

CLEETHORPES ACADEMY HOME LEARNING

Year 10: Geography



We Are **CARING**

We Are **CURIOUS**

We Are **CREATIVE**

SELF QUIZZING

OUR EXPECTATIONS

- The act of self-quizzing supports retrieval. Retrieval is important because the more we revisit knowledge and ideas, the more likely we are to remember it. The more we remember, the greater sense we can make of our learning.
- You should spend a minimum of *30 minutes a night* focusing on a specific subject's retrieval activity.
- You should bring your completed work to form, every Tuesday, where your work will be checked and additional retrieval activities will be completed to support your retention of the information studied at home.
- Failure to complete the activities each week, will result in further sanctions.

WHAT YOU SHOULD DO

- Each night, select a subject to focus on.
- Read the subject's information really trying hard to remember what you have read. You might want to highlight and add your own notes to the information you have been given.
- Once you are confident that you can recall the information without having to recheck, use the following blank page to write down everything you can remember, using a black or blue pen. Don't worry if you can't remember everything
- In form time, your tutor will ask you to check through your work and use a green pen to "gap fill" any information you may have missed.
- Your tutor will also ask further questions in relation to the information you have read each week, to further support your retention of new knowledge.
- You will be rewarded with carrot points for your efforts each week.

WEEKS 1-4

What is Urbanisation?		Sustainable Urban Living		Traffic Management	
This is an increase in the amount of people living in urban areas such as towns or cities. In 2007, the UN announced that for the first time, more than 50 % of the world's population live in urban areas.		Sustainable urban living means being able to live in cities in ways that do not pollute the environment and using resources in ways that ensure future generations also can use them.		Urban areas are busy places with many people travelling by different modes of transport. This has caused urban areas to experience different traffic congestion that can lead to various problems.	
Global Trends Urbanisation is happening all over the world but in LICs and NEEs rates are much faster than HICs. This is mostly because of the rapid economic growth they are experiencing. HICs urbanised in the 1800s due to the industrial revolution. HICs are now experiencing urban-rural migration due to an ageing population.		Water Conservation This is about reducing the amount of water used. - Collecting rainwater for gardens and flushing toilets. - Installing water meters and toilets that flush less water. - Educating people on using less water. Energy Conservation Using less fossil fuels can reduce the rate of climate change. - Promoting renewable energy sources. - Making homes more energy efficient. - Encouraging people to use energy. Waste Recycling More recycling means fewer resources are used. Less waste reduces the amount that eventually goes to landfill. - Collection of household waste. - More local recycling facilities. - Greater awareness of the benefits in recycling.		Environmental problems - Traffic increases air pollution which releases greenhouse gases that is leading to climate change. Economic problems - Congestion can make people late for work and business deliveries take longer. This can cause companies to lose money. Social Problems - There is a greater risk of accidents and congestion is a cause of frustration. Traffic can also lead to health issues for pedestrians.	
Causes of Urbanisation / factors affecting urbanisation rates (1) Rural - urban migration (LICs) The movement of people from rural to urban areas. Push factors are negative and make people leave an area. - Natural disasters - War and Conflict - Poor farming conditions - Mechanisation - Drought - Lack of employment Pull factors are positive and make people move to an area. - More jobs - Better education & healthcare - Poor transportation - Increased quality of life. - Following family members. (2) Natural Increase When the birth rate exceeds the death rate.		Water Conservation This is about reducing the amount of water used. - Collecting rainwater for gardens and flushing toilets. - Installing water meters and toilets that flush less water. - Educating people on using less water. Energy Conservation Using less fossil fuels can reduce the rate of climate change. - Promoting renewable energy sources. - Making homes more energy efficient. - Encouraging people to use energy. Waste Recycling More recycling means fewer resources are used. Less waste reduces the amount that eventually goes to landfill. - Collection of household waste. - More local recycling facilities. - Greater awareness of the benefits in recycling.		Environmental problems - Traffic increases air pollution which releases greenhouse gases that is leading to climate change. Economic problems - Congestion can make people late for work and business deliveries take longer. This can cause companies to lose money. Social Problems - There is a greater risk of accidents and congestion is a cause of frustration. Traffic can also lead to health issues for pedestrians.	
Emergence of Megacities An urban area which over 10 million people living there.		Urban sprawl is when urban planning becomes less controlled and unregulated. Urban areas consume more rural landscapes on the rural-urban fringe. This is happening all over the UK as there is a shortage of housing. Brownfield sites is an area of land or premises that has been previously used, but has subsequently become vacant, derelict or contaminated. Brownfield sites in Bristol include the paintworks, Stoke Croft, Bristol Arena, Harbourside and the Temple Quarter. This usually occurs in the inner city areas and industrial areas. By 2026 over 30,000 new homes are planned on brownfield sites. Between 2006 and 2013 only 6% of new housing developments were built on greenfield sites.		Bristol's Bio / Poo Bus Ultimately unsuccessful this was a scheme to use human waste to produce biomethane to power a bus on a regular scheduled route to Bristol airport to Bath. It could travel approximately 300km on the waste produced by five people. This would reduce emissions by 57%. Funding was removed by the government after the project had run for two years.	
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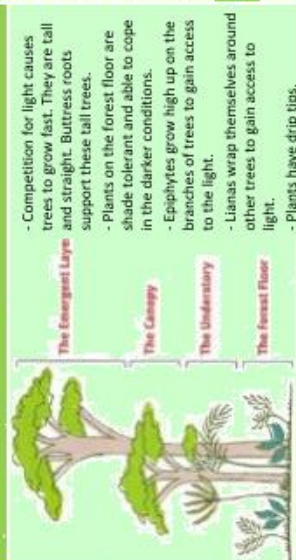
WEEKS 4-7

Urban Change in a Major UK City: Bristol Case Study		Urban Change in a Major NEE City: Lagos Case Study	
Location and Background		Location and Background	
 Bristol is a city and county in South West England with a population of 454,200 in 2017. The district has the 10th largest population in England.		 Lagos is a coastal city in the south west of Nigeria. It is Nigeria's largest city (however not the capital) and it is the 7th fastest growing city in the world with a population of 21 million	
City's Importance		City's Importance	
- Two Universities - Two Cathedrals - Developed in the 18th century as part of the Triangular trade linking West and Africa and the West Indies. - Largest concentration of Silicon chip manufacturing outside California. - UK's 8th most popular tourist city - Strategic position on the M4 corridor		On the Atlantic coastline, allowing for excellent trade links. Major airport connecting it to the rest of the world and connected to other Nigerian cities via railways and road links 60% of industrial and commercial ventures in Nigeria Generates \$90 billion in goods and services	
Migration to Bristol		Migration to Lagos	
Between 1851 and 1891 Bristol's population doubled as people arrived looking for work. Migrants work in wide range of industries including retail, manufacturing and Health. Bristol's population is made up from 50 countries A large number of migrants come from the EU but also Somalia, India and Jamaica		Lagos is not the capital city but is the largest with the most opportunities to attract migrants Recently, millions of people have migrated from rural areas that have suffered from drought, lack of services and unemployment to Lagos. People do this to search for a better quality of life. This expanding population has resulted in the rapid urbanisation of Lagos.	
City Challenges		City Challenges	
Social: Lack of investment has led to social inequality. In some areas there are high levels of social deprivation. Filwood is an example of this Economic: Closure of the cities Port changed the function of the city Environmental: Urban sprawl and derelict industrial buildings. Waste and congestion are other issues.		Social: There is a severe shortage of housing, schools and healthcare centres available. Large scale social inequality, is creating tensions between the rich and poor. squatter settlers such as Makoko have developed. Economic: The rise of informal jobs with low pay and no tax contributions. There is high employment in the squatter settlements. Environmental: Water, air and waste pollution is a big issue throughout the city. Due to rising car ownership traffic congestion is an issue.	
		Social: better healthcare, education (>10 universities) and services available in comparison to the surrounding rural areas. Economic: more opportunities with higher pay and a wider range available such as lawyers, computing and business. Environmental: The expansion of public transport through integrated systems reduces car use and environmental pollution.	
		Urban Planning - Makoko, Floating school and Eko Atlantic The floating school was designed to be sustainable. The materials used were local such as bamboo, timber and other resources. The structure of the school building included; Classrooms, greenery, The use of solar cells to the roof and 250 plastic barrels were used to float on the waters. In 2016 the structure was destroyed during a storm. Eko Atlantic is a new city built on reclaimed land that will employ 150000 people, have a private power grid, be sustainable and home a quarter of a million people. It is currently under construction	

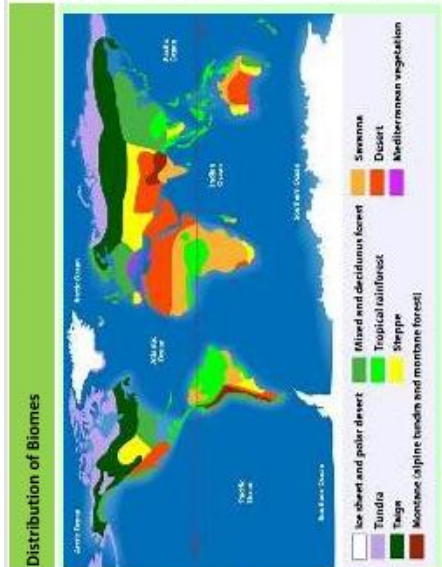
WEEKS 8-12

Ecosystem - Key terms	
Key term	Definition
Ecosystem	A community of plants and animals that interact with one another and their physical environment.
Abiotic	Relating to non living things.
Biotic	Relating to living things.
Producer	An organism or plant that is able to absorb energy from the sun through photosynthesis.
Primary consumer	Creature that eats plant matter. Also known as a herbivore.
Secondary consumer	Creature that eats other animals. Also known as a carnivore.
Decomposer	An organism that breaks down dead plant and animal matter.
Food chain	The connections between different organisms that rely on one another as their food source.
Food web	A complex hierarchy of plants and animals relying on each other for food.
Biome	A large global ecosystem with flora and fauna adapting to their environment.

Tropical Rainforest - Vegetation



Water and Nutrient Cycle



Key Characteristics

- Along equator (Asia, Africa / South America). • 6% of earth's surface. • 25°C – 30°C and over 2500mm rain per month.
- Between equator and tropics. • 20 – 30°C and between 500 – 1500 mm of rain per year. • Wet and dry seasons.
- Tropics (Sahara and Australia). • Over 30°C and less than 300 mm per year rain. • 20% of land's surface.
- Higher latitudes (W Europe, N America, New Zealand). • 5 – 20°C and between 500 – 1500 mm rain per year. • 4 distinct seasons.
- Lose leaves in the winter to cope with the cold.
- 60°N (Scandinavia / Canada). • Cone bearing evergreen trees. • No sunlight for part of the year.
- Above 60°N (Arctic Circle). • Less than 10°C and less than 500mm per year rain. • Cold, icy and dry means 2 month growing season.

Effects of deforestation in the Amazon

- Economic development**
 - Brings in jobs and income.
 - Destroys resources in the long term.
 - Livelihoods of locals destroyed.
 - 2008 \$6.9 billion from cattle.
 - Rubber tappers lost jobs.
 - Mercury from gold mining poisons fish.
- Soil erosion**
 - Land left unprotected from heavy rain leads to landslides and flooding.
 - Nutrients are washed away decreasing nutrients in the soil.
 - Rivers silt up.
- Contribution to climate change**
 - Trees cut down change the water cycle and make it drier.
 - Rainforests are the lungs of the earth and so when deforested there is more carbon dioxide in the air and less oxygen.
 - Burning also releases carbon dioxide into the air (Greenhouse effect).
- Others**
 - Loss of biodiversity - 137 species a day.
 - Loss of indigenous tribes (90 since 1990).
 - Tribal people moving to towns and cities and have drugs and alcohol issues.
 - Loss of indigenous knowledge.
 - Conflicts between developers and indigenous people.

Causes of deforestation in the Amazon	
Commercial farming	Farming to sell produce for a profit. Cattle and crops. Responsible for 80% of Amazon deforestation. Ruins soil and nutrients
Logging	The business of cutting down trees and transporting the logs to sawmills. Selective logging and clear felling. Teak and Mahogany worth the most.
Mineral extraction	The removal of mineral resources from the earth. Gold, Bauxite, Oil and gas. Pollutes rivers and air. Trees above the mines and quarries are removed.
Subsistence farming	A type of agriculture producing food and materials for the benefit only of the farmer and his family or community. Small scale, often slash and burn.
Hydro - electricity	Dams have been built and large areas of rainforest destroyed by flooding.
Resettling	Since 1970 1 million people have been encouraged to move away from shanty towns and into the rainforest. They have been given land which has been cleared to allow farming.
Roads	The 4000km long Trans Amazonia Highway built 1970s. Opened up rainforest, but allowed loggers in.

Protecting the Amazon

- Selective logging. Only fell fully grown trees. Mark sustainable trees for sale.
- Conservation & education. WWF (NGO) educate and train conservation workers. Buy threatened areas.
- Ecotourism. Minimises damage to the environment and benefits locals. This creates incentive to protect the forest.
- International agreements. International Tropical Trade Agreement restricts trade in hard woods.
- Debt reduction. In 2010 the USA converted \$13.5 million from Brazil and used to protect forest.

Unit 1b

The Living World



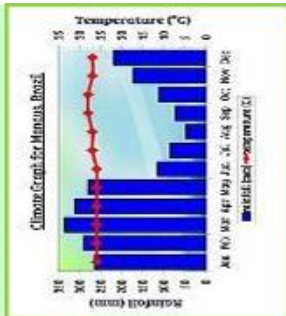
Tropical Rainforest - Animals

- Jaguars have spotted fur. This camouflages them in the dappled shade of the forest floor.
- Parrots have strong, sharp beaks to help them crack open nuts.
- Spider monkeys have a prehensile tail that allows them to cling to branches. Sharp nails allow them to peel bark.
- Poison dart frogs are a bright colour to warn predators away.



Rainforest Climate

Temperatures are high all year (around 28°C). Rainfall is around 2500mm per month.



WEEKS 8-12

Trophic levels			Ecosystem - A question of scale		Cold Environments (C.E)		C.E. - Opportunities		Specific Detail			
Trophic Level			Source of Energy		Examples		Fishing		Commercial fishing is worth \$6billion to the state economy, they employ over 78,000 jobs. Subsistence fishing is where fish are caught to eat and oil for fuel. It is usually done by Native American communities. Alaskan fisheries are widely viewed as successful examples of sustainable management.			
Producers	Solar energy		Green plants, photosynthetic protists and bacteria		Grasshoppers, water fleas, amoebae, termites		Mineral Extraction		In the late 1800s Alaska was considered the Gold rush state. Due conflict with native American communities, regarding the environmental and social issues, plans for the Pebble Gold Mine were halted and one of the world's biggest mining companies walked away from a half billion dollar investment. However, 1/5th of the state's mining wealth still comes from gold.			
Herbivores	Producers		Herbivores		Wolves, spiders, some snakes, weiborn		Solar energy - with 12 hours of cloudless sunshine every day, deserts are ideal locations for this form of electricity generation.		Alaskan oil provides 100,000 jobs or 1 in 7 jobs in Alaska. It contributes \$40 billion to the economy. Oil was discovered in 1968 in Prudhoe Bay in the North. The Trans-Alaskan Pipeline was constructed in 1970 costing \$8 billion. The pipeline is engineered to withstand a number of challenges to protect the environment. It is raised off the ground on stilts due to the heat from the oil, this prevents the melting of the permafrost. The pipeline is raised to allow the migration of animals such as caribou. It zigzags to prevent breakages in case of an earthquake and sections can be isolated in case of spillages, limiting the impact			
Primary Carnivores	Primary carnivores		Primary carnivores		Killer whales, tuna, falcons		Tourism - deserts are remote, romantic and exotic locations for tourists.		tourism attracts between 1-2 million summer visitors each year. Activities include - fishing, whale watching kayaking, cruise ships, hiking, skinning, rock climbing, national parks, and historical / cultural sites of the Native American people. It is one of Alaska's biggest employers however work can be seasonal and low poorly paid.			
Secondary Carnivores	Secondary carnivores		Secondary carnivores		Humans, rats, opossums, bears, raccoons, crabs		The World Wildlife Fund (WWF) is a conservation group that helps to protect the Arctic environments. It provides scientific information, expertise and resources.		Works with local communities to manage critical ecosystems e.g. the Beaufort Sea, narwhal and Greenland shark			
Omnivores	Several trophic levels		Omnivores		Fungi, many bacteria, earthworms, viruses		Works with oil companies, local Inuit organisations and government regulators to plan for a suitable future for the Arctic.					
Detritivores and Decomposers	Wastes and dead bodies of other organisms		Detritivores and Decomposers									
At each (trophic) level of the food chain the number of individuals declines. This is because not all individuals in any trophic level are consumed (eaten). This means not all energy is passed up to the next trophic level.			A small scale ecosystem - Epping Forest		Epping Forest is located east of London. It is all that remains of a larger forest that colonized England at the end of the last Ice Age. It covers 2,476 hectares and contains areas of woodland, grassland, heath, rivers, bogs and ponds, and most of it is a Site of Special Scientific Interest and a Special Area of Conservation.		Cold environments experience temperatures that are at or below zero degrees Celsius for long periods of time.					
Changes within ecosystems			How is this ecosystem interdependent?		Most of the trees are deciduous, meaning that they lose their leaves in winter. This is an adaptation to the UK's seasonal climate. Winters are darker and cooler than summers (the mean monthly temperature is 18°C in July but just 5°C in January. As a result the trees grow broad leaves in spring. This allows them to maximize photosynthesis during the summer. They shed their leaves in the autumn, and so conserve their energy during winter.		Cold Environments - Challenges					
If any component within an ecosystem is changed it will have a knock on effect on the rest of the ecosystem.			Nutrient Cycling in Epping Forest		Epping Forest, the biomass store is large because of the great height of the trees and large dense undergrowth beneath them. The soil store is large too because there is always plenty of humus. The high flow rates between the litter, soil and biomass stores reflect the vigorous cycle of new growth that takes place each year. The forest also loses a lot of nutrients each year, via leaching, during episodes of heavy rainfall.		Extreme Temperatures		Temperatures are above 15°C during the summer and drop below freezing in the winter.			
An example of where this happened was in Yellowstone National Park in the USA when they reintroduced wolves in 1995.			Diagram of the Yellowstone wolf reintroduction cascade:		16 packs of grey wolves introduced. Each pack kills one elk a day. - Elk population falls from 20,000 to 10,000 in 8 years. - Reduction in grazing pressure. Aspen and cottonwood regenerate. There is more tree cover. - Beavers create ponds and flooded areas, which promote growth of aspen. - Increased tree cover provides habitats for birds. - Populations of predators of small rodents e.g. red foxes and birds of prey, increase.		Inaccessibility		Alaska is huge making travel difficult and expensive.			
							Soilfluction		Takes place in the summer when snow melts. On slopes it causes slopes to slip, this reduces access.			
							Permafrost		This is when the ground is permanently frozen, this makes it difficult to grow crops.			
							Seasonal melting and freezing		Causes uneven surfaces, making it difficult to travel to certain areas.			
							Cold Environments - Solutions		Roads - Built on gravel pads to stop heat transfer from taking place.			
							Water/sewage/gas		Cannot be buried under ground or they will freeze, instead they are carried by "utility corridors".			
							Houses		steep roofs so snow can fall off, triple glazing, raised on piles to stop damage from continual thawing of the ground below.			
							Cold Environments - Animals					