



Year 4 - Ecology Reading Booklet

1. Living Things and Habitats
2. Natural Cycles
3. Web of Living Things
4. Air Pollution—A Human Threat to the Environment
5. Ecology in our Local Areas
6. Assessment

Name: _____

Class: _____

Lesson 1 - Living things and their habitats

Living things depend on each other within a habitat. Although all living things look and act differently, there are 7 life processes which make something 'alive': Movement; Reproduction; Sensitivity; Growth; Respiration; Excretion; Nutrition.

A habitat is a home environment for plants and animals or other organisms. Examples: desert; meadow; rainforest; wood-land; grassland; seashore; ocean. A micro-habitat is a very specific, small home environment for plants, animals and insects. Examples: pond; under a stone; individual trees; a pile of logs.

There are 7 life processes which every living thing has in common: movement, reproduction, sensitivity, growth, respiration, excretion and nutrition. You can use MRS NERG as an acronym to remember the 7 life processes.



Lesson 2 - Natural Cycles (Food chains)

There are three groups of living things which the cycle of nature depends on: producers, consumers and decomposers. Producers make their own food using sunshine, water and nutrients. Plants are producers. All living things need energy to survive and they get their energy from food. Consumers eat/ consume other living things to get their energy. Humans are consumers.

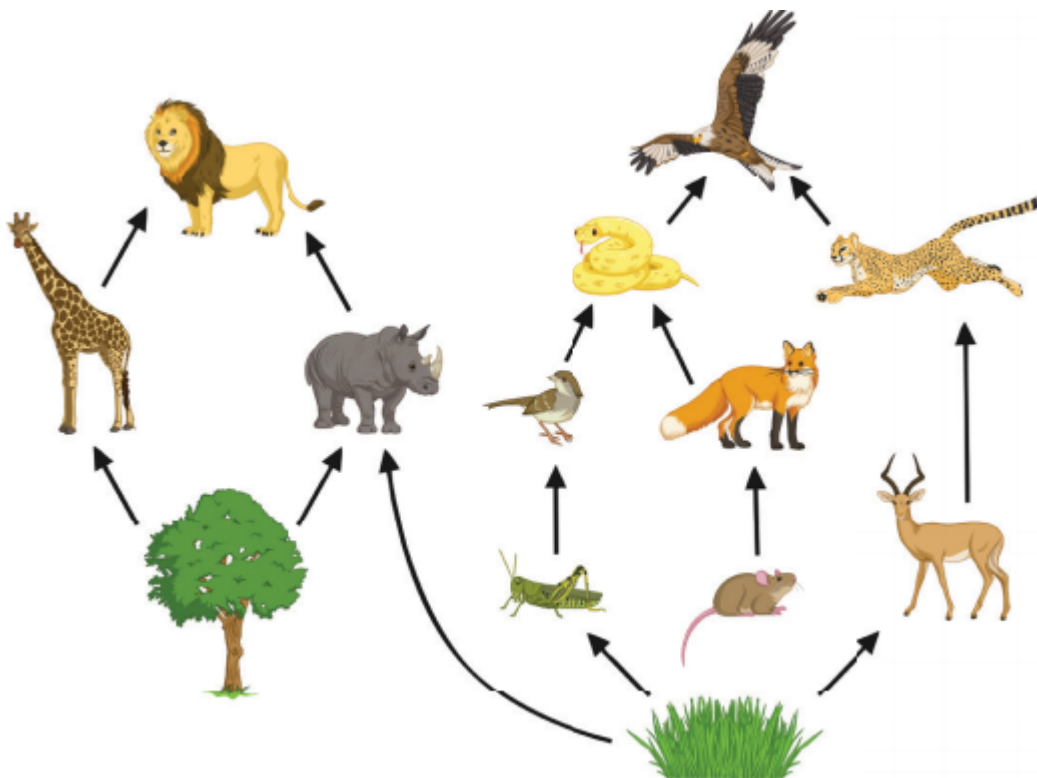
When plants and animals die, they provide food for decomposers. Decomposers break down the remains of dead living things into smaller pieces which leaves nutrients in the soil. Producers will then use these nutrients to help make their own food, starting the cycle again.



Lesson 3 - Web of Living Things

When one part of the natural cycle changes, it can impact the other parts of the cycle. An ecosystem is the interaction of organisms in their environment. This is very delicately balanced, so if one organism is removed from an ecosystem it can have a negative impact on other organisms. For example, when farmers killed wolves to protect their sheep and cows, the number of deer were no longer kept down. The deer needed more food so ate more young trees, therefore fewer trees grew which meant that eventually the deer began to starve.

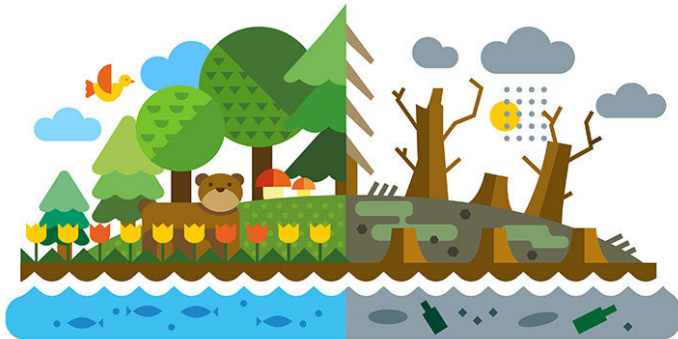
An ecosystem is a delicate, invisible web that holds together life for a group of living things. It changes whenever anything new enters or leaves the web. If one or two strands of the web get damaged, the web may hold together. However, if too many strands are broken, that web changes its shape altogether. Human beings are part of many ecosystems and things that we do can affect an ecosystem greatly.



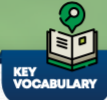
Lesson 4 - Air Pollution

Air pollution is when substances such as chemicals are released into the air and change the air quality. Exhaust and smoke often contain harmful chemicals that pollute the air. Engines burn fuel and then emit harmful chemicals that pollute the air. In the past, particularly during the Industrial Revolution, London's homes and factories emitted pollution into the air from burning fuels. London became known for its smog, thick, polluted air that hung over the city, sometimes making it very hard to see. Smog is dangerous as people breathe in the polluted air. There are now laws in the UK to reduce the emissions that factories release into the air. Air pollution can cause changes in the water cycle. Rain

can become more acidic, water in streams and rivers can become polluted, plants and wildlife can be effected. Themes from this lesson will be addressed again in Year 6 in the Geography unit on British Geographical Issues.



Lesson 5 - Ecology in our Local Area



KEY
VOCABULARY

Habitat

The **natural home or environment** of an animal, plant, or other organism

Producer

A living thing, usually a plant, which **produces its own food**

Consumer

A living thing, usually an animal, which **feeds on plants or other animals**

Decomposer

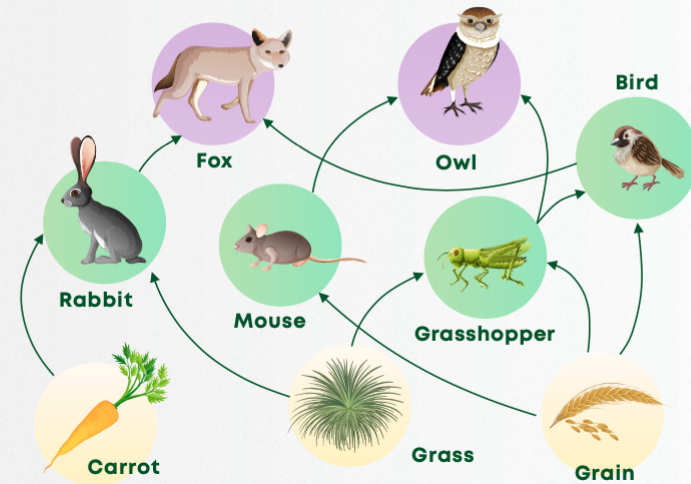
A living thing, usually a bacterium or fungus, which **breaks down the cells of dead plants and animals** into simpler substances

Ecosystem

A system formed by the **interaction of organisms with their environment**

Pollution

The **introduction of harmful substances or products into the environment**. Pollution can damage ecosystems



All these organisms share an ecosystem.
The ecosystem will change if anything new comes into the web or leaves it.



Air pollution is one way that humans can damage the environment. Exhaust from vehicles and smoke from factories can cause air pollution



