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Introduction

The lessons in this book attempt to raise awareness of the environment, the people and the nations that are affected by Lake Victoria. Located in Eastern Africa, the once vital lake has undergone a disturbing change, affecting the livelihood of native peoples in the surrounding countries of Uganda, Tanzania and Kenya. While focusing primarily on the above issues, peoples and countries, this book will touch lightly on other aspects of Eastern Africa, a diverse and interesting region in its own right.

In the 1980s, a team of scientists selected Lake Victoria as a suitable site to explore life at the bottom of a tropical lake. They expected to find the bottom teeming with life. To their surprise, they found no life at all. They found the first signs of aquatic life near 30 metres. It was a thick layer of tiny shrimp known as zooplankton. Shrimp are a favourite food of fish. To find them concentrated in this thick, cloudy layer with no evidence of fish present was inconceivable. The closer they came to the surface, the more life they found. The question now was 'Why?' What was causing the largest tropical lake in all of Africa to be unable to support life at the lower depths?

The cause of the dying lake is the direct result of human activity. In the mid 1950s, the British introduced a new fish to Lake Victoria. The Nile perch was a large, meaty fish that opened the lake for sport fishermen. However, the ecosystem of the lake was so interconnected that they could not alter one part without fundamentally affecting other parts.

When the Nile perch was introduced to Lake Victoria, it thrived. It grew to lengths in excess of 1.5 metres and weighed as much as 110 kilograms. However, the introduction of the oily Nile perch did not benefit the local fishermen. The processing of the fish was too expensive, so foreign investors built processing plants to market the fish nationally and internationally. The perch soon became a major source of income for the countries bordering the lake, but local families were economically devastated.

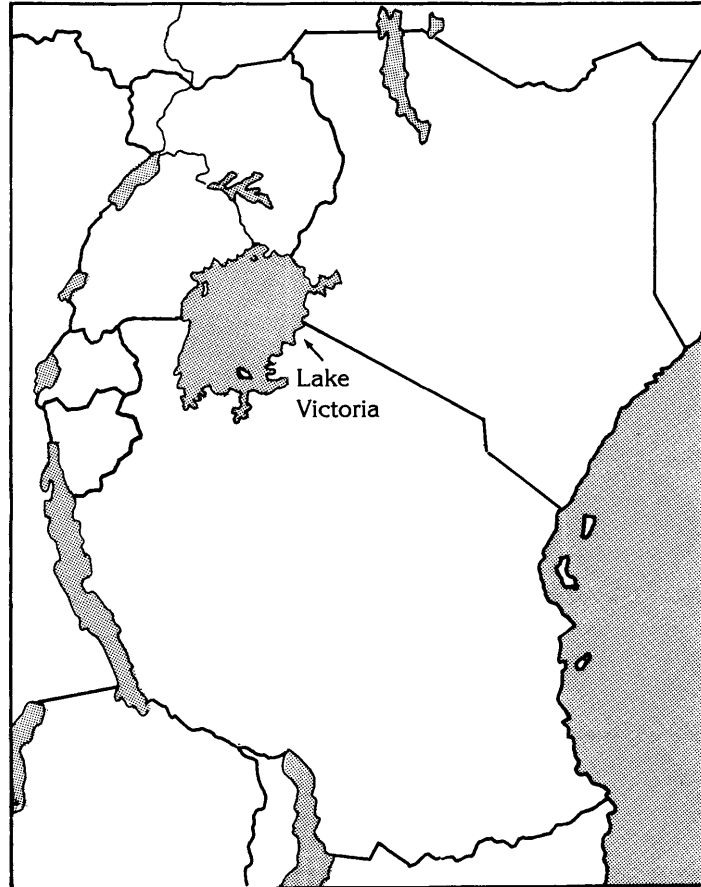
The perch fed mostly on the cichlids, the livelihood and diet of the local fishermen. The perch grew at such a rate that over 50 per cent of the 300–400 varieties of cichlids ceased to exist. Unfortunately, most of these species do not appear anywhere else on the planet.

As the cichlids disappeared, the zooplankton multiplied. The zooplankton fell to the bottom of the lake, where only bacteria were left to feed on it. The bacteria population grew, and their rapid rate of respiration quickly used up the available oxygen at the bottom of the lake.

Recently, the World Bank has committed 20 million dollars to restore Lake Victoria. Now we need to ask how to restore it and for whose benefit.



The Lake Victoria Region of Eastern Africa



1. Use an encyclopedia or an atlas to label the countries of Eastern Africa that border Lake Victoria. Outline their borders in blue.
2. Research to find the tallest mountain in Africa. On the map, draw an 'm' to show its location and write its name and height.
3. Draw three 'c's to show the locations of these three capitals: Dar es Salaam, Nairobi and Kampala. Write their names nearby.

Extra

Learn more about points of interest in this region. Plan an imaginary 10-day trip and write up an itinerary listing where you would like to visit. Make sure your stops follow a logical order. Then mark your route with a dotted line on the map above. Be prepared to explain why you chose each stop on your route. **Note to teacher:** This activity may be used toward the end of the book.



Plate Tectonics

Most of the major features on the earth's surface were formed by the slow-moving tectonic plates that make up the earth's outer shell. At one time the continents were joined as a single continent. Over 200 million years, the surface of the

earth changed greatly, sometimes violently, as mountains or rift valleys formed. Evidence of the earth's change includes the seemingly nice fit of the continents as if they were pieces of a giant puzzle.

Imagine the world map below to be a puzzle. Could you assemble the pieces into a single supercontinent? Cut out along the outer lines of each body of land and arrange the pieces to form one large continent.



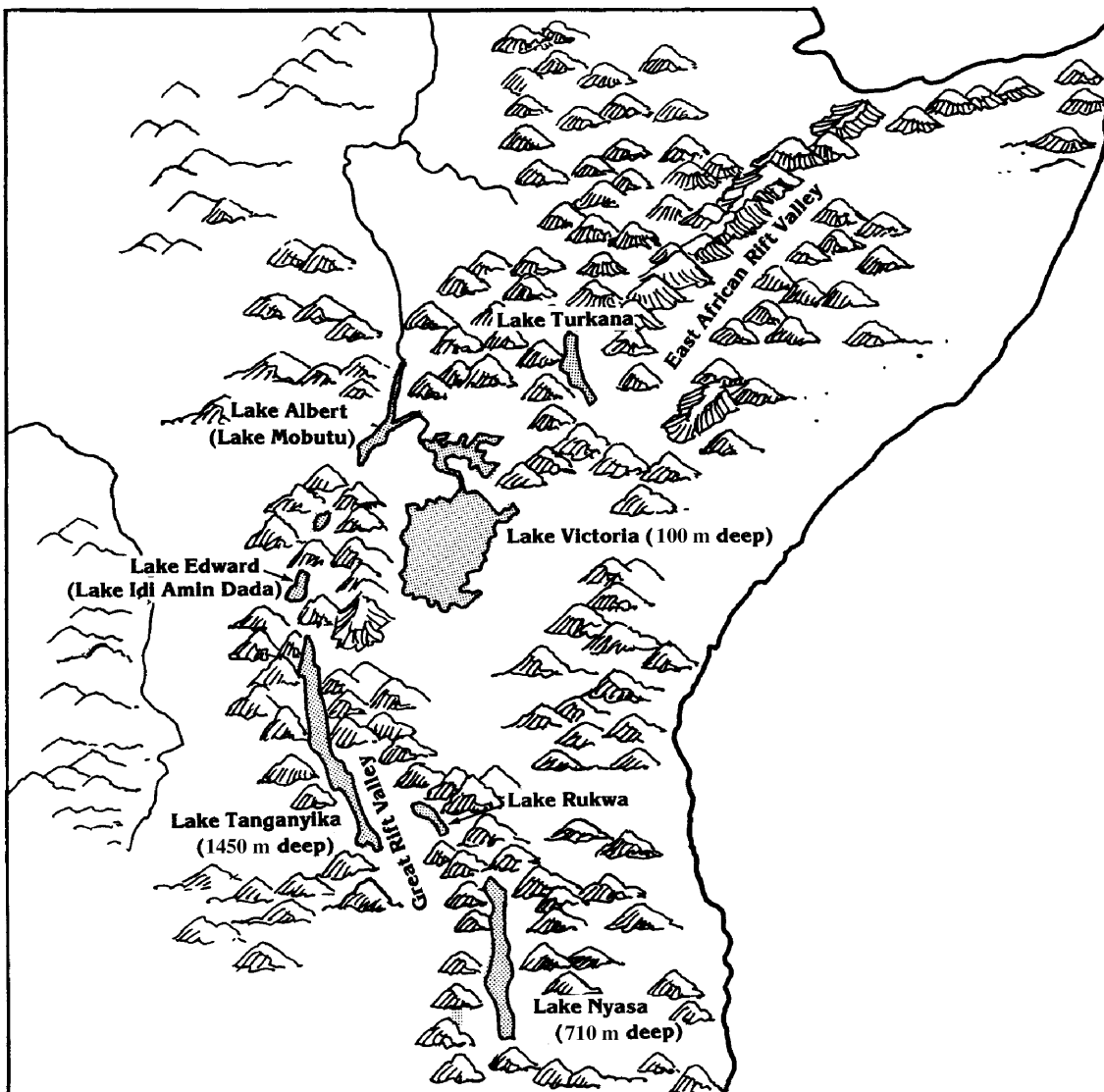


The Great Rift Valley

All of Africa is on a single stable tectonic plate with the exception of Eastern Africa around the Great Rift Valley. This rift is characterised by a narrow valley (30–95 kilometres wide) surrounded by steep walls, sometimes as high as 2000 metres above the valley floor. It extends about 1400 kilometres. Lake Victoria was

actually formed as a result of overlapping rifts. As they rose up, the eastern and western rifts, which form the valley, just missed each other. The shallow depression left by the rifts filled with water to form the puddle that happens to be the second largest freshwater lake in the world: Lake Victoria!

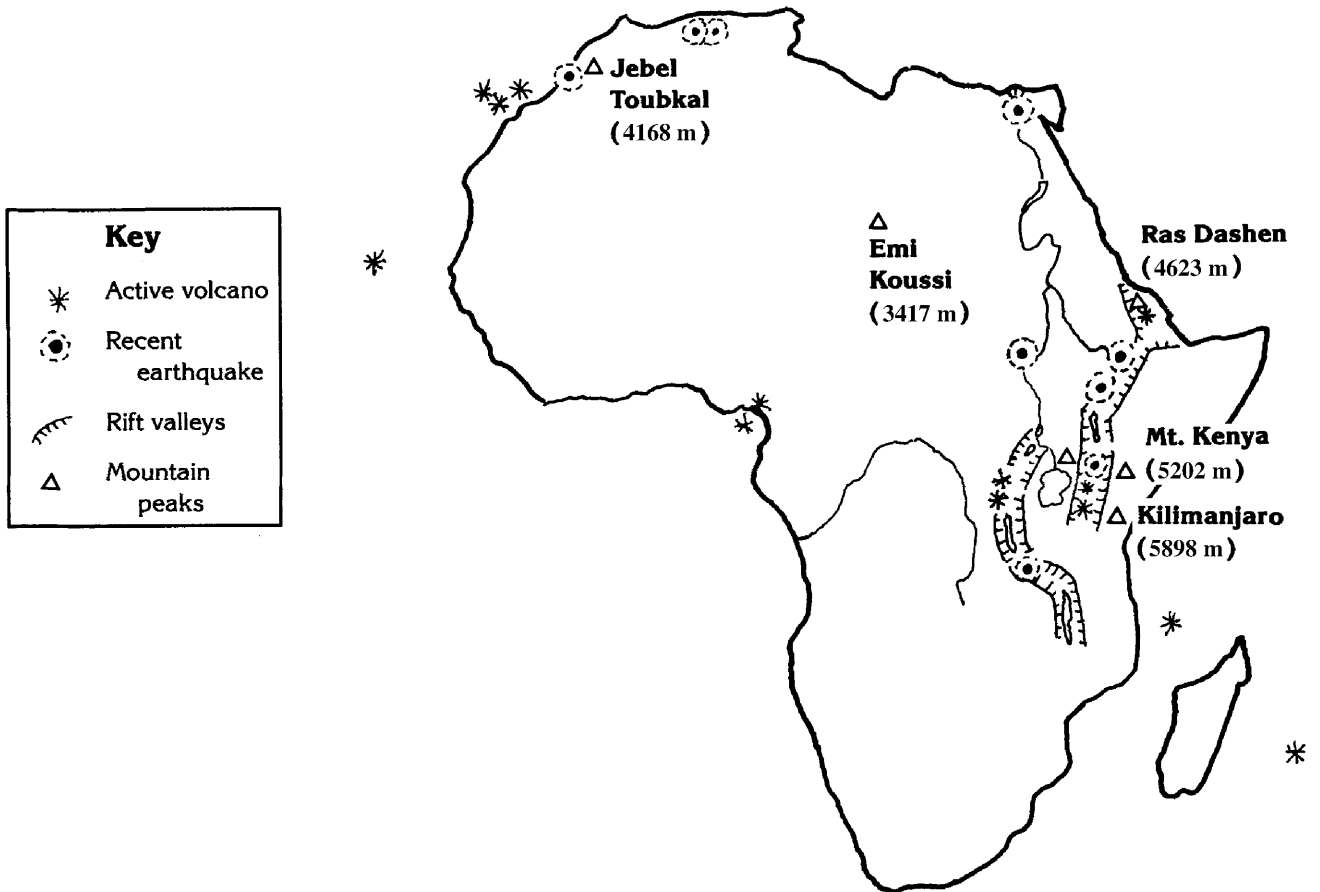
Study the map below. Notice the shape and statistics about the lakes. Write a paragraph about the shape and location of Lake Victoria. How and why is it different from the other lakes?





Volcanoes and Earthquakes

Study the map below. Notice the locations of volcanic and quake activity. Refer to the map to answer the following questions.



- 1 . How many recent earthquakes have occurred in the rift valleys?

2. How many active volcanoes are located in the rift valleys?

3. Identify the three highest mountains in all of Africa and give their heights.

4. Describe where the highest mountains are located and why you think they are there.

5. How might Africa look in 50 million years? (The tectonic plates are still moving about 10 centimetres per year.) _____
