Geography Glossary

Absolute location

Location measured by the coordinates of latitude and longitude on small scale maps, by 6-figure grid references on topographic maps, or by a specific address or landmark.

Aerial photograph

Can be oblique (taken at an angle) or vertical (taken from straight above the ground).

Biodiversity

The variety of living organisms and the ecosystems they form. Biodiversity has direct value as consumable or useful commodities (such as timber, medicines), indirect value through the provision of ecosystem services (such as clean air, carbon sink), and intrinsic value independent of its utility to humans (such as habitat provision).

Biomass

The total mass of living organic matter in a particular area.

Biome

A major terrestrial vegetation community, for example, a tropical forest, a temperate grassland or a desert. Similar biomes, but with different species of plants and animals, are found around the world in similar climatic zones.

Biophysical (natural) processes

Interconnected sequences of cause-and-effect relationships, for example, the water cycle, the geomorphic processes of weathering, erosion, transportation and deposition, soil-forming processes, land degradation, fluvial processes and nutrient cycling. Biophysical processes can operate within and between places, and at a variety of scales.

Characteristics of places

The geographical characteristics of places include climate, landscape, landforms, soils, vegetation, water resources, mineral resources - and people, production, built elements of the environment, communities, and cultures. Some characteristics are tangible, for example, rivers and buildings. Others are intangible, for example, scenic quality and socioeconomic status. See also ‘Features’.

Choropleth map

A thematic map that uses variations in intensity of shading or colouring within predefined areas to indicate differences in values, for example, a map of local government areas showing the percentage of households with an internet connection.

Climate and climate types

The average types of weather, including seasonal variations, experienced by a place over a long period of time. For example, some climates are hot and wet all year (Singapore), some have hot, wet summers and warm, dry winters (Darwin), and some have warm, dry summers and cool, wet winters (Adelaide and Perth). Climates can be classified into distinctive types, such as equatorial, tropical, Mediterranean, semi-arid and arid. See also ‘Climatic zones’.

Climate graph

A graph typically showing average monthly temperature (by a line) and precipitation (by columns) for a location.

Climatic zones

Refers to areas of the Earth that have similar temperatures. The major zones are hot, temperate and polar and are roughly demarcated by lines of latitude. Within each zone there are different climates, because of the effects of the distribution of continents and oceans and the circulation patterns of the atmosphere and oceans. For example, Adelaide and Sydney are at similar latitudes; Adelaide has a Mediterranean climate with very dry summers and moderately wet winters, where-as Sydney has a temperate climate with wet summers and drier but not dry winters. See also ‘Climate and climate types’.

Country/Place

A nation or self-governing territory, such as Australia or Rwanda. See also ‘Country/Place (Aboriginal and Torres Strait Islander)’.

Country/Place (Aboriginal and Torres Strait Islander)

A Country is a space mapped out by physical or intangible boundaries that individuals or groups of Aboriginal Peoples occupy and regard as their own. It is a space with varying degrees of spirituality.

A Place is a space mapped out by physical or intangible boundaries that individuals or groups of Torres Strait Islander Peoples occupy and regard as their own. It is a space with varying degrees of spirituality.

Culture

The customs, habits, beliefs, social organisation and ways of life that characterise different groups and communities.

Custodial responsibility

The obligation that Aboriginal and Torres Strait Islander peoples care for the Country/Place on which they live, even if they are not traditional owners of that Country/Place. Traditional owners have primary responsibility for Country/Place.

Data and information

Data refers to conditions, ideas, or objects in a raw or unprocessed form that are directly recorded; they can be quantitative or qualitative.

Information is data that has been processed for a particular purpose and presented within a context that gives it relevance.

Development

Economic, social and political changes that improve the wellbeing of people.

Digital terrain models

A digital model of the land surface in which vegetation, buildings and other objects can be removed.

Ecosystem services

Services provided by ecosystems that support life without requiring human action or payment, for example, climatic stability, hydrological regulation, nutrient cycling, pollination, pest control, soil formation and protection from ultraviolet radiation. See also ‘Environmental functions’.

Ecosystem-based management

Management based on restoring, maintaining and/or improving the health of the ecosystem, for example, by increasing biodiversity, restoring hydrological systems, protecting marine breeding areas or rebuilding soil structure and fertility. The emphasis is on the whole ecosystem rather than the production of individual commodities, for example timber from a forest.

Environment

The living and non-living physical elements of the Earth’s surface and atmosphere, including for example, deserts, oceans, farmlands, forests, buildings and roads.

Environmental functions

The functions of the environment that support human life and economic activity. The first function is the production of raw materials from the natural resources of soil, water, forests, minerals and marine life (the Earth’s ‘source’ function). The second is the safe absorption (through breakdown, recycling or storage) of the wastes and pollution produced by production and human life (the Earth’s ‘sink’ function). The third is the provision of the environmental or ecosystem services that support life without requiring human action, for example, climatic stability, biodiversity, ecosystem integrity and protection from ultraviolet radiation (the Earth’s ‘service’ function). The fourth is the intrinsic recreational, psychological, aesthetic and spiritual value of environments (the Earth’s ‘spiritual’ function).

Environmental quality

The characteristics of the environment that affect human physical and mental health and quality of human life, for example, plants and animals, the extent of air and water pollution, noise, access to open space, traffic volumes, and the visual effects of buildings and roads.

Environmental resources

Environmental resources can be classified as renewable/non-renewable and finite/infinite.

Renewable environmental resources are those which are or can be renewed within a relatively short time, for example, water through the water cycle, and plants, animals and marine life through reproduction. However, overuse of a renewable resource can lead to its disappearance, as with the overexploitation of a fishery or the over-extraction of groundwater.

Non-renewable or finite environmental resources are those that cannot be renewed, for example, minerals. Soils that have been degraded can only be renewed over long timescales.

Infinite resources are those, such as solar or wind energy, whose availability is unaffected by their use by humans.

Environmental worldview

A person’s view of the relationship between humans and nature. These range from human-centred, in which humans are separate from nature to earth-centred, in which humans are a part of and dependent on nature. A worldview can inform positions on environmental issues. See also entry on Stewardship.

Ethical protocols

Involves the application of ethical principles when undertaking research and collecting information from primary and secondary sources, for example, confidentiality, informed consent, citation and integrity of data.

Features

The tangible elements of a place or landscape, classified as natural, managed and constructed. This term is used in early levels of the curriculum, but is later replaced by the term ‘characteristics’, which includes both the tangible and intangible elements of a place.

Fieldwork

Fieldwork is an essential geographic tool that involves accessing primary sources to collect data. In school contexts it entails students going outside of the classroom to collect data.

Geographic information system (GIS)

A geographic information system (GIS) is a system for storing, managing, analysing and portraying spatial data. It has been described as a combination of database management, cartography and statistical analysis.

Geographical processes

An identifiable series of actions, operations or steps that assist in developing an understanding of what creates, changes and sustains geographic phenomena. Processes can be natural processes (e.g. erosion or disease transmission) or human (e.g. urban development). Natural and human processes have the capacity to influence one another. Geographical processes can operate within and between places, and at a variety of scales.

Geomorphic hazards

Geomorphic hazards are those originating from the lithosphere, including volcanic eruptions, earthquakes, tsunamis and mass movement (landslides or avalanches).

Green water

Water available for plant growth as soil moisture. Almost all of the world’s natural vegetation, and most of its agriculture, depend on soil moisture.

Hazards

When the forces of nature combine to become destructive and have potential to damage the environment and endanger communities.

Housing density

The number of dwellings per hectare. The data required to calculate this measure can be obtained from Australian Bureau of Statistics Census Quick-Stats and Community Profiles.

Human wellbeing

The quality of life of a population. This can be measured by objective indicators, for example, life expectancy, educational attainment and income, or by subjective measures of how people perceive the quality of their life, as revealed by surveys of happiness.

Interconnection

The concept of interconnection emphasises that no object of geographical study can be viewed in isolation. It is about the ways that geographical phenomena are connected to each other through environmental processes, the movement of people, flows of trade and investment, the purchase of goods and services, cultural influences, the exchange of ideas and information, political power and international agreements. Interconnections can be complex, reciprocal or interdependent, and have a strong influence on the characteristics of places. An understanding of the significance of interconnection leads to holistic thinking and helps students to see the various aspects of geography as connected rather than as separate bodies of knowledge.

Internal migration

The movement of people living in one place to living in another place within a country, for example, movement from cities to non-metropolitan coastal locations, or between states and territories.

Inter-regional transfer of water

The transfer of water from one river basin to another, for example, the transfer of water from the Snowy River to the Murray and Murrumbidgee Rivers in the Snowy Mountains Scheme.

Landform

A natural surface feature of the Earth identified by its shape, for example, dune, plateau, canyon, beach, plain, hill, river or valley.

Landscape

A landscape is the visible appearance of an area, created by a combination of geological, geomorphological, biological and cultural layers that have evolved over time, and as perceived, portrayed and valued by people, for example mountain, coastal, desert and riverine landscapes. See also entry on landforms.

Liveability

An assessment of what a place is like to live in, using particular criteria, for example, environmental quality, safety and security, education and health provision, access to shops and services, recreational facilities and cultural activities.

Local

The *local area* is defined as the area around the student’s home or school that can be explored in a few hours. The *local scale* refers to all areas of similar size located in around the local area or in other places, both near and far.

Natural vegetation

The plants that are indigenous to an area, having evolved in that area over time. This can be contrasted with exotic (introduced) vegetation that is not indigenous to the area where it is found.

Net primary productivity (NPP)

Plant biomass gain measured in tonnes of carbon per hectare per year, as a product of the energy gained through photosynthesis minus the energy lost through respiration. It is an indicator of the natural agricultural productivity of an area, based on its climate.

Outline map

A map which only provides very basic information so that more detail can be added, for example, a map showing the borders of a country.

Population pyramid/profile

A diagram comprising a series of bar or histograms that represent the size or proportion of different male and female age groups of a population.

Prevention, mitigation and preparedness

Prevention and mitigation are actions taken in advance to decrease or eliminate the impact of a hazardous event on people, communities and the environment, including, for example, lessening the hazard and reducing the vulnerability of a community. Preparedness refers to actions taken to create and maintain the capacity of communities to respond to, and recover from natural disasters, through measures like planning, community education, information management, communications and warning systems. This preparedness may involve implementing prevention and mitigation strategies, for example building levy banks to reduce or eliminate a flood hazard or clearing vegetation around houses in bush fire prone areas.

Primary sources

Sources that are unprocessed may include original materials collected by the student, for example, field notes from observations, measurements taken from experiments, or responses received from a survey or questionnaire.

Qualitative data

Data which represents, for example, the subjective observations, opinions, perceptions or feelings held by individuals or groups about geographic phenomena or issues. It is explanatory or descriptive in nature and is expressed in words only. Qualitative data is often gathered through interviews or focus groups and its analysis involves generalisation. Examples include people’s perceptions of environmental quality, individuals’ opinions about CO2 levels in the atmosphere, or the use of nominal scales such as ‘socio-economic status’.

Quantitative data

Data that can be collected and expressed in numbers or visually as graphs or on maps. Quantified data lend themselves to mathematical and statistical manipulation during analysis, and may be represented by ordinal, interval or ratio scales. Examples include CO2 levels in the atmosphere measured in parts per million and per capita GDP for a country. It is possible for qualitative data to be processed and expressed quantitatively, for example, by using a number rating or ranking system.

Region

A definable area of the Earth’s surface which contains one or more common characteristics that distinguish it from other areas. Regions are defined at different scales; for example, the intertidal region of a coastal place, Oakleigh South (local), Gippsland (within a state), Murray-Darling Basin (within a country) or Sub-Saharan Africa or a climatic zone (extending over a number countries). See also ‘World region’.

Relative location

Location relative to other places, for example, the distance and direction of a town from other towns. Relative location has a strong influence on the human characteristics of places as demonstrated by the advantages of closeness to suppliers, finance, information and markets for businesses, and to education and employment opportunities for individuals.

Remote

Places distant in terms of accessibility, travel time or number of kilometres from major population and economic centres.

Satellite image

Digital images captured by satellites above the Earth’s surface, for example, those combined in Google Earth. They can be processed to measure specific aspects of the land surface, for example, areas of water or cropland.

Scatter plots/scatter graphs

Graphs which plot the relationship between two variables, for example, population density and distance of a place from the centre of a city, or rainfall and height above sea level. The method can be used to identify trend patterns as well as anomalies for closer study.

Seasonal calendar

The classification of the weeks or months of the year into seasons. The standard classification of spring, summer, autumn and winter is a temperate zone concept imported from Europe. In northern Australia, the seasons are commonly described as the wet and the dry but Aboriginal cultures have other more complex classifications, and these vary considerably from region to region across Australia because they are finely tuned to local climates and the changing availability of food and other resources.

Secondary sources

Sources of data and information that have been collected, processed, interpreted and published by others, for example, census data, newspaper articles, and images or information in a published report.

Settlement pattern

The spatial arrangement of different types of human settlement, from isolated dwellings to villages and outstations, towns, regional centres and large cities. Smaller settlements typically form spatial patterns around larger settlements.

Social connectedness

A measure of the number, strength and quality of people’s social relationships with other people. These relationships, or connections, may be with people in the same place, or in other places, and they can be face-to-face connections or electronic. People with limited social connections may feel isolated or lonely.

Space

The concept of space includes location, spatial distribution and the organisation of space. Location plays an important role in determining the environmental characteristics of a place, the viability of an economic activity or the opportunities open to an individual, but the effects of location on human activities also depend on the infrastructure and technology that link places, and the way these are managed by businesses and governments.

Spatial distribution, the second element in the concept of space, underlies much geographical study. The geographical characteristics of places have distributions across space that form patterns, and the analysis of these patterns contributes to an understanding of the causes of these characteristics and of the form they take in particular places. Spatial distributions also have significant environmental, economic, social and political consequences. Students learn to identify and evaluate these consequences and the policies that could be adopted to respond to them.

The organisation of space concerns how it is perceived, structured, organised and managed by people and how this creates particular types of spaces. Early primary school students can investigate how the space within their classroom and their school grounds is organised for different purposes. Older students can investigate how urban planning organises the environment, creates commercial, industrial, residential and green spaces, and manages the flows of goods and people between spaces.

Spatial association

Coincidence of the spatial distributions of two or more phenomena. A strong spatial association suggests that there may be a relationship between the phenomena that could be investigated. The operation of atmospheric, hydrologic, geomorphic, biological, socioeconomic or political processes might inform proposed explanations of this relationship.

Spatial distribution

The arrangement of particular phenomena or activities across the surface of the Earth.

Spatial technologies

Any software or hardware that interacts with real world locations. The use of spatial technologies forms the basis of many geographers’ work practice. The Global Positioning System (GPS), Google Earth, geographic information systems (GIS) and satellite images are the most commonly used spatial technologies to visualise, manipulate, analyse, display and record spatial data.

Spatial variations

The difference or variation in the spatial distribution of variables such as population, population density, GDP, life expectancy) over an area of the Earth’s surface.

Stewardship

One of the many worldviews that informs ways of achieving sustainability. When applied to the environment, stewardship is an ethical position that supports the careful management of environmental resources for the benefit of present and future generations. Stewards do not own resources; they only manage them.

Sustainability

The concept of sustainability is about the capacity of the environment to continue to support our lives and the lives of other living creatures into the future. As a concept in the curriculum it is used to frame questions, evaluate the findings of investigations, guide decisions and plan actions about environments, places and communities.

System

A group of interacting objects, materials or processes that forms an integrated whole. Systems involve natural processes and human activities. They have inputs of materials and energy, physical processes and human activities and outputs of materials and energy.

Thematic map

Thematic maps portray a specific type of information, for example, rainfall, transport routes, climatic zones or population distribution.

Topographic map

Detailed, large-scale maps of part of the Earth’s surface that illustrate the shape of the land and selected natural and human features.

Urban concentration

The percentage of the urban population of a country or region living in the largest city.

Urbanisation

The process of economic and social change in which an increasing proportion of the population of a country or region live in urban areas.

Vegetation corridor

Strips of vegetation that connect larger but isolated vegetated areas. They enable the movement of animals and plants between places, reduce the ecological effects of habitat fragmentation and help protect biodiversity.

West Asia (Middle East)

The countries of Georgia, Armenia, Azerbaijan, Turkey, Cyprus, Lebanon, Syria, Israel, Palestine, Jordan, Egypt, Saudi Arabia, Yemen, Oman, United Arab Emirates, Qatar, Bahrain, Iraq and Iran. Afghanistan is sometimes included in the region, or in Central Asia. ‘West Asia’ is also known as the ‘Middle East’.

World region

Biophysical, geographical, economic or political regions larger than a nation, for example, the Sahara Desert, Sub-Saharan

Africa the Global North and the Association of South-east Asian Nations (ASEAN). See also ‘Region’.