

**ENVIRONMENTAL ISSUES IN THE LANGUAGE CLASSROOM
LESSON PLANS BASED ON ISSUES FEATURED IN PACE**

Cameroonian language teacher Florence Acworth prepared the following lesson plans as an example of what can be done using PACE topics and resources. More PACE resources can be found at www.paceproject.net or by emailing pace@siren.org.uk

English Language is one of the compulsory subjects in both primary and secondary schools in Cameroon, thus, it would serve as a very convenient and less stressful means of creating an awareness of environmental problems in Cameroon to the youths who are the future of tomorrow. These problems need to be given attention in our educational system. This can be done through the use of Environmental Education Materials like those produced by the PACE project, to be used alongside the official English Language Text Book.

Other topics that could be used for language lessons include:

- Endangered Plants and animals
- Floods in Cameroon
- One Tree, One Family – Fight the desert
- Keep Buea / Limbe Clean
- Mosquitoes and our environment

Lesson Plan 1: THE EFFECTS OF DEFORESTATION

For Students in the last classes of secondary school or high school students and other adult learners.

Topic:

- Speaking
- Picture talk

Picture talk

Give students a few minutes to study the three pictures below, then, ask them to give oral answers to the following questions, working in pairs. If you can't access the pictures with the class, then simply use the rest of the questions to start a discussion in pairs and then as a class.

- What do you see in the pictures?
- Why do people cut down trees in your country?
- What is the importance of trees to you?
- What is the importance of a forest to a logging company?
- Why might you advise a farmer not to cut down all the trees on his farm?
- Think – Discuss with your partner – Share your ideas with the class

Matching Exercise

Match these words with the pictures

- a) Erosion b) Drought c) Rainforest



1



2



3

Photos by Tim McCabe and Jeff Vanuga, USDA Natural Resources Conservation Service.

Reading Comprehension

Read the passage below and, with a partner, answer the questions that follow it.

Nowadays in our society, especially in the rural areas, many people have different reasons for cutting down trees. Some do it for economic reasons, for example, timber companies which export wood and individuals who fell trees and sell as firewood. Some of these trees are medicinal and are of importance to traditional doctors who use the roots, barks and leaves to treat their patients. Since shifting cultivation involves the continuous opening up of new plots by residents of rural areas, for agricultural activities like planting food crops such as cassava, cocoyam, plantains and potatoes or to build houses, this leads to deforestation and degradation.

All the above reasons are valid as man depends on natural resources for his livelihood. On the other hand however, deforestation has its negative effects. Unsustainable logging can cause soil erosion. The forest is habitat for many animals like monkeys, elephants, antelopes, porcupines and deer, and various types of plants, thus the disappearance of forests means loss of biodiversity. Many plants and animals have been lost and many animals remain endangered because their home have been destroyed. These animals either migrate to other regions or poachers take advantage and kill them. When trees and forests disappear, this causes climate change. Plants absorb carbon dioxide (CO₂) to produce their food and give off oxygen. When the forest is destroyed it means that more CO₂ remains in the atmosphere. To make this worse, destroyed vegetation sends out more CO₂ as they decompose. Climate change due to increased CO₂ concentrations in the atmosphere is happening. Cool places may become hotter or places may receive more rainfall. Two years ago, Bamenda in the North West Region of Cameroon and Limbe in the South West Region of Cameroon experienced heavy floods that destroyed houses and cut off a major highway linking the North West Region to the rest of the country.

Faced with what we can call a tragedy, many governments, organisations and individuals are doing a lot to educate people and draw awareness to the importance of preserving our forests and other natural resources. In spite of this, a lot still has to be done. The government should enforce the laws and regulations governing the activities of timber companies. At your individual level you can also impact your society. Recycle and re-use most of the things you use at home that depend on trees for their existence.

After reading this passage, share the information with your friends at school and family at home so that they can be aware of the effects of deforestation in our society and fight to preserve our forests. Make your own little contribution today and save your environment.

Questions: Please answer these questions in full sentences.

1. What can be a suitable title for this passage?
2. What is deforestation?
3. What is the importance of trees and plants to traditional doctors?
4. Give two disadvantages of deforestation.
5. What can governments and individuals do to preserve forests?

Vocabulary Activities

A) Read the passage again and fill the blank spaces in the following sentences. The answers are found in the passage.

1. An illegal hunter. -----
2. Huge amounts of water that can be destructive. -----

3. People use it to prepare their food. -----
 4. A gas that is useful to plants and trees.-----
 5. We use this in making foodstuff like garri (tapioca), fufu and miondo -----
 6. Traditional doctors use these to produce medicines.-----
 7. A small animal whose body is covered with long protective quills.-----
 8. This animal has two tusks.-----
 9. Alterations in weather conditions.-----
 10. An effect of unsustainable logging.-----
- B) Look up the synonyms of these words and phrases in the passage.
1. Home -----
 2. Facing extinction.-----
 3. Cutting down trees.-----
 4. Timber.-----
 5. Removal of trees .-----
 6. Variety of life found on earth.-----
 7. Decay.-----
 8. Protecting,-----
 9. Knowledge.-----
 10. Teach.-----

C) Complete these sentences using the correct form of the words in brackets.
 Nowadays, more and more people are becoming aware of the ----- (danger) situation threatening their environment. At last, we have started to take precautions for the world's natural (source) which are decreasing every day. The most important step taken is re-using materials, that is recycling. It has become(importance) that we reduce waste which pollutes the environment. Recycling paper has been the biggest (succeed) paper can be used six times over, then be burnt for the(produce) of energy. Plastic is the hardest material to recycle because there are..... (vary) kinds which need to be treated (difference). Metal is another material. The production of an aluminium can is more difficult than(cycle) it. Glass can be used again in a (mix) of asphalt and cement to pave streets. As a result, we should think for a while before we throw things away as they may still be (use)

Grammar Activities

Conjunctions – Joining sentences

- A) Join the following pairs of sentences using the conjunctions in the box.
 however, so that, because, so as to, although, in order not to, whenever
1. We can help the environment by recycling. Most people ignore it.
 2. We go to the village during holidays. We enjoy watching wildlife.
 3. Many species of wildlife may become extinct. Some organizations try hard to protect them.
 4. Some aerosols have been banned. They harm the ecosystem.
 5. She provides grants for projects about the endangered species. She wants to protect them.
 6. People chopped down the rainforests. They cut timber and made land for their plantations.
 7. We may ban cars from the city centre on certain days. We can prevent pollution.

- B) Put the verbs in brackets in the correct forms – Focus: Present perfect tense
1. Many plants and animals have their habitat due to deforestation. (lose)
 2. The chief of Mundemba a tree as an example for all the villagers to follow. (just – plant).
 3. The villagers their forest reserve from outsiders. (protect)
 4. Talla all the waste papers we gathered last week. (recycle)
 5. The forest guard a poacher. (arrest)

C) Choose one of the following adverbials to add to each of these sentences so that they are true for you.

Never hardly ever rarely occasionally sometimes usually always nearly always

- a. I.....throw litter around the house.
- b. I..... use recycled objects.
- c. I..... plant trees.
- d. I.....kill animals.
- e. I..... wash clothes and bathe in the river.

Writing

Project – Group work

Task: A) You have been elected the president of the Environment Club in your school. Write a letter to your principal presenting the line of action of your government and your needs. In this letter you should state all that you will do to make your school campus the cleanest in your town and make all your school mates to be environment friendly. Don't forget to mention all the activities that your club will carry out to celebrate the next Environment Day. Work with all the members of your group and put forward the best ideas.

Task: B) Working together with your group members, draw a picture of your school as you would like it to be, portraying all the sanitation aspects. Let your drawing carry a slogan on clean environment and good health

Lesson Plan 2: FUEL-EFFICIENT STOVES

Level: For students in the last classes of secondary school, high school students and adults.

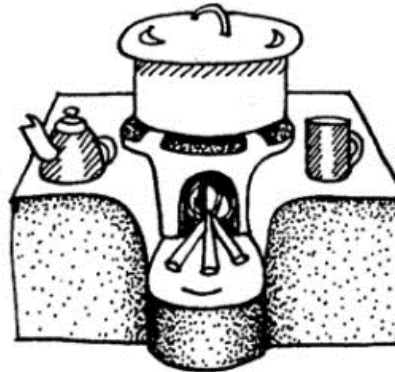
Rationale: Learning ways to use less fuel and make less smoke, and generally promote a healthy environment when cooking at home, at school or at work places.

Starter Activity 1: Picture talk (10 mins)

1.



2.



Look at these pictures with your partner

- What do you see?
- Which materials have been used to make the cooking instrument in picture 2?
- Which method is less harmful to the environment?
- Which method uses more firewood?
- Which method produces a lot of smoke?
- Which method would an environmentalist advise people to use?

Discuss these questions with your partner

- Have you ever heard of the Upesi stoves?
- Are fuel efficient stoves used in your region?

Main Activity: Read the PACE Action Sheet excerpt on the following page before answering the following questions. (40 mins)

Reading comprehension

Fuel Efficient Stoves (Extract from PACE Action Sheet No. 62)

An improved stove is a cooking stove which has been specially designed to use less fuel, cook food more quickly and produce less smoke. One example of an improved stove is the Upesi Stove found in Kenya, East Africa. This stove uses half as much fuel and cooks food more quickly, but it still produces smoke. The Rocket Stove is another amazing design that produces even less smoke. There may be no smoke without fire, but there can be fire with less smoke! With an improved stove, your kitchen will be healthier, more comfortable and easier to keep clean. Using less fuel can save you time and money, and reduce impacts of fuel collection on the local environment. Switching from charcoal to wood from a sustainable source can reduce deforestation. A well-designed stove will also help cook food and boil water more quickly.

Stove designers learnt some important design principles from people who cook on traditional three-stone fireplaces. Expert cooks know exactly how to set the fire to burn hot enough to avoid making a lot of smoke, how to feed wood into the fire to avoid using more fuel than necessary, and how to place the pot to get the most heat from the fire. Stove designers use these lessons to design better stoves, creating easier, safer and faster ways to cook with fire.

Overall, fuel-efficient stoves are better than the three-stone fireplace as they burn fiercer, making less smoke. They burn wisely, as only the tips of wood are burnt, thus they burn hotter and again make less smoke and use less fuel/wood. These stoves cook more efficiently, as they are designed to deliver energy straight to the cooking pot and lastly, they encourage users to go local. Local manufacturers help stove designers to find ways to use easily available materials like clay. The use of the new stoves also seems to change social dynamics. An increasing number of husbands are spending more time in the kitchen, talking with their wives and discussing family issues. Children are also able to spend more time in the kitchen with their mothers simply because the kitchen is cleaner, the air is fresh and the kitchen is safe.

Fuel consumption habits have also changed since the introduction of the Upesi. With the Upesi Stove waste from maize crops and leaves that have fallen from trees can be used as fuel; not only wood as the three-stone fire-place required. This brings about a positive effect to the environment too, as fewer trees are chopped down for firewood. At the economic level, users of the Upesi stove also find life easier. The money saved from buying a lot of firewood helps them to pay school fees and provide better food and clothing for their families.

Comprehension Questions

- What is an improved stove?
- In your opinion, can improved stoves be called fuel-efficient stoves? Why?
- The Upesi stove is an example of an improved stove found in Kenya. Could you provide a name of an improved stove used in your country or region?
- Name two principles used in improved stove designs.
- What are the advantages of using improved/fuel efficient stoves, over the use of the three-stone fireplace? Name four.

Vocabulary: Match the items in column A with those in Column B

- | Column A | Column B |
|------------------------------------|----------------|
| 1. An improved cooking instrument | a) clay |
| 2. Firewood | b) trees |
| 1. Smoke | c) Upesi stove |
| 2. Material to produce Upesi stove | d) charcoal |
| 3. Chop down | e) pollution |

Plenary Activity: Further comprehension questions (10 mins)

- 1) Read the comprehension text again and fill the blank spaces with the words in the box.
toxic emissions, fuel-efficiency, health hazard, waste, pollution
- A) Women and children in developing countries are exposed every day to from cooking smoke.
B) A clean cook-stove like the Upesi stove is designed to optimizewhen cooking meals.
C) Improved stoves are designed to reduce when cooking food.
D) Exposure to a lot of cooking smoke is a serious
E) With the Upesi Stove from maize crops and leaves that have fallen from trees can be used as fuel and not only wood

Grammar – Phrasal verbs

- A) the phrasal verbs with their meanings
- | Phrasal verb | Meaning |
|----------------|--|
| 1. Chop down | To remove something by cutting it with a sharp tool |
| 2. Chop up | Cause something to happen |
| 3. Chop off | To make a tree fall down by cutting it with a sharp tool |
| 4. Bring about | mention |
| 5. Bring up | Cut something into smaller pieces |

Choose the word or phrase that best matches the meaning of the phrasal verb

1. Large areas of rainforest are being chopped down every day for firewood. (a. felled b. cut up c. sold)
2. The use of the upesi stove brings about a positive effect to the environment. (a. sends away b. damages c. makes it happen)
3. The branch of this tree has been chopped off. (a. restored b. removed c. collected)
4. I'd like to bring up an important point on forest conservation at tomorrow's meeting. (a. Mention b. close c. please)
5. Can you chop up some leaves for me? (a. dry b. place c. cut into smaller pieces)

The use of Too and Enough

Why can't the women buy the upesi stove? [Rich – Poor]

- They are not rich enough to buy the upesi stove
- They are too poor to buy the upesi stove

Fill in the blank spaces with either Too or Enough

1. Many logging companies are dangerous for our village.
2. Logging companies are not good for our village.
3. The use of the three stone fire- place is dangerous for our health.
4. The use of the three stone fire- place is not healthy for our well being.
5. The boy cannot light up the improved stove. He is ignorant.
6. The boy is not intelligent to light up the improved stove.