

Name: _____

Date: _____



Week 5 - Biomes

Materials:	Amount:
Mustard Plants	From previous week
2-L Soda Bottles	2
Scissors	1
Clear Duct Tape	1 roll
Water	1 L
Cotton Strips	2
Land Snails	2-3
Redworms	4
Pond Snails	2-3
Aquatic Plants	4 stems
(Optional) Fish	1

Procedure: *NOTE: SCOUTS WILL PERFORM MOST OF THE STEPS!*

1. Using the scissors, cut off the top of one soda bottle and the bottom of another bottle.
2. The bottle without the top will hold the aquatic biome. Fill the bottle with about 1 L of water.
3. Place the provided aquatic snails and plants in the water.
4. Now take the other bottle without the bottom, and remove the cap. This will hold the land biome.
5. Cut a hole through the bottle cap. String a length of cotton strip through the hole.
6. Fit the land biome on top of the aquatic biome. The cut soda bottles should fit snugly, and the remaining strip hanging from the land biome should be submerged in the aquatic biome.
7. Tape the resulting setup. Dig out some of the mustard plants from a plant tray, and place them inside the land biome bottle.
8. Put the land snails and earthworms in the land biome. Keep the double biomes for a week near light. Observe the changes!

What are biomes?

Biomes, also known as ecosystems, are places on Earth with a general climate and groups of living things. A **tropical rainforest**, for example, is very rainy and hot, where animals like monkeys, frogs, bugs, and jaguars roam among many ferns and flowering trees. Although scientists like to categorize places on Earth in this way, all biomes are interconnected through many matter and energy cycles.

Question 1: Give an example of a biome. What kind of plants and animals live in this biome? What is the climate like in this biome?

Biome	Animals & Plants	Climate

The Importance of Each Organism in a Biome

Each plant and animal interacts with a number of **biotic** and **abiotic** factors in an ecosystem. **Biotic factors** are any **living** part of a biome. For example, the biotic factors of a tree include birds that nest in the tree, and fungi or other microorganisms that live in the tree's roots. On the other hand, **abiotic factors** are any **non-living** part of a biome. Taking the same example, the abiotic factors of a tree include sunlight, water, soil, and temperature in the environment.

Question 2: Explain the roles of each organism of the land biome in the table below. What does each organism do for the whole ecosystem?

Animals or Plant	Role in the biome
Mustard Plants	
Redworms	
Snails	

Bonus Question: Think like a scientist!

What would happen if all the plants in a land biome were destroyed?


