



Coral reefs

Coral reefs have been labelled the 'rainforests of the sea' because they contain a wide and colourful variety of plants and animals. Located in the warm tropical waters of the world, they are increasingly coming under pressure from human activities and are an environment at risk. Geographers need to study the interrelationships that exist within coral reefs so that they can make recommendations about their management and ensure that these precious ecosystems exist into the future.

Outcomes

A student:

- 4.1 identifies and gathers geographical information
- 4.2 organises and interprets geographical information
- 4.3 uses a range of written, oral and graphic forms to communicate geographical information
- 4.4 uses a range of geographical tools
- 4.6 describes the geographical processes that form and transform environments
- 4.8 describes the interrelationships between people and environments
- 4.10 explains how geographical knowledge, understanding and skills combine with knowledge of civics to contribute to informed citizenship

Geographical tools

Maps

- use various types of maps
- locate features using latitude and longitude, area and grid references
- identify physical and cultural features on a map
- measure distances on a map using linear scale
- identify scale as written, linear or representative fraction
- use the points of a compass to determine direction
- construct a sketch map
- read synoptic charts

Graphs and statistics

- identify and calculate maximum, total, range, rank and average
- construct and interpret bar, column, line, climatic and proportional graphs

Photographs

- draw a line drawing
- collect and interpret photographic images
- distinguish between oblique, aerial, ground-level photographs and satellite imagery

ICT

- collect and interpret electronic information
- practise ethical behaviour when using email and the Internet

Definitions

archipelago—a chain or cluster of islands

atoll—a circular or ring-shaped coral reef that nearly or entirely encloses a lagoon

barrier reef—a coral reef that forms to protect a lagoon or coastline from the ocean

biodiversity—the variety of all living things

calcium carbonate—the chemical compound created by the coral polyp as it grows. (It is the skeleton of the coral and is frequently found elsewhere in nature.)

coral bleaching—where coral polyps expel multi-coloured zooxanthellae from their cells, making coral lose its colour, causing the reef to die

fringing reef—a coral reef that forms close to an island or coastline

hard coral—corals that form calcium carbonate skeletons as they grow, giving reefs their structure

soft coral—corals with a small amount of calcium carbonate that they use to attach themselves to the reef

symbiotic relationship—a mutually beneficial interaction between two living organisms

synoptic chart—a map that shows air pressure across an area, enabling predictions about the weather to be made

zooplankton—very tiny, drifting animals such as shrimp and small fish

zooxanthellae—algae that grow in the tentacles of the coral polyp

