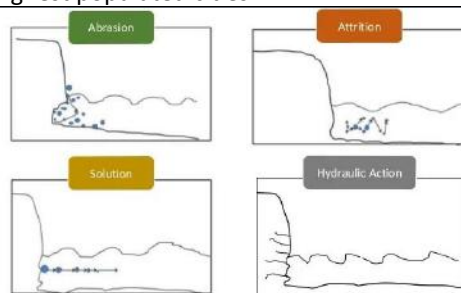
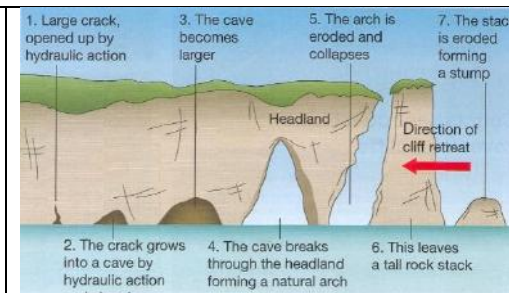
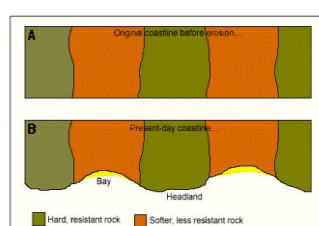
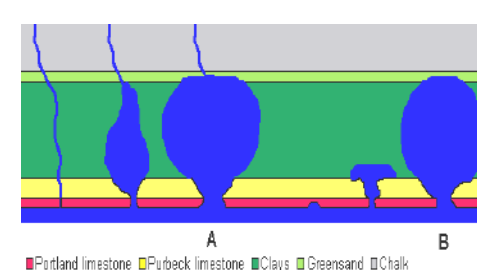
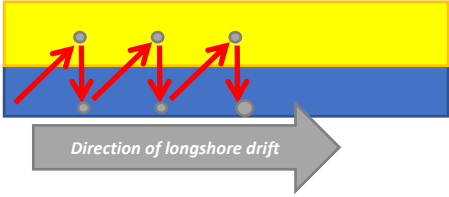
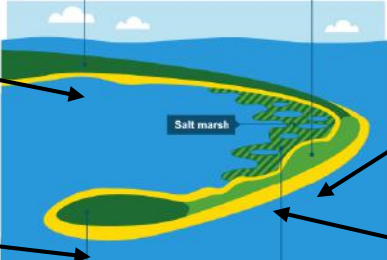


Coasts Knowledge Organiser

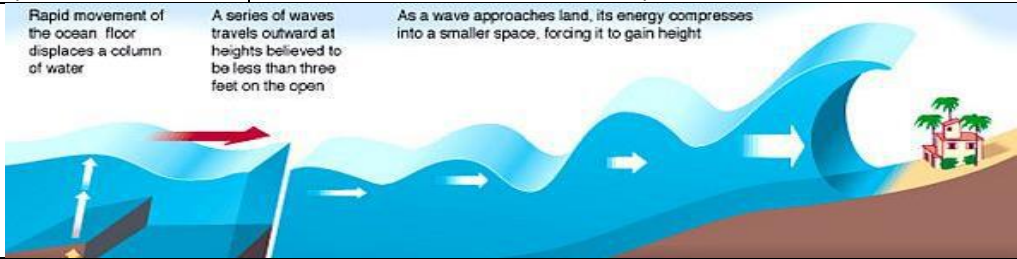
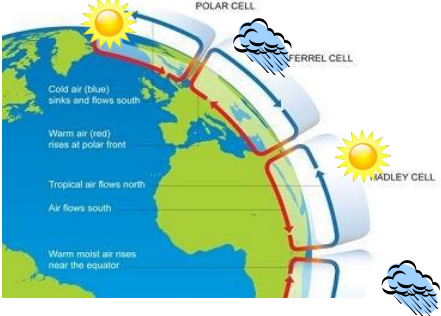
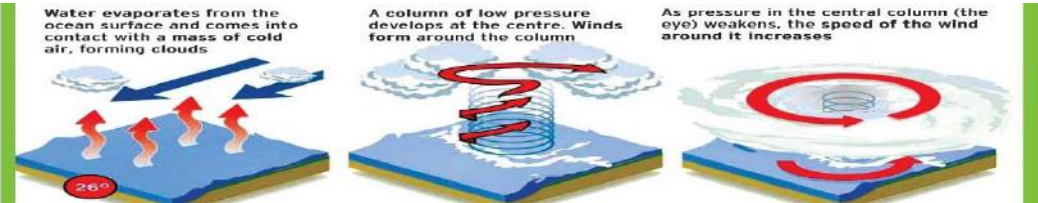
Erosion	Waves are very powerful. They use their energy to break down rocks at the coast
Abrasion	Loose rocks and sediment (small pieces of rock) are thrown against the cliff by the waves. This wears the cliff away and chips bits of rock off the cliff.
Hydraulic action	Waves force water and air into cracks in the rock making the cracks bigger. This is called hydraulic action . It can also be the force of the water hitting off the cliffs and wearing them away.
Solution	Chemical reactions take place between certain rock types and sea water. When cliffs are made of these rocks e.g. limestone or chalk, the salt water and acids within it, will react with them causing them to dissolve in the water and wear away.
Attrition	Loose rock and sediment (small pieces of rock) is carried and swirled around in the waves. The pieces of rock constantly collide with each other. When they do this the sharp edges of the rock get broken off and the rocks become smaller and rounder.
Geology	Rock Type: The geology of the coast is very important as some rocks are more resistant or hard and others are less resistant or weak.
Recede	Erode backwards

Why is the coast important?	The world's largest cities are mainly on the continent of Asia. Most of the cities are <u>inland/on the coast</u> . For example Tokyo, Japan which has a population of 37 million and Jakarta Indonesia which has a population of 26 million are the 2 highest populated cities.		Why do people live on the coast?	Trade, Jobs, Climate, Industry, Investment, Infrastructure, Entertainment and activities
Erosion			How do Stacks Form	
Headlands and Bays	<u>Types of Wave</u> <u>Constructive</u>- strong swash, weak backwash, shallow gradient waves, long wavelength, beach built up by deposition of material brought up in swash <u>Destructive</u>- weak swash, strong backwash, beach eroded, steep gradient waves, tall waves with short wavelength. <u>Types of coastline</u> <u>Discordant</u>  Areas of less resistant rock are eroded quickly by waves. A bay is formed. Areas of resistant rock, erode slowly. This rock juts out into the sea as a headland <u>Concordant</u>  Weaknesses in hard rock, which forms cracks, water forced in (hydraulic action) and then soft rock behind is able to be eroded Bands of rock horizontal to coastline.			
Why do cliffs recede	1. Hydraulic action erodes a crack into the cliff face. 2. The crack is made wider by abrasion and attrition until a wave-cut notch forms. 3. As the crack grows, it makes the cliff unstable so it collapses. 4. The flat area where the cliffs once stood is called a wave-cut platform. 			

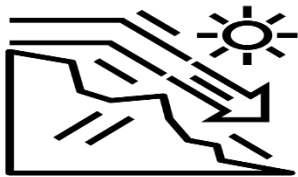
Coasts Knowledge Organiser

How do waves transport material?	 Longshore drift is the movement of material along the shore by wave action. It happens when waves approach the beach at an angle. The swash (waves moving up the beach) carries material up and along the beach. The backwash (waves moving back down the beach) carries material back down the beach at right angles. This is the result of gravity. This process slowly moves material along the beach.
Flooding in Bangladesh	 1. Longshore drift moves material along the coastline. 3. Over time, the spit grows and develops a hook if the wind direction changes further out. 2. A spit forms when the material is deposited. 4. Waves cannot get past a spit, which creates a sheltered area where silt is deposited and mud flats or salt marshes
Holderness Coastline	Location • North East of the UK, Flamborough Head to Spurn Point, stretch of 50km • Subject to force of waves of North Sea, minimal energy loss before reaching cliffline • Dominating waves from the North East, also direction of largest fetch Problems • Rapid rates of erosion (1.8m per year avg.), high energy environment • Underlying the Holderness coast is a solid bedrock made up of chalk • However, in most places this is covered by a glacial deposit of a soft rock (till/ boulder clay) deposited over 18,000 years ago, which is being rapidly eroded • 29 villages have been claimed by the sea in 1000 years • 80,000km² of farmland is lost each year, huge effect on farmers' livelihoods Management of coastline • Bridlington – <u>4.7km sea wall + wood groynes</u> • Hornsea – sea wall, wood groynes + rip-rap, also <u>beach nourishment</u> • <u>£2m</u> has been spent at Mablethorpe to protect the village with 100 residents, 2 rock <u>groynes</u> built in 1991 to protect village and coast road • Some of the farmland is left with a '<u>Do nothing</u>' approach, used when the land value is lower or the cost of defending outweighs the benefits
How can erosion be managed?	Sea walls- run parallel to the coastline; they reflect the energy of the waves back into the sea. Gabions- are wire cages filled with rocks; these are placed in rows along the coastline. They absorb the energy of the waves so it does not reach the cliffs behind which stops erosion. Groynes- are large wooden or rock structures that stick out into the sea at right angles from the coast. Beach nourishment/replenishment- is where additional sand or shingle is added to the beach. Managed retreat- allows the erosion of the coast. People and activities are gradually moved back from the coast

Y9 Dynamic Planet Knowledge Organiser

What is a natural hazard?	Geophysical (earth-related): caused by processes on or under the Earth's surface e.g. volcano or tsunami Hydro-meteorological (weather/water-related): caused by processes in the atmosphere e.g. flooding or a snow storm		
What's inside our earth?	Crust: Thin layer (8-65km) of solid rock broken up into segments called plates. Can be oceanic or continental. Mantle: Very hot, semi-molten. Convection currents make the rock here move like toffee. Outer Core: Liquid iron and nickel. 2000-5000°C. Inner Core: Solid metal (iron and nickel). 5000°C		
What are plate boundaries?	Convergent Oceanic - Continental	Heavier oceanic plate subducts under the lighter continental. Frictions causes it to melt. The liquid rock mixes with sea water to create an explosive composite volcano.	
	Convergent Continental - Continental	Identical weight plates collide. Neither subduct as they are too light instead they push together to form fold mountains such as the Himalayas.	
	Divergent	Oceanic plates move apart. Magma erupts to plug the gap. Flat shield volcanoes form.	
	Conservative	Plates move side by side. They rub together to create earthquakes.	
Volcanic Eruption – Mount Niryagongo 2002	DRC had high levels of vulnerability ; fast flowing Basaltic lava drained from lava lake due to the fissures, low level of development, the city of Goma located 20 km away.		Impacts of the eruption: Economic: Farmers lost income due to acid rain destroying crops, half of the airport was destroyed by the lava flow restricting flights. Social: 14 villages destroyed due to lava flow, 245 people killed, cholera spread due to lack of sanitation in temporary housing. Environmental: Wildlife was disrupted in lake Kivu due to the lava flow.
Hazard profiling	Magnitude Speed of Onset Duration Areal Extent Spatial Predictability Frequency		The size of a tectonic hazard. How slowly or rapidly the tectonic hazard develops. The amount of time a tectonic hazard lasts. How widespread the tectonic hazard is. How likely scientists are to estimate where a tectonic event will strike. The number of times the hazard is likely to occur.
How do tsunami forms?			
Japan Tsunami 2011	Pacific plate subducted under the Eurasian. Magnitude 9 earthquake caused a tsunami. Economic cost \$300 billion. 120,000 buildings destroyed, 15,894 people killed. Fukushima nuclear power station exploded creating a leak of radiation. Damage greater on flat ground which allowed the tsunami to travel further e.g. Ofunato, or where the wave was funnelled into narrow bays and valleys and got higher e.g. Minamisanriku.		
Global circulation	 Cold air sinks = high pressure. Cold air can't hold water = no rain/clouds and clear skies. Sahara desert. Warm air rises = low pressure. Warm air can hold water. Air cools, moisture condenses, clouds form = rain. Amazon rainforest.		
Tropical storms			
Hurricane Desmond	Economic impacts	Social impacts	Environmental impacts
	£500 million damage. - Overall economic costs from storm Desmond and Eva up to £2.3 billion	2 dead - Over 1000 People evacuated from homes. 50,000 homes without electricity.	- A waterfall appeared at Malham cove never seen in living memory. - Soil eroded and dumped on floodplains.
Typhoon Haiyan Philippines	Causes: a) Warm oceans above 28°C encourages typhoon formation b) 60% people vulnerable because they live on the coast (most very poor as Philippines is a developing country) c) Mudslides more common due to deforestation d) Poor disaster planning puts people at risk e) People also at risk of injury from earthquakes		

Year 9 Topic 2 – How does Ice change the World?



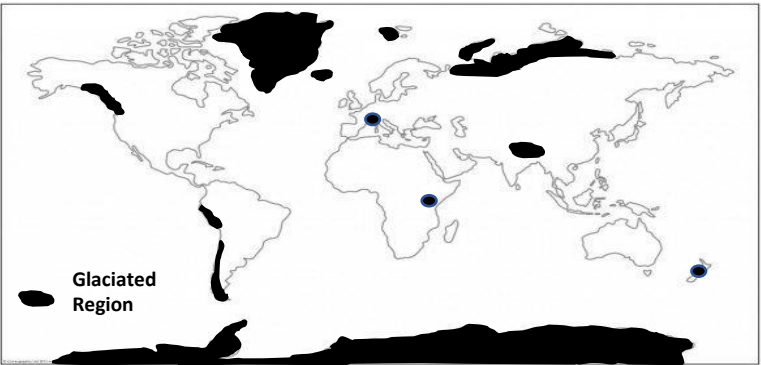
What is a glacier?

Glaciers are made of snow that, has been pushed down or compressed into large, thickened ice masses. As well as snow, glaciers also contain rock and sediment.

What is the distribution of glaciers around the world?

In locations where:

- Average annual temperatures are near freezing point.
- Large amounts of snow fall during winter months.
- Temperatures throughout the year are not high enough to melt the previous winters build of snow.



What are the different types of glaciers?

- Alpine glacier - Form on mountainsides and move down slopes through valleys.
- Continental ice sheets - Form over continents, e.g. Antarctica and spread out and cover large areas.

Has the distribution of glaciers changes through time.
Yes. Through time the climate of the Earth has shifted from glacials (ice ages) and inter-glacials (warmer periods). During glacials, the spread of glaciers around the world has increased whereas during inter-glacials their spread reduces.

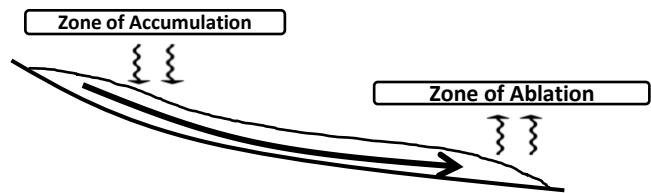
How do glaciers move?

Glaciers move downhill under their own weight. Snow is added to the glacier in the zone of accumulation and removed in the zone of ablation.

What is the difference between an advancing and retreating glacier?

For a glacier to advance: accumulation > ablation

For a glacier to retreat: accumulation < ablation



Features of glacial erosion.

You will need to know how the features below are formed.

Arete	Corrie	Pyramidal Peak	Hanging Valley
U-shaped Valley	Misfit Stream	Ribbon Lake	Truncated Spur

Why do glaciers deposit materials?

A the snout of the glacier, the ice melts, so any material can no longer be carried by the ice and is therefore dumped or deposited. This debris is called glacial till.

What feature are formed by glacial deposition

You will need to know how the features below are formed

Erratics	Drumlins	Lateral Moraines	Terminal Moraines
Medial Moraines	Outwash Plain	Glacial Till	

Making an effective field sketch.



Step 1
Identify the landscape you would like to sketch e.g. V shaped valley



Step 2
Write a title to identify the location e.g. Site 1 – Upper Course



Step 4
Add greater detail to provide more information e.g. interlocking spurs



Step 3
Draw a basic outline of the main features e.g. valley sides and river



Step 5
Annotate the sketch, providing more information e.g. steep sides



Step 6
Take a photo, you can add more detail to your sketch later

Using glaciated landscapes.

Glaciated landscapes can be used for farming, hydro-electric power (HEP), forestry, leisure, e.g. walking, or biking, and tourism.

What impacts does tourism in a glaciated landscape (Lake District) have?

Tourism in the Lake District brings advantages, such as:

Tourism provides employment (36,000 FTE jobs in 2018) and income for local people. in 2018, tourists spent around £3 billion in the Lake District alone.
Services provided for the use of tourists - e.g. leisure facilities - also benefit local people.

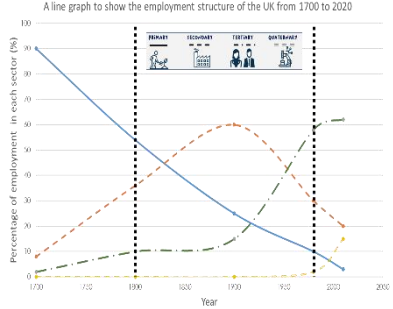
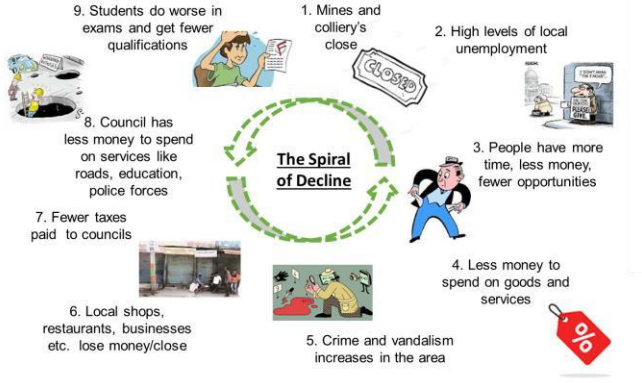
However, tourism also has disadvantages, such as:

House prices in the area can rise due to a demand for second homes. The current average house price in the Lake District is £270,000, which is £40,000 above the UK average.
Local shops on the margins of profitability often close to make way for more profitable gift shops and tea rooms. This leaves local people without essential services, e.g. butchers and greengrocers.

Year 9 Topic 3-Globalisation Knowledge Organiser

Key word	Definition
Globalisation	the process by which the world is becoming increasingly interconnected
Cultural exchange	sharing different ideas, traditions, and knowledge with someone who may be from a different background
Post-industrial	relating to an economy which no longer relies on heavy industry which was common during the industrial revolution
Social inequalities	Social inequalities - unequal opportunities for different social positions or a group in society
Multicultural	relating to or containing several cultural or ethnic groups within a society
Brownfield site	land which was once used for industry that now lies abandoned
Manufacturing	the making of product on a large scale using machinery
Clone town	a town which is identical to another town with chain stores [Starbucks, Nike, Zara] and fewer independent stores
culture	many different things make up a society's culture. These things include food, language, clothing, tools, music, arts, customs, beliefs, and religion.
Megacity	urban regions with a population of more than 10 million people.

What is globalisation?	Globalisation is the process by which the world is becoming increasingly interconnected as a result of massively increased trade and cultural exchange. Globalisation has been taking place for hundreds of years, but has sped up enormously over the last half-century. Globalisation is the way goods, companies, information, jobs and fashions are flowing more and more easily around the world.
When did globalisation begin?	Connections are how people and places are linked together e.g. by trade. For example The British brought tea to Europe from India. (1600s) Dependency theory- Developed rich countries (core) are limiting the level of development of the poorer countries (periphery) from the control of the world economy. The most developed countries are able to exploit less developed countries through the use of their economic and political power.
Why has globalisation increased?	- Transnational Corporations- TNCs are companies that located in two or more countries. TNCs bring money into countries by building factories and creating jobs. - New Markets- People in China and India are becoming richer. This opens up new markets because western companies can sell products to the Chinese and Indian people. This increases trade around the world making us more globalised. - Improved communications- Transport has improved and become cheaper over time. The Internet and mobile phones have also made us more globalised. - International organisations- bring people and money together. The World Bank offers money to poor countries to help them build things like better schools and roads. Some countries group together to form international organisations, for example the EU.
What is a megacity?	Mumbai India Transport- within the slum- mainly walking, bicycle or tuktuk style cars. Monorail improvements have been made to reduce congestion on the roads but trains are very overcrowded. Housing- The wealthy residents of Mumbai can afford to live in gated communities with high quality services e.g. sanitation, security and therefore high quality of life. Mumbai's poorest residents are forced to live in slums where rent is more affordable but these areas are unplanned and overcrowded, reducing quality of life.

	Jobs- mainly informal jobs in local factories or rubbish picking- unofficial work, often unskilled, without regular pay and employment rights.
Is globalisation good or bad?	Movement of call centres to India: English speaking, educated graduates. Pay is less making the company more money Cheaper to run in India
How is globalisation influencing our local industry?	Due to globalisation, the North East's industries changed from the industrial primary and secondary sector (industrial revolution when a country's economy relies heavily on manufacturing) to the tertiary post-industrial sector (period of time following deindustrialisation when a country's economy makes more money from services) 
What social inequalities has deindustrialisation created?	
How multicultural is the North East?	Has migration shaped the character of Newcastle? • Opportunities for new businesses in West End • Pressure to build more housing as large amounts of migrants move to Newcastle, more housing is needed. This sometimes has to be built on precious green space around the city. • Immigrants are highly skilled - 10,000 international students at university in Newcastle. • Helps fills job/labour shortages • Increased cultural diversity e.g. food, music etc. • The Mela festival is based around Pakistani, Bengali, Indian cultures, and is an opportunity to learn more these cultures, meet new people as well as enjoy different music, art and food.
Why did Nissan choose Washington?	• Nissan chose to build a car plant in Washington in 1984. • The Nissan Plant at Washington is Nissan's most productive plant. It makes more than 500,000 cars each year. • The Port of Tyne is a major shipping port. Container ships carry cargo from North Shields to the rest of Europe. The Port of Tyne is only 5 miles from the Nissan plant.

Year 9 – Topic 4 The North East – Our Home Knowledge Organiser

Key words

- Primary** - Extraction of raw materials
- Secondary** - The production of man-made products from natural resources =
- Tertiary** - The sharing of services in a country =
- Quaternary** - The sharing of research and information =
- Spiral of Decline** - The deterioration of a area from economic decline. This usually has a drastic impact of the social and economic measurements within the location.
- MNC** - A company located in multiple nations. Its office will be based in one area and the manufacturing industry in another.
- Sense of Place** - The feeling and attachment that an individual has towards a location. This can be influenced by how long they have lived there, their age and their gender.
- Representation of Place** - How an area is shown to appear in the media or wider social media. It allows people who have never been there to develop an opinion on what that location is like.
- Social Inequality** - The extent to which there are difference between different groups in society. This could be down to race, religion, education or difference in incomes.
- Urban Decline** - The deterioration of the CBD due to wealthier individuals moving to the suburbs and commuting into the city for work.

L1 – Introduction to the North East



The North East of England is a region in the country of England, which is in the continent of Europe. The north east of England lies at approximately a latitude of 55 degrees north and longitude 1.6 degrees west . It borders the country of Scotland to the north and the English county of North Yorkshire to the south. In the east, it has a coastline with the North Sea.



Facts about the North East

- Northumberland is the least densely populated area characterised by sandy beaches, castles and countryside.
- The highest point in the region is the Cheviot Hills at 815 metres high.
- It is an area measuring 8,592Km2
- There are three cities in the region: Newcastle Upon Tyne, Sunderland and Durham.
- The population of the North East is 2.7million.
- The largest city in the North East is Newcastle upon Tyne with a population of 270,000.

L2 – History of the North East



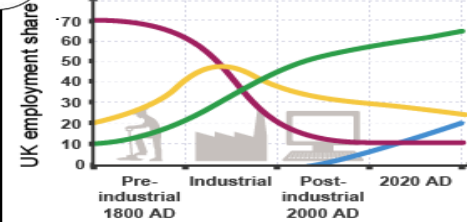
Why did people settle in the NE?

- High land e.g. The Cheviots offer defense points for settlers.
- High land in the North East provided abundant woodland that could be used for timber
- Resources were abundant due to the coastal situating, providing fish for survival.
- The River Tyne provided easily accessed water resources essential for survival for early settlers

Timeline of the North East

1000 The Normans built a fort to safeguard the crossing of the River Tyne.	1294 A shipwrecked sailor began in Newcastle.	1304 C - The most important export from Newcastle is wool but coal is also exported.	1600 The population of Newcastle is about 10,000.	1751 An infirmary is built.	1773- 1783 A new bridge is built over the River Tyne.
1818 Newcastle Central railway connected to Carlisle by railway.	1844 The Central of St Mary is built.	1851 The population of Newcastle is 87,000.	1853 Charles Wilson L533 people in Newcastle.	1873 Leazes, a Park opens.	1870 The first public library in Newcastle opens.
1876 A swing bridge is built.	1879 The first electric tram begins running in Newcastle.	1903 The population of Newcastle is 215,000.	1908 King Edward VII railway bridge is built.	1909 The first cinema opens in Newcastle.	1920 Tyne suspension bridge is built.
1963 Newcastle University is founded.	1976 Eldon Square Shopping Centre opens.	1983 Newcastle the M1 railway interchange is founded.	1988 Newcastle Arts Centre is built.	1992 Newcastle Royal Victoria Bridge is opened.	2003 Robinson turn Bridge is opened.

L3 – Changing Industry of the NE



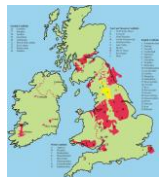
The types of industry:

- Primary** – Extracting raw materials
- Secondary** – Manufacturing products
- Tertiary** – Providing a service
- Quaternary** – Research and development

Reasons for Industry Changes

- The industrial revolution saw an increase in the number of manufacturing jobs.
- More money was found in manufacturing than agriculture.
- Mechanisation has meant fewer people are now needed to work in industries
- It is cheaper to import products such as coal from abroad.

L4 – Rise and Fall of Coal Mines



At its peak in 1913, the Great North Coalfield employed almost ¼ million men, producing over 56 million tons of coal every year from about 400 pits. The North East produced a quarter of Britain's coal in 1913, and was heavily dependent upon mining.



L5-6 - Spiral of Decline and Impacts of Decline

- Mines and colliery's close
- High levels of local unemployment
- People have more time, less money, fewer opportunities
- Less money to spend on goods and services
- Crime and vandalism increases in the area
- Local shops, restaurants, businesses etc. lose money/close
- Fewer taxes paid to councils
- Council has less money to spend on services like roads, education, police forces
- Students do worse in exams and get fewer qualifications

Impacts of Mine Closures on the NE

Water pollution discharge of the mines
 One of the lowest life expectancies in Europe
 A third of the population without any qualifications
 A workforce which lacks appropriate skills
 100,000 lost jobs since 1976
 Migration of young people
 A landscape scarred by industrial waste heaps
 High levels of long-term illnesses



L7-8 – Choosing the Location of Industries The 5 Cs of Industry

Cost – Included are the cost of buying and leasing land, office equipment, wages, training and IT infrastructure.
Capacity of the workforce – Availability of local labour with the right skills set for the type of industry.
Capability of the region – Good communication links such as road, rail and shipping.
Culture of the region – government initiative to support the industry, quality of life and education of the region.
Customers – Close to the market for the product.

Nissan	Metro Centre
Located in Washington, Sunderland. Just off the A19. Close to rail/ port. More than 50 dealerships in 30 miles. Land was a disused airfield. Government gave £40 million to locate here. A1 is 10 mins drive west. Decline in industries so workers were available. Land was cheaper due to mine closures.	Located Gateshead, Tyne and Wear. Just off the A1. Close to rail/city. 4.5 million potential customers in an hours drive. The DoF paid 1.75m towards the cost of roads. Good communication links. The area has few planning rules, was cheap and available.

L9 – Living in the North East

A 'sense of place' is how you feel towards a place.

- People can have positive and negative experiences which can result in different strengths of a 'sense of place'.
- People that have a **strong** 'sense of place' have pride for where they come from.
- People who have a **weak** 'sense of place' may have not lived in or experienced that place.
- Places hold meanings to people and memories are formed at these places.
- There are often distinctive physical features and landmarks that creates this sense of place.



Rise	Fall
1950 - natural decline as coal reserves decreased and the coal that was left became difficult to work	From 1820's many railways opened in Britain. Coal was needed to fuel the steam trains
1970 -Imported coal was cheaper	1900 – Power stations needed coal to work
Late 20 th century -petrol-driven motor cars meant that oil was more useful than coal.	1920 - coal was needed in large quantities to produce iron
1970 - people have worried about the impact of mining, including the health of miners, damage to the landscape	In the late 18 th century (1780's) coal fuelled steam engines that drove machinery

Key concepts within Geography at Emmanuel College:



Location



Scale



**Physical
Processes**



**Human
Processes**



**Environmental
interaction**



**Decision
making**

- **Location (relative and absolute), space and place** – understanding the physical and human characteristics of real places. Developing geographical imaginations of places. Understanding the interactions between places and the networks created by flows of information, people and goods. Knowing where places and landscapes are located, why they are here, the patterns and distributions they create, how and why these are changing and the implications for people
- **Scale** - appreciating different scales – from personal and local to national, international and global, whilst making links between scales to develop understanding of geographical issues
- **Physical and human processes** – understanding how sequences of events and activities in the physical and human worlds lead to change in places, landscape and societies
- **Environmental interaction and sustainable development** – understanding that the physical and human dimensions of the environment are interrelated and together influence landscapes and societies. Exploring sustainable development and its impact on environmental interaction and climate change.
- **Planning and decision making** – understanding that physical and human dimensions are interrelated and together influence landscapes and societies. Analysing geographical problems and drawing on knowledge and understanding to consider, select and justify choices of proposed solutions or ways of tackling a Geographical issue.