Admiralty Primary School
Primary 4 Science

Term 1 – **Theme: Systems**

- Plant Systems (including Plant Transport System)
- Human Systems

Essential Takeaways	Key Inquiry Questions
• A system is made of different parts. Each part has its own unique function. • Different parts of a system influence and work together to perform function(s).	• What is a system? • How do different parts/systems work together to perform function(s)? • Why is it important to understand how parts/systems work together?

Core Ideas	Practices	Values, Ethics and Attitudes
• Identify the different parts of plants and state their functions. - Leaf - Stem - Root • Identify the parts of the plant transport system and describe their functions. • Identify the human systems in the body and state their functions (digestive, respiratory, circulatory, skeletal and muscular). • Identify the parts in the human digestive system (mouth, gullet, stomach, small intestine and large intestine) and describe their functions.	• Investigate how food and water are transported in the plant.	• Show objectivity by seeking data and information to validate observations and explanations about plant parts and functions. • Show care and concern by being responsible towards plants. • Show curiosity in questioning about the structures or functions of the body.

Term 2 – **Theme: Cycles**

- Matter

Essential Takeaways	Key Inquiry Questions
• There are repeated patterns of change around us. • Understanding cycles helps us to make predictions about events and processes around us.	• What makes a cycle? • How does a cycle help us predict events and processes?

Core Ideas	Practices	Values, Ethics and Attitudes
• State that matter is anything that has mass and occupies space. • Differentiate among the three states of matter (solid, liquid, gas) in terms of shape and volume.	• Measure mass and volume using appropriate apparatus.	• Show curiosity in exploring matter in the surroundings and question what they find.

Term 3 & 4 – **Theme: Energy**

- Light
- Shadows
- Heat
- Effects of Heat

Essential Takeaways	Key Inquiry Questions
• Energy is required for things to work. • There are various forms of energy and they can be converted from one form to another. • Some sources of energy can be depleted and we play an important role in energy conservation.	• What are the different forms of energy around us? • How is energy used in everyday life? • Why is it important to conserve energy?

Core Ideas	Practices	Values, Ethics and Attitudes
Light & Shadows		
• Recognise that an object can be seen when it reflects light or when it is a source of light. • Recognise that light travels in straight lines and thus a shadow is formed when light is completely or partially blocked by an object.	• Investigate the variables that affect shadows formed. - Shape, size and position of object(s) - Distance between light source-object and object-screen	• Show objectivity by using data and information to validate observations and explanations about light.

Heat & Effects of Heat		
• Identify some common sources of heat. • State that the temperature of an object is a measurement of its degree of hotness. • State that heat is a form of energy. • Differentiate between heat and temperature. • Show an understanding that heat flows from a hotter to a colder object/ region/ place until both reach the same temperature. • Relate the change in temperature of an object to the gain or loss of heat by the object. • List some effects of heat gain/loss in our everyday life. - Contraction / expansion of objects (solid, liquid and gas) - Change in state of matter • Identify good and poor conductors of heat. - Good conductors: metals - Poor conductors: wood, plastics, air, rubber	• Measure temperature using a thermometer and a datalogger with temperature/heat sensors.	• Show objectivity by seeking data and information to validate observations and explanations about heat.