INTEGRATED SCIENCE – FORM 1 SCHEME OF WORK – Term 1

WEEK	TOPIC	SYLLABUS OBJECTIVES	NUMBER OF SESSIONS	ACTIVITIES/LABS
1-2	**Introduction to Science**	1. Definitions of science and technology 2. Discuss that science is dynamic 3. Advantages and disadvantages of science 4. Outline the scientific method 5. Identify and state the functions of the basic apparatus and materials in the lab 6. State and explain the importance of rules in the lab	9	Visit to the lab – ask students to identify different apparatus and material
3-4	**Scientific measuring**	1. List two reasons for the importance of measurements 2. Explain the following concepts: length, mass, volume, time and temperature 3. Identify the International System of Units (SI) symbol and its conversion when measuring length, mass, volume, time and temperature 4. Demonstrate the appropriate use of metric measurement devices to promote consistency in investigations. 5. Explain the limitation of measuring instruments	9	Teacher gives students a quantity of a substance and asks them to identify how much is present Teacher then explains the unreliability of senses and the need for measuring instruments. Give students instruments to measure length, mass, volume and time. Ask students to identify the units used in each instrument and the abbreviated term used in measurement. Give students a variety of measurements to perform Have classroom discussion on difficulties incurred while carrying out measurements
5 - 8	**Solar system**	1. Identify components of the solar system 2. Describe the organization of the solar system, emphasizing the positions and sizes of the planets relative to the sun 3. Identify the bodies in space that emit light and those that reflect light 4. Describe, simply, fusion reactions taking place in the sun 5. Explain that day and night are caused by the Earth's rotation 6. Explain that gravitational forces hold celestial bodies in their orbit 7. List the instruments used for observation of celestial bodies	15	Make models and collect pictures of celestial bodies Power point presentation on the Solar system Create an acronym to recall the names and sequence of the planets away from the sun Model the rotation of the Earth and its physical relationship to the Sun Research how a satellite is held in its orbit around the Earth
9 - 11	**Forms of Energy**	1. Identify the forms of energy that come from the sun 2. Explain that food is a source of energy 3. Identify the various forms of energy 4. Compare renewable and non-renewable sources of energy 5. Investigate the conversion of energy from one form to another 6. Differentiate between heat and temperature 7. Measure the temperature change that results from using different materials 8. Explain how heat is transferred	15	Conduct a simple experiment to show how sunlight changes the temperature of a container of water Identify the energy content of a food eg. By burning a peanut Use examples such as batteries, fuel, moving objects, etc. to identify the forms of energy Measure temperature, at regular time intervals, of a beaker of water as it is heated to a temperature of approximately 70 degrees Celsius and then allowed to cool Identify the method of heat transfer in different examples