

Glossary

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adaptation

A characteristic or feature of a plant or animal that helps it survive, adaptations evolve over long time periods e.g. birds that become flightless

algae

A simple form of plant that usually lives in water

anchor ice

Ice that forms on the sea floor

Antarctic Circumpolar Current

An ocean current that flows clockwise from west to east around Antarctica

anthropogenic

Caused by people e.g. [ocean acidification](#) [1] is caused by people increasing [carbon dioxide](#) [2] emissions since the industrial revolutions

atmosphere

The air around us

bacteria

Tiny one celled [organisms](#) [3]

benthic

Of the sea floor

benthos

Life on the sea floor

bergy bits

Small broken pieces of [iceberg](#) [4]

biodiversity

The range or variety of living things in a particular area

biosphere

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The part of the Earth system to do with all living things

brine

As salt is squeezed out of freezing sea water a slushy mixture known as brine is formed (a salty liquid mixture)

bryozoan

Ancient marine life form, also known as moss animals which live in colonies and build a skeleton of [calcium carbonate](#) [5]

calcium carbonate

Calcium carbonate is a chemical compound with the formula CaCO_3 . It is a common substance found in rocks in all parts of the world, and is the main component of shells of marine organisms, snails, coal balls, pearls, and eggshells.

calcification

The process by which an organism builds a shell or external skeleton from calcium carbonate

calving

When icebergs break away from ice shelves

carbon

A natural chemical element found in all living, or once living things

carbon-13

A natural form of carbon found more in sea ice algae than in open ocean algae

carbon cycle

Just as the "water cycle" describes the transfer of water molecules between rivers, oceans, land and the atmosphere, the "carbon cycle" refers to the flow of carbon through different parts of the Earth system - including the air and the bodies of plants and animals

carbon dioxide

When a carbon atom joins with two oxygen atoms, a lot of carbon dioxide comes from burning things containing carbon

chemical compounds

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Molecules made up of different types of atoms bonded together

climate

The average weather over many years

climate change

Rapid change in climate due to human activity (mainly burning fossil fuels) increasing heat trapping [greenhouse](#) gases in the atmosphere

community

All the living things in a particular area

consumer

An organism that eats other organisms for food

continent

One of the seven large areas of land on earth

cyst

A cluster of cells that have grouped together to form a sac

decomposer

An [organism](#) [3] that breaks down other dead organisms

ecosystem

This is all the living (e.g. animals, plants) and non-living (e.g. light, water) things within a particular area

fast ice

Sea ice that is held in place year after year

food web

This shows what eats what in a community

frazil

The first ice crystals that form on the sea's surface when the water temperature dips below 1.8 degrees Celsius, are known as frazil

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glacier

A river of ice

global cooling

When the average temperature on earth naturally falls

global warming

When the average temperature on earth naturally rises

greenhouse effect

The natural way the earth is warmed 33 degrees by its atmosphere

Gulf Stream

A powerful, warm, and swift Atlantic ocean current that originates at the tip of Florida

hydrosphere

All the water's on the Earth's surface, such as lakes and seas

hypothesis

An explanation of why things happen that can be tested by scientists

Ice Age

A period when the earth's climate is colder

ice sheet

A large area of ice formed when [glaciers](#) [6]join together

ice shelf

A large area of floating ice, formed when glaciers flow out to sea

iceberg

Part of a glacier or ice shelf that has broken off and floated away

invertebrates

Animals without a backbone e.g. sea urchins

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katabatic winds

When cold air descends from high mountains down into lower areas because the cold air is denser (heavier)

larvae

Young form of an animal such as a sea urchin before it grows into the adult form

lithosphere

The solid rocky layer covering the surface of the Earth including the crust and upper mantle

macroalgae

Large forms of algae e.g. seaweed

McMurdo Iceshelf

The iceshelf that fills McMurdo Sound, Antarctica

McMurdo Sound

The area of the [Ross Sea](#) [7] between [Ross Island](#) [8] and the TransAntarctic Mountains

methane

A greenhouse gas CH₄ produced from the breakdown of once living things

microalgae

Small forms of algae formed of only one cell

microbe

Single-cell organisms so tiny that millions can fit into the eye of a needle. They are the oldest form of life on earth

microorganism

A microscopic organism, which may be a single cell or multicellular organism

nitrous oxide

Sometimes called laughing gas, a greenhouse gas produced by bacteria and by people through agriculture

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ocean acidification

The lowering of the pH of the oceans due to their absorption of [carbon dioxide](#) [2]

ocean current

Large flows of water in the oceans

organism

A living thing

ozone

A gas made up of three oxygen atoms which is naturally present in the upper atmosphere, it helps protect Earth from harmful UV radiation

pH

A measure of how acidic (or alkaline) a substance is

photosynthesis

The process that plants carry out to harness the sun's energy and carbon dioxide to make sugars for food

phytoplankton

Microscopic algae that live in the upper regions of the sea

pressure ridge

A fold or buckle in ice, often where ice collides with land

producer

An organism that can use the Sun's energy to make food from carbon dioxide and water

regulator

A piece of equipment between a diver's airtank and mouthpiece that controls the airflow to the diver

rookery

A place where penguins breed

Ross Ice Shelf

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The huge Antarctic [ice shelf](#) directly south of New Zealand

Ross Island

The island in Antarctica formed by Mt Erebus, also the location of Scott Base

Ross Sea

Part of the Pacific Ocean that juts into Antarctica and ends in the Ross Ice Shelf

sea ice

Sea ice is formed on the ocean surface when the water temperature falls to -2 degrees Celsius. It floats because it is less dense than sea water

SIMCO

Sea Ice Microbial Community, a group of [microorganisms](#) that live in or on the underside of sea ice

transect

A line made through an area to be studied along which samples are taken

vertebrates

Animals with backbones e.g. whales

weather

Day to day changes in the atmosphere

zooplankton

Zooplankton are tiny animals that feed off either phytoplankton or other zooplankton e.g. young krill

Source URL: <http://www.learnz.org.nz/scienceonice144/glossary>

Links

[1] <http://www.learnz.org.nz/scienceonice144/glossary#oceanacidification>

[2] <http://www.learnz.org.nz/scienceonice144/glossary#carbondioxide>

[3] <http://www.learnz.org.nz/scienceonice144/glossary#organism>

[4] <http://www.learnz.org.nz/scienceonice144/glossary#iceberg>

[5] <http://www.learnz.org.nz/scienceonice144/glossary#calciumcarbonate>

[6] <http://www.learnz.org.nz/scienceonice144/glossary#glacier>

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[7] <http://www.learnz.org.nz/scienceonice144/glossary#rosssea>

[8] <http://www.learnz.org.nz/scienceonice144/glossary#rossisland>