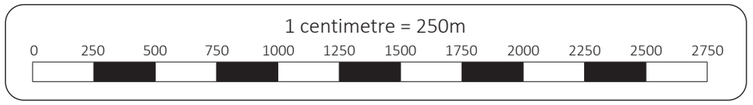
Investigating Our World

Ordnance Survey maps

Ordnance Survey are Britain's national mapping agency. People use map symbols, six-figure grid references and compass directions to analyse and compare places and features on Ordnance Survey maps.

Map scales

The scale on a map gives the relationship between the size of an object on the map and its size in real life. For example, a scale of 1:25,000 means that 1cm on a map is equal to 25,000cm, or 250m, in real life. So 4cm on the map is equal to 1km. On Ordnance Survey Explorer maps, the scale is 1:25,000, and the grid lines are 4cm apart, making each square 1km² in real life.

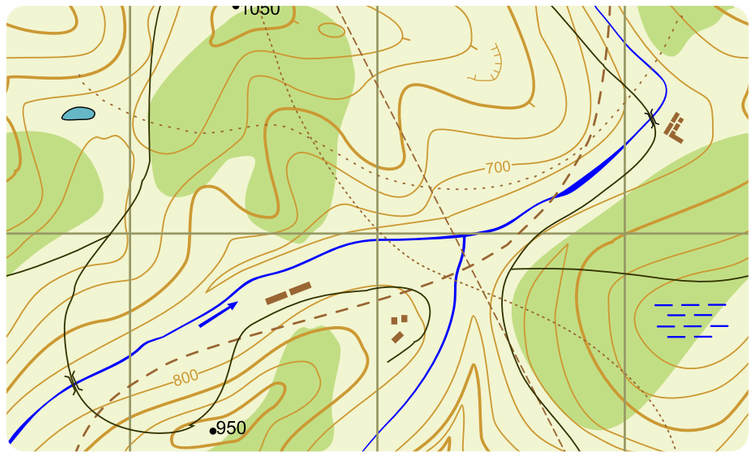


scale bar

Contour lines

Hills, slopes and mountains are represented on a map using contour lines. By studying the contour lines on a map, you can work out the topography of an area.

Contour lines are brown lines on an Ordnance Survey map. They are a two-dimensional representation of the landscape. If contour lines are close together on the map, the land is steep. If they are far apart, the land is flat or gradually sloping. They form a circle at the peak of a hill or mountain.



Comparing human geography

Data, including the population, population density, literacy levels, wealth, life expectancy and religion, is used to compare the human geography of the continents. For example, the continent of Africa has a larger population than Australia. Africa's population is 1340 million. The population of Australia is 43 million.

Lagos, the most populated city in Africa

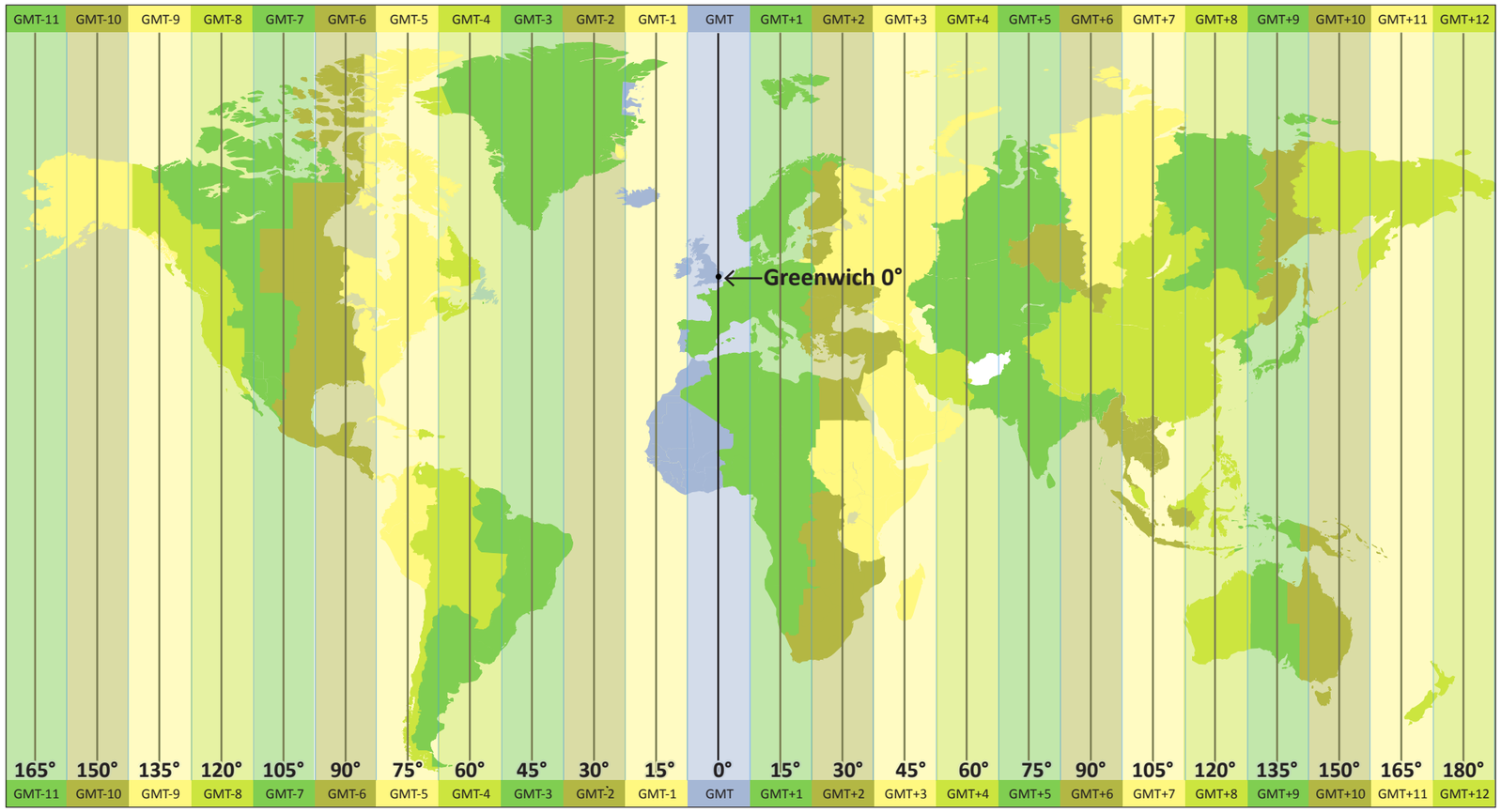
Capital cities of the world

Capital cities are usually the seat of a country's government. They are large settlements with a wide range of human features and transport links and are usually a centre for business and trade. For example, Vienna is the capital city of Austria, on the continent of Europe. It is the country's centre for industry, trade and culture. There is a range of transport links in the city, including a train and underground network, a tram system, and a road system for buses, taxis and cars.

Vienna skyline

Time zones

The time is different in different countries around the world. The world is split into 24 meridians. These are lines of longitude that run from the North Pole to the South Pole. The Prime Meridian is the starting point for all the other meridians. Its position is 0°. It runs through Greenwich, in England. All times around the world are calculated from the Prime Meridian. The time at the Prime, or Greenwich, Meridian is known as Greenwich Mean Time, abbreviated to GMT. If meridians are to the east of Greenwich on a map, hours are added to GMT. If they are to the west of Greenwich, hours are taken away from GMT. Times zones are labelled to show how many hours they are ahead of, or behind, the Prime Meridian, for example GMT+1 or GMT-1.



* this map is simplified and shows approximate time zones

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Climate zones

A climate zone is an area of the world with a distinct climate. There are five main climate zones, polar, temperate, Mediterranean, desert and tropical. The polar climate is the world's coldest climate, and the desert climate is the world's hottest. A temperate climate has warm summers and cool, snowy winters. The Mediterranean climate has hot summers and mild, wet winters. The tropical climate has a lot of rain and hot temperatures all year round. On mountains, the climate varies. As the altitude (height above sea level) increases, the temperature decreases and the climate becomes wetter and windier. Many mountain peaks are covered with snow all year round.

Vegetation belts

A vegetation belt is an area where certain species of plants grow because of the climate. Soil and the height of the land are other factors that affect the types of plants that grow in vegetation belts. There are five main vegetation belts, including desert, forest, grassland, ice sheet and tundra.

Biomes

A biome is a large ecosystem that has characteristic features, such as the climate and landscape. Plants and animals live there that are adapted to the environment. There are five main biome types, including aquatic, desert, forest, grassland and tundra.

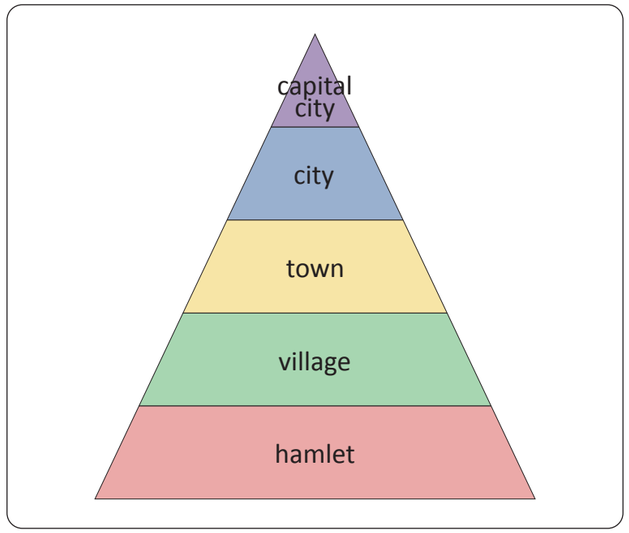
Motorway transport network

A motorway is a main road with multiple lanes built for fast travel over long distances. In the United Kingdom, they run north to south and east to west across the country. Motorways connect towns, cities and transport links, such as A roads, airports or ferry terminals. Motorways allow people and goods to move quickly around the country.

M1 motorway in Yorkshire

Settlement hierarchy

Settlement hierarchy is a way of grouping and ranking settlements according to their type, significance, number and size. The main types of settlement in the United Kingdom are capital cities, cities, towns, villages and hamlets. The most significant type of settlement is at the top of the diagram, and the least significant is at the bottom. Settlements get bigger, have a larger population and have more facilities, workplaces and transport links as they go up the settlement hierarchy. The number of each type of settlement increases as they go down the settlement hierarchy.



settlement hierarchy diagram

Characteristics of settlements

Capital cities are the largest type of settlement. Millions of people live and work in capital cities. They contain the largest number and the widest range of human features. Cities are large settlements. Millions of people can live and work in cities. Towns are smaller than cities and do not usually have a cathedral. Thousands of people live and work in towns. Villages are small settlements with a church. Usually, a few hundred people live in a village. Hamlets are small settlements without a church. Less than one hundred people live in hamlets. They contain a very small number of houses and normally have no shops, cafés or other facilities.

Glasgow, a city in Scotland

Ossett, a town in England

Beddgelert, a village in Wales

Listooder, a hamlet in Northern Ireland

Glossary

climate	The general weather conditions found in a place over a period of time.
ecosystem	An environment, including the plants and animals that live and interact within that environment.
life expectancy	The number of years that a person is likely to live.
population density	The number of people living in an area.
topography	The physical appearance of an area of land, especially relating to its shape and surface.

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