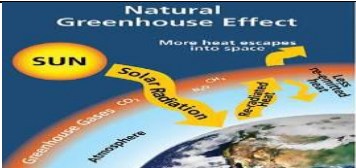
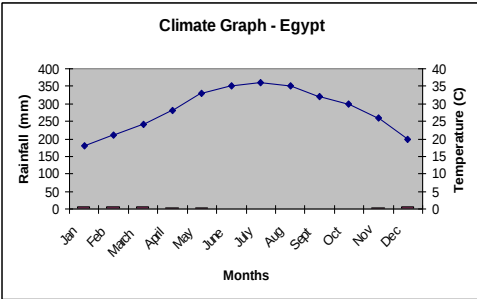
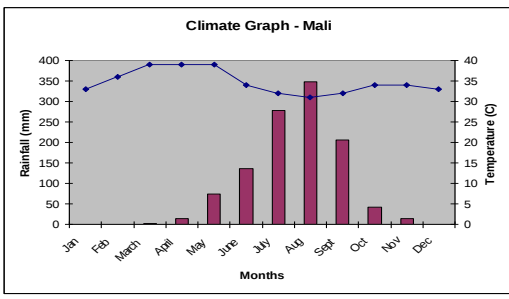
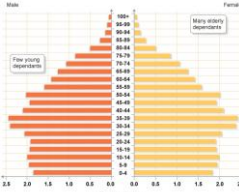
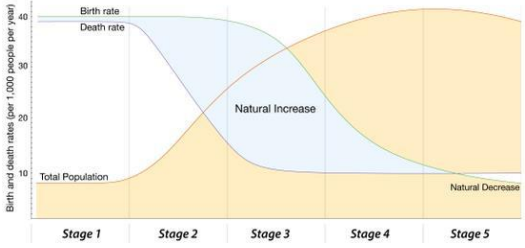
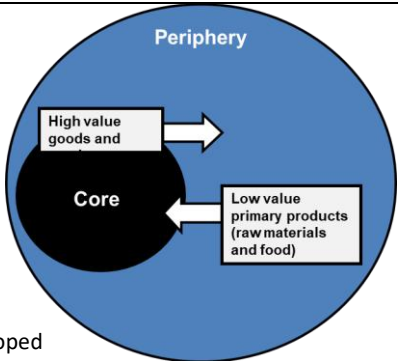


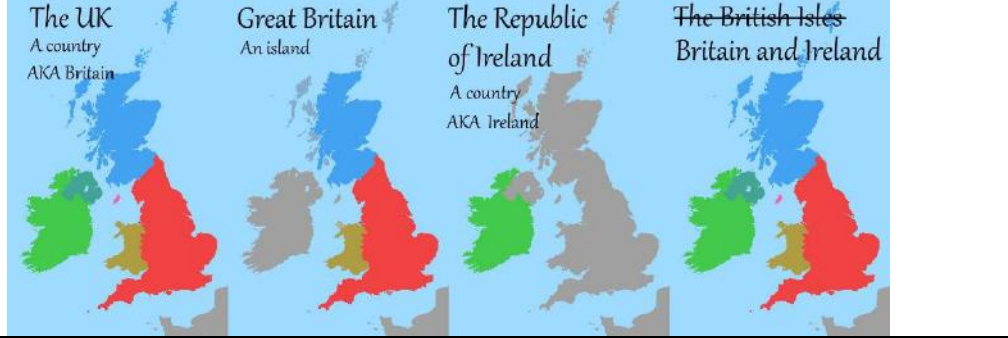
Y8 Climate knowledge organiser

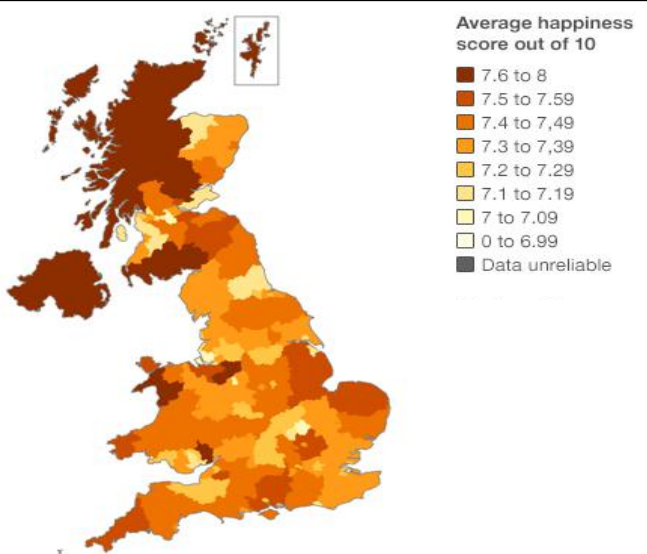
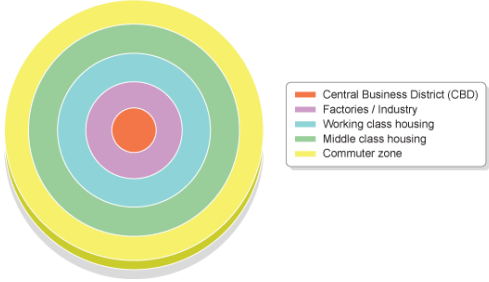
Climate/weather.	Weather is the changes in the atmosphere. The climate is the average weather (rainfall and temperature) over a 30 year period.	
Natural causes of climate change	Sunspot theory: Dark spots in the sun emit more heat, these get larger and smaller changing the temperature. Eruption theory: Ash and gas from volcanic eruptions block sunlight for up to 5 years. Orbital theory. Changes in the orbit of the Earth, from circular to elliptical, around the sun affects the distance from the sun and the amount of heat reaching the Earth.	
Greenhouse effect		UV radiation (heat) from the sun heats the Earth. IR radiation (heat) is reflected back to space. Some IR radiation is trapped by greenhouse gases and bounces back to Earth but much escapes into space. The Earth stays warm but not too hot.
Enhanced greenhouse effect		CO₂ from burning fossil fuels in cars and power stations and burning waste wood in rainforests. Methane from cows. Nitrous oxide from cars and fertiliser. All these add to the greenhouse gases in the atmosphere. More IR radiation heat is trapped and less escapes. Global temperatures increase.
How might climate change affect different areas?	Loss of plant and animal species. As the climate warms certain species are not able to cope with warmer weather e.g. the Black grouse numbers have fallen by 40% because they cannot cope with increased rainfall. Closure of ski resorts: A lack of snow is decreasing skiing which is worth £30 million to the Scottish economy. Problems for people's health: Increase in sunburn and examples of heat stroke in the elderly. Opportunities for farmers: UK farmers now grow heat loving crops such as grapes to make wine. Drought in Australia kills flying foxes. Wildfires in California burns homes and puts people at risk.	
What is Africa like?	Africa has the most countries of any continent at 54. This is 8 more than the next biggest Europe. It is the second biggest in size at 30.2 km². It has 830 million people which is nearly 3000 million lower than Asia. The majority of the African continent is lowland. In particular the lowland is situated towards North Western parts of the continent. The majority of the mountains (upland) is situated to the South of the continent. Africa has a varied climate. To the North is the Sahara desert.	
What is the climate of Africa like?	Climate Graph - Egypt 	Climate Graph - Mali  The North is hot and dry and has the Sahara Desert (Egypt climate graph) Moving South the land becomes semi arid desert
	then Savana grass lands and scattered trees. This leads to hot and wet rainforest in the West of the continent (Mali climate graph), and then finally back to grasslands in the South.	
What are the consequences of climate change in Africa?	Lack of food security with crops failing. This leads to starvation and stunted growth in children. The Malaria carrying mosquitoes need temperatures above 18 deg C to live. Climate change means new areas in Africa are becoming warm enough. Water scarcity: 95% of farmland in the Sahel is under water stress. No water means no crops and starvation.	
What are the Global consequences of climate change?	Sea level change: leading to low lying land around the world being flooded eg Kiribati in the Pacific ocean. Accelerated Warming: Methane trapped beneath the ice is now escaping. Methane is 20 times more effective at trapping heat in the atmosphere. New shipping routes. As the ice has melted ships can now travel from Asia to Europe easily.	
COP26	World Targets -Secure global net zero by 2050 and keep 1.5 degrees within reach. -Adapt to protect communities and natural habitats. -Mobilise finance. -Work together to deliver.	UK Pledges - Invest in hydrogen fuel/ renewable energy - Reduce emitting car sales - Invest in nuclear power - Prevent heat loss from buildings - Capture more CO₂
What are the extra benefits of stopping climate change?	Electricity generation. As well as producing CO₂ burning coal produces particles that are bad for our health. Using renewable energy such as wind turbines eliminates this. Transport: Riding bikes is not just CO₂ free but is also good for our health. Food: Eating less beef means less cows emitting methane and a better diet for us.	

Y8 Mind the Gap Organiser

How can a country's development be classified?	Development is the measure of wealth and social and political progress of a country. Developed: Country with very high human development (very rich country) Emerging: Country with high/ medium human development (recently emerging country). Developing: Country with low human development (poor country).		
Levels of Development	There are 4 levels of development: Low Income Countries (LIC) E.g. Ethiopia, Lower Middle Income Countries (LMIC) E.g. Afghanistan, Upper Middle Income Countries (UMIC) E.g. South Africa and High Income Countries (HIC) E.g. USA.		
What is the best measure of development?	GNI- The World Bank uses Gross National Income (GNI) per capita to measure a country's development. GNI per capita is the value of a country's income in a year, divided by its population. It is measured in dollars. Life expectancy- how long a person can expect to live for at birth. Calorie Intake- the average number of calories consumed within a day Literacy rate- the percentage of people that can read and write who are over the age of 15 Birth rate- the number of live births per 1000 people per year Infant mortality rate- the number of live births per 1000 people per year.		
What can a country's population tell us about its development?	As countries develop birth rate and death rate decreases and life expectancy increases. Developing countries tend to have youthful populations whilst developed countries are more likely to have ageing populations . This can be seen in the Demographic transition model (DTM). Population pyramids show the number or percentage of each sex in each age category for a country. A wider base means a higher birth rate, sloping sides show a high death rate and a tall pyramid suggests a high life expectancy.  		
What is life like in each stage of development	Developing: Large families live together in small houses. They may have access to clean water but this source is likely to be shared, there may be some electricity supply but not to all houses, wood is there cooking fuel. They are more likely to work in farming. Emerging: Families are more likely to live in their own accommodation. Many people live in urban areas to be near to the better jobs found in the city. There is access to clean water within the house and there is an electricity supply, although this may occasionally be disrupted. Families will aim to have a car. Developed: Families live in their own homes. There is good access to sanitation, electricity and the internet. Families will own a car. They are likely to work in the services industry for a reasonable wage. Families will be able to go on holiday.		
Why is development uneven?	Physical factors eg Chad	Climate	Climate change will increase drought and food shortages in some countries, affecting people's health and their social development. Extreme weather events may cause flooding which will ruin crops and reduce income earned by a country limiting economic development. Natural hazards eg cyclones can destroy a lot of infrastructure so money needs to be spent repairing and replacing it instead of being used to help the country develop.
		Location	Being landlocked makes trade more difficult as goods need to travel through other countries which becomes difficult and expensive so countries find it more difficult to develop economically.
		Relief	Steep relief is difficult to build on which makes it difficult to have infrastructure. This makes a country less attractive for investment from other countries or companies and limits their development.
	Political factors eg India	Corruption	Governments take money for their own gain, instead of using it to provide services for the country limiting social development. Countries with corrupt governments are less attractive to investment which limits economic development.
		War	Wars are expensive so money is not available to be spent on services, reducing social development. Many lives are lost, mainly of people of working age which reduces the labour force and limits economic development.
		Colonialism	Colonisers often took resources and people from their colonies leaving them with little to make money from, hindering economic development. Former colonies are often left with unstable governments.
	Economic Factors	Terms of trade	For a country to make more money their exports need to be higher value than their imports. If a country exports (sells) manufactured goods and imports (buys) raw materials they will make more money and develop economically.
		Cash Crops	Countries are moving from growing crops to feed their people to growing crops for sale (commodities). The value of commodities fluctuates so farmers do not know how much money they will make from their crops. This makes planning very difficult for families and for the government who do not know how much money they will get in a year so they don't know how much to spend on services and their social development slows down.

What was Britain's role in the development gap?	Britain created a vast empire and colonised many countries and regions. India was colonised in some form from the 1600s until 1947. The East India company took many natural resources and changed trading rules with India to benefit them, this reduced India's own trades and replaced them with goods from the UK, limiting their economic development. The UK also reinforced the caste system within India, hindering their social development. Despite formal colonisation having ended the remnants of the relationships of power remain. However colonisation did bring democracy to India and the English language, both of which have enabled India to access the global market more easily. Andre Frank believed that some countries were trapped in poverty by wealthy developed countries. Andre Frank believed that some countries were trapped in poverty by wealthy developed countries. He argued that colonialism was a major cause of poverty. The economic core had become rich by exploiting resources in the economic periphery.		
What is Asia Like?	Physical	The largest country in Asia is Russia . Northern Asia is fairly flat and includes the Western Siberian plain. A large mountain range called the Himalayas is found in eastern Asia and to the North East of India. A series of islands can be found in the South East of Asia called Indonesia .	
	Climate	India has a monsoon climate : part of the year is much wetter than the rest of the year. This is because winds blow from the southwest from June until September, bringing moisture from the Indian Ocean onto the land. In October these winds reverse and blow from the northeast. These winds are much drier. Some areas are a long way from the ocean, so receive less rain than others. The areas around the coast receive more rainfall and therefore are more likely to be rainforest environments.	
Why has Bangladesh been left behind?	About	Bangladesh is in southern Asia. It is bordered by India to West, North and East and has a short border with Myanmar in the South East. Bangladesh's coastline is on the Bay of Bengal. It is the confluence of many rivers including the Ganges and the Brahmaputra. The Himalayas can be found to the North of Bangladesh.	
	Flooding	Nearly a million homes were inundated, this means that a lot of people have been left homeless with little shelter. This will increase ill-health and disease which will prevent Bangladesh from developing socially.	
	Gender inequality	Girls taken out of school at a young age to get married to men they do not know. Young girls responsible for the household and taking care o their husband and their family. They then are expected to have a family while still very young.	
Why is India emerging?	Fewer people are working in primary industry and more have moved into secondary and tertiary. People earn more money in secondary and tertiary employment, they then spend this money in the country which provides more income for the government who can then invest in services such as infrastructure, healthcare and education.		
A characteristics of an emerging country is that there are inequalities across the population as some get richer much more quickly than others and wealth and services are not evenly distributed.			
This leads to rural-urban migration and in turn urbanisation , another key characteristic of an emerging country.			
Why has Japan developed	Japan achieved sustained growth in per capita income between the 1880s and 1970 through industrialisation.		
In Japan, as in many developed nations, decades of improving life expectancy and falling birth rates have produced a rapidly ageing and shrinking population. In the next 50 years the population is expected to shrink by about 1/3 and the proportion of over 64 year olds is expected to reach 38%.			
How did the global shift affect China	The Global shift is the relocating of the global economic centre of gravity to Asia from Europe and North America, over the last 30 years. The shift of manufacturing jobs from Europe, Japan and North America to China and South East Asia.		
Mao wanted China to focus on making steel instead of farming, he bought seeds that were meant to grow more grain but they didn't work in Chinese soils. At the same time people were told to move to cities to make the steel, so there were fewer farmers and the granaries shut down leaving little food. Mao did not know all the impacts immediately as people were scared of him. The available food was sent to the cities leaving people in the countryside to starve.			
China's One Child Policy	It was a government policy that restricted most Chinese families to only having one child. China's population was growing rapidly and by the late 1970s it was almost 1 billion. The government thought this would slow down development as more money would need to be spent on services instead of industry. Family planning had been tried and the population growth was not slowing so stricter measures were decided upon.		
Will China be the next superpower?	A superpower is a country that can project its power and ideas globally , using its strengths to influence other countries. Sources of power include great military strength , large population, large economy , great political influence, large amounts of natural resources and great cultural influence.		
Economically China is likely to become the most powerful country in the world. This is because it already has the second highest GDP and is currently growing at a faster rate than the USA who has the largest economy, this means that it should overtake the USA within the next decade. Having the largest economy will make China powerful as they will be able to control global trade.			

UK, Britain or The British Isles?	
Features	Physical features are to do with the environment; things that nature made. E.g mountain, river, lake, etc. Human features are to do with people; things that we have made. E.g. Shopping centre, road, bridge, etc.
Geology types	Igneous rocks are formed from the cooling of molten rock. Molten rock is rock that has been heated to such a high temperature that it melts into a liquid. The basalt which makes up the Giant's causeway is an igneous rock. The grains in sedimentary rocks are arranged in layers. The oldest layers are at the bottom and the youngest layers are at the top. Chalk, limestone, shale, and sandstone are all examples of sedimentary rocks. Metamorphic rocks are formed from other rocks which change due to heat or pressure. E.g marble and slate
Geology relationship	There is a relationship between relief (land height) and geology. Where the geology is very old and resistant, upland areas are found. For example the Cumbrian Mountains in NW England are nearly 1000m high and are made from igneous rocks like basalt and granite. Where the geology is younger and less resistant, lowland areas are found. For example, the Fens in East England are less than 100m high and are made from sedimentary rocks such as sand and clay.
Malham cove	<u>Geology</u> Made from Limestone. Limestone is made from the crushed shells and coral that lived in tropical seas 300 million years ago. AS they died their skeltons fell to the sea bed. As more fell on top of each other they squeezed the water out of them and they turned into rock. <u>Tectonic processes</u> Convection currents cause the plates to move around. These convection currents caused the Eurasion plate which Britain is on to move from being under the water near the tropics to where we are now. These currents also pushed Britain upwards causing all the water to run off and the land and rocks to emerge. <u>Glaciation</u> Very slowly the ice flowed down the valleys as deep rivers of ice called glaciers. The weight of the ice combined with rocks stuck to their bases scratched at the valley bottoms forming wide U shaped valleys. As the glaciers melted, water flowed out from underneath and eroded the rock even more. This water flowed over Malham cove eroding it into the shape we see today.

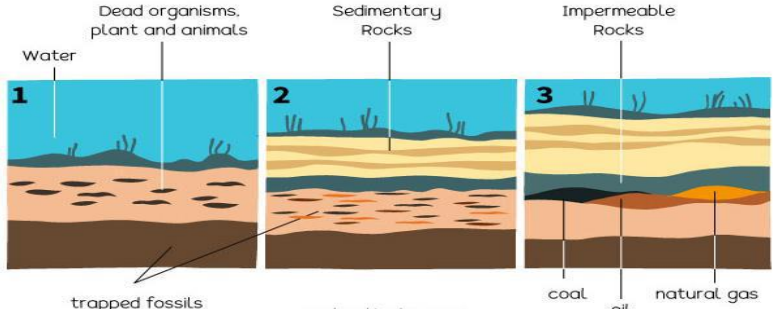
UK Happiness	
Primary sector decline	There are four main reasons for the decline in numbers employed in the UK's primary sector: 1. Running out of resources 2. Cheap imports (of coal and food) 3. Mechanisation (farming) 4. Social Change (move to renewables from coal)
Secondary Sector Decline- Tata Steel case study	Tata steel closed on Teesside in 2009. It resulted in nearly 1500 job losses from the factory and a further 8000 from industries that supported it. Bosses at Tata steel said it was cheaper to make the steel abroad as the wages were lower. Nearly 100 years of steel making tradition has come to an end and many workers have become depressed because they can't find new jobs. Because workers have less money services such as shops and restaurants are not being used as much and are now closing. The government once owned the steel company along with many other secondary industries and protected it through subsidies until it was privatised in the 1980s. Steel making needs a lot of energy and a major concern has been the rising cost of energy in the UK.
Location and structure of London	 Central business district This is the oldest part of the city and where most of the offices are found. As it is in short supply it is also the most expensive so people build upwards creating tall skyscrapers such as the London Shard. Its very accessible with excellent road and rail connections. London has a large underground railway network and bus service. Factories/industry-inner city

	Much of the industry that once located here has now moved to the edge of city. Abandoned warehouses and docks have been redeveloped into modern offices such as those at Canary Wharf. Other land has been redeveloped into leisure facilities such as the Westfield shopping centre and the Olympic Park and stadiums. Working class housing-inner city Here you find densely packed terraced houses. Some of the houses have been knocked down and replaced with high rise flats. Although small they can still be expensive especially if they are close to transport connections. This is a popular location for new migrants and ethnic minorities. Middle class housing – inner suburbs There are huge variations here. Kensington is made of up of grand terraced houses, often with 5 floors and is one of the most expensive suburbs anywhere. Services are good and crime is low. In contrast Hackney has much smaller and cheaper houses with some disused factories inbetween. Crime levels are much higher Commuter zone – outer suburbs and rural urban fringe. Houses are larger, more modern, detached and have gardens. Epping forest on the Northern edge of the outer suburbs. There are some industrial areas but these are kept separate from the houses. There are large shopping centres and sports facilities such as the cricket ground at Loughton		
London-Canary Wharf regeneration	Environmental	Social	Economic
	- Views across London - Replaced abandoned factories and docks	- Offers bars, restaurants, shops, etc. - Excellent transport links e.g. rail and boat - More housing - Population increase	- Global companies locating - Employs over 100,000 - Increased property values

Natural Resources Knowledge Organiser

Key Vocabulary

Resource	Something we use from the planet.
Fossil Fuel	Coal, oil and gas which are burnt to provide energy.
Energy	The ability to do work/ power
Conventional Extraction	The commonly used method of drilling for large oil deposits vertically.
Unconventional Extraction	Less commonly used methods of drilling for smaller oil deposits e.g. horizontal fracturing (fracking) of the rock to remove oil.
Conflict	A fight/ active disagreement.
Renewable Energy	Energy from a source that can be used over and over again e.g. solar, wind etc.
Non-Renewable Energy	Energy from a source that will run out e.g. Oil, coal, gas.

<u>Fossil Fuel Formation</u>	 -Coal was made on the land when lots of the Earth was covered in swamps. -It is made from the compressed (squashed) remains of dead trees and plants such as ferns. -Oil and gas were made under the sea. They are made from the compressed remains of dead fish and other sea creatures such as phytoplankton. -Over millions of years, vast quantities of carbon has been stored in the fossil fuels, in the lithosphere. -Fossil fuel combustion has released much of this stored carbon into the atmosphere as carbon dioxide, upsetting the carbon cycle.		
<u>Fossil Fuel Reserves</u>	Countries with large reserves of fossil fuels include Saudi Arabia, Venezuela, Qatar, Iraq, Iran, Canada and Russia . The region with the largest reserves is the middle east .		
<u>Middle East Location</u>	 The Middle East region is part of Asia. The region was named by Europeans to separate the 'far east' from the 'middle east'. It includes countries such as Iran, Iraq, Turkey, Oman, Saudi Arabia. The area is mostly Desert with the exception of Turkey (Mediterranean). People live near water sources as the climate is desert. Many people live near the Nile, Tigris and Euphrates. Not many people live in the uplands.		
<u>Middle East Issues</u>	OPEC The Organisation of Petroleum Exporting Countries (OPEC) are an intergovernmental organisation (IGO) who control the global supply of oil. Countries such as Saudi Arabia and Iraq are members and try to control the price of oil.	Geography Over 99% of the oil produced in the Middle East is transported abroad by ships through chokepoints. This causes issues with traffic. There are also issues with piracy in the Arabian sea leading to hijacking of tankers.	History of Conflict Many locations in the middle east are former colonies of the UK including Iraq, Yemen, Oman, UAE. War is common in the region with two 'gulf' wars between the USA and Iraq.
<u>Other Reserves</u>	Arctic: The USGS estimate that the Arctic contains 25% of the world's unexploited oil and gas reserves. The potential for conflict between the eight Arctic nations is high.		Tar Sands: The Taiga forest is being destroyed in Alberta Canada to reach the 'tar sands' below. This has created wealth but destroyed tribal culture/ environment.
<u>Alternative Energies</u>	Renewables (solar, wind, tidal, HEP) +Can be used over and over. + Do not emit CO2. -Often every expensive -NIMBY attitude of many people -Difficult to install in developing countries. -Can be intermittent (irregular).	Biofuels (bio-diesel from soya or palm oil) + Absorbs CO2 as crops are grown. +Grow in most biomes. +Can be used in cars and planes. -Deforestation occurs to plant crops. -Amount of land needed is very large. -CO2 is released when using them.	Nuclear + Generates large amounts of electricity (over 70% in France). +Uranium used can be used many times. -Safety fears especially in locations like Japan. - Very expensive form of energy.

Natural Resources Knowledge Organiser