WEEK 4

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Week Ending:** | | **DAY:** | | | **Subject:** Science | | |
| **Duration: 100mins** | | | | | **Strand:** Humans & the Environment | | |
| **Class:** B9 | | **Class Size:** | | | **Sub Strand:** Climate Change & Green Economy | | |
| **Content Standard:**  B9.5.4.1 Demonstrate an understanding of the natural and human factors that influence climate change and a green economy | | | **Indicator:**  B9.5.4.1.1 Examine various natural and human factors that influence climate change and green economy in their localities. | | | | **Lesson:**  1 of 2 |
| **Performance Indicator:**  Learners can examine various natural and human factors that influence climate change and green economy in their localities | | | | **Core Competencies:**  Critical Thinking and Problem Solving (CP), Communication and Collaboration (CC) Digital Literacy (DL), Creativity and Innovation | | | |
| **References:** Science Curriculum Pg. 120 | | | | | | | |
| **Key words: Climate Change, Greenhouse gases, natural factors, human activities, green economy** | | | | | | | |
|  | | | | | | | |
| Phase/Duration | Learners Activities | | | | | Resources | |
| PHASE 1: **STARTER** | Briefly discuss the difference between weather (daily conditions) and climate (long-term trends). Show pictures or videos of extreme weather events (e.g., floods, heatwaves).  Ask learners: Have you noticed any changes in weather patterns in recent years? What might be causing these changes? | | | | |  | |
| PHASE 2: **NEW LEARNING** | Introduce the concept of climate change and natural factors that influence it (e.g., volcanic eruptions, solar activity, ocean currents).  Briefly explain how these factors can cause fluctuations in temperature.  Show pictures/videos of these phenomena  Discuss human activities that release greenhouse gases (GHGs) into the atmosphere. (e.g., burning fossil fuels, deforestation). Explain the greenhouse effect and how GHGs trap heat, causing global warming.  Divide learners into pairs or small groups. Distribute a chart with two columns: "Natural Factors" and "Human Activities" (See Assessment worksheet).  Ask them to list examples under each category and discuss their impact on climate change. Encourage them to consider the speed and scale of the effects.  Facilitate a group discussion about the completed charts. Highlight the differences between natural and human influences.  Emphasize the greater control humans have over their activities.  Introduce the concept of a green economy. Explain how it focuses on reducing our dependence on fossil fuels and promoting sustainable practices that minimize climate impact.  Discuss examples of green technologies and industries (e.g., renewable energy, sustainable agriculture). | | | | | Pictures/Videos of natural phenomena | |
| PHASE 3: **REFLECTION** | Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.  Take feedback from learners and summarize the lesson. | | | | |  | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Week Ending:** | | **DAY:** | | | **Subject:** Science | | |
| **Duration: 100mins** | | | | | **Strand:** Humans & the Environment | | |
| **Class:** B9 | | **Class Size:** | | | **Sub Strand:** Climate Change & Green Economy | | |
| **Content Standard:**  B9.5.4.2 Evaluate the effectiveness of initiatives that address the issue of climate change and green economy in Ghana and the world at large | | | **Indicator:**  B9.5.4.2.1 Assess data on climate change and green economy actions/ activities globally including Ghana and other countries. | | | | **Lesson:**  1 of 2 |
| **Performance Indicator:**  Learners can assess data on climate change and green economy actions/ activities globally including Ghana and other countries | | | | **Core Competencies:**  Critical Thinking and Problem Solving (CP), Communication and Collaboration (CC) Digital Literacy (DL), Creativity and Innovation | | | |
| **References:** Science Curriculum Pg. 120 | | | | | | | |
| **Key words:** | | | | | | | |
|  | | | | | | | |
| Phase/Duration | Learners Activities | | | | | Resources | |
| PHASE 1: **STARTER** | Briefly discuss climate change and its impact on the environment. Ask learners: What are some challenges Ghana faces due to climate change? (e.g., erratic rainfall, rising sea levels)  Introduce the concept of a green economy. Explain how it promotes sustainable practices to address climate change. | | | | |  | |
| PHASE 2: **NEW LEARNING** | Divide learners into groups of 3-4. Assign each group one of the following research tasks:  Group 1: Research climate change and green economy initiatives in Ghana. (e.g., renewable energy projects, sustainable agriculture programs)  Group 2: Research climate change and green economy initiatives in another country. (Choose a country relevant to the learners' interests or geographically close to Ghana)  Learners use the internet or provided resources to find information about the assigned topic. Encourage them to focus on specific initiatives, their goals, and impacts.  After research, each group prepares a short presentation (using chart paper/whiteboard or notes) highlighting:   * Key initiatives in their assigned country * Similarities and differences between initiatives in Ghana and the other country   Facilitate a class discussion based on group presentations. Encourage learners to compare the effectiveness of different approaches and discuss factors influencing initiative success (e.g., government support, community involvement).  As a class, brainstorm a list of effective initiatives from both countries based on the research findings.  Assessment   1. List 2 climate change/green economy initiatives in this country 2. What is one best practice you identified from your research 3. How can this best practice be applied to address climate change/green economy issues in Ghana? | | | | |  | |
| PHASE 3: **REFLECTION** | Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.  Take feedback from learners and summarize the lesson. | | | | |  | |