

Lesson Plan Five - Great Lakes of East Africa, Lesson 1



Reference to: Understanding Life Systems, Interactions in the Environment

- **2.4** use appropriate science and technology vocabulary, including **sustainability, biotic, ecosystem, community, population, and producer**
- **2.5** use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes
- **3.8** describe ways in which human activities and technologies alter balances and interactions in the environment
- **1.2** analyse the costs and benefits of selected strategies for protecting the environment

Resources

- Buckets/large containers
- Towels
- Water
- Map of East African Great Lakes Worksheet – class set, preferably printed in colour.
- Access to a computer

Vocabulary

- Herbicide
- Microbe
- Pesticide
- Sewage outlet

Summary

Students will think about where they get their water from, and compare it to where people in Africa get theirs. They will learn the location of the East African Great lakes, and compile a set of questions to send to East African students regarding Lake Victoria.

Objectives

Students will:

- Appreciate their access to clean water, compared to other areas of the world.
- Identify ways in which they can reduce water usage.
- Think about how the problems associated with the Great Lakes of North America may be occurring in the East African Great Lakes region.

Starter Activity

Water usage

Description

Students think about how much water they use on a day to day basis. They then feel how heavy a bucket of water is and imagine what children in some areas of Africa have to go through each day to provide water for their family. They then decide what they would give up if they had to collect their own water.

Instructions

1. **Ask students to write down all the instances their family uses water** - for example brushing their teeth, flushing the toilet, washing their hands, having a shower, washing their face, cooking, drinking, cleaning the house or car etc.
2. **Using the buckets/large containers of water ask the students to lift them up**, making sure not to spill any on the floor, have towels ready just in case. Allow all students to have a turn at lifting the containers of water.
3. **Discuss with the students: How heavy the water is, could they carry it over large distances?**
On average, someone in the U.S. uses 82 gallons of water per day, someone living in sub-Saharan Africa uses just 4. Children normally spend several hours a day collecting water – leaving little time for playing, and may have to leave school.
4. **Where might people in Africa get their water from?** – Lakes, rivers, wells, rain collection.
5. **What problems may water from these sources pose?** – Disease causing organisms

6. We may take our water for granted.
Ask the students what they would give up from the list they created at the beginning of this activity if they had to collect the water

Main Activity one

Location of East African Great Lakes

Description

This worksheet is designed to provide the students with a map of the East African Great Lakes. It will also show them the countries which surround each Great Lake.

Instructions

- Give students a copy of the " **Map of East African Great Lakes**" worksheet. They are to list all the countries bordering the Great Lakes.

Main Activity – two

Questions for East African students

Description

This activity encompasses all of the knowledge gained so far on Great Lakes ecosystems. Students are to create questions for African students about the East African Great Lakes. Questions are to be based on topics covered so far, thinking about what has affected the North American Great Lakes and if there are similarities and differences occurring in the East African ecosystem. The sets of questions will then be sent to Africa for students to answer.

Instructions

2. Get students to think back to the things they have learnt about the problems associated with the North American Great Lakes – pollution, invasive species, agriculture, habitat destruction.
3. Divide the students into 10 groups, so 10 sets of questions will be produced.
4. Students are to create 10 questions for students who live on the shores of Lake Victoria .The questions should allow the students to discover the similarities and differences between the two Great Lakes ecosystems.

Example questions could include:

Where do you get your water from?
 Where do small villages in your area get their water from?
 What are the issues affecting your lake?
 What are the main pollutants in your lake?
 Do you have any endangered animals living in or around the lake?
 If so, what has caused them to become endangered?
 Do you have any invasive plants or animals? How did they get there?
 What, is anything is being done about the invasive organisms?

1. Their questions will then need to be typed into a word document, and the sets of questions will need to be sent to your partner school. There, the questions will be given to a group of African students to answer and return.

Plenary Activity

Eco Bingo

Description

This game of Eco bingo will remind the students of vocabulary learnt so far during this module. It is a fun game in which all students can participate. Prizes could be provided to make it even more exciting!

Instructions

1. Write the words from the "word" column below, on the board.
2. The students are to draw a grid of 4 squares any choose 4 of the words written on the board to put inside it.

For example:

Sun	Consumer
Food web	Habitat

3. Read out the definitions below, in random order, not telling the students the word.
4. If they have the corresponding word to the definition you read out, they cross out that word.
5. As you read out a definition put a mark by the word, in order to keep track of words you have given definitions for.

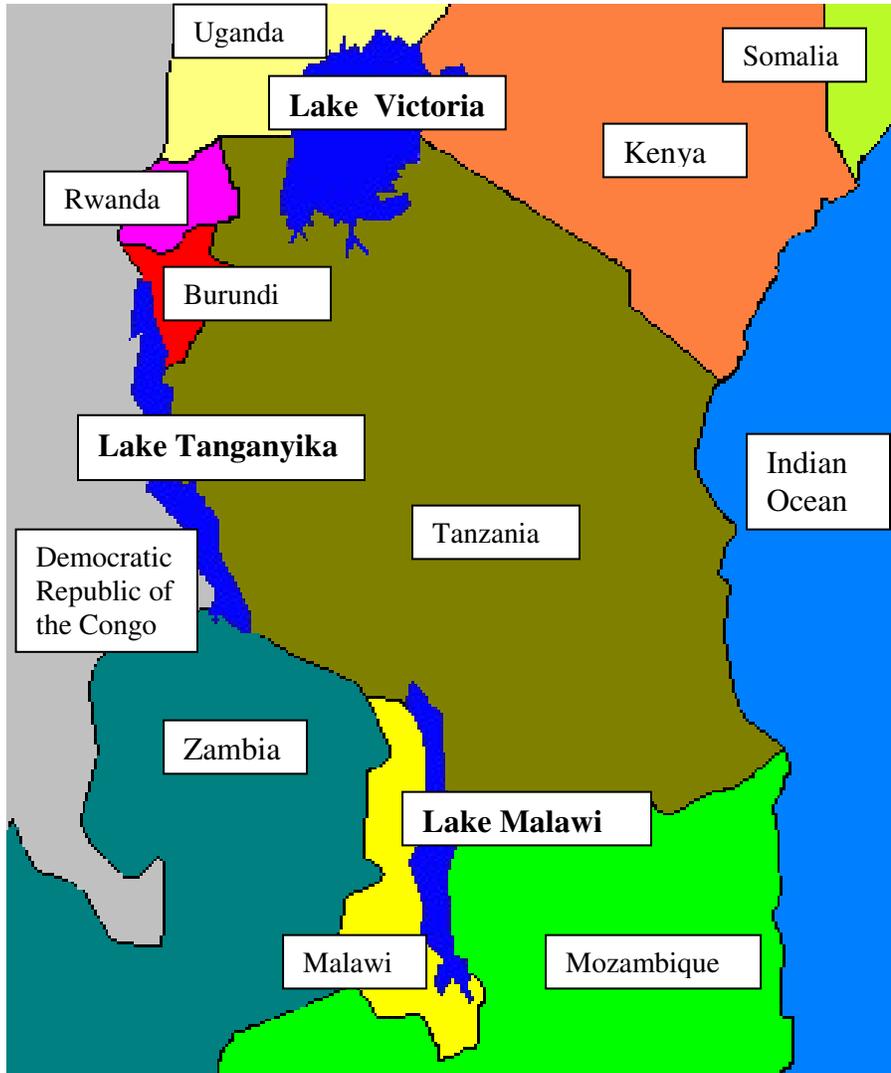
6. The first student to cross off all four boxes wins, and shouts out "Bingo".
7. When a student claims bingo, get them to tell you their 4 words, and check that you have indeed given their definitions.
8. The game can end there or continue to find the runner-up of the game.

To make the game last longer students could draw a grid containing 6 boxes

WORD	DEFINITION
Lake	a body of water
Salmon	a trout like fish
Producer	a member of the food chain, who makes their own food
Consumer	a member of the food chain who eats things
Sun	where does all the energy in a food chain come from originally?
Abiotic	non living parts of an ecosystem
Biotic	living parts of an ecosystem
Food web	many food chains linked together
Habitat	the type of place where a plant or animal naturally lives or grows
Ecosystem	all the interacting parts of a biological community and its environment e.g. a stream
Herbivore	an animal which eats only vegetation
Pollution	harmful materials that are released into the environment
Decomposer	fungi and microbes are examples of this useful last part of the food chain
Organism	any living thing is known as this

Name.....

Map of East African Great Lakes Worksheet



List all of the countries that boarder the following Great Lakes of Africa:

Lake Victoria is bordered by:

.....

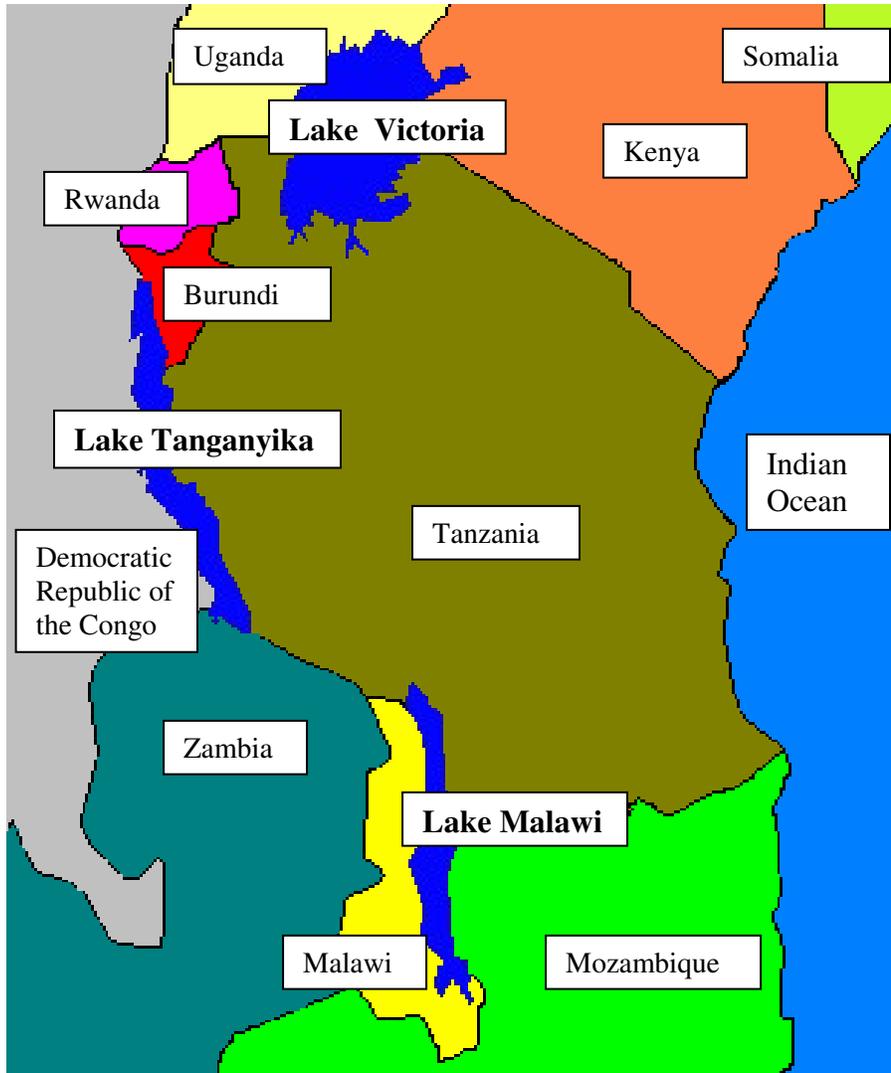
Lake Tanganyika is bordered by:

.....

Lake Malawi is bordered by:

.....

Answer Sheet Map of East African Great Lakes



Lake Victoria is bordered by:

Uganda, Kenya and Tanzania

Lake Tanganyika is bordered by:

Burundi, Tanzania, Zambia and the Democratic Republic of the Congo

Lake Malawi is bordered by:

Tanzania, Mozambique and Malawi