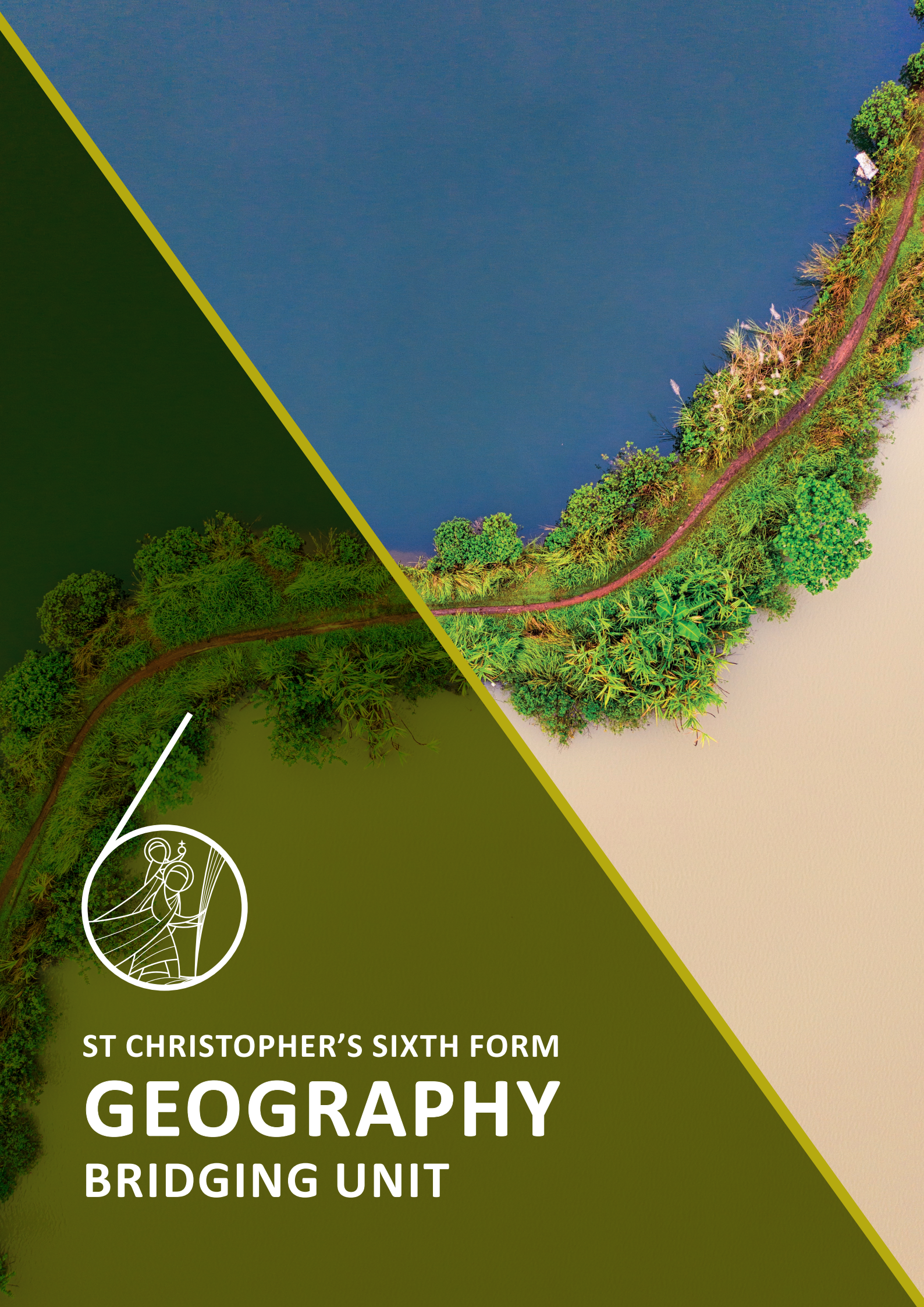


ST CHRISTOPHER'S SIXTH FORM

GEOGRAPHY

BRIDGING UNIT

Geography

Course Overview

The A Level Course studied at St Christopher's will follow the AQA syllabus that can be found online http://www.aqa.org.uk. The units that we will be selecting for Year 12 are:

- Water and Carbon Cycles
- Coasts
- Population and the Environment
- Changing Places

You may wish to download the syllabus from the AQA website in order to view the specification material in more detail. The textbook we use most frequently as an accompaniment is "AQA A-Level Geography (4th Edition)", edited by Skinner, M et al, and we also use "Geography Student Book – A/AS Level for AQA, edited by Parkinson, A. Please note, we only offer the A-Level Geography course at the Sixth Form.

Geography is also a very topical subject and I would encourage you to keep up to date with world issues over the summer by:

- Reading a good daily newspaper and collecting cuttings in a folder about any of the syllabus related topics
- Watching current affairs programmes or looking at BBC News online for further discussion of world issues
- Looking out for relevant articles in journals e.g. "The Economist", "The New Scientist" or "National Geographic"

Case Studies

It may also be helpful over the summer to get an idea of some of the places we are going to study. You may want to visit some of them (again if travel restrictions allow!) or at least do some reading/research into them.

Water and Carbon Cycles

Topic	Case Study	Resources
Impact of deforestation on climate, Carbon Dioxide absorption rates	• Amazon Rainforest, Brazil	• BBC "Lungs of the Planet" Resources • https://www.alevelgeography.com/water-and-carbon/

Coasts

There is a helpful section on Coasts in the GCSE textbook (AQA Geography GSCE, edited by Ross, S) which will be worth reading ahead on if you have never studied this topic beforehand, although the syllabus assumes no prior level of study

Topic	Case Study	Resources
HIC Coastline Management	• Holderness, NE England	• GCSE Bitesize website – Coastal Management in Holderness • A Level Geography website www.alevelgeography.com/coasts – Coastal Management in Holderness (Mappleton)
LIC Coastline Management	• Bangladesh	• GCSE bitesize website – Coastal Management in Bangladesh • Slideshare website https://www.slideshare.net/cheergalsal/bangladesh-coastal-flooding - Coastal Flooding in Bangladesh

Hazards

There is a helpful section on Hazards in the GCSE textbook (AQA Geography GSCE, edited by Ross, S) which you all will have studied before in GCSE Geography. Please also go back over your old GCSE notes in books (and keep those books – they are always handy for going back over your learning!). Case studies here may vary by which teacher you get, but all are worth looking into in detail

Topic	Case Study	Resources
Volcanic Eruption (Seismic Hazards)	• Mount Nyiragongo, DR Congo, 2002 • Eyjafjallajokull, Iceland 2010	• https://earthobservatory.nasa.gov/images/9160/nyiragongo-volcano-erupts-in-the-congo • https://www.bgs.ac.uk/research/volcanoes/icelandic_ash.html • https://www.youtube.com/watch?v=blDXgde1Tpg
Earthquake (Seismic Hazards)	• Nepal, 2015 • Haiti, 2010 • Japan, 2011	• https://www.internetgeography.net/topics/nepal-earthquake-2015/ • https://www.bbc.co.uk/bitesize/guides/zgkksrd/revision/5 • https://www.bbc.co.uk/bitesize/guides/zp46sg8/revision/5 • http://www.coolgeography.co.uk/GCSE/AQA/Restless%20Earth/Earthquakes/Haiti.htm • https://www.alevelgeography.com/japan-2011-earthquake-case-study/
Atmospheric Hazards	• Typhoon Haiyan, 2013 • Hurricane Sandy, 2012	• https://www.bbc.co.uk/bitesize/guides/zyd8frd/revision/7 • https://www.internetgeography.net/topics/typhoon-haiyan-case-study/
Multi-Hazardous environment	• The Phillipines	• https://coggle.it/diagram/WjEGP0rD2AABaZeC/t/the-philippines-multi-hazard-case-study
Wildfires	• California, 2018 • Australia, 2009 & 2020	• https://blog.thinkreliability.com/case-study-californias-deadliest-wildfire • https://www.corelogic.com/downloadable-docs/wildfire-case-study-1118-04-screen.pdf • https://www.vox.com/2018/8/7/17661096/california-wildfires-2018-camp-woolsey-climate-change • https://aussie-bushfires.weebly.com/case-study--2009-black-saturday-bushfires.html • https://www.bbc.co.uk/news/world-australia-47038202

Geography

Changing Places

Please note, some of these reports are very long! Don't let this put you off, or maybe just cheat and read the summaries instead!

Topic	Case Study	Resources
Placelessness		• https://www.independent.co.uk/news/uk/home-news/clone-towns-british-towns-in-danger-of-becoming-identical-and-soulless-9214986.html
Change in Rural Areas	• Sabden or Whalley	• Council Ward profiles of each area (Ribble Valley.gov.uk)
Re-imaging and re-branding	• Salford Quays or Belfast or Amsterdam	• Manchester – A Sense of Place article • Websites on how Salford Quays has changed as "Media City" • IAmsterdam campaign
Manipulation of place	• Israel or Syria	• Tourist Agency websites
Local Place	• Accrington	• David Lloyd's Autobiography "Last in the Tin Bath" – THIS is a case study we quote directly for the exam • Stuart Maconie "Pies and Prejudice" • Accrington Baseline Report (2008) • Accrington Masterplan Executive Summary • Accrington Area Action Plan
Distant Place	• New York	• OneNYC Report • OneNYC Progress Report (2016)

Population

Topic	Case Study	Resources
Changes in Population Structure	• China's One Child Policy	• Plenty out there
Case Study of Population Change	• Your Own	• You have to have your own one of these for the exam, so making a start on this now might not be the worst idea! China is a good place to start, but also think about how population changes affect HICs e.g. ageing population in France, Poland
Migration	• Your Own	• Again, you will use different case studies for migration, but a good place to start is reading recent articles about migration to Europe from outside, and forced migration due to the conflict in Syria
Food Security Solutions	• Green Revolution	• https://www.ifpri.org/publication/green-revolution - A good, downloadable PDF case study as evaluation here. Plenty more out there!
Communicable Disease	• Malaria	
Non-Communicable disease	• CHD (Coronary Heart Disease)	
International Organisations	• Impact of the MDGs on Health	• Find out what the MDGs are/were! • Look at reports on MDG 6 in particular – successes/failures?
NGOs	• Riders for Health in Kenya	• Based on a 2015 A Level Pre-release booklet https://pastpapers.co/aqa/A-Level/Geography-2030/AQA-GEO4B-PM-JUN15.PDF • Riders for Health also have a website https://ridersintl.org/
Local Health Inequalities	• Hyndburn	• This is the report for Hyndburn 2019 – worrying stuff! https://fingertips.phe.org.uk/static-reports/health-profiles/2019/e07000120.html?area-name=hyndburn

Below are some sample questions to give you an idea of the standard that you will be working at by the end of Year 12. Don't try and complete these, but then be pleased at the end of Year 12 when you can!

Q. Examine the factors that influence river discharge (10 marks)

Q. How and why does a population structure change as a country progresses through the stages of the Demographic Transition Model? (10 marks)

Overall, have a relaxing summer and we hope to see you, ready and raring to go (or something along those lines!) in September. Please feel free to e-mail at: **t.smith@st-christophers.org** if you have any questions.

Mr Smith and the Sixth Form Geography Department

AQA GCSE Geography - Coastal Landscapes

How do waves form?

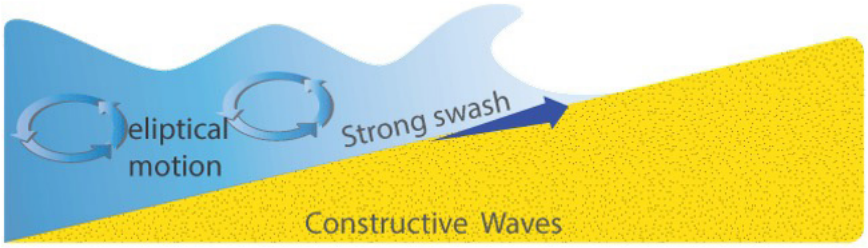
Waves are formed by the action of the wind blowing over the sea. Friction with the surface of the water causes ripples to form and these develop into waves.

The distance that the wind blows across the water is known as the fetch. The longer the fetch, the more powerful the wave.

Water that rushes up the beach is known as swash. Water flowing back down the beach towards the sea is backwash.

https://timeforgeography.co.uk/videos_list/coasts/types-waves/

Wave types



Constructive waves are low in height. They spill onto the beach and carry lots of sediment. Constructive waves 'construct' the beach making it larger. The beach will have a gentle slope.

Destructive waves are tall in height they plunge onto the beach and 'destroy' it by removing large amounts of sediment. The waves are shorter and they create a steeper beach.

Task: Complete the table below

Wave characteristic	Constructive waves	Destructive waves
Wave height		
Wave length		
Type of wave break (spill or plunge)		
Strength of swash		
Strength of backwash		

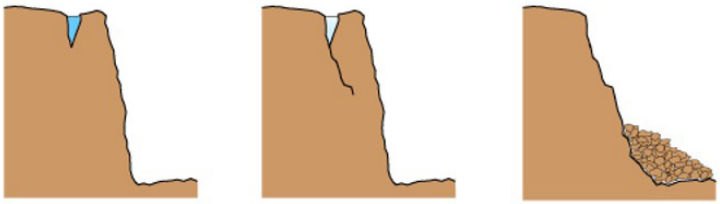
What causes cliffs to collapse?

Weathering and mass movement

Weathering causes cliffs to collapse. Weathering is the weakening or decay of rocks in their original place close to the ground surface. Weathering is mainly caused by the weather – rainfall and changes in temperature.

There are three types of weathering:

- **Mechanical weathering** – the disintegration or break up of rocks.
- **Chemical weathering** – caused by chemical changes such as slightly acidic rainwater dissolving certain types of rock.
- **Biological weathering** – due to plants and animals. Animals such as rabbits burrow into weak rocks. Plants grown in cracks in the rock and widen cracks, loosening them.

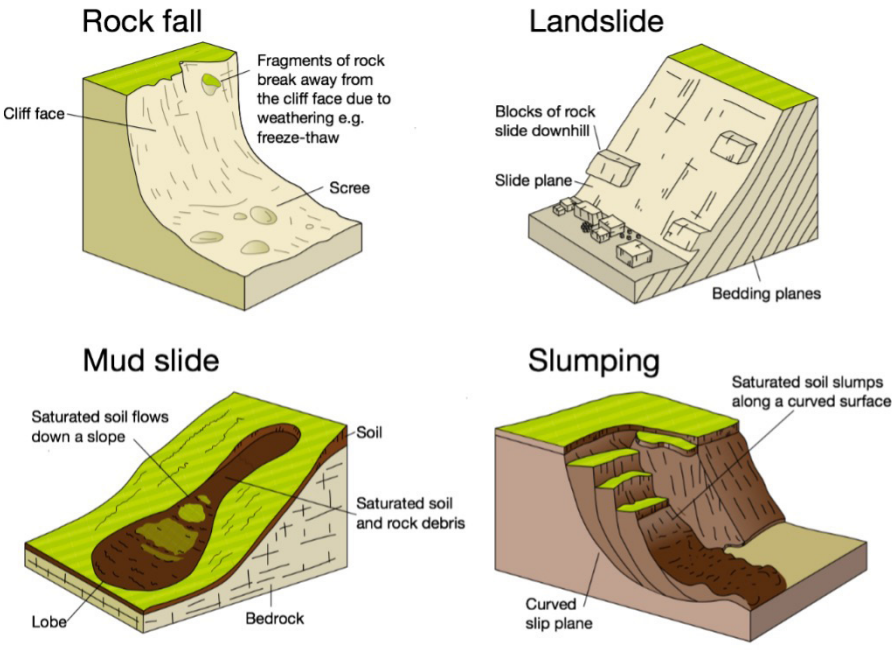


Task:

Freeze thaw weathering is an example of mechanical, chemical or biological weathering?

.....

Mass movement - is the downward movement or sliding of material under gravity.



https://timeforgeography.co.uk/videos_list/coasts/subaerial-erosion-processes/

Geography

Coastal erosion

Erosion involves the removal of material and the shaping of landforms.

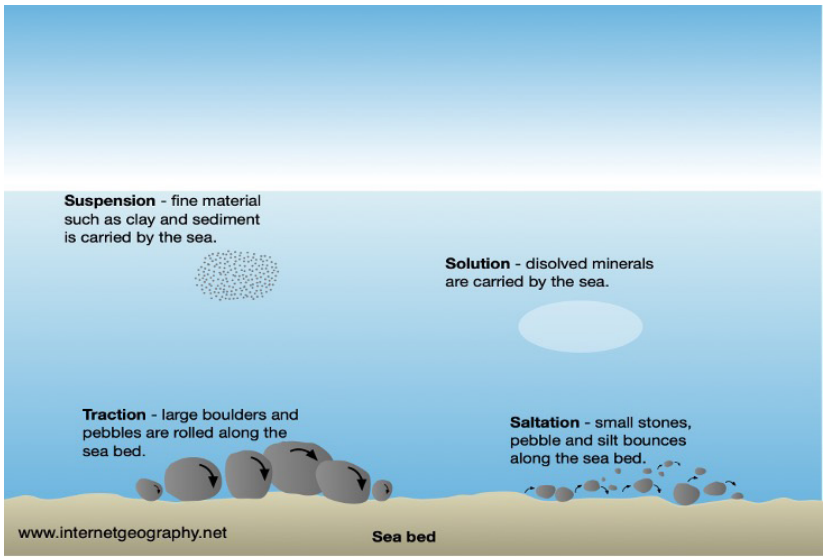
https://timeforgeography.co.uk/videos_list/coasts/marine-erosion-processes/

- **Hydraulic power –** the power of the waves as they smash into a cliff. Trapped air is forced into holes and cracks in the rocks causing them to break apart.
- **Attrition –** rocks knock against each other and become smaller and more rounded.
- **Abrasion –** The sandpapering effect of pebbles grinding over a rocky platform causing it to become more smooth.
- **Corrasion –** rocks are picked up by the sea and hurled at a cliff. The rocks act like tools scraping and gouging, eroding the rock.
- **Solution –** dissolving of soluble chemicals in rocks e.g. limestone

Task: Annotate the photo of a cliff with the weathering and erosion processes likely to be acting upon it.

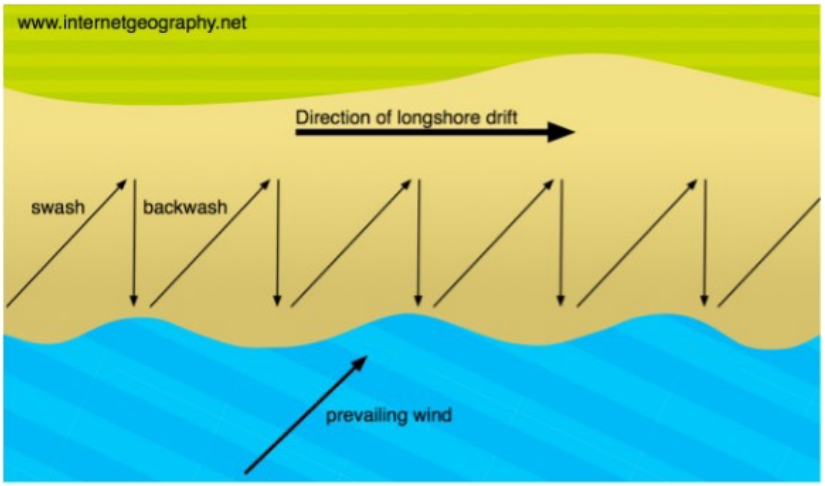
Coastal transportation

Sediment of different sizes can be transported in the sea in four different ways.



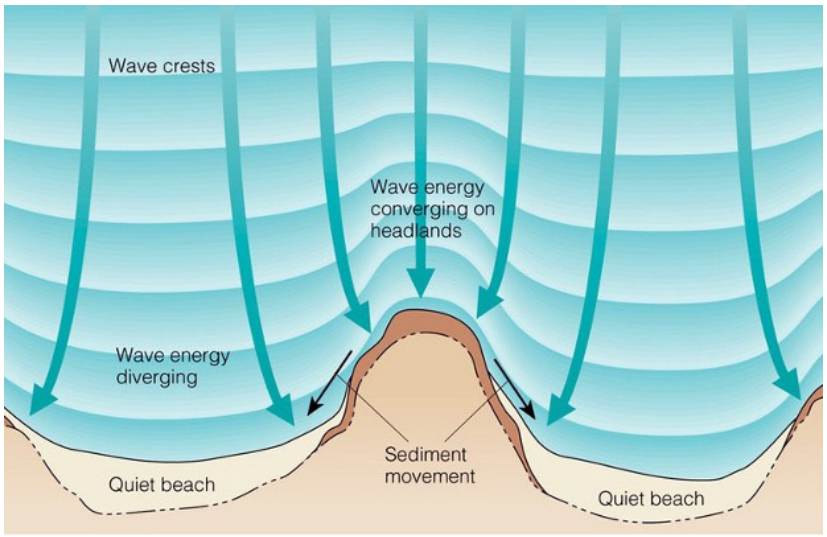
Longshore drift

This process moves sediment along a coastline. When waves approach the coastline at an angle, sediment will be moved along the beach in a zig zag pattern.



Coastal deposition

Deposition takes place in areas where the flow of water slows down. Waves lose energy in sheltered bays and where water is protected by spits or bars. Here sediment can no longer be carried or moved so it is deposited. This explains why beaches are found in sheltered bays, where the energy is reduced. Wave energy is concentrated on headlands. This is called wave refraction.



Geography

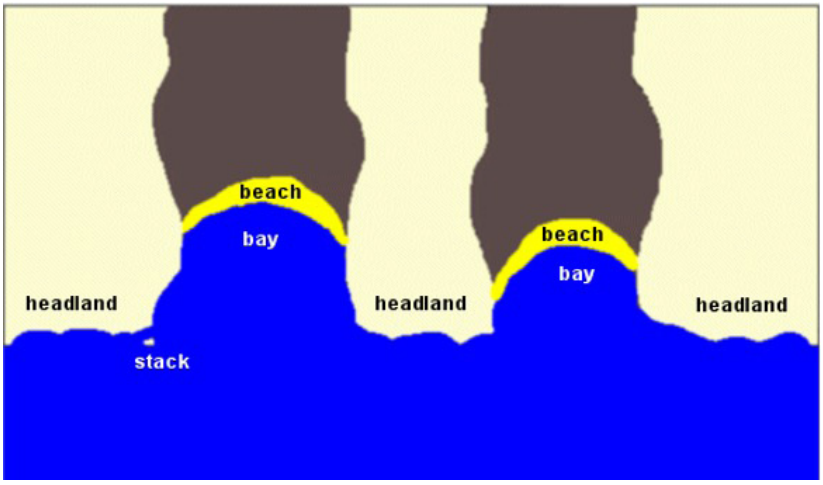
Coastal landforms

A landform is a feature of the landscape made by the processes of:

- Erosion
- Transportation
- Deposition

Bays and headlands

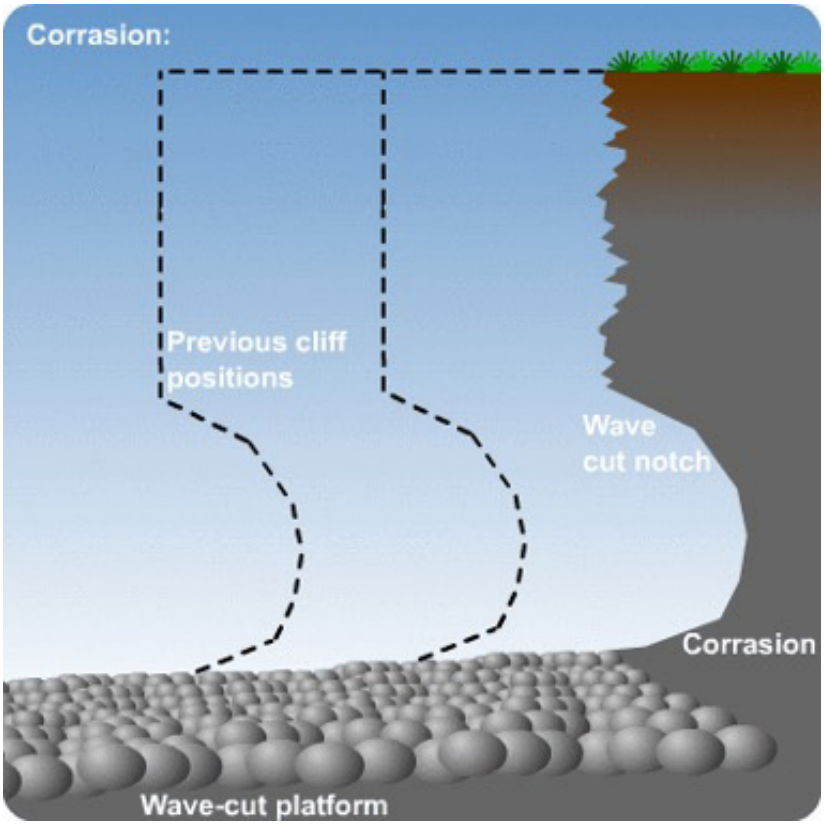
Bays and headlands are formed due to different rates of erosion. Weaker bands of rock erode more quickly and bays are created and softer rock is eroded away more quickly. More resistant bands of rock erode more slowly and so they stick out into the sea forming headlands.

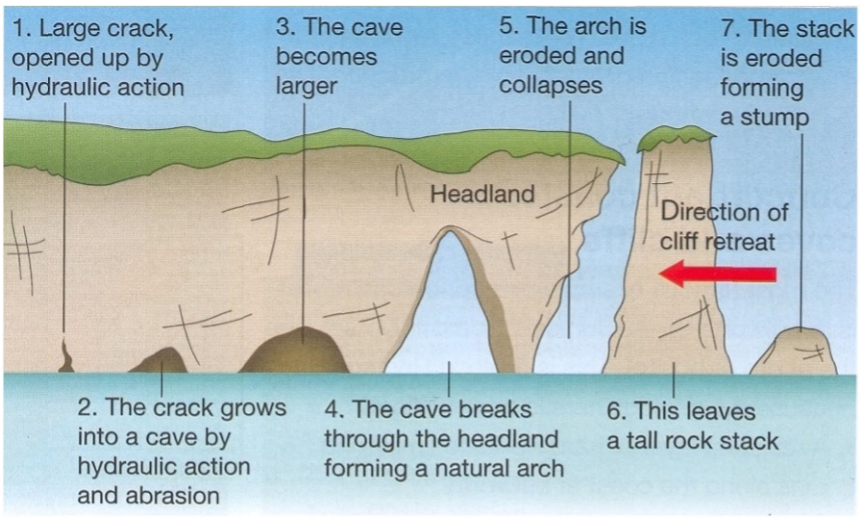


Cliffs and wave cut platforms

When waves break against a cliff, erosion will wear away the rock at the base of a cliff creating a wave cut notch. Overtime the notch will get deeper and deeper into the cliff undercutting and causing the cliff face to collapse. As this process repeats the cliff face will retreat and leave a gently sloping rocky platform called a **wave cut platform**.

https://timeforgeography.co.uk/videos_list/coasts/formation-of-a-wave-cut-platform/





Caves, arches and stacks

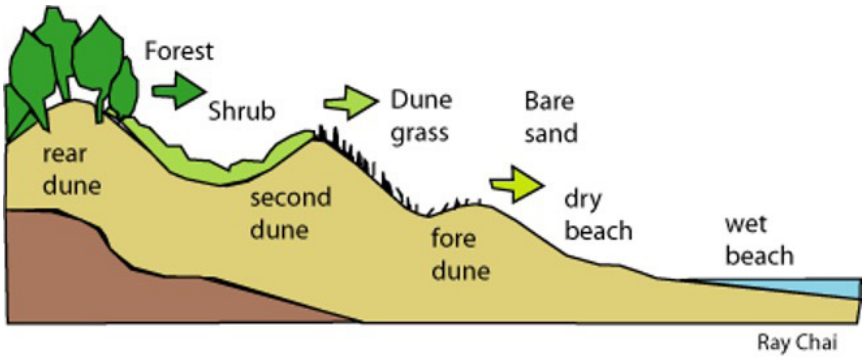
Lines of weakness in a headland, such as faults, are particularly vulnerable to erosion. The energy of the waves wears away the rock along a line of weakness to form a cave. Overtime increased erosion may lead to the back of the cave eroding through to create an arch. Gradually the arch is enlarged by erosion by waves at the base and weathering processes at the top. Eventually the top of the arch will be worn away and collapses to form an isolated pillar of rock known a stack.

https://timeforgeography.co.uk/videos_list/coasts/formation-of-a-sea-stack/

Coastal deposition landforms

Beaches

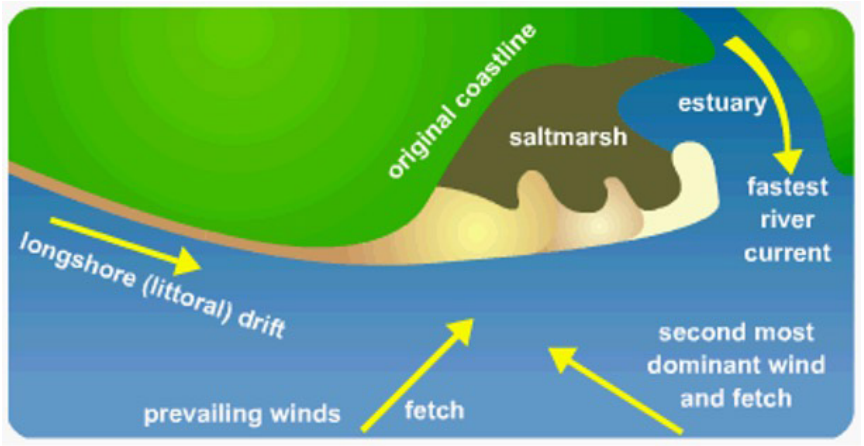
A beach is a deposit of sand and/or shingle (pebbles) at the coast. Sandy beaches are mainly found in sheltered bays. The waves operating in the bay are constructive, they have a strong swash and build up the beach.



Sand dunes

Sand dunes occur at the back of a beach where large amounts of sand are blown inland by onshore winds to form dunes. Sand dunes are formed when sand accumulates around an object such as a pebble or a stick. Overtime these dunes become stabilised by vegetation such as marram grass. The roots of these grasses bind the sand dune together. In time rotting vegetation adds organic matter to the sand and it becomes a sandy soil where more types of vegetation can grow.

https://timeforgeography.co.uk/videos_list/coasts/formation-sand-dunes/



Spits

A spit is a long, narrow finger of sand or shingle jutting out into the sea form the land. Spits will form on a coast where there is significant longshore drift. If the coastline changes orientation or bends sharply, sediment is deposited out at sea. This sediment builds up and forms an extension to the land, the process repeats and a spit grows out into the sea. Strong winds or tidal currents will cause the end of the spit to be curved. In the sheltered water behind the spit, deposits of mud build up creating a mudflat. When vegetation starts to grow it becomes known as a saltmarsh.

Why do you think the area behind a spit is known as saltmarsh?

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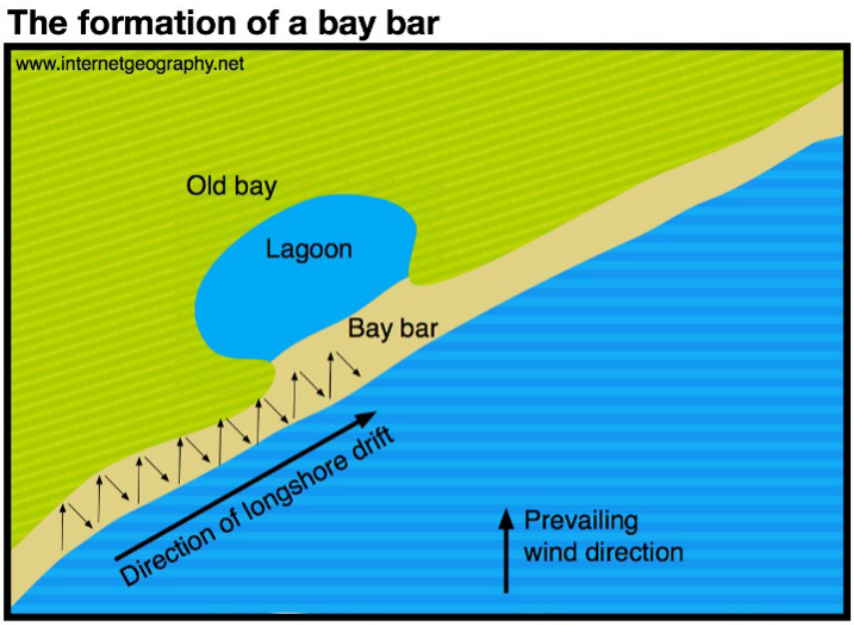
Geography

Bars

Longshore drift may cause a spit to grow right across a bay, trapping a freshwater lake behind it known as a lagoon. This is known as a bar.



Task: Identify the landform – write the name of the landform under each photo.

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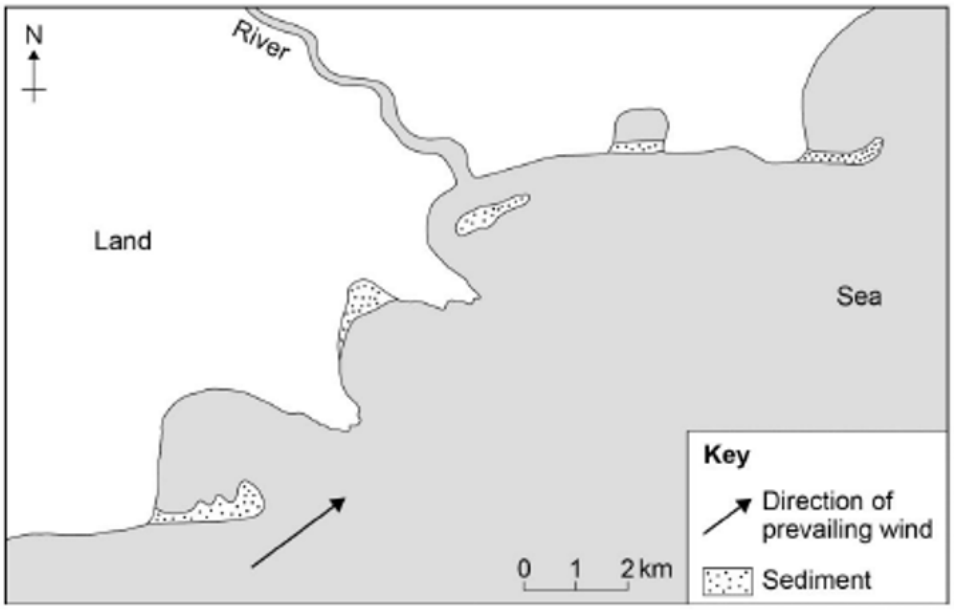
Study **Figure 12**, a sketch map showing features of coastal deposition.

Figure 12



Using Figure 12 and your own knowledge, explain how different landforms may be created by the transport and deposition of sediment along the coast. (6 marks)

Geography

Identify the landform shown above. (1 mark)

.....

Explain the processes which lead to the formation of this landform. (4 marks)

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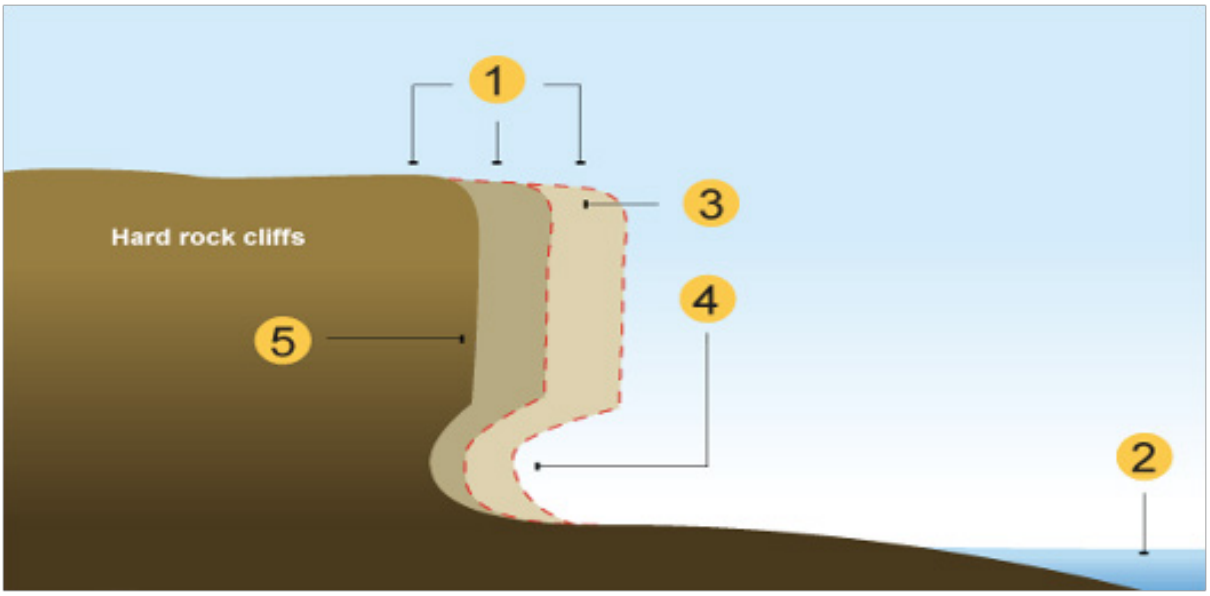
The following paragraph describes how coastal processes are linked. Complete the paragraph. Choose the correct words from the list below. (2 marks)

Deposition **Transported** **Weathering**

Erosion and ..... break down rocks in coastal areas. Sediment is ..... by the action of the waves and tides. Once the waves and tides have lost energy ..... takes place.



Use the diagram above to write 5 statements to explain the formation of a wave cut platform.

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With reference to the photograph above, explain how a stump is formed.

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Geography

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

Use the statements below to label the map above, part of the Devon coastline.

Choices:

- Recurved end
- Mudflats
- Shingle beach
- Salt marsh
- Direction of longshore drift
- Neck of spit

Coastal Management

The coast needs to be managed to prevent erosion and flooding from the sea. People who live or work near the coast need protection.

There are three different management strategies for defending the coast.

- **Hard engineering** - uses artificial structures such as sea walls to control natural processes.
- **Soft engineering** - is less intrusive and more environmentally friendly, it uses methods that work with natural processes such as sand dune regeneration.
- **Managed retreat** - this increasingly popular option enables the controlled retreat of the coastline, often involving allowing the sea to flood over low lying land.

Hard Engineering

Sea Wall

A concrete or rock barrier against the sea, placed at the foot of cliffs or at the top of a beach. Has a curved face to reflect the energy of the waves back into the sea.

Cost: £5000-£10,000 per metre

- ☺ Effective at stopping erosion and flooding
- ☺ Often has a walkway or promenade on top for people to walk on
- ☹ Looks unnatural
- ☹ Very expensive

Groynes

Timber or rock structures built out to sea from the coast. They trap sediment being moved by longshore drift and protect the beach. A wide beach acts as a natural buffer to reduce wave damage. Beaches can absorb the energy from the waves.

Cost: £150,000 per timber groyne

- ☺ Creates a wide beach that attracts tourists
- ☺ Prevents longshore drift
- ☹ Can increase erosion further along the coast
- ☹ Groynes are unnatural and expensive to construct

Rock Armour (Rip Rap)

Piles of large boulders or rocks are dumped at the base of a cliff or along a beach. The rocks force waves to break, absorbing their energy and protecting the land.

Cost: £200,000 per 100 metres

- ☺ Relatively cheap and easy to maintain
- ☺ Effective at reducing erosion
- ☹ Rocks are usually transported from abroad
- ☹ Looks unnatural

Geography

Soft Engineering

Beach Nourishment

Adding sand or shingle to a beach to make it wider or higher.

Cost: up to £500,000 per 100 metres

- ☺ Relatively cheap
- ☺ Looks natural
- ☺ Good for tourism and visitors
- ☹ Needs constant maintenance especially after storms

Dune Regeneration and Fencing

Sand dunes are protected by fencing and building walkways to prevent the dunes being damaged by erosion. Marram grass can be planted to stabilise the dunes and help them develop.

Cost: £200 - £2000 per 100 metres

- ☺ Sand dunes provide a natural barrier against the sea
- ☺ Relatively cheap
- ☺ Maintains a natural coastal environment - popular with people and wildlife
- ☹ Can be damaged by storms and regular maintenance is required
- ☹ Time consuming - Marram grass takes a while to grow
- ☹ People may not always keep out of fenced areas

Managed Retreat

Managed retreat is a deliberate policy of allowing the sea to flood or erode an area of relatively low value land. It is a form of soft engineering and it allows natural processes to take place. Low lying land of low value along the coat is allowed to flood.

In the long term this is more sustainable than spending large amounts of money trying to protect the coast building large structures such as sea walls. Structures that will need constant maintenance especially as sea levels continue to rise.

Task:

Explain why managed retreat may have been used on this area of land.

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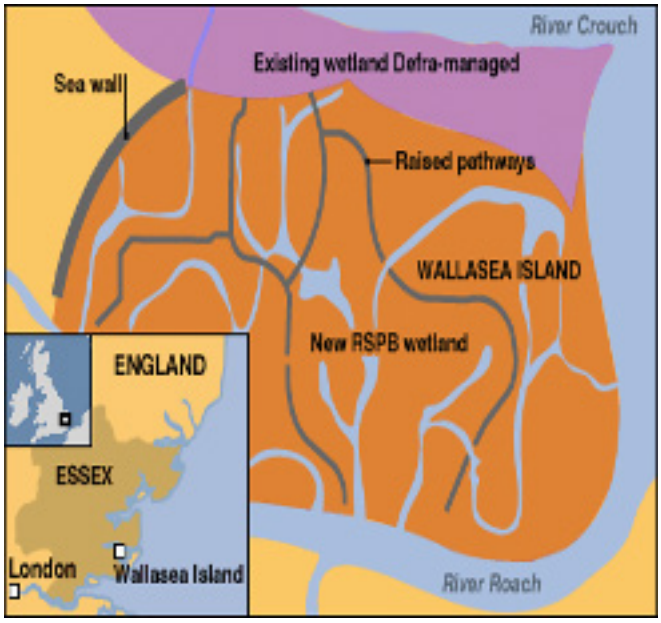

Questions - Managed Retreat at Wallasea Island in Essex

1. What evidence is there on the map to show that this area is at risk of flooding?

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2. How is the area currently being used?

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.....

.....

3. What type of sea defence has previously been used?

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.....

4. Why should this area be protected?

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.....

5. Describe the 3 different methods of coastal management and give an example of each.

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6. Why is a sea wall an example of hard engineering?

.....

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7. Identify the differences between hard and soft engineering.

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8. Explain the disadvantages of beach nourishment.

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9. Suggest why either hard engineering or soft engineering is the best option for defending the coast.

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10. Why is managed retreat a sustainable option for coastal management?

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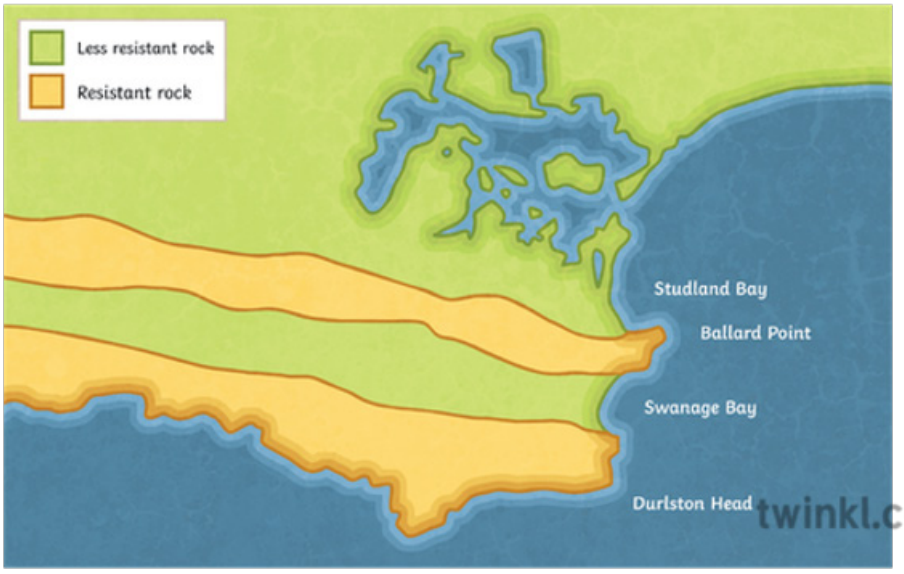
Coastal Landforms Example - Swanage, Dorset



Swanage is a seaside town on the south coast of England, it is part of the UK's world famous Jurassic Coastline.

Swanage is located in a sheltered bay and has a wide sandy beach.

This coastline has many features of coastal erosion and deposition.

Headlands and bays have formed along the coastline due to alternating bands of hard and soft rock. This is known as a discordant coastline.

There are headlands as shown above, on either side of Swanage Bay. Physical processes have meant that the headlands have been turned into caves, arches and stacks.

TASK: Use the digital copy of the text book available in your class team on Microsoft Teams. Complete all activities on page 103, 104 and 105

Geography

TASK - Use the digital text book page 112 & 113 to complete the questions below.

Lyme Regis is a town that has used a scheme with both hard and soft engineering.

1. Where is Lyme Regis?

.....

.....

2. What are the issues?

.....

.....

3. How has the coastline been managed?

.....

.....

4. Key Features:

   a. Phase 1 - 1990s

.....

.....

   b. Phase 2 - 2005-2007

.....

.....

   c. Phase 3 - Not undertaken

.....

.....

   d. Phase 4 - 2013-2015

.....

.....

5. How successful has the management scheme been?

Positives ☺	Negatives ☹
.....	.....
.....	.....
.....	.....
.....	.....

Now have a go at this exam question.

'Coastal management schemes are effective in protecting the coastline from physical processes.'

Do you agree? Using an example, explain your answer. [6 marks]

Remember to include an example in your answer, look back over your notes on what has happened at Lyme Regis in Dorset.

Topic: Population and the Environment

1. Natural Population Change

The population of the world is always changing, sometimes populations grow and sometimes they get smaller. This section will outline how and why this happens.

Task 1: World Population Growth

a. Open up this website **https://www.worldometers.info/** This is a world population clock and this gives a general idea of how the world's population is growing.

i. What do you notice about the current world population?

.....

.....

ii. Look at the numbers for birth and death rates – which is changing fastest?

.....

.....

iii. Net Population Growth is increasing. What do you think makes the population grow? Tick the answer below:

The Birth Rate and the Death Rate are the same	☐
The Death Rate is higher than the Birth Rate	☐
The Birth Rate is higher than the Death Rate	☐
The Birth Rate is lower than the Death Rate	☐

b. Watch the online video found at **https://www.ined.fr/en/everything_about_population/population-games/world-population/** and answer these questions:

i. What is expected to be the world's population by 2022-23? .....billion

ii. How many babies are born on average per second? .....

iii. How many people die on average per second? .....

iv. What happens to the population when the birth rate is higher than the death rate?

.....

.....

v. How many more people are there on average every year?

.....

.....

vi. How often does the population double? Every..... years.

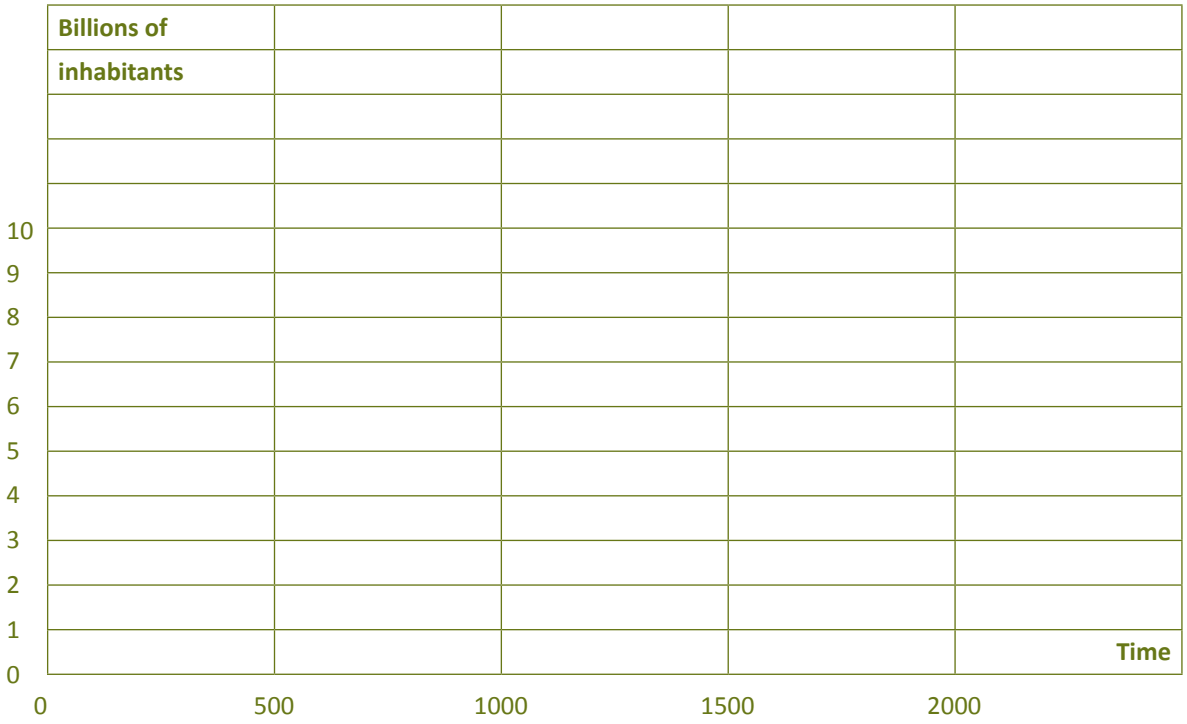
c. Complete and learn the following definitions.

Definitions for Learning	
Optimum population	The perfect amount of people for an area to function sustainably
D..... rate	The number of deaths per 1000 of a population
Carrying Capacity	The maximum amount of people that can be supported by resources in a given area.
Natural d.....	When more people are being born than are dying
M.....	The movement of people into a place
B..... rate	The number of births per 1000 of a population
M.....	The movement of people from one place to another
Overp.....	Too many people in one area so the place has severe economic, social and environmental issues
Life e.....	The average age a person is expected to live to
Demographic Transition Model	A prediction to show movement from high birth rates to optimum population
In..... M..... rate	The number of children under 1 who have died per 1000 people
E.....	The movement of people out of a place

Task 2: World Population Growth over Time

a. Watch the online video found at: **https://www.ined.fr/en/everything_about_population/population-games/world-population/**

b. Sketch a line graph on the axes below to show how population numbers have changed over time.



c. On your graph label the period of slow growth and the period of rapid growth.

d. What reasons can you suggest why population sometimes grew slowly and sometimes fast?

.....

.....

.....

.....

.....

.....

.....

2. Population distribution and density

Distribution

World population distribution describes how people are spread out across the globe. The human population is not spread out evenly. Few people live in locations that are sparsely populated and densely populated places have many people. The distribution of people is often shown using a dot distribution map.

The Himalayas are a good example of an environment that is difficult or challenging in which to live and work. This large mountain range in Asia has low temperatures, poor soil quality and the slopes are too steep for people to live on and cultivate - and so it is sparsely populated. Other locations, such as parts of the UK, are more densely populated because they have flatter land, good soils and a mild climate.

Density

Population density is the number of people living in an area. It is worked out by dividing the number of people in an area by the size of the area. So, the population density in an area is equal to the number of people per sq. km, divided by the size of the area in sq. km.

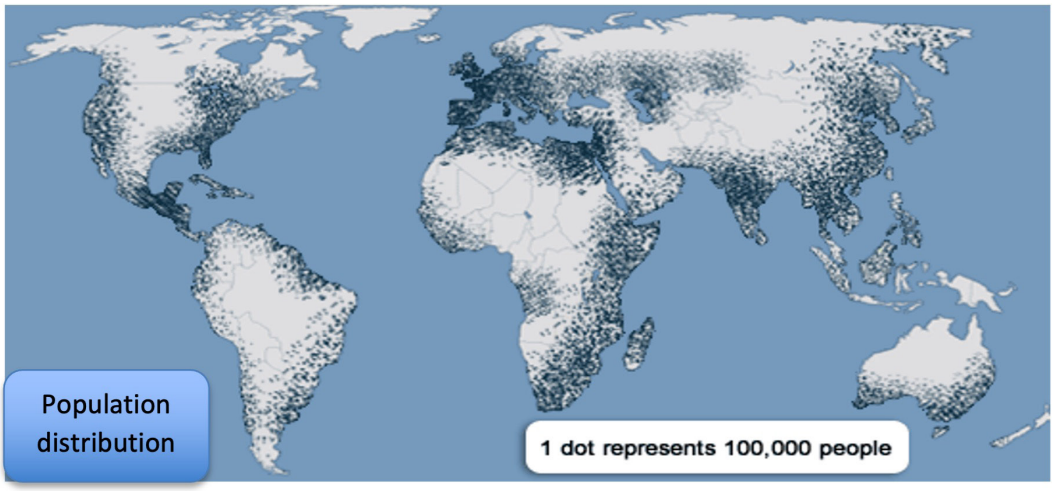
Factors that attract people and lead to dense populations (people living in close proximity) include:

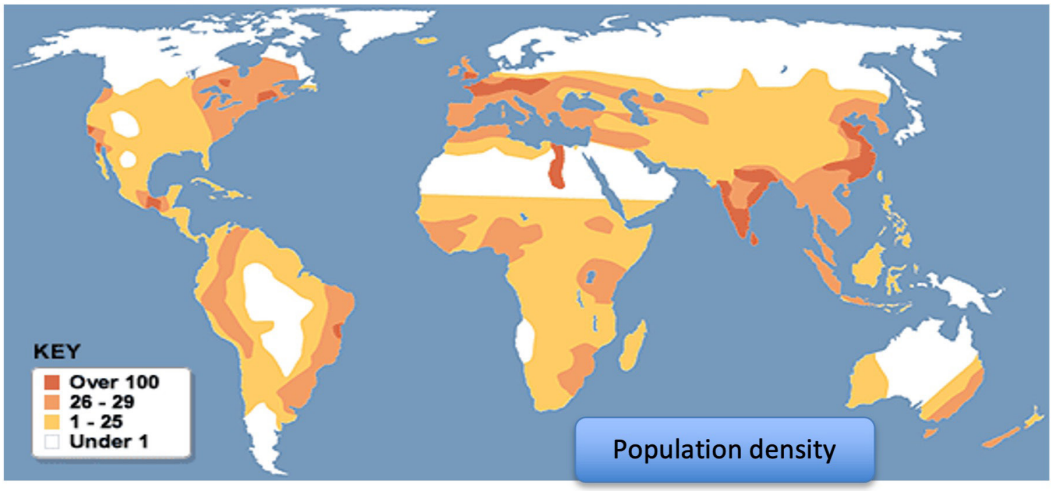
- Flat or gently sloping land
- Mild climate
- Good soils
- Lowland
- Water
- Good transport and communication links, e.g. ports
- Places to work
- Resources, e.g. coal, oil

Factors that may discourage people and lead to sparse populations (people living further apart) include:

- Steep slopes
- Harsh climate - very hot or very cold
- Dense forest
- Dry conditions
- Isolated areas with poor transport links
- Few jobs
- Lack of resources

Where in the world are people living?





Task: Describe and give reasons for the world's population distribution and density

- Describe the population distribution and density in at least 4 continents
- Explain the distribution by using the information on the previous page.
- Include these 3 key words/phrases in each one:
  - Sparsely populated
  - Densely populated
  - Population distribution

3. The Demographic Transition model

The demographic transition model shows population change over time.

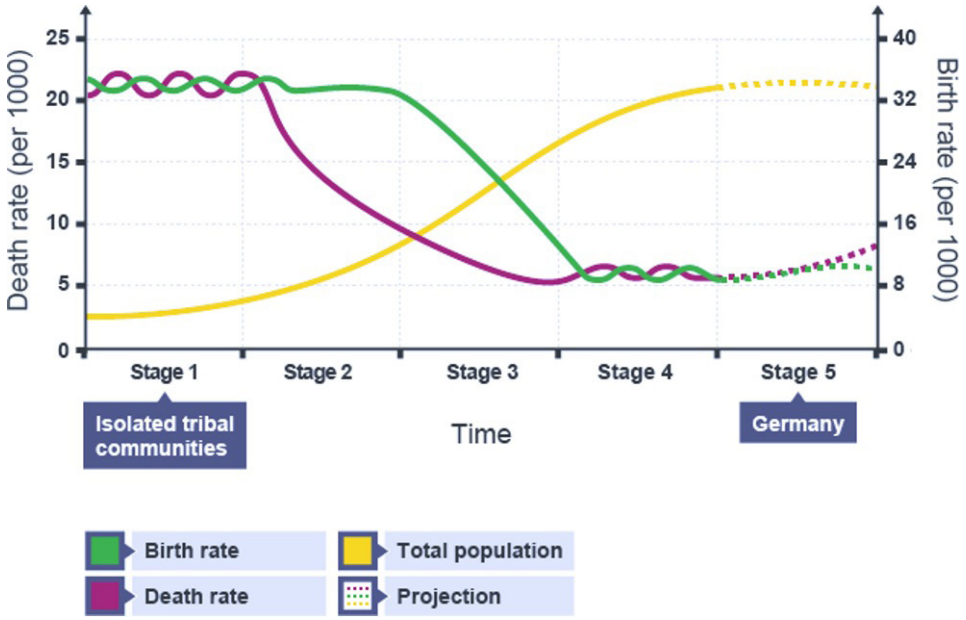
It studies how birth rate and death rate affect the total population of a country. It shows marked differences between LICs, NEEs and HICs.

Five stages of the demographic transition model

As a country passes through the demographic transition model, the total population rises.

Most LICs / NEEs are at stage 2 or 3 (with a growing population and a high natural increase).

Most HICs are now at stage 4 of the model and some such as Germany have entered stage 5.



Overview

As populations move through the stages of the model, the gap between birth rate and death rate first widens, then narrows.

In stage 1 the two rates are balanced. In stage 2 they diverge, as the death rate falls relative to the birth rate.

In stage 3 they converge again, as the birth rate falls relative to the death rate.

Finally in stage 4 the death and birth rates are balanced again but at a much lower level.

What happens in each stage?

Stage 1: Total population is low but it is balanced due to high birth rates (36/37 per 1,000) and high death rates (36/37 per 1,000). Countries at this stage will usually be undeveloped.

Stage 2: Total population will start to rise because the death rates will start to fall (to around 18/19 per 1,000). Birth rates will remain high. Death rates fall due to:

a. medical care will be improved (vaccinations, scientific improvements, doctors and new drugs);

b. sanitation and water supplies will be much better;

c. the quality and security of food will be improved;

d. there will be a noticeable decrease in child mortality.

Stage 3: Total population is rising rapidly. The gap between birth and death rates will narrow. Natural increase is high. Death rates will now remain low and steady (to 15 per 1,000) but birth rates will fall quickly (down to around 18 per 1,000). Birth rates fall due to:

- increased use of family planning methods;
- much lower infant mortality rates will mean that more children will survive and there is less need to have as many babies;
- increased opportunity for employment in factories means that fewer people (and children) are required to work on the land;
- changes to society put more desire on material possessions than large families;
- changes to equality mean that women are increasingly in the workforce and not 'staying at home' to look after the children.

Stage 4: Total population is high and growing slowly. It is balanced by a low birth rate (15 per 1,000) and a low death rate (12 per 1,000). Contraception is widely available and there is a social desire to have smaller families.

Stage 5: Total population is still high but starting to decline due to the birth rate falling (to 7 per 1,000) below the death rate (9 per 1,000). The population will start to fall as it is no longer replacing itself. The population is ageing and will gradually be dominated by older people.

Task: Complete the gap fill using the word bank below

In the first stage the ..... rate tends to fluctuate more than the ..... rate, but because both rates are high, the population remains fairly .....

During the second stage improvements in ..... and ..... lead to a ..... death rate, although the birth rate remains ..... This produces a rapid ..... in the overall population.

In stage three the death rate stabilises at a ..... level, but the birth rate ..... due to improved ..... and the use of ..... . However, the population continues to ..... until the beginning of stage ..... .

In this fourth stage, both rates are low the birth rate tends to ..... more. Since the two rates are relatively ..... they can cancel each other out and the population .....

In the last stage (five), ...

.....

.....

.....

Complete the last stage yourself

increase	**birth**	**four**	**hygiene**	**equal**	**drops**	**failing**
fluctuate	**low**	**high**	**standards of living**	**death**	**medicine**	**education**
	rise	**low**	**contraception**	**stabilises**	**constant**	

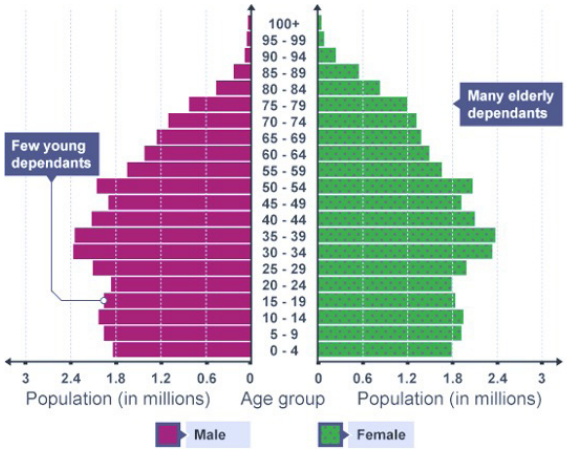
4. Population pyramids

Population structure means the 'make up' or composition of a population. Looking at the population structure of a place shows how the population is divided up between males and females of different age groups.

Population structure is usually shown using a population pyramid. A **population pyramid** can be drawn up for any area, from a whole continent or country to an individual town, city or village.

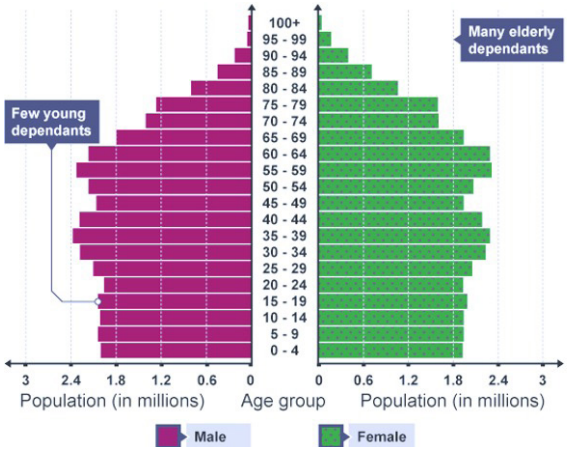
- The shape of a population pyramid can tell us a lot about an area's population.
- Usually pyramids are drawn with the % of male population on the left and % of female population on the right.
- It gives us information about birth rates (reflected at the bottom of the pyramid) and death rates (reflected at the top) as well as **life expectancy**.
- A population pyramid tells us how many dependants there are. There are two groups of dependants; young dependants (aged below 15) and elderly dependants (aged over 65).
- Dependants rely upon the **economically active** for economic support.
- Many LICs have a high number of **young dependants**, this means that the pyramid will have a wide base and the sides of the pyramid will decrease as fewer people will reach old age
- However, many HICs have a growing number of **elderly dependants**, this will be shown by the pyramid having straight sides or a barrel shape. The pyramid will also be much taller.

The following graphs show the population pyramids of an HIC (the UK) and an LIC (Mozambique), for 2000 and in 2025 using projected figures. The left side of each pyramid shows the number of men in each age group, the right side shows the number of women in each age group.



UK (2000)
US CENSUS BUREAU, 2013

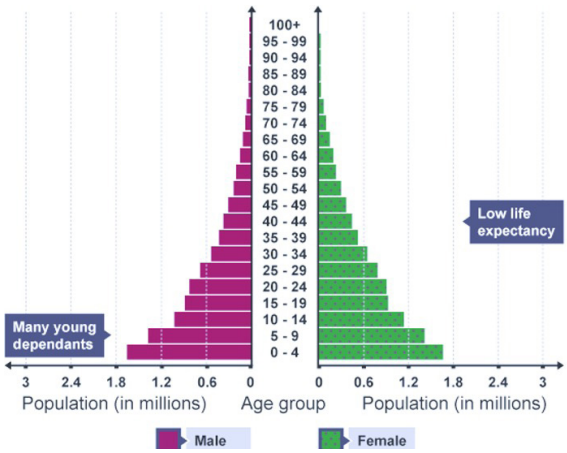
Notice how in the UK 2000 pyramid there is a bulge in the area of the 30-34 and 35-39 age groups, with the numbers thereafter reducing fairly steadily as the ages increase. This matches stage 4 of the demographic transition model.



UK (2025)
US CENSUS BUREAU, 2013

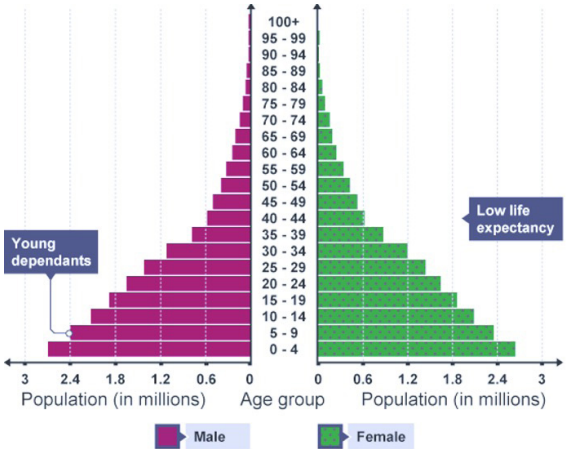
Compare this to the 2025 pyramid, which would be stage 5 in the model. Here the bulge extends much further, covering the age groups 30-64, with the numbers beginning to reduce significantly only after 64.

Now compare the UK population pyramids with those for Mozambique:



Mozambique (2000)
US CENSUS BUREAU, 2013

In this graph, notice that in 2000 the 0-4 age group contained the largest number of people, with the numbers thereafter declining steadily as the ages increase. The graph matches stage 1 in the model.



Mozambique (2025)
US CENSUS BUREAU, 2013

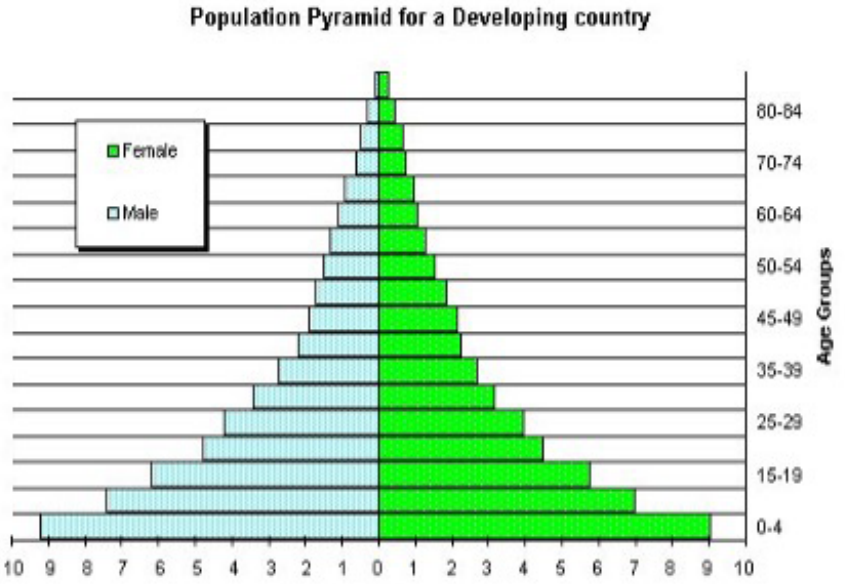
In the second graph, the largest group in Mozambique in 2025 is still the 0-4 age group, but there are nearly as many people in the 5-29 age groups. Now the population pyramid matches stage 2.

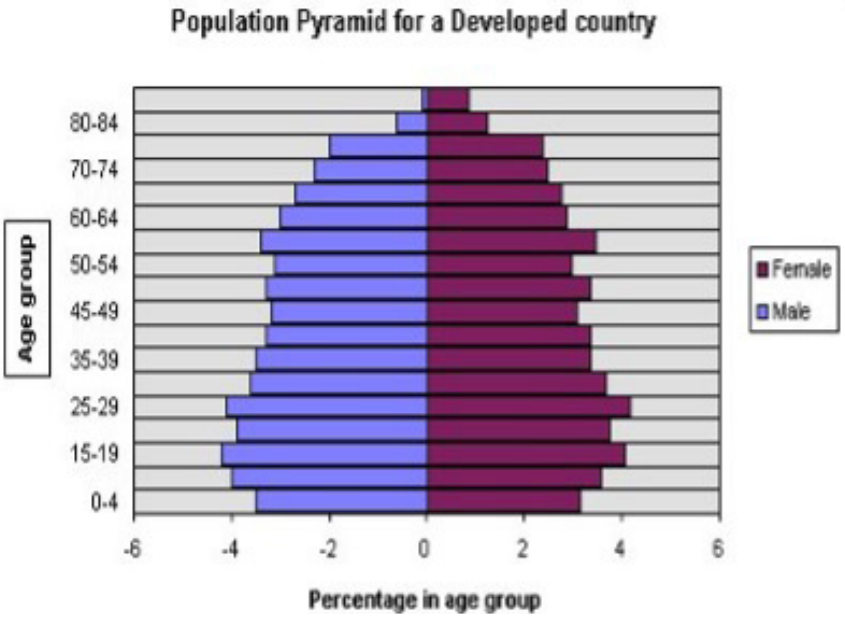
Task: Complete the following activity

a. Read each of the statements below.

a. Decide which population pyramid **on the following page** that each of the statements relates to and label them around the population pyramids following.

This pyramid is typical of a country such as Kenya or Vietnam.	**Narrower at the base which means that birth rates are lower.**
Developing Country	**Wide at the base which means there are a large proportion of young people in the country.**
Wide at the top because there is longer life expectancy.	**4% of the population is female aged 25-29.**
Narrow at the top which shows that there is a small proportion of elderly people.	**Wider in the middle which means that people are living longer, less infant mortality.**
Developed Country	**This pyramid is typical of a country such as Italy and Japan.**


Population Pyramid for a Developing country
Female
Male
80-84
70-74
60-64
50-54
45-49
35-39
25-29
15-19
0-4
Age Groups
10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10


Population Pyramid for a Developed country
Age group
80-84
70-74
60-64
50-54
45-49
35-39
25-29
15-19
0-4
-6 -4 -2 0 2 4 6
Percentage in age group
Female
Male

5. Migration

Migration in Geography usually refers to the movement of humans from one place to another. It occurs when the perceived interaction of Push and Pull factors overcome the friction of moving.

- **Push factors:** elements of the origin that are perceived negatively leading to a desire to leave.
- **Pull factors:** elements of the destination that are perceived positively leading to place-attraction.
- **Friction of Moving:** costs in time, finance and emotions in leaving one location and moving to another. The strength of the Pull and/or Push factors need to overcome these costs to cause potential migrants to turn that into an actual relocation.
- **Perception:** how a geographical feature may be received be each individual. A quiet coastal resort may be seen as 'boring' by a teenager (and the 'quietness' a Push factor), but attractive to a retired couple (so a Pull factor). This may result in coastal resorts seeing a net out-migration of young people and net in-migration of the recently retired.
- **Net Migration:** the sum change in migrant numbers between those coming into an area (in-migrants) and those leaving (out-migrants). If migration crosses international borders a person is an Emigrant from the country they leave and an Immigrant to the country they are going to.

Migration Classification

Migration types can be classified according to a range of criteria:

1. **Migration Based on Distance**
    - Intra-building: Movement within a building (e.g. user-movements in an airport terminal or hospital)
    - Inter-building: Pedestrian patterns between a complex of buildings (e.g. students moving over a University campus)
    - Local scale: Moving house to another within a town or city
    - Regional scale: Migrating within a country from one county/state to another
    - International scale: Migrating from one country to another (emigration/immigration)
    - Global scale: Migrating between distant continents
2. **Migration Based on Duration**
    - Daily: Commuting to and from work each day often resulting in 'rush hours'
    - Seasonal: Winter snow-sport enthusiasts to the Alps; Summer sun-seekers to the Mediterranean; nomadic herders to fresh grazing pastures.
    - Medium-term temporary: Working in an overseas TNC branch office for a few years; taking up a university course; working in a developing city to pay off rural debts.
    - Permanent: Emigrating to another country with no intention of returning.
3. **Migration Based on Motive**
    - Forced (Environment): Fleeing a region of drought / flood / desertification / eruption.
    - Forced (Political): Threats to freedom, safety and liberty due to religious, ethnic, racial or political persecution, conflict or war (leads to Refugee and Asylum-Seeker status).
    - Collective Behaviour: Moving as part of an identified group to maintain group cohesion (Traveller communities, nomadic groups, ethnic groups).
    - Personal Aspiration: Desiring an improved standard of living for yourself or your family through gaining economic and social benefits; Economic migrants.
    - Personal Well-Being: Migration for health reasons (retirees to Florida), or perceived quality of life (relocating to rural areas for a less frenetic pace of life).

Some key migrations affecting the geography of contemporary regions:

- Rural-Urban migration in developing economies resulting in rapid urbanisation.
- Suburbanisation and Counter-urbanisation from the cities of mature economies leading to urban sprawl or diffusion of urban characteristics into the rural-urban fringe.
- Refugee migrations from areas of conflict in the Middle East (Syria, Iraq, Afghanistan)
- Economic migrations between areas of highly contrasting economic situations (from north Africa to Europe, from Mexico to the USA)
- Tourism migrations as more people have disposable income to spend on travel and leisure.

Advantages and disadvantages of migration

Migration can bring advantages and disadvantages to the country which is losing people and also to the host country.

Country Losing People	
Advantages	**Disadvantages**
Money sent home by migrants	People of working age move out reducing the size of the country's potential workforce
Decreases pressure on jobs and resources	Gender imbalances are caused as it is typically men who seek to find employment elsewhere. Women and children are left
Migrants may return with new skills	'Brain drain' if many skilled workers leave

Host Country	
Advantages	**Disadvantages**
A richer and more diverse culture	Increasing cost of services such as health care and education
Helps to reduce any labour shortages	Overcrowding
Migrants are more prepared to take on low paid, low skilled jobs	Disagreements between different religions and cultures

In addition, there are a number of obstacles that the migrant may need to overcome, including:

- Unemployment in new country
- Racism and cultural differences
- Language barriers
- Lack of opportunities

UK migration

Migrants come to the UK from a variety of countries. People from the UK also emigrate to countries around the world. Immigration is not new and the UK has been a multicultural society for thousands of years. Many people in the UK are descended from previous settlers and invaders such as the Romans, Vikings, Saxons and Normans.

Recent migrants include people from other European countries such as Poland. Any European Union resident is usually free to work in other European Union countries. This freedom of movement has encouraged migration.

Another type of migrant is an asylum seeker, someone who has been forced to leave their own country because they are in danger, e.g. fleeing as a result of their religious beliefs or the danger of war.

Geography

Task: Complete the following activity

a. Match the KEY TERMS with their definition:

International Migration	**Movement of people within a nation**
Internal Migration	**Movement into a country to change residence**
Emigration	**Movement out of a country to live elsewhere**
Immigration	**Involves the crossing of national boarders**

b. International and internal migration may be forced or voluntary. Often the causes of migration can involve both push and pull factors:

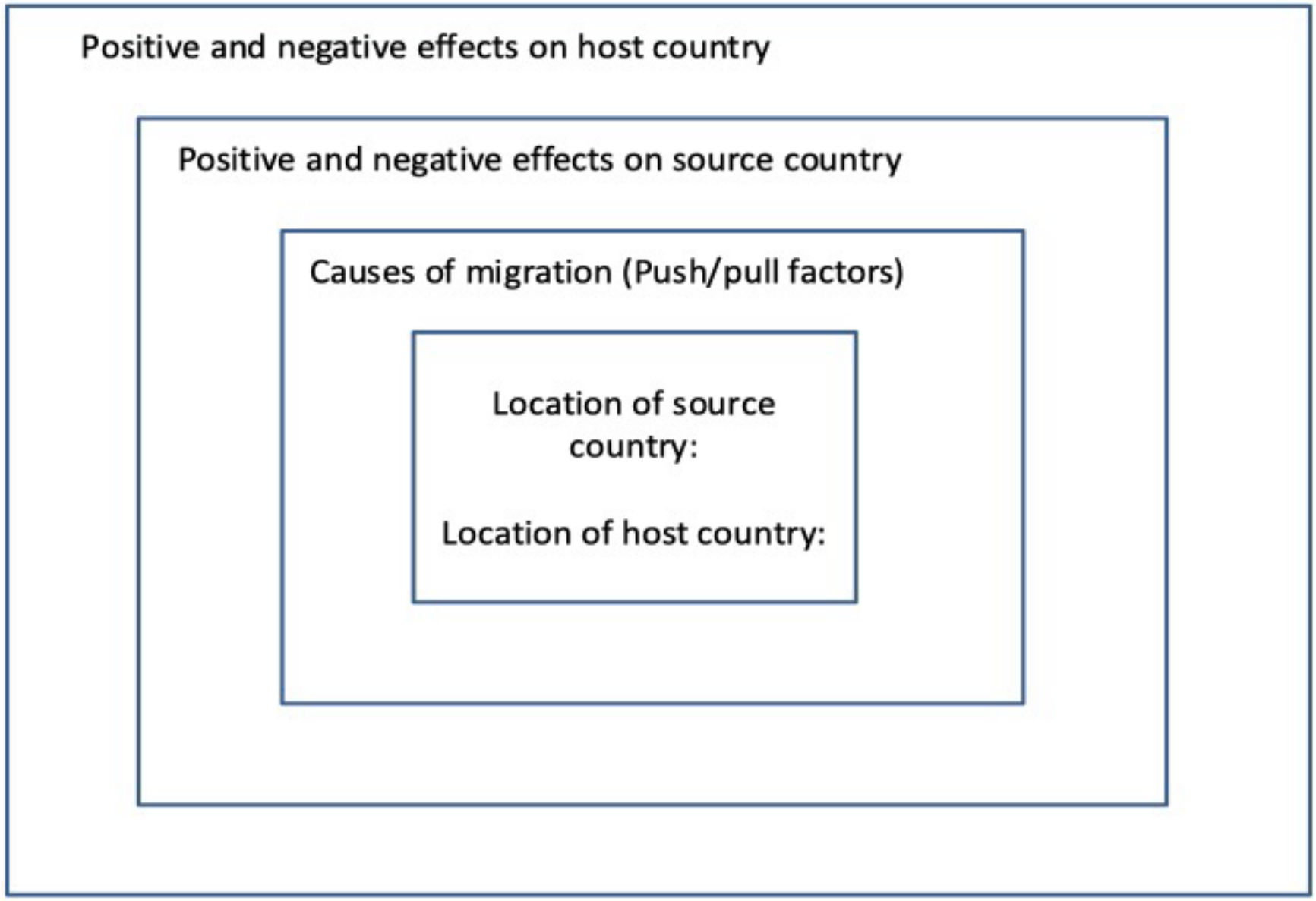
Push Factors (forced migration)	Pull Factors (voluntary migration)

Put the statements below in the correct headings:

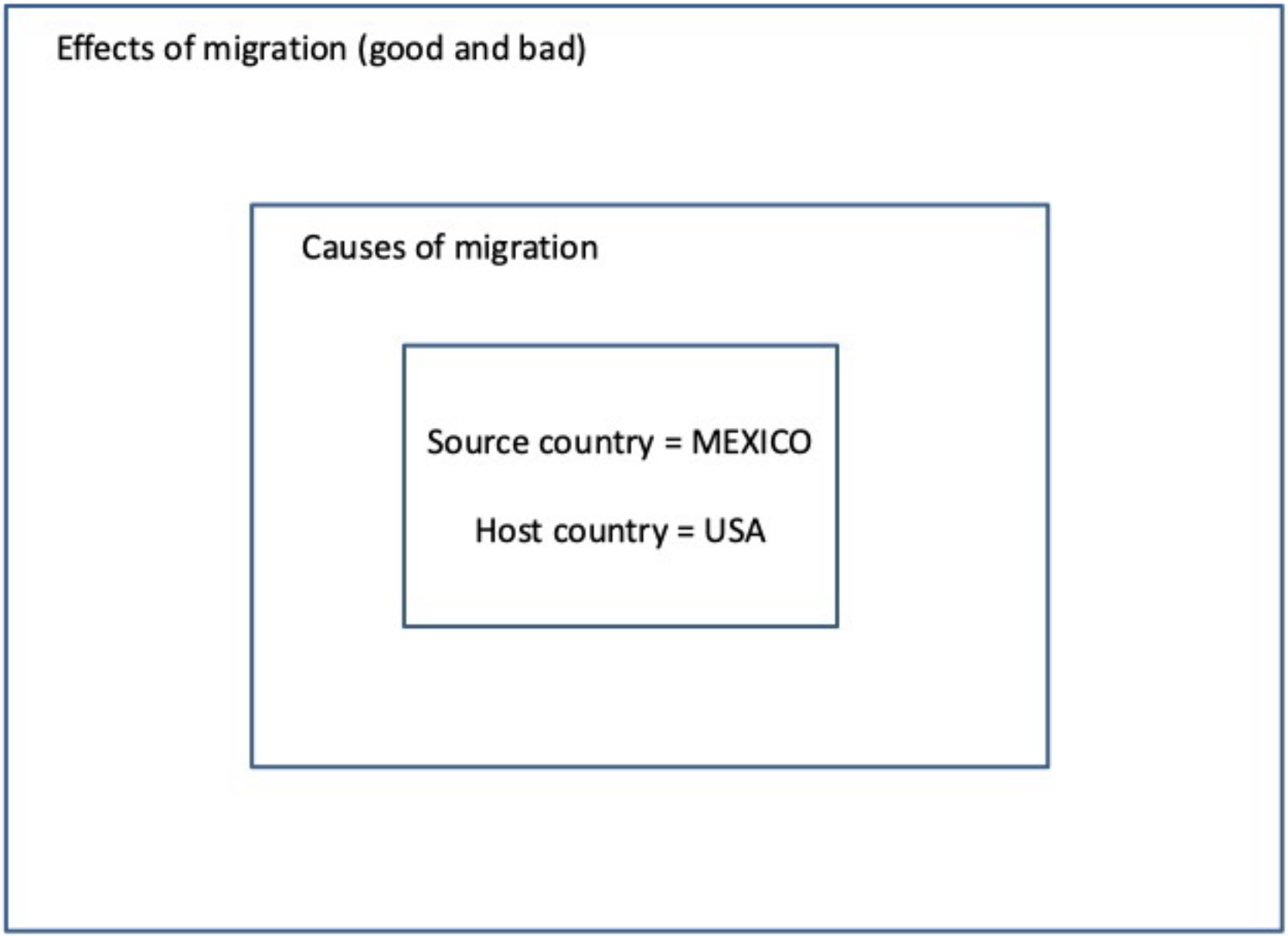
◊ Better climate
◊ Wars causing refugees
◊ Racial discrimination
◊ Better healthcare and education
◊ Improved prospects
◊ To be with friends and relatives
◊ Unemployment
◊ Forced labour - Slavery, POWs
◊ Natural disasters
◊ Entertainment
◊ Better housing
◊ Poverty on poor farmland
◊ Employment with higher wages
◊ Starvation
◊ Cleaner, safer environment
◊ Lack of basic amenities
◊ Better lifestyle
◊ Religious/political persecution
◊ Overpopulation

c. Research your own case study of migration and complete the factfile, then research migration from Mexico to the USA and complete the second factfile, so that you can compare migrations.

Management


Positive and negative effects on host country
Positive and negative effects on source country
Causes of migration (Push/pull factors)
Location of source country:
Location of host country:

How is the USA managing this?



**“For I know the plans I have for you,” declares the Lord,
“plans to prosper you and not to harm you,
plans to give you hope and a future.”**

Jeremiah 29:11

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