acid rain? What happens when we burn fossil fuels?</p>	<p>dissolve evaporate evaporation condensation filter solution soluble solvent solute mixture suspension reversible irreversible effervesce substance material</p>
4	<p>Forces and motion</p>	<ul style="list-style-type: none"> ➤ Describe friction, including air resistance and understand it is a force which opposes movement. ➤ Draw diagrams to show forces acting in different directions. ➤ Understand that when forces are balanced an object will not speed up, slow down or change direction. ➤ Make accurate observations and measurements. ➤ Understand the need to repeat observations and measurement. 	<ul style="list-style-type: none"> ➤ Investigate the action of gravity on objects. ➤ Compare the friction of different surfaces using toy cars. ➤ Investigate pulling forces and resistance. ➤ Investigate upthrust acting on objects in water. ➤ Record results as bar charts and line graphs. <p>Going Green Link: What is your carbon footprint?</p>	<p>air resistance water resistance unbalanced balanced stationary force meter friction gravity Newtons weight mass upthrust</p>

5a	Electricity	<ul style="list-style-type: none"> ➤ Construct a series circuit from a circuit diagram, recognising circuit diagram symbols. ➤ Discuss the need for a circuit to be complete for it to work. ➤ Identify changes that take place when components are added or removed. 	<ul style="list-style-type: none"> ➤ Construct simple circuits and record them, making accurate use of circuit diagram symbols. ➤ Investigate how varying the components of a circuit affects the brightness of bulbs. ➤ Construct a circuit using the greatest variety of electrical conductors. <p style="background-color: #00b050; color: black; padding: 5px;">Going Green Link: Research renewable energy in Oman.</p>	components battery cell bulb buzzer circuit conductor insulator electrical motor mains resistance series switch brighter dimmer
5b	Welcome to Science (Year 7 Transition Unit)	<ul style="list-style-type: none"> ➤ Understand the safety rules in the science laboratory ➤ Bunsen burners ➤ Recording data ➤ Data handling 	<ul style="list-style-type: none"> ➤ Safety rules ➤ Bunsen burners ➤ Recording data ➤ Data handling 	