

B3.2 Glossary

Abundance

The quantity or amount of something present in a particular area.

*The ecologist sampled the field to estimate the **abundance** of daisy plants present.*

Biodiversity

The variety of all the different species in an ecosystem or area.

*A stable ecosystem has a high **biodiversity**.*

Biomass

A measure of the total quantity of biological material in one or many organisms.

*The total **biomass** of all the grass plants in the field is 10000 kg.*

Biotechnology

The use of biological processes for industrial or medical purposes.

*Genetic modification of bacteria to produce human insulin is an example of **biotechnology**.*

Carnivore

An animal that only feeds on other animals.

*A lion is an example of a **carnivore**.*

Climate Change

The overall change in weather patterns (global or regional) over a long period of time.

*Many countries have reported more extreme weather thought to be due to **climate change**.*

Consumer

Organisms that cannot make their own food, so must eat other organisms.

*All animals are **consumers** because they cannot make their own food.*

Contamination

Making something impure by polluting or poisoning.

*Sewage water must be treated properly otherwise there is a risk of **contamination** to rivers and seas.*

Deforestation

When humans cut down wide areas of trees.

***Deforestation** is happening around the world to make space for farming.*





Ecosystem

The interaction of a community of organisms with the non-living (abiotic) parts of their habitat.

A rainforest **ecosystem** contains gorillas, ants, nut trees, water and sunlight.

Efficiency

The proportion of something which is useful vs wasted.

The **efficiency** of biomass transfers from one trophic level to another is around 10%.

Emissions

The release of greenhouse gases.

Increased carbon dioxide **emissions** are linked to global warming.

Energy Transfer

Energy is moved between trophic levels when one organism eats another organism.

The first **energy transfer** in a food chain happens when a consumer eats a producer.

Eutrophication

Excessive nutrients in a body of water which cause excessive plant growth.

Fertilisers running from fields into rivers and streams can cause **eutrophication**.

Famine

An extreme shortage of food.

Decreased food security may lead to **famine**.

Fertiliser

A chemical added to soil to increase the mineral content which improves plant growth.

Farmers add **fertilisers** to the soil every year to help their crops grow.

Food Security

Having enough food to feed a population.

Increased birth rates is a factor that can threaten the **food security** of a country.

Global Warming

The rise in global temperatures due to greenhouse gases.

Burning fossil fuels is a big contributor to **global warming**.

Greenhouse Gas

A gas that contributes to the greenhouse effect and global warming.

Carbon dioxide and methane are both examples of **greenhouse gases**.





Habitat	The area where an organism lives. <i>The habitat of a polar bear is sea ice.</i>
Herbivore	An animal that eats only plants. <i>A rabbit is an example of a herbivore.</i>
Indicator Species	Organisms that can tell us about the levels of pollution in an area by their presence or absence. <i>Lichen are an indicator species for air pollution.</i>
Intensive Farming	A process that uses machines, fertilisers and man-power to maximise food production. <i>Intensive farming methods have been used because there is high demand for cheap meat and animal products.</i>
Leaching	Movement of minerals through soil often due to rainwater. <i>Leaching of minerals from farmers' fields can lead to eutrophication of surrounding bodies of water.</i>
Peat	A dark brown substance, like soil, that is formed when plant material cannot decay because of acidic and anaerobic conditions. <i>Peat can be burned as fuel or used as compost by gardeners and farmers.</i>
Pollution	Caused when human waste isn't properly handled or disposed of. <i>Water pollution can come from untreated sewage or from fertilisers.</i>
Predator	Consumers that eat other animals. <i>A fox is the predator of a rabbit.</i>
Prey	Animals that are eaten by other animals. <i>A rabbit is the prey of a fox.</i>
Producer	Organisms that can make their own food using photosynthesis. <i>Plants and algae are examples of producers.</i>





Quadrat	A piece of equipment used to count the number of organisms/individuals in a specific area. Quadrats are used during both random and systematic sampling to count the individuals in an area.
Quota	A limited quantity of something. Countries have fishing quotas meaning there is a limited number of fish they are allowed to catch.
Resources	A substance or object required by an organism for normal growth, maintenance and/or reproduction. Resources that plants need to live are space, water, sunlight and minerals.
Sewage	Wastewater that is produced from human households and industries. Sewage water needs to be treated so that it does not pollute rivers and seas.
Species	A group of similar organisms that breed together to produce fertile offspring. Lions and tigers are different species because when they breed together their offspring are not fertile.
Thermoregulation	The process where an animal uses energy to maintain a constant body temperature. Humans need to use energy to thermoregulate and keep their internal body temperature at approximately 37°C.
Transect	A line placed across a habitat for systematic sampling. The ecologist used a transect to investigate how the presence of a lake affected the distribution of frogs.
Trophic Level	An organism's position in a food chain. A producer is always found at the first trophic level as they are at the beginning of a food chain.

