Rayner Stephens
HIGH SCHOOL

Curriculum Intent

for

Geography

The intent of geography at Rayner Stephens is to provide students with essential and transferable skills to deal with, and understand, the rapidly changing world in which they will be living. The world is increasingly interconnected, with large scale economic movements and migration across the globe, and within the country. Geography gives students the opportunity to be able to understand the reasons for these changes, and their consequences. We want to create discerning and inquisitive geographers who can use their geography skills to interpret the world around them. We want our students to see a world beyond Tameside, so that they can access it, if they choose to. We want to be developing students love of learning and research, as well as helping students to create their own enquiries, making justifiable decisions, cost-benefit analyses and being able to see issues from a range of viewpoints, not just their own. We seek to create global citizens who are aware of, and passionate about, the diverse physical world in which we live.

Geography Learning Journey

Rayner Stephens High School

YEAR 7

Exploring the UK
Students will explore the physical and human geography of the UK exploring its unique geographical features. This will include differing weather patterns and the changing population.

Exploring Climate
Students will study how climate has changed over different geological periods of time. They will be introduced to the concepts of both natural and human influenced climate change.

Exploring Hazards
Students will develop an understanding of both weather and tectonic hazards studying specific case studies and studying the impacts of these hazards in different parts of the world.

Exploring Africa
Students will learn that the continent of Africa is one of the most diverse on the planet. Students will investigate the features of Africa and the significance of Nigeria and Ghana.

Exploring Asia
Students will investigate the different human and physical features of the world's largest continent. A study of India and China's rapid population growth, their differing population policies and economies.

Exploring Fieldwork
Students will use their knowledge from the previous topic to measure the micro-climates around school. Students will design and implement an investigation and analyse and conclude on their own results.

YEAR 8

Exploring Cities
Students will understand the global pattern of urbanization and the challenges and opportunities that a rapidly urbanizing world can create.

Exploring Biomes
Students will explore the different global hot and cold biomes looking at, hot and cold deserts, the polar regions and the Tropical Rainforest.

Exploring Coasts
Students will investigate the dynamic coast of the UK looking at the different physical processes that impact the coastline and the features that are created as a result.

YEAR 9

Exploring Fieldwork
Using knowledge from previous topics students will assess the ability of the school to withstand natural hazards and suggest how the school could become earthquake proof.

Exploring Fieldwork
Using knowledge from previous units students will complete a river study discussing the varying features of the rivers different courses.

Exploring Rivers
Students will study the different geomorphic processes that change the river landscapes in the UK and assess the many impacts that these can have on a variety of groups of people.

Exploring Resources
Students will explore the increasing demand an increasing population and climate change can have on food, water and energy resources.

Exploring Inequality
Students will explore the process of globalisation by examining the interconnected nature of different countries and how this can impact development. Students will investigate the cause and impact of these connection on countries of varying levels of development.

Exploring the Middle East
Students will study the physical and human features of the Middle East including the conflicts arising from oil production and the methods they are using to increase sustainability.

YEAR 10

Urban Futures
Students will explore how and why the global pattern of urbanisation is changing and assess the varied opportunities and challenges through and in-depth analysis and evaluation of two major cities. One city from the developing and one from the developed.

Global Hazards
Students will investigate both weather and tectonic hazards, analysing and assessing the causes, impacts and responses to each of the different hazards through two case studies, one from the UK and one non UK based weather hazard.

Fieldwork
Using knowledge from previous units students will investigate the human impact on one coastal area in the UK by visiting this area and collecting data.

Dynamic Development
Students will consider the changing nature and distribution of countries along the development spectrum before examining the complex causes of uneven development. Students will investigate and analyse an in-depth study of one country, considering its development journey so far, how its global connections may influence the future and possible alternative development strategies.

Climate and Change
Students will analyse patterns of climate change from the start of the Quaternary period to the present day, considering the reliability of a range of evidence for the changes. Students will study the theories relating to natural climate change and consider the influence of humans on the greenhouse effect. Social, economic and environmental impacts of climate change at both local and global scales will be examined.

YEAR 11

Distinctive Landscapes
Students will gain a deeper understanding of the different geomorphic processes that shape river and coastal landscapes within the UK. The process of one coastal area and one river basin in the UK will be examined along with human impact on these environments.

Sustaining Ecosystems
Students will investigate the global ecosystems and the link between human wellbeing and ecosystem wellbeing and how vital that connection is. Students will explore the distribution and characteristics of the Earth's global biomes. Students will investigate the two contrasting ecosystems of tropical rainforests and polar environments, exploring physical cycles and processes that make these ecosystems distinctive, the threats posed to their existence and how humans are attempting to manage them for a more sustainable future.

UK in the 21st Century and Fieldwork
Students will discover a range of cultures, identities and economies within the UK. Students will analyse the changing nature of people's lives and work in the UK in the 21st century. Students will the global significance of the UK, this will be investigated through a study of the UK's political and cultural connections with the rest of the world. This topic will also include a piece of fieldwork for students to investigate the industrial decline and regeneration of Salford Quays.

Resource Reliance
Students will investigate emerging patterns, where demand is outstripping the supply of food, water and energy, before taking the issue of food security and considering the question 'can we feed nine billion people?'. Students will explore what it means to be food secure, how countries try to achieve this and reflect upon the sustainability of strategies to increase food security

Year 9 – Geography					
Curriculum intent	The year 9 curriculum is designed to be synoptic bringing together knowledge and skills from previous topics to look at issues which can impact on the local, national and global scale. Students will draw on knowledge from all units in year 7 and 8 to address 'big issue' topics and further deepen their knowledge and develop their skills. The concept of geo-politic and the interdependence of countries will also be analysed and discussed. The use of fieldwork to then investigate these geographical processes will deepen students understanding of the similarities and differences that humans face in responding to these physical processes and the responses that can be implemented. This learning will then provide the basis for an in-depth analysis of the Middle East where a synoptic approach will be taken to all knowledge and skills, to deepen the global understating of human interactions with physical processes and the impacts this can have on different scales.				
	Topic 1 **Exploring Rivers**	**Topic 2** **Fieldwork**	**Topic 3** **Exploring Resources**	**Topic 4** **Exploring Inequality**	**Topic 5** **Exploring the Middle East**
Knowledge	• The hydrological cycle and its inputs, outputs and processes. • The geomorphic processes found in the different course of a river. • The contrasting features and processes of a river's different courses. • The causes and impacts of flooding. • The different ways in which humans can use the river landscape.	• Application of Exploring Rivers. • The structure of a geographical investigation. • The different types of data collection methods and their benefits and disadvantages. • How to select appropriate data collection methods and construct a hypothesis. • How to construct an investigation and conduct it, including introduction, methodology, analysis, conclusion and evaluation.	• Global increase of resource consumption and the dangers of demand outstripping supply. • The sustainability of renewable and non-renewable resources. • The reasons for water scarcity globally . • Solutions for water stress and scarcity. • The reasons for food insecurity in the UK. • The solutions to food security in the UK and globally.	• Assess global inequality through a variety of development indicators. • The process and causes of industrialisation and deindustrialisation in the UK. • The process of globalisation and its impact on countries at different levels of development. • The impact of fast fashion on countries at different levels of development.	• The different biomes and climate zones of the Middle East. • The challenges and opportunities of living in the Middle East. • The connections between the UK and the Middle East. • The geopolitical state of the Middle East including the Qatar and the historical conflicts. • The influence of oil on trade and foreign policies. • The position of the Middle East as a global superpower

New Procedural Knowledge	OS Maps Cross Section Flood Hydrograph	Measuring the discharge, velocity, depth, width, cross profile, sediment size and type in a river.	Radial graph	Sphere of influence maps. Flowline Map	Isoline map
Assessments	**Evaluate** Evaluate the impacts of a flood.	**KS3 Exam 1** Multiple choice questions. Recall Questions. Procedural Knowledge Extended piece of writing.	**Examine** Examine the sustainability of solutions for food security at different scales.	**KS3 Exam 2** Multiple choice questions. Recall Questions. Procedural Knowledge Extended piece of writing.	**Enquiry Question** Did the USA steal the Middle East?
Enrichment	River Detectives	The River Eden: Virtual Fieldwork Investigation	Greater Manchester Green Summit	Let's Cultivate Greatness	Contrast in the Middle East

YEAR 9 HALF TERM 3 – EXPLORING RESOURCES

Vocab	Definition
Resource	Resources such as food, energy and was are what is needed for basic human development.
Renewable	A source of energy that does not run out and can be used again.
Non-Renewable	A source of energy that is going to run out and can not be used again.
Infrastructure	The physical structures that are in place to support a country, e.g. the road network and the power supply.
Water Scarcity	When there is not enough water to meet demand in a given area.
Drought	A prolonged shortage of water such as when it has not rained for a ling time.
Food security	the state of having reliable access to a sufficient quantity of affordable, **nutritious** food.
Genetically Modified Food	Foods derived from organisms whose genetic material (DNA) has been modified in a way that does not occur naturally.
Yield	A measurement of the amount of agricultural production harvested per unit of land area.
Pesticide	A substance used for destroying insects or other organisms harmful to cultivated plants or to animals.
Reservoirs	A large man made lake that used as a source of water supply.
Fossil Fuels	Sources of energy are made from decomposing plants and animals.
Food Bank	A place where food is supplied to people free of charge,

1. Demand outstripping supply

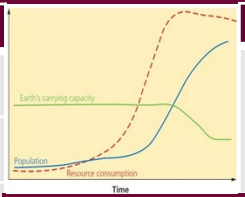
The demand for resources like food, water and energy is rising quickly that supply cannot always keep up. Importantly, access to these resources varies dramatically in different locations.

Population Growth

- Currently the global population is 7.3 billion.
- Global population has risen exponentially this century.
- Global population is expected to reach 9 billion by 2050.
- With more people, the demand for food, water, energy, jobs and space will increase.

Economic Development

- As LIDCs and EDCs develop further, they require more energy for industry.
- LIDCs and EDCs want similar lifestyles to ACs, therefore they will need to consume more resources.
- Development means more water is required for food production as diets improve.



2. Dangers of demand outstripping supply.

Consumption – The act of using up resources or purchasing goods and produce.
Carry Capacity – A maximum number of species that can be supported.
Resource consumption exceeds Earth's ability to provide!

3. Energy Supply – Renewable and Non-renewable

	Advantages	Disadvantages
Solar	Renewable, no pollution, very reliable at certain points in the year and warmer countries.	Lots of energy to build, only works during the day, cannot increase power if needed.
Wind	Renewable, no pollution, no lasting damage to the environments, minimal running costs.	Not as reliable, do not work when there is no wind, can not increase supply when needed.
Hydroelectric	Renewable, no pollution, can increase power supply if needed.	A big impact on the environment from building, animals and plants may lose habitat.
Fossil Fuels	Reliable, enough to meet the current demand for energy, can produce more energy when the demand is higher, infrastructure is already in place.	Running out, releases carbon dioxide, leading to global warming, and also releases sulphur dioxide which causes acid rain.

4. Reasons for water scarcity.

There are three main factors that cause water scarcity: overuse, pollution and climate change.
- Water pollution caused 1.8 million deaths in 2015 and makes 1 billion people ill every year.
- 2 million tonnes of sewage, industrial and agricultural waste goes into the world's water every day.
- More than 2 billion people live in areas of water stress, this will increase due to increases in population and climate change.
- 160 million children live in areas at risk of drought.

5. Solutions for water scarcity.

	Methods	Impacts
Reservoirs	Increasing storage to hold more water and constructing more dams to control river flow can provide a reliable source of water.	• Can flood a large area of land and damage habitats and natural landscapes. • Dams can be a barrier for certain species to migrate upstream. • Natural flow of sediment is disrupted, which then reduces fertility of land further down.
Water Transfer	Constructing pipes and canals to divert water surplus to areas in need of a water supply.	• Large-scale engineering works can damage ecosystems along the route. • Lots of energy is required to pump water over long distances.

6. Food Availability in the UK

The UK population is around 65 million and enjoys a high level of food security.
- The UK produces 68% of its own food but this is steadily decreasing.
- The UK has to import the rest, especially seasonal food such as fruit and vegetables.
- Food production in the UK has increased by intensifying agriculture.

7. Global food inequality.

- This shows how many people are suffering from hunger or illness caused by lack of food.
- The index gives a value for each country from 0 (no hunger) to 100 (extreme hunger).

8. Solutions to food security in the UK.

Food Banks
- This is food that is donated by the public.
- They help people with a sudden loss of income.
- It is estimated that 1 million people rely on food banks for their own food security.

Urban Gardens
- These are large projects where groups work together to grow food and promote healthy living.
- This can involve planting crops in urban environments such as roundabouts.

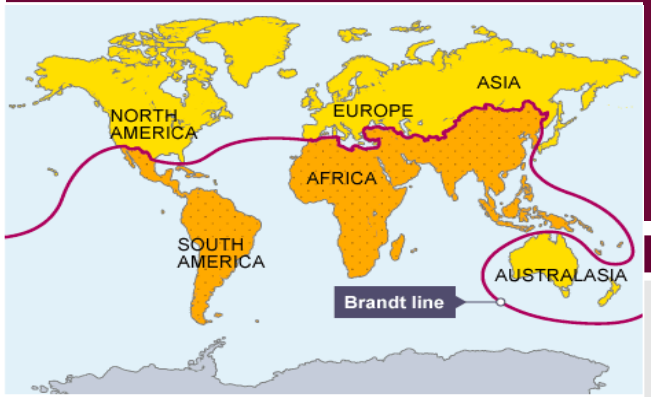
9. Global food security solutions.

Genetically Modified	Involves changing the DNA of foods to enhance their productivity and properties. Crops can be better protected from disease and drought, but also made larger or include more health benefits.
Allotments	This is an area of land that is divided into plots and rented to individuals to grow their own fruit and vegetables. Allows people in urban areas to produce their own cheap & healthily food close to home.
Intensive Farming	Makes the most of the land and allows for higher yields. This can make growing food more productive and therefore cheaper to produce. Chemical fertilisers, pesticides and herbicides can pollute the environment and harm people, animals and insects.

YEAR 9 HALF TERM4 – EXPLORING INEQUALITY

Vocab	Definition
Globalisation	
TNC	
Interconnected	
Westernisation	
Development Indicator	
Industrialisation	
Deindustrialisation	

1. The development gap



Rich north

Poor south

2. Development Indicators.

	Definition	High or Low in AC
GDP	Total value of goods and service produced per year.	↑
Life Expectancy	Average age a person lives to.	↑
Infant Mortality Rate	Number of babies who die under one year old, per 1000 live births.	↓
Calorie Intake	Average calories eaten per day.	↑
Energy Consumption	Average amount of energy used per person (indication of level of industry)	↑
Urban Population	Percentage of people living in towns or cities.	↑
Literacy Rate	Percentage of adults who can read or write.	↑
People per Doctor	The number of people per doctor, an indication of access to healthcare.	↓

3. Issues with development indicators.

1) Different indicators develop at different rates and all figures are averages – no measurement should be used on it own.
2) Information can be outdated or inaccurate – some countries can't or won't measure it.

4. Industrialisation and deindustrialisation in the UK.

From 1750 Britain went through a process of change in a number of key areas: **Agriculture – Industry – Transport and Communications – Technology.** There were also many scientific discoveries and technological inventions that changed society and industry

The UK has experienced **deindustrialisation**. There has been a decrease in the amount of manufacturing taking place in the country and a growth in the **tertiary** and **quaternary** sectors. Traditional industries, such as ship building and textiles, have declined.

5. Divers of globalisation.

1. Improvements in transport – containerization and jest aircraft.
2. Free – trade agreements – easy to buy and sell internationally.
3. Communication improvement – Internet and phone, access to news, TV shows and social media.

6. Impacts of globalisation.

Access to new technologies that can improve levels of development in a country.
Helps provide new services for people in EDCs and LIDCs.
Governments have been able to improve economic growth and advance infrastructure.
Improved access to resources as countries trade with one another.
Higher paying job opportunities.
Countries rely n each other and are more likely to work together.
Ideas and skills are shared between countries which can lead to greater progress.

Deindustrialisation in AC's have led to job losses.
Some resources have been over exploited which means that they may run out and they can be taken from local people.
Local people in less developed countries are likely to be exploited with poor working conditions, low pay and unfair expectations.
It can create cultures that are all the same and countries can lose their individuality.
Large amounts of pollution created by air travel and the movement of goods on ships and lorries.
Diseases such as Covid-19 can spread from one country to another far easier with so many people and goods moving around the world.

7. Fast Fashion

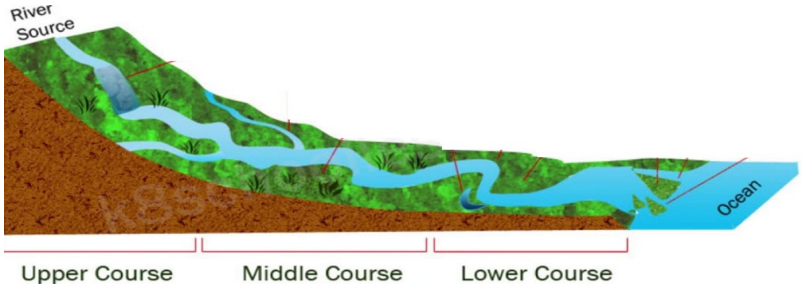
- The world uses an estimated 80 billion pieces of clothing every year, a 400 percent increase from two decades ago.
- Textile production contributes more to climate change than international aviation and shipping combined.
- Buying just one white cotton shirt produces the same amount of emissions as driving 35 miles in a car.
- By 2030, global apparel consumption is projected to rise by 63%, from 62 million tons today to 102 million tons—equivalent to more than 500 billion additional T-shirts
- 75% of consumers believe that sustainability is important and one-third are willing to choose brands that help environmental and social improvement.
- The fashion industry is responsible for 10% of annual global carbon emissions.
- Around 300,000 tonnes of textile waste ends up in household black bins every year, sent to landfill or incinerators. Less than 1% of material used to produce clothing is recycled into new clothing at the end of its life
- Clothing companies create more than 1 million garments every day.
- Fast fashion emissions will grow by 50% by 2030, if current growth continues. Extending the life of clothes by just 9 months of active use would reduce carbon, water and waste footprints by 20-30% each.

YEAR 9 HALF TERM 1 – EXPLORING RIVERS

Key vocab	Definition
Confluence	The meeting point of two or more rivers
Tributary	A small stream feeding into a larger stream or lake
Watershed	The edge of the drainage basin
Fluvial	Anything that is associated with rivers
Drainage basin	The area of land around a river where all water drains from
Course	A distinctive part of a river
Processes	Forces that change the physical feature of the earth
Impact	Something that happens because of a previous action. This can be positive or negative
Transportation	The movement of material from one place to another
Erosion	The breaking down of rocks
Deposition	The dropping of material when the river loses energy

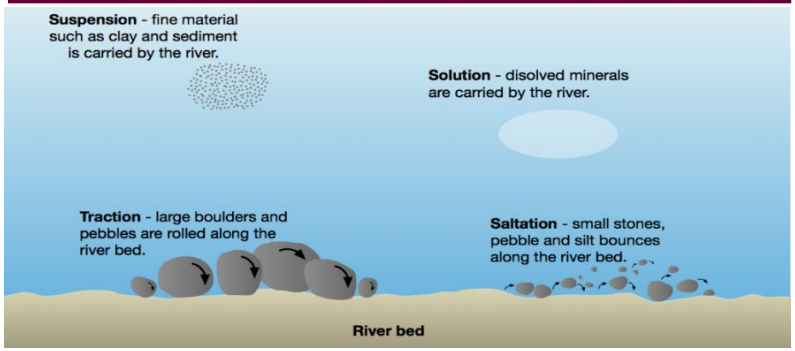
Landforms

Upper	**Interlocking spurs** – hills that are overlapping in the landscape. Created by erosion. **Waterfall** – Hard rock above the soft rock. Hydraulic action creates an undercut which becomes unstable and falls into the plunge pool below
Middle	**Meander** – a bend in the river created by something that is in its way. Fastest flow on the outside, slowest flow on the inside. **Oxbow lake** – a meander that has been cut off from the main channel after flooding happens
Lower	**Floodplain** – the low lying land next to the river that floods when a river bursts its banks **Levee** – natural build up of material by deposition on the river banks. Acts as a natural flood defence.



	Upper	Middle	Lower
Gradient	Steep	Slightly sloping	Flat
Channel width	Narrow	Slightly wider	Widest
Velocity	Fastest	slower	Slow
Sediment size	Large, Angular rocks	smaller, less angular rocks	Smaller, smoother rocks

Types of Transportation



Hard engineering	Soft engineering
• Involves the use of technology to control rivers. • It is more expensive as concrete is used. • Immediate results but may create problems in the future	• More sustainable option • Does not interfere with the flow of the river • Less expensive – very little material is used. • Works alongside natural processes.

Types of erosion	Definition
Hydraulic action	Sheer power of the water smashing against river banks. Air becomes trapped in cracks and widens them
Attrition	Rocks that the river is carrying knock against each other and become smaller and rounded
Abrasion	Pebbles grind along river banks and bed, causing rocks to break apart
Solution	Water dissolves certain types of rock such as limestone.

Impacts of flooding

- Loss of houses and businesses
- Floodwater can contaminate fresh water supplies
- Loss of life
- Difficult to get insurance on properties
- Destruction of wildlife habitats.
- Sewage can be brought up out of grids

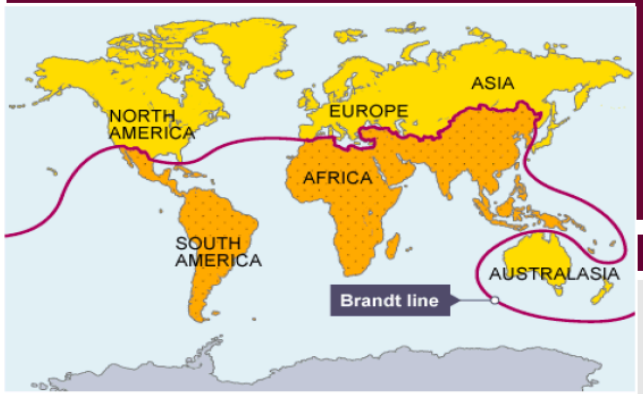
Humans use of land around rivers

Upper	• Walking/hiking • Farming • Reservoirs
Middle	• Towns and cities • Farming • Transport
Lower	• Towns and cities • Factories built near ports • Tourism – beaches/seaside towns

YEAR 9 Summer – EXPLORING INEQUALITY

Vocab	Definition
Globalisation	The process by which the world is becoming increasingly interconnected.
TNC	A Trans National Company is an organisation which operates globally.
Interconnected	Different organisations are connected through trade and come to economically depend on each other.
Westernisation	The adoption of the practices and culture of western Europe by societies and countries in other parts of the world.
Development Indicator	Development indicators are a method used to measure how developed a country or region is.
Industrialisation	The process of transforming the economy of a nation or region from a focus on agriculture to a reliance on manufacturing
Deindustrialisation	A decline in the importance of industrial activity for a place, a movement from manufacturing to the service sector.
NGO	A non-government organisation such as a charity.
Fast Fashion	Cheap clothing that samples ideas from the catwalk or celebrity culture and turns them into garments in high street stores quickly to meet consumer demand. An industry that causes extensive damage to the planet, exploits workers, and harms animals

1. The development gap



2. Development Indicators.

	Definition	High or Low in AC
GDP	Total value of goods and service produced per year.	↑
Life Expectancy	Average age a person lives to.	↑
Infant Mortality Rate	Number of babies who die under one year old, per 1000 live births.	↓
Calorie Intake	Average calories eaten per day.	↑
Energy Consumption	Average amount of energy used per person (indication of level of industry)	↑
Urban Population	Percentage of people living in towns or cities.	↑
Literacy Rate	Percentage of adults who can read or write.	↑
People per Doctor	The number of people per doctor, an indication of access to healthcare.	↓

3. Issues with development indicators.

1) Different indicators develop at different rates and all figures are averages – no measurement should be used on it own.
2) Information can be outdated or inaccurate – some countries can't or won't measure it.

4. Industrialisation and deindustrialisation in the UK.

From 1750 Britain went through a process of change in a number of key areas: **Agriculture – Industry – Transport and Communications – Technology**. There were also many scientific discoveries and technological inventions that changed society and industry

The UK has experienced **deindustrialisation**. There has been a decrease in the amount of manufacturing taking place in the country and a growth in the **tertiary** and **quaternary** sectors. Traditional industries, such as ship building and textiles, have declined.

5. Drivers of globalisation.

1. Improvements in transport – containerization and jest aircraft.
2. Free – trade agreements – easy to buy and sell internationally.
3. Communication improvement – Internet and phone, access to news, TV shows and social media.

6. Impacts of globalisation.

Access to new technologies that can improve levels of development in a country.
Helps provide new services for people in EDCs and LIDCs.
Governments have been able to improve economic growth and advance infrastructure.
Improved access to resources as countries trade with one another.
Higher paying job opportunities.
Countries rely n each other and are more likely to work together.
Ideas and skills are shared between countries which can lead to greater progress.

Deindustrialisation in AC's have led to job losses.
Some resources have been over exploited which means that they may run out and they can be taken from local people.
Local people in less developed countries are likely to be exploited with poor working conditions, low pay and unfair expectations.
It can create cultures that are all the same and countries can lose their individuality.
Large amounts of pollution created by air travel and the movement of goods on ships and lorries.
Diseases such as Covid-19 can spread from one country to another far easier with so many people and goods moving around the world.

7. Fast Fashion

- The world uses an estimated 80 billion pieces of clothing every year, a 400 percent increase from two decades ago.
- Textile production contributes more to climate change than international aviation and shipping combined.
- Buying just one white cotton shirt produces the same amount of emissions as driving 35 miles in a car.
- By 2030, global apparel consumption is projected to rise by 63%, from 62 million tons today to 102 million tons—equivalent to more than 500 billion additional T-shirts
- 75% of consumers believe that sustainability is important and one-third are willing to choose brands that help environmental and social improvement.
- The fashion industry is responsible for 10% of annual global carbon emissions.
- Around 300,000 tonnes of textile waste ends up in household black bins every year, sent to landfill or incinerators. Less than 1% of material used to produce clothing is recycled into new clothing at the end of its life
- Clothing companies create more than 1 million garments every day.
- Fast fashion emissions will grow by 50% by 2030, if current growth continues. Extending the life of clothes by just 9 months of active use would reduce carbon, water and waste footprints by 20-30% each.