

**Critical Issues - Lesson Plan**

**“Introduction to African Ecosystems and Environmental Problems”**

<b>Unit:</b> Natural Resource Science and Management	<b>Specific Topic:</b> Food Security
<b>URL:</b> <a href="http://www.cpar.ca/CPAR/media/PDF/Tools%20for%20Learning/Saskatchewan/SS20-Unit3-Food Security and Environmental Change In Africa.pdf">http://www.cpar.ca/CPAR/media/PDF/Tools%20for%20Learning/Saskatchewan/SS20-Unit3-Food Security and Environmental Change In Africa.pdf</a>	
<b>Lesson Description:</b> In this lesson, via PowerPoint, students will be introduced to: <ul style="list-style-type: none"> <li>- The characteristics of six African ecosystems</li> <li>- Various environmental problems that have largely resulted from poor natural resource management</li> <li>- The relationship between the people of Africa and the environment</li> </ul>	
<p><b>Curriculum Outcomes:</b>  <b>Overall Expectations</b>  E1 - Assess the environmental impact of the harvesting and/or extraction of resources, including ways of reducing this impact, and analyze threats to the sustainability of natural resources.   E3 - Demonstrate an understanding of the sustainable use of resources and its relationship to the biodiversity and sustainability of ecosystems.</p> <p><b>Specific Expectations</b>  E1.1 - Assess the environmental impact of industrial practices related to the extracting or harvesting of natural resources, and describe ways in which that impact can be monitored and minimized.   E3.2 - Describe the characteristics and properties that make a natural resource viable for use (i.e., the size, type, and location of trees; the value, location, and extraction and processing costs of minerals), and explain the importance of managing natural resources to ensure sustainability and biodiversity.   E3.3 - Describe a variety of methods used to extract or harvest natural resources (i.e., drag nets, strip mining, selective cutting of forests).   E3.5 - Explain the importance of biodiversity to the sustainability of life within an ecosystem (i.e., variability among biotic and abiotic factors within an ecosystem decreases the chance that any organism within that ecosystem will become extinct).</p>	
<b>Additional Cross-Curricular Connections:</b> Language Arts	
<p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>- Teacher-given quiz</li> <li>- Class participation in discussions</li> <li>- Evaluation of handout</li> </ul>	<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>- Download a copy of the PowerPoint workshop <a href="#">Food Security and Environmental Change in Africa</a></li> <li>- AV equipment</li> <li>- Photocopies of student handouts (3 total): <i>Ecosystems in Africa, Food Security and Environmental Change in Africa, and CAPRS: Commitment to resource management and food security.</i></li> <li>- Scissors</li> <li>- Glue</li> </ul>

**Procedure:**

**Before**

1. Small Groups: Ecosystems of Africa

- In groups of 4 or 5, students will explore the six different ecosystems found in Africa
- Each group will be given a chart, ecosystem images, ecosystem names, and ecosystem description (these can be cut out before class, or students can cut out each item in their groups during class)
- Student will match ecosystem name with their description and picture
- Students will organize and glue each item into the correct box on the 'Ecosystems of Africa' chart
- Students should work collaboratively in groups
- One group member will raise their hand after they are confident their group has organized the items correctly
- The teacher will check their answer and provide hints/guidance if corrections are needed
- After the majority of groups have finished, take up the worksheet as a class

**During**

2. Whole Class: PowerPoint Presentation 'Management of African Resources'

- Hand out PowerPoint presentation student worksheet 'Management of African Resources'
- Students should be instructed to use the student worksheet to follow the power point presentation and to gather relevant and important information
- Use the power point presentation to introduce students to the relationship between people and the environment problems, and the millennium development goals
- As part of the PowerPoint presentation, students will watch a short video clip *Climate Witness*
  
- During the PowerPoint presentation students will be asked to brainstorm how the achievement of the MDGs relates to the environment, ecosystems, and natural resources

3. Whole Class: Discussion

- Facilitate a brief discussion that explores the relationship between the achievement of MDGs, the environment, ecosystems, and natural resources
- Key points can be documented on the chalkboard/overhead

**After**

4. Individual/Small Groups: CPARS Commitment to Resource Management and Food Security

- This homework assignment will give students the opportunity to explore CPARS commitment to promoting resource management with the goal of achieving food security
- Students should complete the handout for next class
- Students can be asked to complete all parts of the handout individuals or the teacher can organize the students into groups of 4-5, where each member is responsible for completing a different part of the assignment and reporting back to the rest of the group
- The results in their research inquiry will be shared and collected next class

**Extension Resource:** For further information on Global Citizenship Education (GCE) and additional resources, see **SCIC's Global Citizenship Education Modules.**