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| ACTIVITY PLAN | | | | |
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| **Theme** | **Subtopic** | **Activity Title** |
| Global and Local Perspectives in Environmental Education | Understanding Global Environmental Issues | Exploring Global Environmental Challenges |

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| Introduction part (or activity overview) |
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| **Introduction part (or activity overview)** | This activity aims to develop students' understanding of global environmental issues through research, analysis, and presentation. Students will explore significant global environmental challenges, analyze their causes and effects, and propose potential solutions. |
| **SETTING** | Location: Classroom and computer lab for research and analysis.  Educational Context: Collaborative group work (4-5 students per group). |

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| Materials Needed |
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| **Materials Needed** | Computers with internet access and relevant software (e.g., presentation tools, data visualization tools)  Access to online databases and resources on environmental issues  Projector for presentations  Poster boards and markers for visual aids |

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| **Learning Outcomes** | * Understand the causes, effects, and potential solutions for global environmental issues. * Develop skills in research, data analysis, and critical thinking. * Enhance abilities in project development and presentation. |  |
| **Activity Contents** | **Theoretical Part (Duration: 60 minutes)**: Begin with an introduction to the significance of understanding global environmental issues. Highlight various challenges and their global impacts.   * **Introduction to Global Environmental Issues**:   + Explain what global environmental issues are and why they are critical to understand. Discuss the interconnectedness of global ecosystems and the impact of human activities on the environment.   + Provide an overview of major global environmental challenges, including climate change, deforestation, loss of biodiversity, ocean acidification, air pollution, and water scarcity. * **Causes and Effects of Global Environmental Issues**:   + Discuss the causes of climate change, including greenhouse gas emissions from human activities. Explain the effects of climate change on weather patterns, sea levels, and ecosystems.   + Examine the causes of deforestation, such as agriculture, logging, and urbanization. Discuss the effects on biodiversity, carbon sequestration, and local communities.   + Explore the causes of biodiversity loss, including habitat destruction, pollution, and climate change. Discuss the ecological and economic impacts of losing species diversity.   + Explain the causes of ocean acidification, primarily due to increased CO2 levels. Discuss its effects on marine life and ecosystems.   + Discuss the sources of air pollution, including industrial activities and vehicle emissions. Explain the health and environmental impacts of air pollutants.   + Examine the causes of water scarcity, such as overuse, pollution, and climate change. Discuss its effects on human populations and ecosystems. * **Case Studies**:   + **Case Study 1: Climate Change Mitigation Efforts**: Present a case study on global efforts to mitigate climate change. Discuss international agreements, such as the Paris Agreement, and their impact.   + **Case Study 2: Conservation of Rainforests**: Share a case study on efforts to conserve rainforests in the Amazon. Highlight the strategies used and the outcomes achieved. * **Video Resources**:   + "Understanding Global Environmental Issues" https://www.youtube.com/watch?v=aTrWtFR\_FrQ – A video showcasing major global environmental challenges and their impacts.   + "Global Solutions for Environmental Problems" https://www.youtube.com/watch?v=-D\_Np-3dVBQ – An overview of international efforts to address global environmental issues.   **Discussion Prompts**:   * How do global environmental issues affect local communities? * What are the key challenges in addressing global environmental problems? * How can individuals contribute to global environmental solutions?   **Task 1: Research and Data Collection (Duration: 45 minutes)** **Objective**: To gather information on a specific global environmental issue.   * **Step 1**: Form groups and assign each group a specific global environmental issue to study (e.g., climate change, deforestation, ocean acidification). * **Step 2**: Use online resources to collect data and information on the assigned issue. Ensure that data is gathered from multiple reputable sources. * **Step 3**: Organize the collected data and prepare it for analysis.   **Task 2: Analysis and Interpretation (Duration: 90 minutes)** **Objective**: To analyze the causes, effects, and potential solutions for the assigned global environmental issue.   * **Step 1**: Analyze the collected data to identify the main causes and effects of the issue. * **Step 2**: Interpret the data to draw meaningful conclusions. Consider the broader context and potential long-term impacts. * **Step 3**: Develop potential solutions or mitigation strategies based on the analysis. Identify actions that can be taken at global, national, and local levels. * **Step 4**: Prepare a presentation summarizing the research, analysis, and proposed solutions.   **Task 3: Presentation and Feedback (Duration: 45 minutes)** **Objective**: To present the findings and proposed solutions to the class and receive feedback.   * **Step 1**: Each group presents their research, analysis, and proposed solutions to the class. * **Step 2**: Conduct a Q&A session where other students and the instructor can provide feedback and ask challenging questions. * **Step 3**: Groups reflect on the feedback received and discuss potential improvements. |  |
| **Assessments** | Thoroughness and accuracy in research and data collection.  Depth of analysis and interpretation of the global environmental issue.  Quality and feasibility of proposed solutions.  Clarity and persuasiveness of the presentation.  Team collaboration and dynamics. |  |
| **Key Competences** | Research and analytical skills  Critical thinking and problem-solving  Strategic planning and project management  Effective communication and presentation skills  Teamwork and collaboration |  |
| **Connections with Eco STEAM** | Eco: Understanding and addressing global environmental issues and their impacts.  Science: Applying scientific principles to analyze and interpret environmental data.  Technology: Utilizing digital tools and software for research and data analysis.  Engineering: Developing solutions based on critical evaluation and analysis.  Arts: Creating engaging presentations and visualizations to communicate findings.  Math: Using statistical methods and data analysis to support research and solutions. |  |
| **References** | https://earth.org/the-biggest-environmental-problems-of-our-lifetime/ |  |
| **Notes** | This activity can be extended into a longer-term project, where students continuously research and analyze new data on global environmental issues and refine their proposed solutions. |  |

**Evaluation Criteria Table for Exploring Global Environmental Challenges Activity**

| **Evaluation Criteria** | **Points Available** | **Comments** |
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| **1. Thoroughness and Accuracy in Research and Data Collection** | 20 | Assess the precision and comprehensiveness of the research and data collected. |
| **2. Depth of Analysis and Interpretation** | 20 | Evaluate the depth and rigor of the analysis and interpretation of the global environmental issue. |
| **3. Quality and Feasibility of Proposed Solutions** | 20 | Rate the reliability and practicality of the proposed solutions. |
| **4. Clarity and Persuasiveness of Presentation** | 20 | Rate the clarity, persuasiveness, and professionalism of the presentation. |
| **5. Team Collaboration and Dynamics** | 20 | Assess the level of teamwork, including communication, cooperation, and mutual support among team members. |

**Total Points:** 100