

Name: _____

2-3

Ecosystems

BIOTIC FACTORS

An Ecosystem is a place with a unique combination of abiotic and biotic factors. This unit focuses on biotic factors. For more information on abiotic factors see Ecosystems unit 2-1.



Biotic factors in an ecosystem are the relationships between living things in that ecosystem.

Like the components in a complex machine, each abiotic and biotic component in an ecosystem is essential for it to function correctly.

The biotic components of an ecosystem can be broken into two basic groups:

Producers- make food available in an ecosystem using sunshine and carbon dioxide. This includes wildlife groups like trees, algae and some bacteria.

Consumers- cannot make their own food. They get their energy from producers either directly by eating the producers or indirectly by eating other consumers.

Decomposers- there is a third important group in all ecosystems called decomposers. Decomposers are all microorganisms (living things too small to see with the naked eye). These are mostly either bacteria or fungi. They are responsible for eating and breaking down the remains of once living things.

If it wasn't for these microorganisms two things would happen:

1. we would literally be neck deep in dead animals, leaves and grass. Disease would be rampant.
2. there would be no soil and no nutrients from their recycling. Almost everything would die.

Microorganisms are essential to ecosystems without them life as we know it would cease to exist!

- i. What is an ecosystem?

- ii. What is an abiotic factor?

- iii. Give three examples of abiotic factors

- iv. What is a limiting factor

- v. Give four examples of limiting factors

- vi. What is a carrying capacity?

- vii. What does a producer do to add energy into an ecosystem?

- viii. What does a consumer do?

- ix. What do decomposers do?

- x. Name two types of wildlife that are decomposers.

- xi. Why are microorganisms

- xii. Why are they important

ACTIVITY 1- Categorizing Wildlife

Go to mrhodes.net and click the Wildlife of the Canadian Shield link. Use that information to sort all the wildlife species there into consumers (C) or producers (P).

- ___ Aspen
- ___ Northern Shrike
- ___ Jack Pine
- ___ Moose
- ___ Fireweed
- ___ Powdered Sunshine
- ___ Black Bear
- ___ Apple Moss
- ___ Pale Beauty Moth
- ___ Flat Leaved Willow
- ___ Arctic Fox
- ___ Buffalo Berry
- ___ Spruce Sawyer Beetle
- ___ One-sided Wintergreen
- ___ Red Squirrel
- ___ Awnless Broom

Go to mrhodes.net and click the Decomposers in action link.

What do decomposers do?