Passport to Geography

What are the three types of Geography?

Human Geography
To do with people and what we create

Physical Geography
To do with the natural world

Environmental Geography
How humans are impacting on the world

Continent: a land mass made up of many countries
Country: an area of land with political borders
Atlas: a collection of maps
Contours: lines on an OS map which indicate the height and shape of land
Distance: the length of space between two points
Direction: the course that something or someone takes, based on a compass (North, East, south, west

What maps do Geographers use?

Thematic map
This type of map displays a specific topic of interest.

Physical map
Shows the physical features of the world and includes topography, seas, oceans and rivers.

Political map
Shows boundaries that separate countries, regions and counties. They can also show settlements such as towns and cities.

Ordnance Survey map
Detailed coverage of the UK including physical and human aspects of our country.

What are map projections and which one is best?
It is impossible to take a sphere, flatten out the surface and not cause **distortion**. World maps are therefore drawn so no landmass is chopped in half. There are different ways to do this and it is called map projection. Africa is 14 times the size of Greenland, but the Mercator projection shows them as the same size! Peter's projection is more realistic.



Peter's Projection



Map symbols
OS maps show human and physical features using a range of different symbols. A selection of symbols are shown below

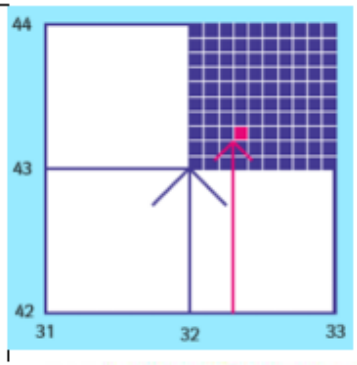


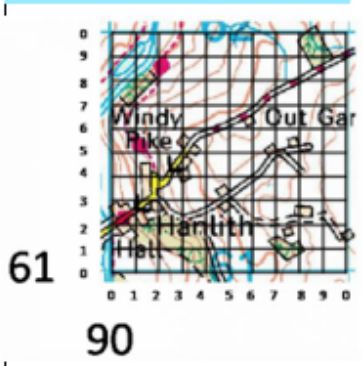
Grid references
Grid references allow people to accurately locate places on a map. Every OS map has a grid of faint blue lines printed on it. The lines that run from top to bottom are called eastings. Those that run horizontally from left to right are called northings. To find a **4 figure grid reference**, do the following steps:

1. Locate the place on the map and fine the bottom left corner of the square.
2. Read along the Eastings until you get to the bottom left corner you have marked. Write the number.
3. Then, read up the Northings until you get to the bottom left corner. Write the number so you have 4 'figures' (numbers).

The 4 figure grid reference for the red dot would be 3243.

Six figure grid references allow you to identify an exact location within a grid square. In order to identify a six figure grid reference, we need to imagine another grid on top of the existing square. The six figure grid reference for the coniferous forest shown below is 908619. Again, the eastings come before the northings.





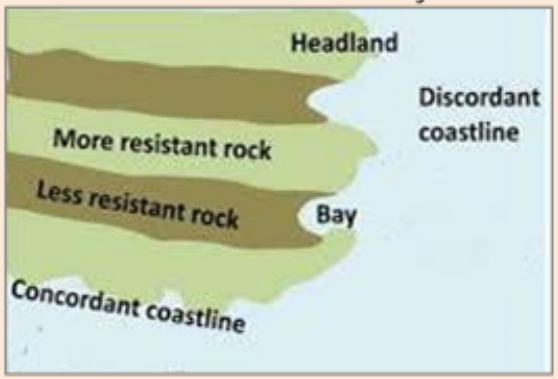
How do we learn about place?

Place Characteristic	*What a geographer will investigate*	*Japan*	*Nepal*
Population	The number of people in a place and their characteristics such as age	127 million, 10th largest	29 million
Built environment	How the place has been created, what this looks like and the problems and opportunities it presents	Some of the highest land prices in the world	Mud or brick houses
Culture	The ideas, customs and traditions of a place	Shinto and Buddhism	81% are Hindu
Society	How the people of a place live alongside one another, what their strengths are and the problems they encounter	Hard working	Family orientated. 25% live in poverty
Economy	How wealthy a place is and how it makes money	Average salary is £33,500	One of the poorest in Asia
Politics	How the place is governed, who makes the laws and who has the power	Monarchy and government	President
Physical environment	How the physical features influence the place e.g. volcanoes, rivers, mountains, climate	66% forest and home to Mt Fuji	Himalayas

COASTLINE. FRIEND OR FOE?

Key Terms

Coast: the area where the land meets the sea
Geology: the type of rock at the surface of the Earth
Landform: A natural phenomenon created by coastal processes
Discordant coastline: where areas of rock lie perpendicular (90°) to the sea. This creates coastlines with lots of landforms
Concordant coastline: where areas of rock lie parallel with the sea. This creates less dramatic coastlines as the rock type does not vary
Headland: an area of land that juts out to sea
Bay: where land curves inwards to create a sheltered area of water. You will often find a beach in a bay

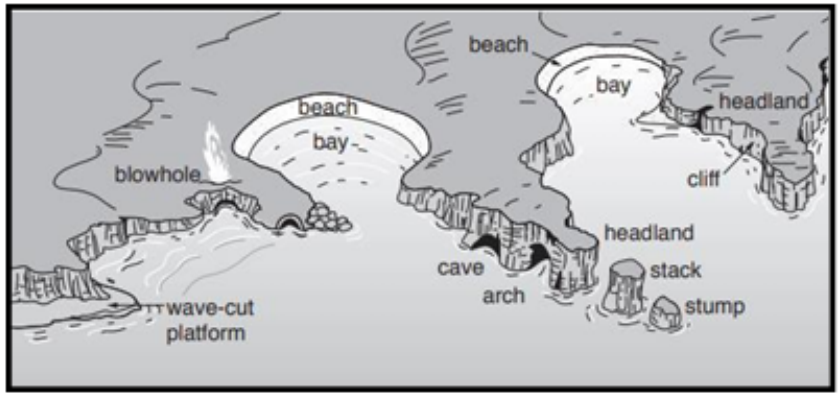


Fetch: The distance over which a wave travels
Erosion: the wearing away of the land or rocks by the action of waves, water, ice and/or wind
Differential erosion: When some rocks erode (wear away) faster than others
Solution: chemicals and salts in sea water dissolve the cliffs
Abrasion: Waves carry sand and small pebbles which smash into cliffs wearing them down
Hydraulic action: air is slammed into cracks as waves smash into cliffs. This forces cracks in rock to widen and weaken.
Attrition: rocks in the water smash into each other getting smaller and rounder in the process
Hard engineering: ways to protect coasts by absorbing the energy of waves and preventing/reducing erosion
Soft engineering: ways of protecting coasts by altering natural processes in an environmentally friendly way
Managed retreat: decision to do nothing and allow natural processes to occur without intervention

Coastal processes

The shape of a coastline is created by the interaction of three processes.

Erosion (4 types)	Transportation	Deposition
• Hydraulic action • Solution • Abrasion • Attrition	Eroded material is moved along the coastline	Eroded material e.g. sand is dropped by the waves as they lose energy



Coastal management

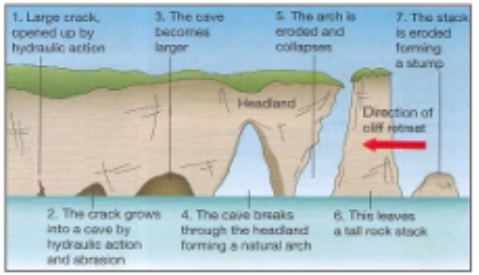
	Advantages	Disadvantages
Hard engineering • Sea walls • Gabion boxes • Rock armour	• Lasts a long time • Very effective against erosion	• Can look unattractive • Expensive • Costly to maintain
Soft engineering • Beach nourishment • Dune regeneration	• Works with natural processes • Looks natural • Relatively cheap	• Has to be repeated • Doesn't remove erosion risk
Managed retreat Do nothing	• Free • Allows nature to behave as it wishes	• People can lose their homes • Can create conflict

Coastal landforms

Coastal processes create landforms.

Erosional landforms	Depositional landforms
• Bays and headlands • Cliffs and wave-cut platforms • Cave, arch, stack, stump	• Beach • Spit (a stretch of beach extending into the sea)

Bays and headlands are formed on discordant coastlines with bands of more and less resistant rock. Less resistant rock erodes more quickly creating a bay and the more resistant rock will be left sticking out to sea in the form of the headland.



The erosion of headlands leads to caves, arches, stacks and stumps.

Case study: Old Harry Rocks
On the south coast of England is a famous chalk stack called Old Harry. .

Case study: Cornwall
With a fetch from South America creating excellent surfing waves, Cornwall attracts many tourists. This is positive as it brings jobs and £900 million per year to Cornwall but it has caused local house prices to rise beyond what many locals can afford.

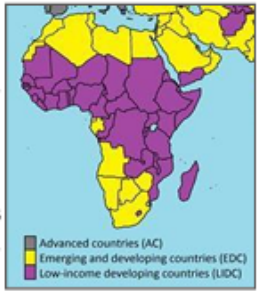
JOURNEY INTO AFRICA

Key Terms

Development: the standard of living in a country
Poverty: being so poor that basic needs cannot be met
Stereotype: a widely held and overly simple view of something/someone/somewhere
Misconception: an opinion that is incorrect based on faulty thinking or understanding
Literacy rate: The percentage of people aged over 15 that can read and write
Rural: relating to the countryside
Urban: relating to towns and cities
Slum: a squalid, impoverished and overcrowded urban area
Trade: the exchange of goods for money
Aid: using other countries or organisations to support development
HICs: high income country
NEEs: newly emerging economy
LICs: low income country

Africa is NOT a country

- There are 54 countries in Africa
- The population is 1.3 billion (2020)
- 767 million Africans live on less than $1.90 a day (10%)
- China is Africa's largest trading partner
- Some countries in Africa are NEEs (e.g. South Africa) whilst others are LICs (e.g. Ethiopia)



Case study: How successful has Ethiopia been in tackling poverty?

Successes in Ethiopia	Challenges in Ethiopia
One of the fastest growing economies	Education in rural areas is worse than in urban
Poverty decline in urban areas	Businesses lack knowledge around technology and resources

What causes poverty?

Location Without a coastline it can be more difficult to trade	**Politics** Unstable governments can make decisions that affect a country for years	**Climate** Extreme climates can make it difficult to grow food supplies	**Natural hazards** These can lead to continually rebuilding or recovering.
War Services are disrupted, buildings and roads are destroyed and people are killed or forced to flee	**Access to education and healthcare** Lack of education can result in a shortage of people to do skilled jobs and makes it harder to maintain high levels of health and hygiene		**Gender inequality** When women are not treated as equals to men, the country does not use its workforce fully

Stereotyping Africa

Most common stereotypes and misconceptions about Africa	
Stereotype	**Challenging the stereotype with fact**
Africa is poor	Africa is, on average, the poorest continent. However, six African countries make the top ten for the fastest growing world economies (for example, Ethiopia).
Africa doesn't have many tarmacked roads	Only ¼ of roads are tarmacked. The world average is more than ½ roads are tarmacked in any given country.
Everyone is a Christian	45% of Africans follow Christianity and 40%, Islam.
Healthcare and diet are poor	Life expectancy in Africa is lowest of all the continents but it is rising. African diets are among the healthiest in the world. Most food is fresh, free from preservatives and any unnecessary saturated fats and salt.
Africa is mainly desert	The Sahara Desert covers 25% of Africa. Africa is also home to dense tropical rainforest, vast grasslands and high mountains.
Africa is dependent on aid from ACs	Africa is rich in natural resources including diamonds, oil, gas and gold. It does not want handouts from other countries but support to develop in its own way.

Other African successes

- Nollywood is the second largest film industry in the world and is based in Nigeria.
- There is a growing fashion industry in Africa which is ethically minded and is creating employment opportunities and supporting education and healthcare with the help of the organisation 'fashion 4 development'
- African jade is more expensive per gram than diamonds and China is its major world market



The truth about Africa has been discussed by Chimamanda Ngozi Adichie who spoke of "**the danger of the single story**"

DO WE LIVE IN A RISKY WORLD?

Key Terms

Inner core: the innermost layer of our planet
Outer core: fluid layer between the inner core and mantle
Mantle: layer of the Earth between the outer core and crust
Crust: outermost layer of the Earth made of solid rock
Magma: molten rock trapped underground
Lava: molten rock that has flowed onto the Earth's surface
Tectonic plate: Big pieces of the Earth's crust
Convection currents: transfer of heat from the core to the crust
Earthquake: shaking of the surface of the Earth
Epicentre: the point on the Earth's surface directly above the focus
Focus: where an earthquake begins
Seismic waves: energy caused by the breaking of rock
Magnitude: the strength of an earthquake
Richter Scale: the scale used to determine the magnitude of an earthquake
Mitigation: action to reduce the severity of something

Tectonic plate boundaries

Tectonic plates meet at boundaries. There are four types of plate boundaries.

A collision boundary: move together.

A conservative boundary: slide past

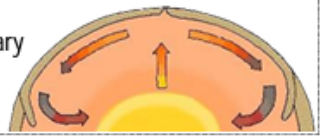


A destructive boundary: sink

A constructive boundary: move apart

Tectonic plates move due to convection currents. There creates lots of pressure which builds up and causes earthquakes. At destructive and constructive boundaries you also find volcanoes.

Japan lies on a destructive boundary where the Eurasian (8) and Pacific (2) plates meet.



Structure of the Earth and tectonic plates



	Made of?
Inner Core	Solid iron
Outer Core	Liquid metal
Mantle	Liquid rock
Crust	Rock

Some tectonic plates form our continents like the Eurasian Plate (8), where we live. Other plates are submerged below the oceans e.g. the Pacific Plate (2). The thickness of the crust under continents is about 40km whereas under the oceans it is only 6 -10km thick.



Risk and earthquakes

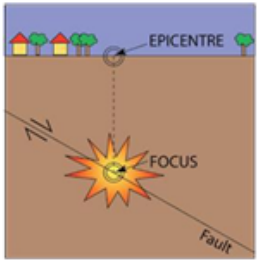


Hazard	A natural event that has the possibility of causing harm
Vulnerability	What makes you weak?
Response	What help is available after the hazard event?
Risk	The loss, injury and death

Case study: Haiti, 2010

300,000 people were killed. The earthquake was so risky because it measured 7.0 in magnitude and shook for 30 seconds. Many people live in poverty and buildings are not earthquake proof. Hospitals were destroyed, disease spread quickly and aid from abroad took days to arrive.

Earthquakes



A fault is a small section of a plate boundary.

Stress builds up
↓
Fault gives way
↓
Seismic waves
↓
Earthquake

If an earthquake occurs underwater it may cause a tsunami

Earthquake mitigation

The following strategies can help mitigate against the risk from earthquakes:

- Building design e.g. the beehive shape
- Drills and procedures e.g. Japan's training day
- Survival kits – kept somewhere to grab in a hurry

These strategies can be compared through cost, effectiveness and longevity.

Case study: Ghorka, Nepal, 2015

8,632 people killed, $10 billion damage
Hazard: magnitude 7.6, 2 large aftershocks, landslides and avalanches
Vulnerability: Nepal is a low income country, few earthquake proof buildings
Response: Foreign aid was needed for search and rescue. The UK sent £73 million

Case study: Tohoku, Japan, 2011

15,981 people killed, $300 billion damage
Hazard: magnitude 9.1, 38m high tsunami
Vulnerability: Japan is a high income country, many buildings are earthquake poof
Response: 100,000 Japanese soldiers immediately sent to the area. Motorways were repaired within 4 days