

Life Science

____ Grade 7 ____

Written by Tracy Bellaire

The experiments in this book fall under eight topics that relate to two aspects of life science: **Interactions Within Ecosystems in the Environment; and Plants for Food & Fibre.** In each section you will find teacher notes designed to provide you guidance with the learning intention, the success criteria, materials needed, a lesson outline, as well as provide some insight on what results to expect when the experiments are conducted. Suggestions for differentiation are also included so that all students can be successful in the learning environment.



Tracy Bellaire is an experienced teacher who continues to be involved in various levels of education in her role as Differentiated Learning Resource Teacher in an elementary school in Ontario. She enjoys creating educational materials for all types of learners, and providing tools for teachers to further develop their skill set in the classroom. She hopes that these lessons help all to discover their love of science!

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ECOSYSTEMS AND BIOMES

LEARNING INTENTION:

Students will learn about the characteristics of an ecosystem and the major biomes of the world.

SUCCESS CRITERIA:

- define the meaning of ecosystem and identify specific examples of ecosystems
- recognize an ecosystem, determine what makes it an ecosystem
- identify some common characteristics of ecosystems
- identify and describe the major biomes of the Earth
- research a biome to determine its location(s), its climate, vegetation, animals home to it
- research and report three interesting facts about a chosen biome

MATERIALS NEEDED:

- a copy of “Defining an Ecosystem” worksheet 1, 2, and 3 for each student
- a copy of “What Makes It An Ecosystem?” worksheet 4 for each student
- a copy of “Biomes of the Earth” worksheet 5, 6, and 7 for each student
- a copy of “Researching a Biome” worksheet 8, 9, and 10 for each student
- access to the internet or local library
- dictionaries
- clipboards, pencils, pencil crayons, markers, chart paper
- access to a printer (*optional*)
- modeling clay, construction paper, glue, scissors, shoe boxes for dioramas (*optional*)

PROCEDURE:

***This lesson can be done as one long lesson, or be done in four or five shorter lessons.**

1. Divide students into pairs and give each pair worksheet 1. They will engage in a ‘Think-Pair-Share’ activity to discuss the definition of an ecosystem. Then come back together as a large group to discuss and record their ideas on chart paper.
2. Give students worksheets 2 and 3 to complete. They will need to work with a partner again to complete a section on worksheet 2. An option is to come back as a large group to orally share ideas of examples of specific ecosystems.
3. Give students worksheet 4, and a pencil and clipboard. With access to the internet, students will search for an example of an ecosystem (diagram or picture). They can either illustrate it on the worksheet space provided, or print out a copy and paste it in place. They will share and compare their drawings with a classmate, then discuss the common characteristics of an ecosystem. Students should realize that:
 - an ecosystem contains living and non-living things
 - it is ever changing, growing, reducing, without limits
 - there are different types of ecosystems in different areas, each with a purpose
 - it is an integration of living and non-living things, dependent upon each other
 - it is a functional unit, working to meet needs



Defining an Ecosystem

Think Pair Share

With your partner, do some thinking and sharing of ideas about the question below.



“What is an ecosystem?”

Record Your Thinking!



Is this an ecosystem? Explain your thinking.



Is this an ecosystem? Explain your thinking.



What Makes it an Ecosystem?

Access the internet to look for examples of ecosystems. Once you find one, illustrate it in the box below, or print a picture of it and paste it in the box below.

Share and compare your image with a classmate's findings.

What are some common characteristics of ecosystems that you notice?
