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BASIC 8

WEEKLY LESSON PLAN – WEEK 9

Strand:	Humans and the Environment		**Sub-Strand:**	Climate Change and Green Economy	
Content Standard:	B8.5.4.1 Demonstrate understanding of the effects of climate change in the world and greening of other tropical countries including Ghana.				
Indicator (s)	B8.5.4.1.1 Explain the concept of climate change and its effect on the environment B8.5.4.1.2. Describe climate change and green economy actions		**Performance Indicator:** Learners can identify causes and effects of climate change.		
Week Ending	25-08-2023				
Class	B.S.8	**Class Size:**		**Duration:**	
Subject	Science				
Reference	Science Curriculum, Teachers Resource Pack, Learners Resource Pack.				
Teaching / Learning Resources	Power Point Presentation, Poster, Pictures, Video		**Core Competencies:**	• Digital Literacy • Critical Thinking and Problem Solving • Communication and Collaboration.	

DAY/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFLECTION**
MONDAY	Discuss the concept of " climate change" with the Learners.	1. Learners brainstorm to identify signs of climate change. 2. Discuss some examples of climate change with the Learners. 3. Assist Learners to identify 5 causes of Climate Change. 4. Learners in small groups to explain 5 effects of Climate Change and report to the class. **Signs of Climate Change;** ▪ intense droughts ▪ water scarcity ▪ severe fires ▪ rising sea levels ▪ flooding ▪ melting polar ice ▪ catastrophic storms ▪ declining biodiversity.	Reflect on the effects of Climate Change on the nation. **Exercise;** 1. What is Climate Change? 2. State 5 causes of Climate Change 3. Explain 3 effects of Climate Change.

THURSDAY		✓ **Generating power;** Generating electricity and heat by burning fossil fuels causes a large chunk of global emissions. Most electricity is still generated by burning coal, oil, or gas, which produces carbon dioxide and nitrous oxide – powerful greenhouse gases that blanket the Earth and trap the sun's heat. Globally, a bit more than a quarter of electricity comes from wind, solar and other renewable sources which, as opposed to fossil fuels, emit little to no greenhouse gases or pollutants into the air. ✓ **Manufacturing goods;** Manufacturing and industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, iron, steel, electronics, plastics, clothes, and other goods. Mining and other industrial processes also release gases, as does the construction industry. Machines used in the manufacturing process often run on coal, oil, or gas; and some materials, like plastics, are made from chemicals sourced from fossil fuels. The manufacturing industry is one of the largest contributors to greenhouse gas emissions worldwide. ✓ **Cutting down forests;**tting down forests to create farms or pastures, or for other reasons, causes emissions, since trees, when they are cut, release the carbon they have been storing. Each year approximately 12 million hectares of forest are destroyed. Since forests absorb carbon dioxide, destroying them also limits nature's ability to keep emissions out of the atmosphere. Deforestation, together with agriculture and other land use changes, is responsible for roughly a quarter of global greenhouse gas emissions. ✓ **Using transportation;** Most cars, trucks, ships, and planes run on fossil fuels. That makes transportation a major contributor of greenhouse gases, especially carbon-dioxide emissions. Road vehicles account for the largest part, due to the combustion of petroleum-based products, like gasoline, in internal combustion engines. But emissions from ships and planes continue to grow. Transport accounts for nearly one quarter of global energy-related carbon-dioxide emissions. And trends point to a significant increase in energy use for transport over the coming years. ✓ **Producing food;** Producing food causes emissions of carbon dioxide, methane, and other greenhouse gases in various ways, including	

		through deforestation and clearing of land for agriculture and grazing, digestion by cows and sheep, the production and use of fertilizers and manure for growing crops, and the use of energy to run farm equipment or fishing boats, usually with fossil fuels. All this makes food production a major contributor to climate change. And greenhouse gas emissions also come from packaging and distributing food. years. ✓ **Consuming too much;** Your home and use of power, how you move around, what you eat and how much you throw away all contribute to greenhouse gas emissions. So does the consumption of goods such as clothing, electronics, and plastics. A large chunk of global greenhouse gas emissions are linked to private households. Our lifestyles have a profound impact on our planet. The wealthiest bear the greatest responsibility: the richest 1 per cent of the global population combined account for more greenhouse gas emissions than the poorest 50 per cent.	
FRIDAY	Through questioning strategy, review Learners knowledge on the previous lesson.	1. Assist Learners to describe human activities that contribute to climate change. 2. Learners brainstorm to explain mitigation and adaptation of climate change. 3. Using a Presentation, explain climate change adaptation measures that can be applied in the community. 4. Discuss possible solutions to climate change with the Learners. **Human Activities that contribute to climate change;** - Burning fossil fuels - cutting down forests - farming livestock are increasingly influencing the climate and earth's temperature. - Cutting down forests **Mitigation** – reducing climate change – involves reducing the flow of heat-trapping greenhouse gases into the atmosphere, either by reducing sources of these gases (for example, the burning of fossil fuels for electricity, heat, or transport) or enhancing	Individual Learners brainstorm to describe what they can do to prevent climate change. **Exercise;** 1. State 4 human activities that contribute to climate change. 2. Explain the following; i. Mitigation ii. Adaptation

		the “sinks” that accumulate and store these gases (such as the oceans, forests, and soil). **Adaptation** – adapting to life in a changing climate – involves adjusting to actual or expected future climate. The goal is to reduce our risks from the harmful effects of climate change (like sea-level rise, more intense extreme weather events, or food insecurity). It also includes making the most of any potential beneficial opportunities associated with climate change (for example, longer growing seasons or increased yields in some regions).	

Name of Teacher: ***School:*** ***District:***