LESSON 26 Understanding Ecosystems: Erosion and Flooding

Grade Level: 9-10

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2. Overview Human beings, plants and animals usually live together in a natural environment. The activities of the co-inhabitants impinge on one another and in particular on the environment. There is need to guard against the abuse of our natural environment, otherwise disasters such as flood and erosion can take place.

3. Purpose The purpose of this lesson is to emphasise the interplay of activities of inhabitants in a given environment. Maintaining a balance in the ecosystem is important

4. Objectives Students will be able to:

i. Define what is meant by an ecosystem
ii. Discuss which activities affect the ecosystem
iii. What activities in the community can lead to erosion and to flooding.

5. Resources/materials

- Map of an aquatic habitats for study.

6.Activities and Procedures Ecosystems have become an important issue in environmental science. The teacher should take time to explain issues to the students. The definition given here is only one. The teacher can find others suitable for the students being taught.

The Ecosystem is defined as a natural, self-contained system consisting of all the plants, animals and micro-organisms in an area, functioning together with the physical components of that environment. [Step Ahead Int. Science]. There are two main components of an ecosystem:

- The physical components--abiotic
- The living components-biotic

Consideration of physical components of an ecosystem should include temperature, rainfall, light, soil, wind, and type of terrain. Consideration of the living components

of an ecosystem should include both the plants and animals. The distribution of living components in an ecosystem is influenced by the physical components.

The activities of the animals in an ecosystem can affect the physical components. Reduced to simple human activities, disasters like erosion and flood which affect the physical component of an ecosystem can be due to the behaviours of human beings. The teacher should discuss these with the students citing examples in Africa.

7. Tying it all together The interaction of the living and physical components in an environment can totally influence what goes on in that environment. The use of the word habitat to describe an environment is appropriate here. A particular area of the environment that provides shelter, the physical needs of plants and animals and often a food source is described as a habitat.

8. Assessment Students should be organised into groups. Each group should submit Project Report of a study of the ecosystem in a named place.

9. Author(s) S. T. Bajah stan@alpha.linkserve.com

10. References Croft, G et al. (2000). **Step Ahead 'O' Level Integrated Science.** Harare: Longman Zimbabwe (Pvt.) Ltd.