ASCOT HIGH SCHOOL

DEPARTMENT OF SCIENCE

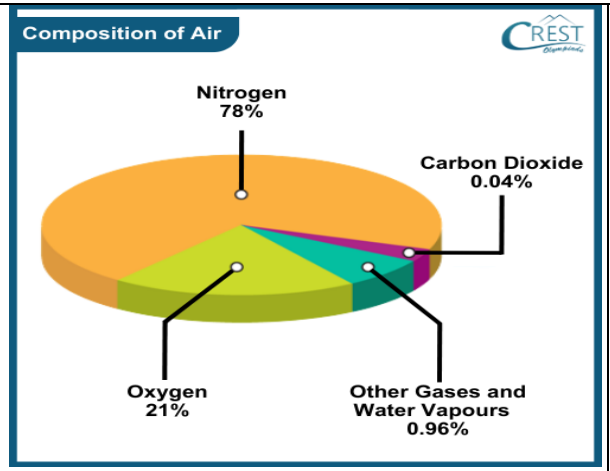
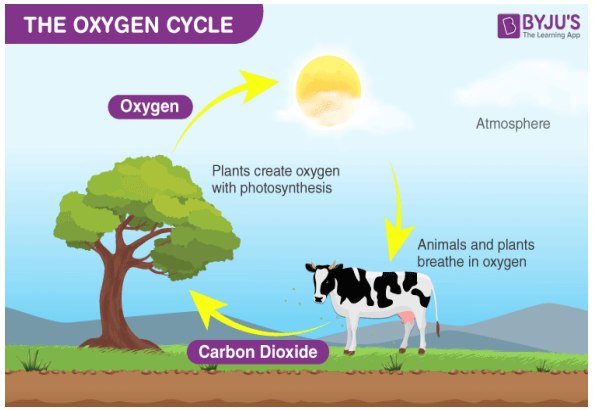
GRADE 9 INTEGRATED SCIENCE

TERM 1: SEPTEMBER-DECEMBER 2025

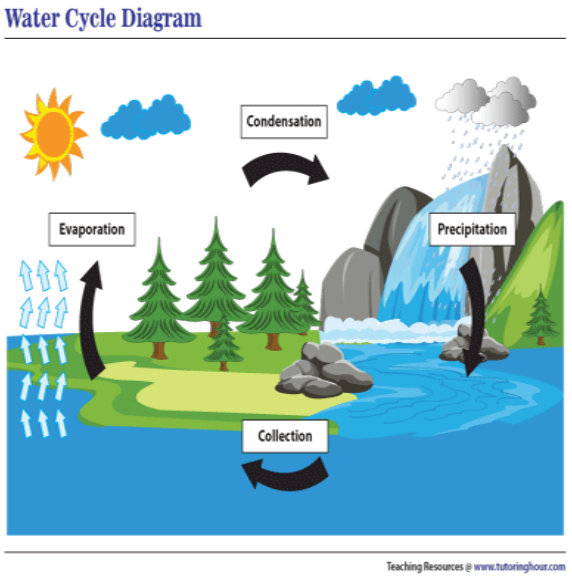
National Goals: Jamaica Has A Healthy Natural Environment

Jamaicans are Empowered To Achieve their Fullest Potential

UNIT	DURATION	TOPIC	SPECIFIC OBJECTIVE	SUGGESTED TEACHING/LEARNING ACTIVITIES	ASSESSMENT
Orientation Activities & Diagnostic Test-September 1-12					
Exploring Science and The Environment	5 Weeks Sept.15-Oct. 17	**Air and Oxygen Cycle**	**Air** Students will- 1.Recall the term matter and state the three states of matter. 2. Discuss the properties of gas. 3. Determine if air is found in the atmosphere. 4. List the components of Air as Oxygen, Nitrogen, Argon (Other gases e.g. Carbon Dioxide and Water Vapour) 5. Discuss the importance of the Components of Air to living organism.	**Activity 1** In groups, after discussions with teacher, use a plastic bag and plastic twist (example, that is used to seal bread bags), to determine if air is present in the atmosphere. Solve the problem by asking questions, example. i. Where do we find air? ii. Can you feel air? Record the responses to the questions posed. **Activity 2** Exhale on a mirror to demonstrate that air contains water vapour. Students note observation. Draw a pie chart to represent the percentage components of air.	**Practice Questions: Air and Oxygen Cycle** https://www.liveworksheets.com/worksheet/en/science/1784767 https://www.liveworksheets.com/worksheet/en/science/655381

					
			Oxygen Cycle 1.Students will recall the definition of the following terms: photosynthesis and respiration. 2. Draw and label the oxygen cycle.	**Watch Video on Oxygen Cycle.** **Draw and label the oxygen cycle** **https://www.youtube.com/watch?v=W_nIWEtj91Y** 	

QUIZ ON AIR & OXYGEN CYCLE (10%)					
NATIONAL HEROES DAY & MID-TERM BREAK- October 16-20					
SESSIONAL TEST 20%					
UNIT	**DURATION**	**TOPIC**	**SPECIFIC OBJECTIVE**	**SUGGESTED TEACHING/LEARNING ACTIVITIES**	**ASSESSMENT**
Exploring Science and The Environment	4 Weeks Nov.3-28	**Water Cycle in Nature**	Students will- 1.Define the term cycle. 2. Investigate the processes involved in the water cycle (**evaporation, condensation, precipitation, infiltration/collection**). 3. Construct a model of the water cycle. 4. Discuss the importance of the water cycle to humans and the environment. 5. Justify the need for water conservation.	**Water Cycle** 1. **Watch video of the Water Cycle** **https://www.youtube.com/watch?v=ncORPosDrjI** After video students will brainstorm in groups on the terms **"cycle" and "water cycle"**. 2. Draw and label the Water Cycle.	**GRADED HOMEWORK 10%** **Model of Water Cycle**

			6. Show interest in water conservation through personal conservation efforts. 7. Assess the impact of human activities on water quality 8. Create a simple purification device 9. Value individual effort and team work through hands on activities.	 3. Students observe the teacher demonstrates the following activity (or perform the activity in groups). Place a half-full beaker with water on a heater. Cover the beaker with a watch glass. Heat the water in the beaker to boiling. Note the observations. Answer questions such as, '**What happens to the water as it boils?', 'Where did the water go?', 'What did the water change to?', 'What was formed on the surface of the watch glass?**' Students will provide	

				explanations for their observations and identify the processes that are taking place. Teacher will lead students to link the processes depicted with the water cycle. 4. In groups students list the Processes in the Water Cycle and write a brief statement on each process based on the video and experiment. **<u>Importance of Water</u>** 1. Class discussion on the importance of water to humans and the environment. 2. Students list the importance in notebooks. **<u>Water Issues and Water Purification</u>** In groups, students identify Issues affecting water globally **(e.g. scarcity, drought, and contamination). Use pictures and videos**	**CLASSWORK WORKSHEET (10%)**

				showing areas affected by water shortage and contamination. Discuss and list the measures that are needed to make water safe at home example boiling, adding bleach. **Video Link: Water Purification** PURIFICATION OF WATER || PURIFICATION METHODS || SCIENCE EDUCATIONAL VIDEO FOR CHILDREN **Research, Plan and design a Simple Water Purification device** **Water Usage and Conservation** Create a strategy to reduce water usage in the home, school, or community. Check meter readings at home. Formulate a personal conservation plan showing individual efforts to conserve water at home. Present plan to the class using multimedia or role play. As a class, identify areas of water wastage at school. Formulate plans to reduce, re-use or	**HOMEWORK (10%)** **Plan and design a Water Purification Device.**

				recycle water used in the school. Plan and design a public education campaign to increase awareness on water conservation options (e.g. using slogans, jingles etc.). Present to peers in a variety of ways. **Review Video** https://www.youtube.com/watch?v=TD3XSIE4ymo	**SESSIONAL TEST 2 (20%)** **CREATIVE EXPRESSION on Water Conservation at home or school (Poster, Jingle, Drama piece, Poem)**
QUIZ ON WATER CYCLE & WATER (10%)					
REVISION & END OF YEAR EXAMINATION: December 1-16					