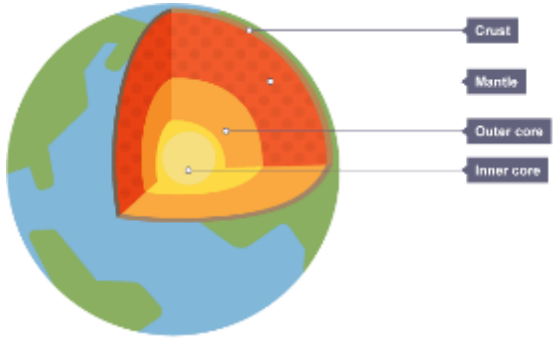
Knowledge Organiser - Geography – Year 8 - Unit 1 - How do people live with Natural Hazards?

Retrieval:

Structure of the Earth

Crust: The thinnest layer, broken into tectonic plates.
Mantle: The thickest layer, composed of mostly solid rock that can flow very slowly.
Outer Core: A liquid layer composed of iron and nickel.
Inner Core: A solid sphere composed of iron and nickel.



Responses to Natural Hazards:

Immediate (Short-term) Responses:

Search and Rescue:
This involves locating and rescuing survivors trapped in collapsed buildings or debris.

Medical Aid:
Providing first aid, treating injuries, and administering necessary medications are crucial.

Emergency Shelter:
Setting up temporary shelters for those displaced by the disaster.

Providing Basic Necessities:
Ensuring access to food, clean water, and sanitation facilities is essential for survival.

Long term responses

Rebuilding Infrastructure:
Repairing or reconstructing damaged roads, bridges, buildings, and essential utilities like water, gas, and electricity.

Restoring Essential Services:
Re-establishing communication networks, transportation systems, and other vital services.

Economic Recovery:
Providing financial assistance and support to help affected communities recover economically.

Implementing Mitigation Measures:
This includes strengthening building codes, developing early warning systems, and improving disaster preparedness plans.

Key Terms:

Natural Event: A naturally occurring process or phenomenon (e.g., earthquake, volcanic eruption, tropical storm).

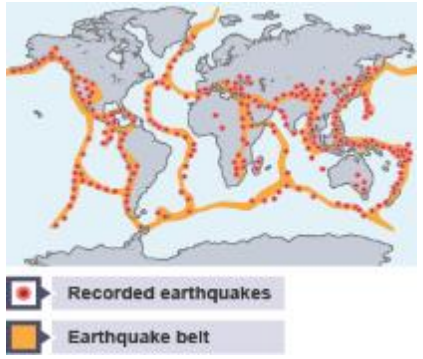
Threat: The event poses a risk or danger to people, property, or the environment.

Impact: Natural hazards can lead to loss of life, damage to property, and disruption of human activities.

Earthquake: sudden violent shaking of the ground

Tsunami: A series of powerful ocean waves typically caused by a large-scale disturbance under the sea, most commonly an underwater earthquake

Distribution of Tectonic Hazards

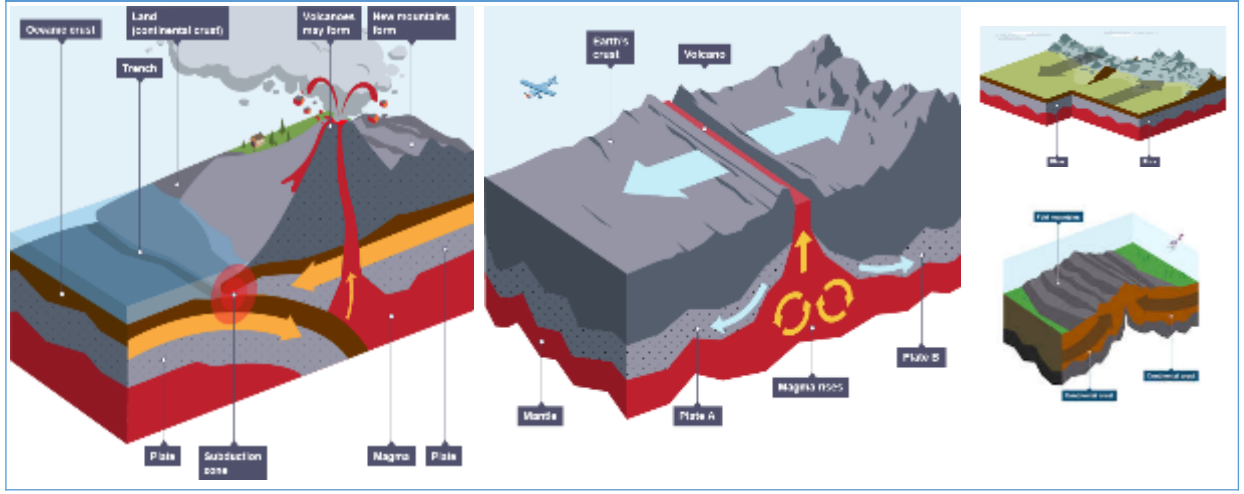


Most earthquakes and tsunamis occur along **plate boundaries**, especially:

Pacific Ring of Fire
Mid-Atlantic Ridge

Tsunamis mainly affect coastal areas around the Pacific and Indian Oceans

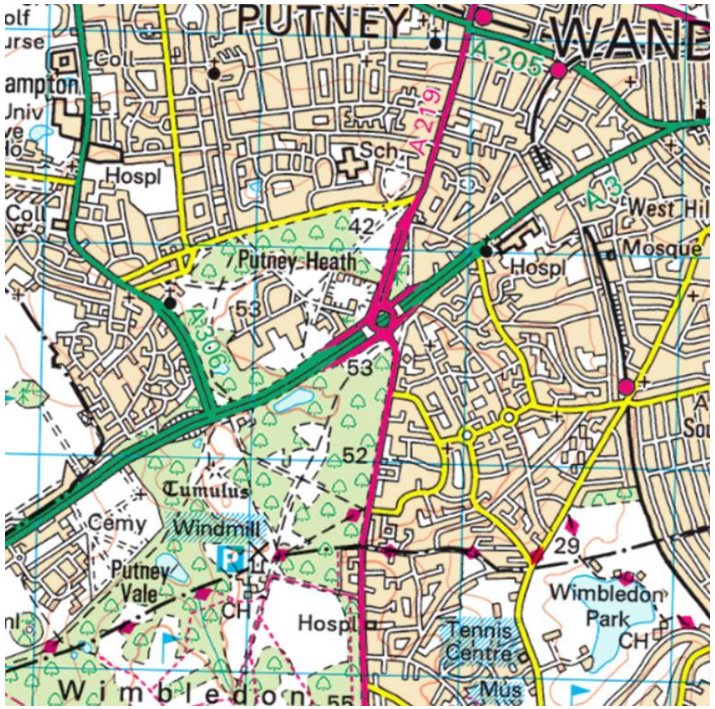
Plate Boundaries

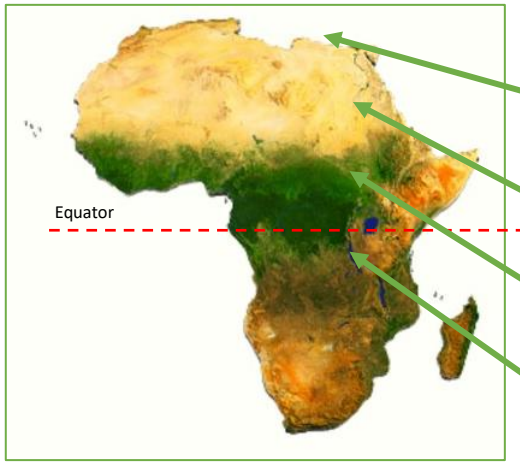


HILLSIDE HIGH SCHOOL

Knowledge Organiser - Geography – Year 8 - Unit 2 - How is Africa Not the World's Richest Continent?

Retrieval:





African Biomes Characteristics	
Mediterranean	Hot dry summers and seasonally restricted rainfall, short grasses / shrubs and variety of mammals
Desert	Hot and dry climate, characterised by short grasses and mammals. Along the Tropics.
Savannah	Hot and wet climate, 6-month wet period, tall grasses, featuring zebra, elephant and giraffes
Tropical Rainforest	Hot, humid and wet with tall trees. Home to over 50% of animal life. Along the Equator.

What is Desertification?

Desertification is where land is gradually turned into desert, usually on the edge of a desert, so the desert spreads grows.

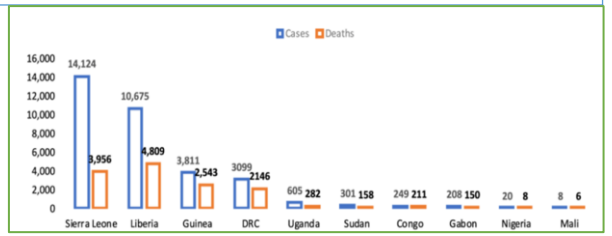
Causes of Desertification

Climate change is leading to more droughts	In the Sahel to the south of the Sahara the rainfall is becoming more unreliable, and it is raining less than it did 50 years ago. Vegetation dies and exposes the soil which is blown away.
Soil erosion	When the vegetation has been removed, the dry soil is exposed to the wind which blows the topsoil away.
Population Pressure	As populations increase land close to the desert becomes overgrazed as too many animals are eating the grass. When the grass is gone the soil is exposed so…
Over- cultivation	As villages grow, they need more food and marginal land is overused. The soil is exhausted as the nutrients have been removed

Solutions to Desertification

Water Management	In Burkina Faso, West Africa the villagers have placed stones in lines along the contours of hills or dammed up gulleys with stones. When it rains these stones trap and slow down the water and trap the soil in place, reducing soil erosion.
Conservation	These protect the areas at risk, but they only work when people are not present. Zion National Park in the USA is a good example. In Kenya the local people have been made to move from their traditional homes which were in the National Parks, such as the Massai Mara.
Tree Planting	Trees bind the soil together with their roots and provide valuable shade. Community tree planting projects provide firewood and building materials as well. Many such projects have been developed across the Sahel
Soil Management	Leaving soil to rest between crops means that it is not exhausted of nutrients. Crop rotation means that different crops remove different nutrients. Animal dung is added to build up organic matter.
Appropriate Technology	As people in these regions are so poor the technology has to be cheap and 'appropriate'. Solar cookers reduce the need for firewood and make use of a plentiful resource – the sun.

Malaria - Symptoms	Malaria - Treatment	Ebola - Symptoms	Ebola - Treatment
• Headache • Fever • Nausea • Vomiting • Dry Cough	• Antimalarial drugs	• Nausea • Vomiting • Red eye • Fever • Diarrhoea • Chest pain • Cough	• No known cure. • Quarantine • Isolation • Fluids • Electrolytes



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Knowledge Organiser - Geography – Year 8 - Unit 2 - How is Asia Developing?

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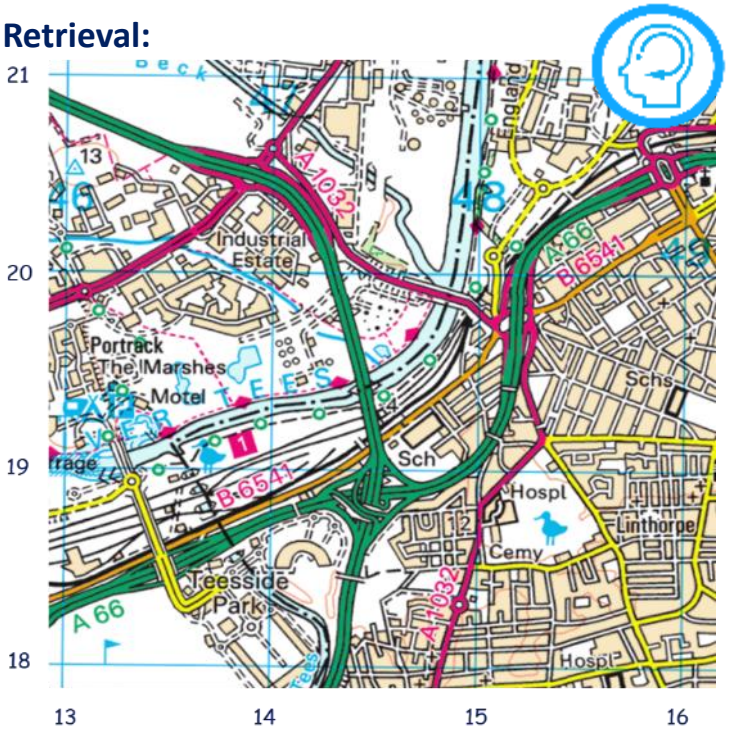


Key terms:

Urbanisation	Increase in the proportion of people living in cities
Globalisation	Countries becoming more connected through trade and ideas
NEE (Newly Emerging Economy)	A country experiencing rapid economic growth
Infrastructure	Basic services like roads, rail, electricity, water supply

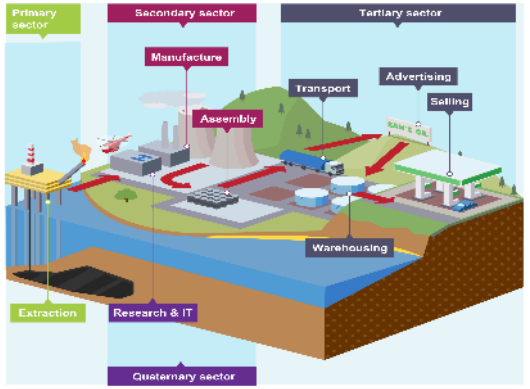
Asia – The World's Largest Continent

Asia is the **largest** and most **populous** continent.
It has a wide range of development levels:
HICs: High-Income Countries (e.g., Japan, South Korea)

NEEs: Newly Emerging Economies (e.g., China, India)

LICs: Low-Income Countries (e.g., Afghanistan, Nepal)

Industrial Sectors



Primary Sector – Jobs that collect natural resources:
Farming and agriculture
Fishing
Mining (coal, oil, minerals)
Secondary Sector – Jobs that make or build things:
Factory work (electronics, clothing, cars)
Construction (houses, roads, bridges)
Food production (factories making packaged foods)
Tertiary Sector – Jobs that provide services:
Teachers and schools
Doctors, nurses, and hospitals
Shop workers and retail
Quaternary Sector – Jobs that involve research or technology:
Scientific research
IT and computer programming

Push and pull factors

Migration is when people move from one place to another, often for better living conditions, jobs, or safety.
Push Factors: These are negative conditions that force people to move away from their home.
Pull Factors: These are positive conditions that encourage people to move to a new place.

Evidence of China's Development

Urbanisation: Over 60% of China's population now live in cities
Megacities: Rapid growth of cities like **Shanghai, Beijing, Shenzhen**
Economic Growth: China has lifted **hundreds of millions out of poverty** since the 1980s
Global Influence: Major role in world trade, technology, and politics

Why is China Developing Rapidly?

Economic Factors:
Massive growth in manufacturing (factories producing goods for export)
Investment in technology and infrastructure (roads, railways, cities)
"World's Factory" – produces electronics, clothes, machinery for global markets
Social Factors:
Rising education levels and literacy rates
Growing middle class with higher incomes
Urbanisation – millions moving from rural areas to cities for better jobs
Political Factors:
Stable government policies encouraging business and trade
Investment in global projects (e.g., **Belt and Road Initiative** – building roads, ports worldwide to boost trade)

HILLSIDE HIGH SCHOOL

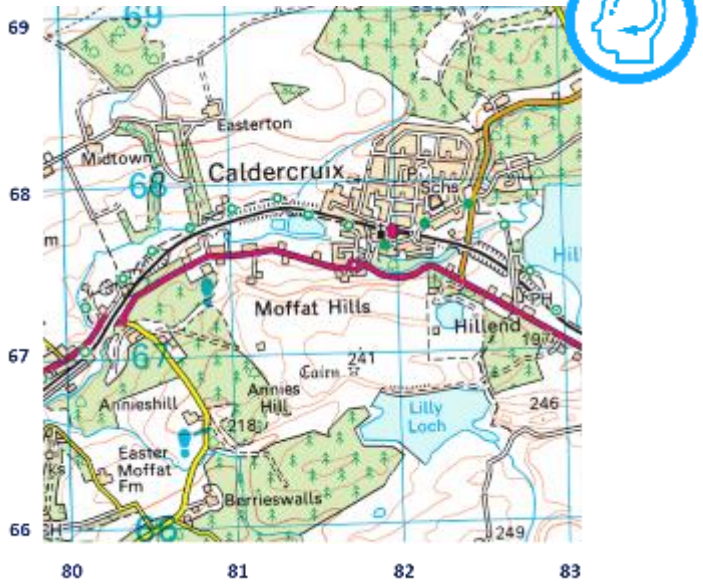
Knowledge Organiser - Geography – Year 8 - Unit 4 - Will Climate Change alter our Environment Forever?

Causes of Climate Change:

Human Causes
- Increase burning of fossil fuels (coal, oil and gas)
- Increase in Agriculture
- Deforestation

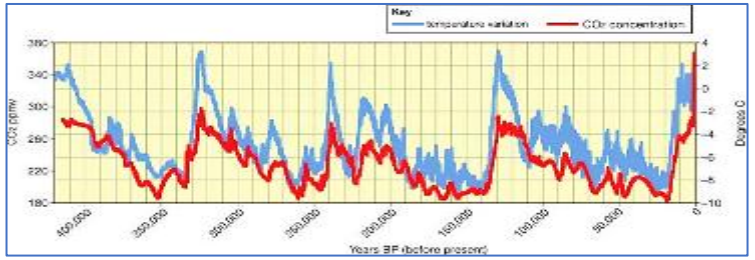
Natural Causes
- Volcanic eruptions
- Earth's orbit of the sun
- Solar flares

Retrieval:

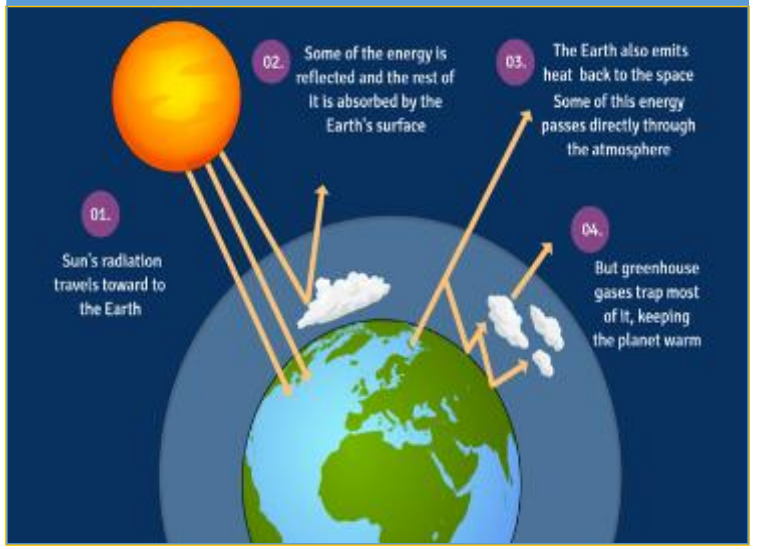


Changes in Global Climate :

The Earth's climate has naturally fluctuated over this period between glacial (cold) and interglacial (warm) phases.



The Greenhouse Effect:



Evidence for Climate Change:

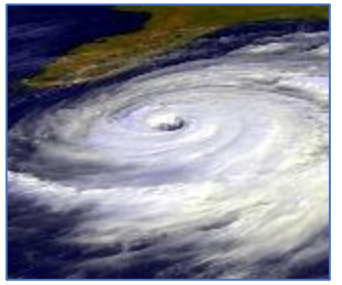
- Global Temperature Records
- Ice Core analysis
- Tree Rings
- Historical Records
- Glacial Retreat and Melting Ice

Effects of Climate Change:

Social effects:
- **Increase in malaria:** morbidity, mortality, decrease in economic activity, poverty.
- **UN has suggested there could be war over water in LICs:** East Africa, South Asia & the Middle East.

Economic effects:
- **Damage to settlement, industry, transport, communication links & infrastructure:** loss to economy

Environmental effects:
- **More droughts, severe hurricanes and massive forest fires** – destruction & extinction of habitats.
- **Increase in heat waves** - greater risk of heat-related illness and death of vulnerable people (OAPs).
- **Increasing frequency & magnitude of flooding** - Boscastle, UK 2004 a 1 in 400-year event!
- **UK to experience extreme seasons:** hot, dry summers = drought / warm wet winters = flooding.
- **Greenland ice sheet melts by 7-8m:** 75% of the world's population on the coast = flooding & migration



Responses to Climate Change:

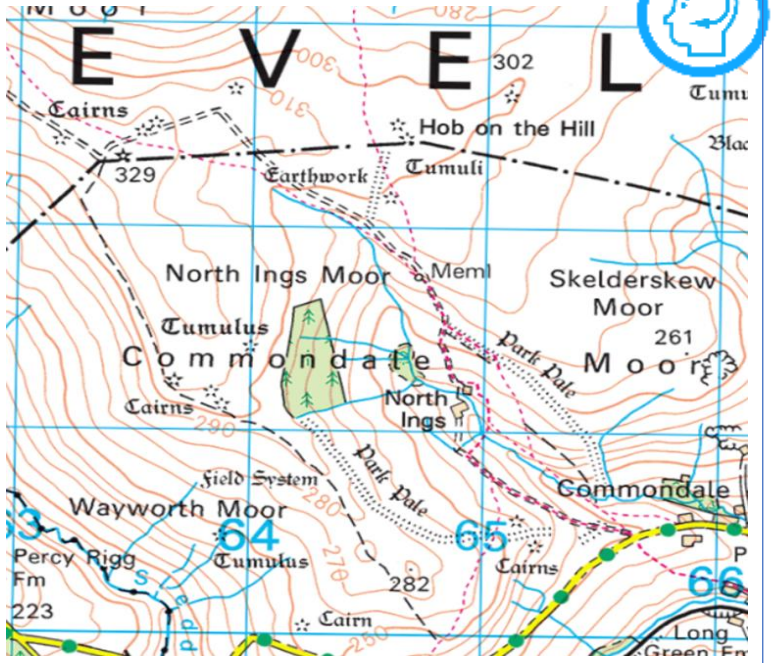
Mitigation (Stop the cause of the problem):
- **Alternative energy production (Renewables – Solar, Wind, Thermal)** – as there is no burning of fossil fuels therefore no CO2 in the atmosphere..
- **Carbon capture** - carbon dioxide is captured, compressed, transported and stored in underground reservoirs between layers of rock.
- **Afforestation (Planting trees)** - trees exchange oxygen for carbon dioxide reducing temperatures.
- **International agreements between all countries** – agree to reduce global greenhouse gas emissions.

Adaptation (Adjust and live with the problem):
- **Changes in agricultural systems:** Storing Grain or growing drought resistant crops.
- **Managing Water Supply** - water metres are installed in people's homes to discourage them from using too much water.
- Flood Defences: Reducing the risk from rising sea levels

HILLSIDE HIGH SCHOOL

Knowledge Organiser - Geography – Year 8 - Unit 5 - How do Glaciers Shape the Land?

Retrieval:



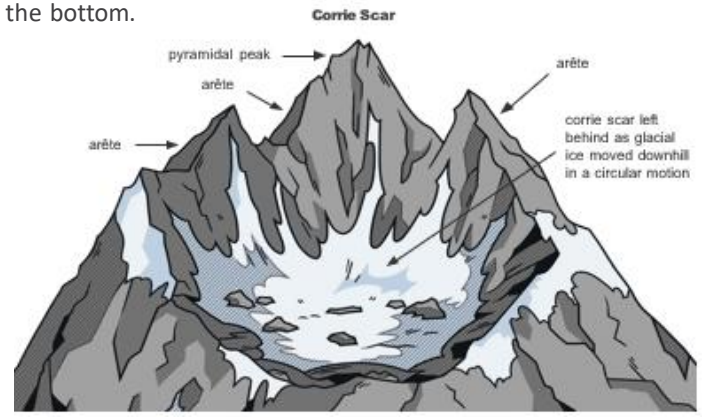
Maximum Extent of Ice Coverage in UK During the Last Ice Age

- Over the last 2.6 million years there have been many glacial periods (ice ages).
- During the last glacial (20 000 years ago), ice covered much of the UK.
- It extended as far south as East Anglia in the east and the Bristol Channel in the west.
- The ice shaped the landscape of the UK through erosion, transport and deposition.

Erosional Glacial Landforms

Corrie

Valley glaciers often start in corries; snow collects in small hollows and becomes compacted over time, turning into ice. Rotational slip, plucking, abrasion and freeze-thaw weathering cause the hollow to enlarge into an armchair-shaped hollow in the mountainside with a lip at the bottom.



Arête

A sharp, knife-like ridge formed between two corries eroding back-to-back by processes of erosion and freeze-thaw weathering.

Pyramidal Peak

A pointed mountain peak formed when three or more corries form, eroding back to meet at a central point.

Truncated Spurs

A steep-sided valley created when a glacier erodes through the interlocking spurs of an older meandering river valley.

UK Example: The Lake District

Attractions for Tourists

- 18 million tourists visit the Lake District each year.
- Visitors spent £1.3 billion in the Lake District in 2016.
- Outdoor activities, e.g. high ropes, archery, boat hire.
- Scenery – unique, varied and dramatic scenery attracts visitors from all over the world.

Social and Economic Impacts of Tourism

- 92% of the Lakes District's visitors (16 million a year) drive, this causes traffic jams and parking problems around tourist sites.
- The large amount of second home ownership raised house prices. A three bedroom house can cost £700,000 and 80% of houses in Chapel Stile are second homes/holiday lets meaning that many people cannot afford to buy a home here. Schools and doctor surgeries have begun to close.
- Many businesses cater for tourists rather than locals – 40% of businesses in Ambleside are cafes and restaurants.

Environmental Impacts of Tourism

- Boat users on Lake Windermere create noise, pollution and litter problems.
- Walkers venturing off paths has resulted in soil erosion (e.g. along Striding Edge at Helvellyn).

Strategies to Manage the Impact of Tourism

1. Footpaths at Crinkle Crags have been replaced with hard surfaces. The aim is that a durable path will contain walkers into a narrower area and reduce the amount of footpath erosion.
2. Travel schemes, such as 'Go Lakes', provide cheap and regular buses to encourage tourists to travel around the Lake District by public transport.
3. Affordable housing schemes have provided an opportunity for locals to buy their own home. In 2013, a shared ownership scheme in Keswick built 11 new homes and in 2017, 10 affordable homes were built in Coniston.

Erosion

abrasion - As a glacier moves downhill, rocks, pebbles and sand become embedded in the base and sides of the glacier. The material is scrapped along the land, wearing it away like sandpaper. This creates a smooth and polished landscape. Striations (deep scratches) are formed by larger angular material in the base of the glacier.

plucking - Glacial meltwater freezes and sticks to rock. As the glacier moves downhill this ice will 'pluck' rock fragments that have been weakened by freeze-thaw action away from the land. Plucking creates a jagged landscape.

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