

AQA Geography Revision

Check it! answers

Natural hazards

Check it! (page 10)

- 1 A naturally occurring physical phenomena, which poses a potential risk to human life and/or damage to property
- 2 Atmospheric, geological and hydrological
- 3
 - a Some people are more at risk because: they live in densely populated areas and so there is more risk of buildings collapsing; they live in extreme poverty and so are forced to live on land that may be unstable and so are at a higher risk of landslides; or low-lying land which is prone to flooding. Developing countries are also less likely to have hazard-resistant buildings, which means there is a higher chance of them collapsing or getting damaged in a natural hazard.
 - b People are likely to be more at risk in the future due to climate change, which could increase the likelihood of flooding in the UK; droughts in sub-Saharan Africa, e.g. South Sudan, and bring more tropical storms to countries such as Bangladesh. Also, more and more people are living in urban areas which makes people more vulnerable to natural hazards, especially if they are forced to live on land which is unsafe, for example, in shanty towns on steep hillsides as in Rio de Janeiro. People may be less at risk in developed countries, where better technology to build hazard-resistant buildings is available and education is better, so people are aware of what to do in the event of a natural hazard.

Tectonic hazards

Check it! (page 17)

- 1 Earthquakes and volcanoes happen at plate margins because this is where two or more plates meet due to convection currents and/or slab pull and ridge push. Tensions and pressure build up and their release results in an earthquake at conservative plate margins. At destructive plate margins, melting rock and the rise of magma produces volcanoes.
- 2 Constructive, destructive and conservative.
- 3 Where two continental plates of low density meet folding and uplift occur. Neither of the two plates is subducted because the continental rocks are relatively light. This causes the formation of fold mountains, e.g. the Himalayas.
- 4 Primary effects: these happen *directly* as a result of an earthquake or volcano. Secondary effects: these occur *indirectly* as a result of an earthquake or volcano. They can happen hours, days or weeks later, e.g. fires and the spread of disease.
- 5 The primary effects of the L'Aquila earthquake were that 308 people died and 1500 people were injured. Furthermore, 10 000–15 000 buildings collapsed or were severely damaged, including the hospital, churches and medieval buildings. This left 67 500 people homeless and cost US\$16 billion. The secondary effects were landslides, which affected transport, and a drop in the number of people going to L'Aquila university following the earthquake.
- 6 There is evidence to support this is true. This is shown in the Nepal earthquake where 9000 people died and 20 000 people were injured compared to the L'Aquila earthquake in Italy where 308 people died and 1500 people were injured. Furthermore, following the Nepalese earthquake nearly 3 million people were left homeless compared to 67 500 people in the L'Aquila earthquake. This shows the extent to which people are affected more in developing countries after an earthquake. However, there are often more economic effects in a developed country, for example, the L'Aquila earthquake cost US\$16 billion whereas the Nepal earthquake costs US\$5 billion. In conclusion, the social effects are often more devastating after an earthquake in a developing country but the economic effects can be higher in a developed country.
- 7 Building hazard-resistant buildings, educating people to know what to do in the event of a hazard, using land-use maps to identify high-risk buildings so they can be protected and ensuring all households have disaster survival kits in their homes.
- 8 The benefits of living near a volcano are: potential geothermal power source, volcanoes produce fertile and nutrient-rich soil for farming, volcanoes can provide jobs via the tourist industry and also mining jobs.

- 9 There are a number of ways of making buildings earthquake proof, e.g. deep foundations to prevent collapse of a building, strong double-glazed windows to prevent glass shattering down, a strong steel frame which means the building is more flexible, cross bracing to stop floors from collapsing and a damper in the roofs that acts like a pendulum, which reduces sway.

Weather hazards

Check it! (page 25)

- 1 Low pressure is found in areas where air is rising. High pressure is found where air is sinking towards the ground.
- 2 Tropical storms do not form on the equator because the Coriolis force is too weak.
- 3 Management strategies to reduce the effect of tropical storms have positives and negatives. Positives of monitoring storms using satellites: people can be informed of up-to-date information and be given early warning when the storm changes in strength or increases in speed. This data can be used to predict the path of the tropical storm, which allows governments to warn citizens and evacuate people, if necessary, to reduce death toll and injury levels. Strengthening windows and building cyclone shelters helps to protect the people who may be affected by the tropical storm and so to reduce the number of people injured or killed. Finally, planning enables people to be educated on what to do in the event of a tropical storm.

There are negatives to some of these methods, for example, when predicting a storm, the information may be incorrect, as the path of a storm can be unpredictable. It is more difficult to warn people in developing countries as communications are not as good with less advanced technology and less access to mobile phones and televisions. People in developing countries are less likely to be able to afford storm protection and so there is a higher chance of buildings collapsing or being damaged.

- 4 In the UK, there is evidence that we may get more extreme weather events due to climate change. As temperatures increase, the UK could get more extreme weather such as: heavy rainfall leading to floods and more extreme temperatures leading to heatwaves, drought and heavy snowfall.
- 5 There is a range of methods used to manage flooding in the UK. Using the example of the Somerset floods in 2014, one strategy was that the government had rivers dredged to increase the capacity of the river channels. Road levels were raised in places, which protected communications and businesses from future flooding events and finally flood defences were built. For example, river banks were raised and strengthened and more pumping stations built. These are examples of hard engineering techniques. Soft engineering examples would be reforestation, which increases infiltration rates to reduce flooding or managed flooding, which allows certain areas along the river course to be naturally flooded to prevent flooding in areas near settlements.

Climate change

Check it! (page 29)

- 1 Three causes of natural climate change:
 - i Changes in the Earth's orbit. These include eccentricity, which is the change in the elliptical paths of the Earth around the Sun; precession which is the natural wobble of the Earth and tilt which is the change in the Earth's tilt between 21.5 and 24.5 degrees.
 - ii Solar output, which is the cyclical change in solar energy linked to sunspots.
 - iii Volcanic activity: volcanic ash can block out sunlight, reducing temperatures; sulfur dioxide emitted during a volcanic eruption mixes with water vapour and forms sulfuric acid, this reflects the Sun's radiation, reducing temperatures.
- 2 The greenhouse effect is the way that gases in the atmosphere trap heat from the Sun. Like glass in a greenhouse, they let heat in, but prevent most of it from escaping.

- The greenhouse effect is natural, whereas the enhanced greenhouse effect is caused by humans. Added pollution, for example, carbon dioxide and other greenhouse gases, has meant more heat is trapped in the atmosphere and has caused temperatures to rise.
- There may be more flooding in some parts of the world due to heavy rainfall. This could affect parts of the UK, e.g. Somerset. Low-lying coastlines are more at risk of coastal flooding due to sea-level rise e.g. Bangladesh, and there may be more extreme weather events such as droughts in sub-Saharan Africa, e.g. South Sudan and heatwaves in places like the UK.
- Adaptation (responding to change) means actions taken to adjust to natural events such as climate change, to reduce damage, limit the impacts, take advantage of opportunities or cope with consequences. Mitigation (reducing causes) means actions taken to reduce the long-term risk from events such as climate change, e.g. developing more renewable energy or planting more trees to create carbon sinks.
- One way of mitigating against climate change is developing renewable energy to reduce the amount of greenhouse gases emitted, and another is reforestation to increase carbon storage.
- All year round.
- Any one of: to make money from forest resources, perhaps from exports, to help develop the country; to use rainforest resources to support industries and create jobs within the country; to provide living space for poorer people in the country; to build infrastructure such as dams for hydroelectric power so that there is cheap electricity for people and businesses.
- The rate of deforestation may vary over time due to: (i) changing demand for rainforest products such as soya and beef; (ii) changes to the rate of population growth; (iii) changes to government policy on schemes and developments; (iv) pressure to reduce deforestation from conservation organisations or international protocols; (v) pressure to pay off international debts.
- Advantages: helps the country avoid paying the burden of debt; saves natural areas from degradation and destruction (legal protection); reduces extinction of species.
Disadvantages: often only small natural areas are set aside; LIC/NEEs do not have the ability to protect and manage designated protected areas; continues the dependence of LIC/NEEs on outside links; may encourage more borrowing by the country.

The living world

Ecosystems

Check it! (page 37)

- Biotic factors are living things, such as plants and animals.
- Abiotic means the non-living parts of an ecosystem, such as soil and water.
- A food chain is a simple linear sequence, e.g. grass → zebra → lion. A food web has a complex pattern of interlocking food chains. In a food web it is likely that there are several key living things that either eat several things or are the food source of several things.
- Nutrients, such as nitrogen, accumulate in the soil from weathered rock and decomposed litter (humus). These are then absorbed by the roots of plants to help them grow. Parts of a plant may be eaten by herbivores and the nutrients are passed on to them. When plants become dormant they drop their leaves, and animals may leave their waste products on the ground. Decomposers then release the nutrients from these materials into the soil.
- The tundra global ecosystem is mostly found in the northern hemisphere along the shores of the Arctic Ocean, in northern Canada and northern Russia.
- The hot desert global ecosystem is very dry (less than 250 mm of rain a year), has high daytime temperatures (over 30°C), and low night-time temperatures.
- The tropical rainforest vegetation grows because of the climate. This tropical zone receives (i) plentiful sunlight in the tropics, (ii) concentrated heat (25 to 30°C) from the Sun near the equator and (iii) high rainfall due to the rising humid air, and condensation around the ITCZ due to the circulation of air in the two Hadley cells.
- Any two of: removal of natural vegetation; farming changing the soil structure; climate change, which may increase the strength of storms, increase the frequency of heavy precipitation or drought; extinction of species through hunting or poaching.
- The Hadley cell has rising humid air near the equator (at the ITCZ). This causes condensation and a large annual precipitation, which supports a large amount of plant growth in the tropical rainforest. The air in the Hadley cell descends away from the equator at about 30°N and 30°S. As the air descends, it warms and moisture is evaporated. This creates stable conditions with clear skies and a lack of precipitation. This makes it very difficult for plants to grow in the hot dry conditions of deserts.

Tropical rainforests

Check it! (page 45)

- Tropical rainforests affect the local climate through the transpiration of moisture into the air. This condenses in the cool of the evening, leading to heavy rain. If deforestation has taken place, areas often become much drier.
- In the hot, wet conditions, chemical reactions and the actions of decomposers are fast, so nutrients from the litter are quickly broken down and absorbed by the extensive shallow roots of trees, so they do not stay in the soil for long. Most nutrients in this ecosystem are stored in the biomass. The heavy tropical rain causes leaching in the soil, which is where nutrients are washed down very deep into the soil away from the surface layer.

Hot deserts

Check it! (page 51)

- Any one of: very dry (less than 250 mm of rain a year); very hot during the day; much cooler at night (large diurnal range).
- It is fragile because of the very difficult living conditions for plants and animals. They are just able to survive with limited water and are easily affected by any changes. As in all ecosystems, producers and consumers are linked together, but these links can easily be broken by any change.
- Answers will vary according to case study.
 - The hot desert covered in this Revision Guide is the Thar Desert in South Asia, in the countries of India and Pakistan.
 - Three development opportunities in the Thar Desert are: use of minerals such as gypsum; use of energy resources (lignite coal) to provide energy; renewable energy can be used; tourism and cultural income, for example, from the Desert Festival; crops, such as wheat, grow very well with irrigation water. Your answer must explain how each is an opportunity. For example, 'Gypsum can be extracted from the Thar Desert. This is needed in the construction industry. Its extraction and processing provides local and national employment.'
 - Three development challenges: extreme heat makes working difficult; loss of water from high evaporation rates and salinisation of the soils; limited water for a growing number of people; transport routes difficult to maintain in a hot, shifting desert. Your answer must explain how each is a challenge. For example, 'The extreme heat in the Thar Desert, in excess of 40 °C during the day, makes work outside difficult and can cause heatstroke.'
- Overgrazing happens when there is too much livestock on an area of land and grass is eaten before it has the chance to regrow. When the grass dies, the soil becomes loose and can be eroded by rain and the wind, degrading the area so that it cannot recover. This allows the desert to spread into the area.
- Either choice could be made. For climate change, points could include: reduced rainfall in semi-arid areas so that water holes (oases) dry up and grasses and thorny trees start to die. Soil is then not held together and lacks humus and moisture, and can be blown away. Sands advance from the desert covering the semi-arid areas, and other areas become bare. For population, points could include: that there are too many people for the semi-arid area to support as there is only a limited amount of water underground or at oases, their livestock overgraze areas killing the grasses, or too many cultivated fields exist close together. People may also cut down the few trees for firewood. The soil is not held together and blows away and the desert can advance into the semi-arid zones.
- It is important to reduce desertification because the natural ecosystem is damaged and changed forever, with the possible extinction of species. Desertification also makes it very difficult for poorer people in LICs/NEEs to survive, as crops will not grow and there is a shortage of food and water leading to drought and famine. With desertification, people are forced to migrate and this increases pressures in other areas which also then suffer problems.
 - Any strategy, such as water management. Desertification can be reduced if water can be retained in the natural and human systems. This may be achieved by having efficient methods of getting groundwater, such as concrete lined wells with hand pumps, and then using methods of collecting and storing rainwater, such as rain barrels,

which would allow people to continue to live in the area. Farming could be more secure with ways of trapping rain behind small rock dams in gullies or bunds across fields; this would encourage more plant growth which then holds soil together with their roots. Ploughing fields across the slope creates furrows in which moisture and rain collects and soaks into the ground, encouraging plant growth.

Cold environments

Check it! (page 58)

- One of: ice sheets; glaciers; most life is in the warmer waters of the ocean or coastal areas of land; (very low temperatures (winter temperatures can drop below -50°C); very low precipitation).
- Polar ecosystems can be found in Antarctica or areas around the North Pole, such as northern Greenland.
 - Tundra ecosystems can be found in the state of Alaska, northern Canada and northern Russia.
- Two of: permanently frozen ground (permafrost); active layer on surface in the brief summer; patterned ground created by freeze-thaw action which sorts particles by size; solifluction causes the active layer to move slowly downslope.
 - Two of: very low temperatures (as low as -50°C) in winter; very low precipitation (370 mm a year); most precipitation in brief summer; summer temperature reaching about 10°C ; large annual temperature range of about 21°C .
- Pristine wilderness is a natural area that is untouched and undamaged by human activities; a place where nature and natural processes continue undisturbed.
- Antarctica is important to the world because it is one of the few remaining wilderness areas. It also helps regulate the Earth's temperature by cooling the world in a time of global warming. Wildlife has adapted to the cold with special chemicals that may be useful to humans. The Antarctic ice sheet provides a record of past climate change and atmospheric composition, which helps us to understand the present. Antarctica is a reminder of the power and beauty of nature, a comparison with other world areas that have been touched by human activities. It is protected by a special treaty to prevent serious damage.
- International agreements are important so single countries don't suddenly decide to exploit cold wilderness areas (e.g. Antarctic Treaty, 1961). They offer protection for the natural environment and restrict human activities. They bring countries and peoples together to work towards sustainability, such as through the Arctic Council. The greatest amount of change due to global warming could be in the cold environments where warmer temperatures could cause extinctions and landscape changes, so international agreements on climate change are essential.
- No one correct answer: for governments, points could include: the ability to make laws to protect nature or limit human activities; set aside areas within their territory for protection or sign international agreements (e.g. the UK passed the Antarctic Act in 2013 and signed the Kyoto Protocol). For conservation groups, points could include: the power of persuasion backed by public support (e.g. petitions); they often focus on aspects of cold environments that governments are less concerned about or have difficulty with because of international relationships. For example, they have brought pressure on countries like Japan that still continue to catch whales, and on the USA and Canada for their extraction of oil in Alaska and other Arctic areas.
- Cold wilderness areas can be an inspiration to people, reminding them of the need to protect and appreciate the power of nature through a comparison with areas touched by human activity. They also provide important areas for scientific research, not least monitoring and understanding climate change and its impacts through Antarctic ice cores and measurements of current changes. Preserving Antarctica is important in helping to cool the Earth overall. The wildlife in these areas has unique chemicals that have helped them adapt to cold conditions, and these may help people in the future, such as during space exploration.
 - Any strategy, such as international agreements. The Arctic area is currently under most threat because Antarctica is protected by a treaty (1961) and several protocols (e.g. 1998 Environmental Protection) to prevent degradation by tourism and other human activities. An international agreement, like the Antarctic Treaty, is desperately needed for the North Pole. International agreements on climate change (Kyoto 1997, Paris 2015) are helping cold environments as any reductions to the temperature increase will reduce the negative impacts on the cold environments' ecosystems.

UK physical landscapes

Check it! (page 60)

- Relief describes the physical shape of the land, including height above sea level, steepness of slopes, and the shape and orientation of landscapes and features.
- The River Thames flows from the source at Thames Head in an eastern direction and ends after 346 km in the North Sea near Southend-on-Sea. The River Thames passes through the city of Oxford and continues to travel south-east near the city of Reading, before meandering through Henley-on-Thames, Marlow and Windsor. The Thames flows through Greater London and Central London. The river passes the Thames Barrier and ends via the Thames Estuary in the North Sea.
- Tough resistant rock such as granite and slate form some of the UK's most dramatic mountain ranges e.g. Arran, Scotland. Chalk forms distinctive hills in the South Downs and Wiltshire. London is a good example of a clay landscape.

Coastal landscapes in the UK

Check it! (page 70)

- Constructive waves are low in height and surge up the beach with a strong swash and weak backwash. They carry and deposit large amounts of material and make beaches more extensive. Destructive waves are high and steep waves with a strong backwash and weaker swash, which means that they remove sediment and can cause the destruction of beaches.
- Weathering is the weakening or decay of rocks in situ, on or close to the ground surface. This weakening of the rock can lead to mass movement, which is the downward movement of material under the influence of gravity. This can be by sliding or slumping, etc.
- Possibilities include: an arch, a wave cut platform, a stack, a wave cut notch, a sea cave, a headland, and so on.
- Sand dunes begin as embryo dunes that form around deposited obstacles such as pieces of wood or rocks. Over time, these develop and become stabilised by vegetation, such as Marram grass, to form foredunes and tall yellow dunes. In time, the vegetation will decompose and add organic matter to make the sand more fertile. This allows a range of plants to colonise the back dunes. Wind can form depressions in the sand called dune slacks, in which ponds may form.
- Two possible types of hard engineering are groynes and rock armour. Groynes: benefits – can create a wider beach due to trapping sediment, they are not too expensive and help deflect the energy of the waves. Costs: groynes are not too expensive to build, but they interrupt the process of longshore drift, which starves beaches further down the coast, leading to increased rates of erosion, e.g. on the Holderness coastline. Rock armour: benefits – rock armour is relatively cheap and easy to maintain and it absorbs the energy of the wave, which protects the cliffs. Costs: the rocks need to be sourced from another part of the country or abroad, and they often don't fit in with the local geology.
- Managed retreat is a deliberate policy allowing the sea to flood or erode an area of relatively low-value land. This happens in areas where it would cost more to protect the land than it would were it to be left to erode e.g. farmland.

River landscapes in the UK

Check it! (page 79)

- The three fluvial processes are: erosion, transportation and deposition.
- The four different types of erosion are hydraulic action, abrasion, attrition and solution.
- Material is deposited when a river loses velocity and slows down, as it no longer has the energy to erode or transport sediment.
- A waterfall is formed when a river flows over two different rock types, eroding a softer rock layer under the harder rock. This creates a plunge pool due to hydraulic action and abrasion. The harder rock is undercut and an overhang is formed, which eventually will collapse into the plunge pool as it is unsupported. The waterfall retreats upstream as this process is repeated.
- Three facts about meander formation: the thalweg is the fastest line of velocity in a river, flowing on the outer side of bends; erosion occurs on the outside of the bend of a river where the flow is faster; deposition occurs on the inside of the bed where the river flow is slower; meanders move downstream over time due to erosion; a meander neck can be cut off to form an ox-bow lake.

- 6 Floodplains are formed when a meander moves from side to side causing the valley sides to become wider apart, creating a flat valley floor.
- 7 Levées are formed when sediment from the river is deposited on a floodplain during times of flood and builds up to form raised banks at the sides of the river.
- 8 Two human factors that increase the risk of flooding are urbanisation creating impermeable surfaces, which increases run off, and deforestation, which means that there are fewer trees and therefore less interception of rainfall. Two physical factors that increase the risk of flooding are steep relief that increases the speed with which water reaches the rivers, and heavy precipitation, where flash floods increase the volume of water in a river.
- 9
 - a Hard engineering is the use of human-made structures to prevent and control flooding, usually expensive to install and used to protect areas of high value. Soft engineering is when natural processes are used to manage river processes and floods.
 - b An example of hard engineering is the building of embankments to raise the height of the river banks so they can hold more water during floods. An example of soft engineering is afforestation, where trees are planted to increase the interception and absorption of water.
- 10
 - a The Jubilee River scheme has helped to reduce flooding by creating a channel that diverted water from the Thames when the water discharge was high, thus preventing the Thames from bursting its banks.
 - b People have objected to the scheme because it was very expensive to build and maintain. It went over budget during the construction. It might protect the high-value area of Windsor but places downstream have had increased issues with flooding. Environmentally, it is not very attractive and algae collects behind the weirs, disrupting the natural ecosystem.
- 3 People leave the countryside as crops fail due to drought; subsistence farming brings in very little extra money and there is a lack of employment opportunities in the rural areas. These reasons are called push factors.
- 4 People migrate to the cities in search of better opportunities, with pull factors such as, better-paid jobs, more jobs in manufacturing industries due to TNCs and better access to education and health care in the city.
- 5 Megacities with a population of more than 10 million people are mostly found in South-East Asia, especially in China and India. There are a few in North America and South America.

Urban growth in an emerging city

Check it! (page 96)

Answers will vary according to case study. In this Revision Guide, the example is Rio de Janeiro.

- 1 Rio de Janeiro is located on the South-East coast of Brazil.
- 2 Rio is an important emerging city because it is the second most important industrial centre in Brazil. It is also a major port for exports and has a large manufacturing industry. It is a very popular tourist resort with beautiful beaches.
- 3 Rio is divided into four zones; the north zone is industrial with the airport, the south zone is the main beach area and is wealthy, it is overlooked by the favela, Rocinha. The central zone is the main central business district with shops and the financial centre. The west zone contains the wealthy coastal suburbs and the Olympic stadium area.
- 4 Squatter settlements build up in emerging cities due to the large rural to urban migration of people to the city who can't afford anywhere permanent to live.
- 5 Squatter settlements have a number of social challenges. They are temporary illegal dwellings made from wood and metal. They are very high density and overcrowded with a lack of basic infrastructure and services. A lack of sewerage and sanitation means that disease spreads easily, made worse by the lack of a running water supply. There is a lack of formal employment, which means a lack of money. Crime rates are high in the Brazilian favelas.
- 6 The local authorities have paid for materials to improve the infrastructure and services in the squatter settlements. The local people in favelas, such as Rocinha in Rio de Janeiro, have worked together as communities in self-help schemes to build and improve the quality of their housing and their quality of life.

Urban change in the UK

Check it! (page 105)

- 1 The percentage of people who live in urban areas in the UK is 83%.
- 2
 - a The largest cities in the UK are London, Birmingham, Manchester, Leeds and Glasgow.
 - b London and other large cities have developed due to their favourable locations, e.g. they are often located where there is plenty of flat land, accessible by road, rail or sea. Many also have navigable rivers or are deep water ports.
- 3 London is a city of global importance because the London Stock Exchange is the most important in the world. London is the headquarters of many of the world's biggest companies and is a world centre for media, research and technology.
- 4 **Answers will vary according to case study.** In this Revision Guide, the example is London. Transport in London has been improved by linking trains, tubes and buses into an integrated transportation network. New rail links, such as Crossrail, are being built to link central London quickly to the home counties and its commuter towns and cities. The authorities have tried to reduce congestion in London by introducing the Congestion Charge.
- 5 **Answers will vary according to case study.** In this Revision Guide, the example is London. London's cultural mix means that 37% of people living there were born outside the UK, making it one of the most culturally diverse cities in the world.
- 6 **Answers will vary according to case study.** In this Revision Guide, the example is London. Urban greening has improved environmental quality by increasing the amount of oxygen in the atmosphere and providing a carbon sink. Trees and grass reduce the danger from flooding as they slow run-off. The green areas also provide a habitat for wildlife.
- 7 Regeneration means improving an area that has been experiencing a period of decline.

Glacial landscapes in the UK

Check it! (page 86)

- 1 Basal slip is when meltwater lubricates the base of the glacier allowing it to slip downhill.
- 2 Freeze-thaw weathering is when water seeps into cracks in the rocks. It freezes overnight and expands by 9 per cent as it turns to ice, widening and weakening the crack. The ice melts during the day and then seeps into the wider crack, until it freezes again overnight. This process is repeated over time and the crack gets bigger and bigger until the rock shatters.
- 3 Material is transported by a glacier on the surface of the ice, inside the ice and below the ice. Material is deposited by a glacier when the ice starts to melt, leaving behind till (or boulder clay) and moraines.
- 4 Five landforms created by a glacier include: arêtes, pyramidal peaks, ribbon lakes, hanging valleys and corries.
- 5 A corrie is formed when snow gathers in a sheltered hollow on a mountainside and is compressed into a pack of ice. Rotational slip and erosion by abrasion make the hollow get bigger and deeper, eroding the back and side walls. A raised lip forms at the front of the corrie, where less erosion takes place.
- 6 Corries lead to the formation of arêtes when two corries are back to back forming a steep ridge between the two, e.g. Striding Edge in the Lake District. Pyramidal peaks form when three or more corries are at the top of a mountain and form a sharp peak, e.g. the Matterhorn on the border between Switzerland and Italy.
- 7 Three different types of moraine are terminal, medial and lateral. Terminal moraine is found at the snout of the glacier. Medial moraine is found in the middle of the glacier when two glaciers meet. Lateral moraine is found at the edges of the glacier
- 8 The following are evidence of glacial movement: striations – evidence of abrasion from large boulders dragged by a glacier showing as scratches on the rock; drumlins – mounds of glacial till, deposited by a glacier as ground moraine; and erratics – large boulders found in places as a result of transportation by a glacier.

Global patterns of urban change

Check it! (page 89)

- 1 Urban growth is an increase in the size of an urban area and urbanisation is an increase in the proportion or percentage of people who live in urban areas.
- 2 Urban population growth is not spread out evenly around the world. In developed countries, e.g. the UK, the rate of growth is now slow, but it is much more rapid in developing and emerging countries (LICs and NEEs), e.g. Nigeria.

Urban sustainability in the UK

Check it! (page 107)

- 1 Sustainable means meeting the needs of the city but still being able to provide for, and meet, the needs of future generations. Ecological footprint means the area of land that is required to produce all the inputs needed and to dispose of the outputs.
- 2 There are several ways that East Village is an example of sustainable living. Examples include that the housing is energy efficient with high levels of insulation so that energy usage is 30% less than most urban areas. Rainwater is recycled for toilet flushing, reducing the need for clean water supplies. The housing also has 'green' roofs to encourage wildlife.
- 3 Bristol has developed a sustainable transport network by developing a network of cycle routes, improving the public transport with a metro rail service and creating a rapid metro bus service to shorten journey times. Traffic calming methods make it safer for people, and a park-and-ride scheme reduces traffic into the city centre. The aim is to discourage cars and encourage people to use more sustainable transport methods.

Economic development and quality of life

Check it! (page 116)

- 1 Quality of life includes the standards of education and health care, levels of happiness and equality and levels of wealth (money).
- 2
 - a One economic measure, such as GNI, which is a measure of all the profit made by a country's businesses (inside and outside the country); GNP per capita or GDP per capita.
 - b One social measure, such as life expectancy, which reflects the living conditions and level of health care in a place. (Other examples: literacy rate; infant mortality rate; access to safe water.)
- 3 Any two possibilities such as: LICs have lower education levels than NEEs; LICs have worse levels of health care than NEEs; LICs have higher infant mortality rates than NEEs; people in LICs are poorer than those in NEEs; LICs are in Stage 1 or Stage 2 of the demographic transition model while NEEs are in Stage 3; LICs have fewer doctors per 1000 people than NEEs; LICs have higher disease rates (e.g. tuberculosis) than NEEs.
- 4 In Stage 2, the birth rate is very high and may increase if better living conditions reduce infant deaths. The death rate declines very quickly from very high to quite low.
 - b In Stage 2, economic development of countries increases because of improvements in health care and living conditions, which create a better and larger workforce. Education gives people more skills to be able to work better on farms (more food) or factories (more money). This is a transition from LIC to NEE.
- 5 Overpopulation is where there are too many people for the resources available, so people lack food, water, energy and jobs, creating a lower quality of life. Underpopulation creates a similar problem, with too few people to work and develop the resources available, so people again are unable to improve their quality of life. Both overpopulation and underpopulation hold back development.
- 6
 - a Two physical causes, such as: climate may or may not favour development depending on suitability to type of development; resources are not evenly spread, those areas with resources develop while those without do not; locations may or may not favour trade, for example, those by the sea may be able to develop ports; the presence or absence of natural hazards also affects development, with those subject to natural hazards being held back.
 - b Two human causes, such as: the presence or absence of a trading network with other countries, those with one will develop more; the ability or not to attract foreign direct investment (FDI) can determine the level of development; external influences may determine the level of development, such as through a colony linked to an empire country, or the amount of aid received.

Global development gap

Check it! (page 121)

- 1 The multiplier effect is the process where money spent results in a larger effect on the economy, as the money is spent again and again. It is also where one improvement directly causes another improvement. There is a positive 'knock-on' effect.
- 2
 - a Aid may help a country develop by reducing a weakness, allowing a multiplier effect to start, e.g. educating people so that they have the skills to do their jobs better or providing finance for major projects,

such as hydroelectric power schemes that provide cheap electricity and perhaps better water supplies.

- b Fairtrade targets poorer people, e.g. farmers, to give them a reasonable income from which they can improve their lives, whereas debt relief targets a whole country or the government to reduce a massive financial burden, so that money can be invested in things to help develop the country.
 - c Both microfinance loans and intermediate technology can help poorer people, so they are similar because they both avoid dependency on external aid. Small loans can be used to improve farming, send children to school or improve housing. Intermediate technology also makes small improvements to farming and perhaps to water and energy supplies.
- 3 **Answers will vary according to case study.** In this Revision Guide, the example is Jamaica.
 - a Jamaica's natural advantages are its climate: hot and sunny, and being a tropical island with sandy beaches and warm blue seas.
 - b Tourism helps development by providing jobs and income for poorer people linked to the industry in hotels, transport, food and activities.
 - i There is economic success with 27% of GDP coming from tourism, and 82 500 jobs, and growing with a multiplier effect. There are fluctuations linked to world economic conditions and tourist fashions. However, not all tourist money reaches Jamaica, as it goes to the foreign tourist companies.
 - ii The quality of life has improved for many people, but not all. Infrastructure improvements such as roads, water and sewage systems, and housing have taken place in tourist areas, but poor conditions still exist away from these areas.

Rapid economic development and change

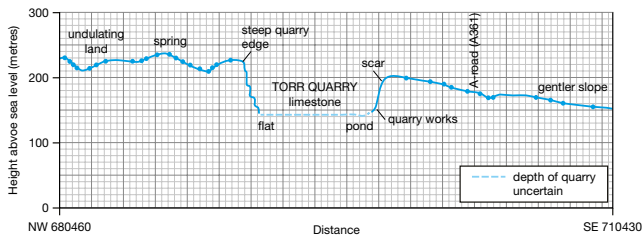
Check it! (page 125)

- 1
 - a Economic change means the changes that have taken place in the industrial structure (primary, secondary, tertiary, quaternary), the types of industry and business, the types of employment, and the wealth of the country.
 - b Environmental change means the changes to the natural environment, such as to ecosystems, rivers, the landscape, and air quality.
- 2 **Answers will vary according to case study.** In this Revision Guide, the example is Nigeria.
 - a The advantages that Nigeria has include: large oil reserves (12th largest oil producer in the world); a large young adult workforce; an English speaking population; a coast for access to trading by sea; high remittances from Nigerians abroad (US\$21 billion in 2015).
 - b Cultural characteristics include: a multi-racial society with 4 main ethnic groups; Christian and Islamic religions; growth of Nigerian music, film and sport; traditionally farming communities.
 - c The socio-political challenges that exist include: the North-South divide based on wealth, ethnicity and religion; the insurgency by Boko Haram; widespread corruption. These are challenges because peace and stability is essential to economic development, as only then will benefits spread evenly to the whole population.
 - d Political and economic globalisation have strongly influenced Nigeria because there are pressures to produce and sell, oil, because it is needed all around the world. This pressure and money has encouraged illegal activities and oil pollution. Nigeria's major trading partners are not in Africa but are China, the USA, India and the EU. Nigeria is linked to the UK as a Commonwealth country and receives aid for social purposes such as health care. Nigeria has taken a key role in Africa, such as through the African Union.
- 3 The quality of life in Nigeria has improved according to some measures of development, for example, life expectancy has increased and mortality rates are lower, more people have access to clean water and the number of children in schools has doubled. As a result HDI has increased. Economic development has also caused some problems, such as pollution of the natural environment, illegal oil refining, corruption in business and politics, deforestation, and the continued north-south divide. Nigeria's HDI rank position did not change between 2005 and 2014.

Ordnance Survey (OS) Mapwork Skills (page 130/31)

- 1 Types of economic activity evident: farming (primary); quarrying (limestone) with works (primary); forestry (primary); mill (secondary); brick works (factory) (secondary); school (tertiary); sewage works (tertiary); railway (tertiary).

- 2 Monk Wood (6943) is a deciduous wood (non-coniferous trees) with coppice.
- 3 Evidence of active quarry: railway spur line to main railway line (690435); buildings of the quarry works (697442); Merehead Quarry (limestone) is named and does not say 'disused' like the quarry in 7045; public footpath goes around the quarry.
- 4 Lodge Hill Farm is at 699455.
- 5 Footpath distance is 1.85 km (allow 1.8 to 1.9 km).
- 6 Slope characteristics: steep slope with steeper parts at top (around 265 m) and bottom (around 210 m); altitude range from 190 m to 280 m within the grid square; constant gradient in the middle section (215 m to 245 m).
- 7 See example of cross section below. Labels to include: pond in bottom of quarry; flat quarry bottom; steep slope; quarry edge or scar; gentler slopes; spring; A-road; quarry works.



Note: Vertical scale is exaggerated
Cross-section through Torr Quarry, Somerset (from 1:25000 0.5 mgp)

Changes in the UK economy

Check it! (page 139)

- 1 The main economic sector in the UK in the 21st century is the tertiary sector (service industry).
- 2 Any two, such as: outdated secondary industries (old machinery and inefficient); competition from other developed and NEE countries; UK resources running out or becoming too expensive to extract.
- 3 One government policy from: nationalisation – direct government support for industries to secure jobs and keep industries going; privatisation – government encourages competition so that industries become efficient and profitable; deregulation of financial markets – to encourage investment, including from overseas; improved transport routes – to reduce transport costs for businesses (money and time); encouraging FDI – government provides incentives to foreign companies to locate in areas of higher unemployment.
- 4 Globalisation can help the UK economy because this process supports tertiary and quaternary businesses on which the UK depends, e.g. London as a world financial centre and high-tech science parks.
- 5 A motorway provides a faster route for the delivery of goods by lorry, or for workers to get to and from work more quickly.
- 6 IT can help the UK economy by making worldwide trade links with near instant text, voice or video communications; it is also a growth business area itself and the UK is one of the top countries in the world for IT.
- 7 Any two, such as location near to: top universities (skilled workforce), fast roads rail and airports (long-distance business links), attractive surroundings (pleasant working and living environment to attract best workers).
- 8 Research and development is important so that UK businesses stay ahead of their rivals, with new ideas that will make money around the world. It is also employing an increasing number of people.
- 9 One pollution, such as: air, water, noise and land (scars in the landscape) which can be on a local to a global scale.
- 10 Green technologies produce lower levels of pollution and reduce impacts on ecosystems and the landscape. They may use green energy, e.g. solar or hydroelectric power to reduce their environmental footprint.
- 11 **Answers will vary according to case study.** In this Revision Guide, the example is Torr Quarry, Somerset.
 - a The problems include: a large hole and scar on the landscape, removal of natural vegetation, change to run-off patterns, and the creation of dust and noise, additional transportation on local roads (workers' cars).
 - b A railway is used to transport the rock rather than lorries and this reduces congestion, noise and danger on the rural roads, and reduces air pollution overall. Monitoring by the Environment Agency and Somerset County Council ensures minimum standards are met, but some damage will be caused e.g. a big hole in the ground with 20 years more disturbance to go. Eventually restoration will make improvements to the site with new woodland and grassland, the quarry lake will provide water and recreation, and the local railway is planned to keep operating which keeps lorries off the roads.
- 12 a One change from: depopulation with young adults leaving; increase in second home ownership; closure of services (e.g. village stores and post offices); ageing population.
 - b One change from: population growth; increasing house prices; expanding settlements; increased traffic on roads; uncertainty in farming; pressures on services (e.g. doctors' surgeries); community (social) change.
- 13 **Answers will vary according to case study.** In this Revision Guide, the example is South Cambridgeshire. Any two impacts of population growth described, such as: increase in the number of vehicles on rural roads, creating congestion and danger; increase in house prices so that local young adults cannot afford them; change to communities as people with an urban background outnumber those with a farming background.
- 14 **Answers will vary according to case study.** In this Revision Guide, the example is the Outer Hebrides. Any one impact of population decline such as: an ageing population (average 45–74) has been created as there are few jobs or services for young adults, causing them to move to urban areas. This leaves behind just the older people. This results in a further decline in services as the number of customers shrinks, and there is difficulty providing specialist services for the older age group.
- 15 a Several possible examples, such as: the introduction of the Dart Charge at the M25 crossing of the Thames estuary.
 - b Several possible examples of one future UK rail improvement, such as: HS2 which will link London to the Midlands and the North-West.
- 16 a Several possible examples of a recent port capacity improvement, such as: expansion of container ship docks at Liverpool2.
 - b There is still debate about where to expand London's airport capacity, despite the government decision that it will take place at Heathrow. All the choices have a range of positives and negatives. For example, Heathrow has the better infrastructure, but a large area of housing and other urban land uses would have to be cleared; while Gatwick can be expanded quicker than other locations (but rural land would be lost).
- 17 Any one generalised difference, such as: the North has a lot of manufacturing industry, while the South has tertiary; the North has higher unemployment than the South; North has lower house values than the South; North is generally poorer than the South.
- 18 a Any one government scheme, such as: investment in transport links such as rail improvements between Manchester and Sheffield; directing FDI to northern locations such as Nissan factory to the North-East.
 - b Broadband provision in northern areas of the UK would help to reduce the divide because most businesses now rely on internet links for advertising, taking orders for goods or services, and finding new materials or customers. Tertiary (services) businesses depend on broadband connection to carry out their IT activities.
- 19 One major international organisation, such as: the EU (until Brexit negotiations are completed); NATO (security); the UN and UN Security Council; G8 (economic discussion group).
- 20 The UK is currently linked to the EU through the 'single market' trade agreement and the freedom of movement of EU citizens. The UK gives money to, and receives money from, the EU funds. Physically the UK is linked to the EU via the Channel Tunnel (road and rail) and by a variety of ports and airports.
- 21 Transport hubs are important because they provide the links for businesses, industries and people to other countries. They link directly and indirectly to every country of the world. (Include some facts about at least one of the following – Heathrow, Felixstowe, Channel Tunnel.)

Resource management

Check it! (page 152)

- 1 Water can improve people's lives by providing clean safe water for drinking, and for washing to keep clean (hygiene). Water also can be used for washing things and for irrigation, which increases food supplies. Water is used by industries that employ people and make things that people need. Water may also provide leisure opportunities such as swimming or sailing.
- 2 Patterns of food consumption vary around the world because population sizes vary and where there are more people, more food will be eaten. Where people are wealthier, more food can be bought and eaten. Preferences for and availability of food in different places means that diets differ.

- 3 Energy supplies are unevenly distributed around the world because geological processes millions of years ago only formed fossil fuels in certain locations, and today these processes determine the location of geothermal areas. Physical geography determines where there is enough water and steep slopes for hydroelectric power, and climate determines where solar energy and wind energy are possible. Technology must also be available for a country to use the possible energy resources.
- 4 Two ways, such as: the demand for a wide variety of foods because of links with Commonwealth countries and the EU; supermarkets are able to make deals to get foods from various locations at relatively cheap prices, for example, this ensures that vegetables and fruits are available throughout a year rather than just seasonally; there has been a small increase in the demand for organic, environmentally friendly and Fairtrade products as people get more concerned about the environment and social responsibility.
- 5 Farming activities may contaminate water by adding chemicals to groundwater and rivers, for example, nitrates in fertilisers may lead to the process of eutrophication.
- 6 Economic issues, such as: fossil fuels running out, which will increase energy costs, or increase the costs of extracting the resource, such as oil from deeper water in the North Sea; high costs of decommissioning nuclear power stations; increasing need to invest in the development of renewable energy.

Food

Check it! (page 159)

- 1 Food insecurity means that there is not enough food for everyone, either because of poor environmental factors (e.g. plant disease) or human factors (e.g. civil war).
- 2 **a** Three reasons, such as: world population growth means that there are many more people to feed; increasing average wealth of people means that globally more food is being bought; changing diets are increasing the diversity of foods that are expected, including a higher consumption of meat.
b Pests and diseases may affect food supplies because they kill crops and animals or make them unfit for people to eat, and so reduce the amount of food available (food insecurity).
- 3 Three impacts, such as: famine, undernutrition, soil erosion, rising prices or social unrest. For example, food insecurity means a lack of food, which can lead to a famine during which people may starve to death. During food insecurity children experience undernutrition, so that they do not get a balanced diet and are unable to fight off disease. As food is essential to life, people get very angry and worried when there is food insecurity, which can lead to them taking violent action.
- 4 Aeroponics involves the growing of plants in misted air without the use of soil. This requires considerable amounts of water and special equipment.
- 5 **a** The aim of permaculture is to be self-sufficient in food supplies by using natural systems, renewable resources and adapting to the Earth's changes.
b Biotechnology is controversial because it often involves genetic modification (GM), which some people believe changes natural systems, plants and animals too much, even causing negative impacts on human health when GM foods are eaten.
- 6 Answers will vary according to case study. In this Revision Guide, the example is the Indus Basin Irrigation System.
a Two advantages, such as: increased food production due to a larger area of farmland; nutrition of local people is better because a greater variety of crops is grown; reservoirs can also be used for fish farming which provides protein; food processing industries have been established which employ people; the dams can also provide cheap electricity through HEP.

Answers will vary according to case study. In this Revision Guide, the example is Jamalpur, Bangladesh.

- b** One feature, such as: planting of fruit trees and vegetables on the dykes between the paddy fields, which has made the scheme sustainable because it provides a long-term improvement to the diet of local people, making them healthier and able to work better.

Water

Check it! (page 165)

- 1 Water insecurity means that there is an unreliable supply of safe clean water and not enough for everyone's needs.
- 2 **a** Three reasons for the increase in world water consumption are: the increase in world population, the more people there are, the more water is used; economic development means that there are more businesses and industries, all of which use water for processing, cooling machinery or for farming; the average standard of living has increased and people use more water directly for washing things, but also indirectly through the things that they buy.
b Over-abstraction may affect water supply because it reduces the amount of water stored and available in the ground or rivers, so there is not enough for people, farming and industries.
- 3 Three impacts, such as: without enough irrigation water, food supplies would decrease causing malnutrition or hunger; without enough water, factories may not be able to make products and have to close down; there may be fighting within a country or between countries over water if there is not enough for everyone.
- 4 The main features of desalination are the taking of seawater, and using a lot of energy to separate the salts from the water to produce drinking water.
- 5 **a** The aims of increasing groundwater storage link to the water situation in an area. It may be to ensure that there is enough water in case of drought, or to replace the water after a drought, or to raise groundwater levels again when too much has been taken out and used.
b Using dams and reservoirs to increase water supplies is controversial, because a large area of land is flooded to create a reservoir behind a dam and people may have to move from their homes and fertile farmland may be lost. In some places waterborne diseases may increase, and minor earthquakes may even occur as the weight of the water pushes the land down.
- 6 **a** Answers will vary according to case study. In this Revision Guide, the example is China (south to north). Two disadvantages, such as: the scheme is very costly for the NEE (US \$80 billion) and diverts money away from other purposes; many people have been moved to make way for new reservoirs and canals; the amount of water in the Yangtze River has been reduced, which affects boats trying to move along it and the wildlife that lives in it.
b Answers will vary according to case study. In this Revision Guide, the example is Hitosa, Ethiopia. One feature is the pipeline that moves the water by gravity from the springs to 100 stand taps.
c The water pipeline at Hitosa is a sustainable feature because it uses no energy to transfer the water, so there are no expensive pumps for local people to pay for and no pollution. 65 000 people have access to water in a hot dry area, which has improved their lives in the long term.

Energy

Check it! (page 175)

- 1 Energy insecurity means that there is an unreliable supply of energy and not enough to meet the needs of people and businesses.
- 2 **a** Three reasons for the increase in world energy consumption are: the increase in world population, so there are more people and more energy is used; economic development means that there are more businesses and industries, all of which use energy for their machinery and technology; the average standard of living has increased and people use more energy directly for electricity and petrol, but also indirectly through buying things made in factories.
b The costs of exploitation and production may affect energy supplies by: making prices too high for poorer people due to extraction and conversion costs; getting new resources may only be worthwhile if the resource is running out and costs have got very high, so for a time there may only be a certain amount of energy available.
- 3 Three impacts, such as: it may force a country to look for energy resources in a difficult or sensitive area, which may then damage the environment as well as cost a lot of money; if there are not enough energy supplies, there may be power cuts, which means that industries cannot operate and people will have no power for their homes; pressure may increase to grow biofuel crops instead of food crops, which may reduce the food supplies for the country.

- 4 The main features of biomass energy are the use of plant material to burn (e.g. wood, special grasses, ethanol (which is produced from plant material)). These need a large area of land to grow the biofuel crops or woodland that can be cut down. It is a renewable resource as long as the vegetation is replanted and it is low cost so that poorer people can afford it. It is a flexible energy source as it can be used by families or in large power stations.
- 5 a Positives explained, such as: it is a cheap energy source once the machinery is in place, because the wind is free; wind farms with many turbines can create energy for thousands of homes; it is a flexible energy source because micro-turbines can be used for individual homes or farms in remoter locations. Negatives explained, such as: wind turbines are often very large and so are considered unsightly and spoil views; wind farms may be costly if they are located offshore in the sea; wind turbines have moving blades which endanger birds, and when they are placed offshore, disturb the seabed.
- b Using hydroelectric power to create energy is controversial, because a large area of land is flooded to create a reservoir behind a dam, and people may have to move from their homes and fertile farmland may be lost. The dam may be unsightly and there is a lot of change to the landscape. They are also very expensive, which may make them unsuitable for a LIC/NEE country.

Issue evaluation

Check it! (page 185)

The exam

- Paper 3 Section A
- a One minute per mark.
b Yes there will be skills questions.
- Things to remember about the final exam question include: do it last; leave at least 9 minutes to complete it; SPaG marks are allocated to it; the command word 'justify' will be used; there is no correct answer; state your choice clearly; give advantages of your choice with evidence; give problems with evidence, and reject other possible choices with evidence if you have time.

The resource booklet

- Any type of resource could be used, including graphs, maps, diagrams, text extracts, tables of data, and photographs.
- Four sections.
- The understanding of any topic or combination of topics may be useful in the examination to show your depth and breadth of geographical ability and to get higher marks. Similarly an awareness of what is happening in the world would also help to broaden your understanding of the resources provided.

Academic skills

- The mean is calculated by adding up all of the numbers and dividing by how many there are (also sometimes called the average).
- The interquartile range is calculated by dividing the number of values into four equal groups after arranging them from highest to lowest (perhaps in a single axis scatter graph). The interquartile range is then the difference between the value dividing the highest quarter from the one below and the value between the lowest quarter and the one above.
- A choropleth map is created by dividing the range of values for areas into four (or more) categories (by using regular steps, standard deviation, or by visual analysis of a single axis scatter graph). Each category is allocated a colour or shading in a logical sequence, such as crimson, red, orange, yellow. Each area on the map is then coloured according to its category.

Exam command words

- 'Suggest' means that there is not one definite answer expected, perhaps because the examiner does not expect you to know the exact geographical situation. You must present a case for your answer using geographical ideas and understanding from similar situations.
- 'Plot' means mark accurately on a graph the exact point for a given value (this may also involve completing the graph).
- To justify, you must use geographical reasons for decisions. To make these reasons precise, you must use evidence to back each one up.

Fieldwork and geographical enquiries

Check it! (page 193)

The exam

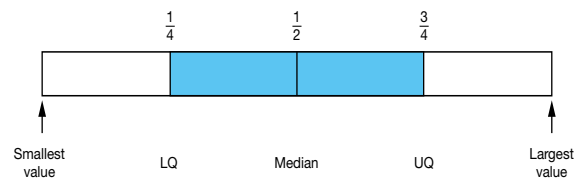
- The fieldwork enquiry is found in Paper 3 Geographical applications, Section B.
- a Roughly one minute is available per mark (76 marks for 75 minutes exam time).
b There are skills questions in this exam.
c The answer will depend on the geographical enquiry undertaken, but essentially you need to remember: geographical enquiry; measuring and recording data; processing and presenting fieldwork data; describing, analysing and explaining fieldwork data; reaching conclusions; and evaluation of geographical enquiry.

The enquiry process

- The answer will depend on the geographical enquiry undertaken.
- The six strands of enquiry that you could be examined on are: geographical enquiry; measuring and recording data; processing and presenting fieldwork data; describing, analysing and explaining fieldwork data; reaching conclusions; and evaluation of geographical enquiry.
- The answer will depend on the geographical enquiry undertaken
- The answer will depend on the geographical enquiry undertaken. A good risk assessment could focus on: hazard, event risk, action to be taken to reduce risk, action to be taken in event of risk occurrence.

Academic skills required

- The interquartile range is a value calculated by: the upper quartile minus the lower quartile. It shows how spread out the middle 50% of the data is.



The 50th percentile is the median. The 25th percentile is the value 25% of the way into the data set, when the data is in order. This is a quartile. The lower quartile is 25% of the way into the ranked data.

- Isolines are the lines which join all places with points of the same or equal value. These lines join places with the same or equal characteristics.
- This will depend on the data presentation methods used. For example, why you have chosen a bar chart instead of a line graph, etc.

Exam command words

- The command word 'suggest' means present a possible case.
- The command word 'calculate' tells you to work out the value of something.
- The command word 'explain' tells you to set out purposes or reasons for something.
- The command word 'assess' tells you to make an informed judgement on an issue by weighing up various possible options.