### Paper 2: Challenges in the human environment - case studies and examples

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Paper 2 glossary

Section A: Urban issues and challenges

**Brownfield site** - Land that has been used, abandoned and now awaits reuse

**Dereliction** - Abandoned buildings and wasteland

**Economic opportunities** - Chances for people to improve their standard of living through employment

**Formal economy** - the type of employment where people work to receive a regular wage, pay tax, and have certain rights, i.e. paid holidays, sickness leave

**Greenfield site** - A plot of land, often in a rural or on the edge of an urban area that has not been built on before

**Inequalities** - Differences between poverty and wealth, as well as wellbeing and access to jobs, housing, education, etc,

**Informal economy** - employment outside the official knowledge of the government

**Megacity** - An urban area with a total population of more than ten million people

**Migration** - When people move from one area to another; in many LICS people move from rural to urban areas (rural-urban migration)

**Natural increase** - Birth rate minus the death rate of a population

**Pollution** - Chemicals, noise, dirt or other substances which have harmful or poisonous effects on an environment

**Rural-urban fringe** - A zone of transition between a built-up area and the countryside, where there is often competition for land use

**Sanitation** - Measures designed to protect public health, such as providing clean water and disposing of sewage and waste

**Social deprivation** - The extent an individual or an area lacks services, decent housing, adequate income and employment social impact The effect of an event on the lives of people or community social opportunities The chances available to improve quality of life, i.e. access to education, health care, etc..

**Squatter settlement** - An area of (often illegal) poor-quality housing, lacking in services like water supply, sewerage and electricity

**Traffic congestion** - When there is too great a volume of traffic for roads to cope with, and traffic slows to a crawl

**Urban greening** - Process of increasing and preserving open space in urban areas, i.e. public parks and gardens
**Urbanisation** - When an increasing percentage of a country’s population comes to live in towns and cities

**Urban regeneration** - Reversing the urban decline by modernising or redeveloping, aiming to improve the local economy

**Urban sprawl** - Unplanned growth of urban areas into the surrounding rural areas

**Urban sustainability** - A city organised without over reliance on the surrounding rural areas and using renewable energy

**Waterborne diseases** - Diseases like cholera and typhoid caused by microorganisms in contaminated water

**Waste recycling** - Process of extracting and reusing useful substances found in waste
Section B: The changing economic world

**Birth rate** - The number of births a year per 1000 of the total population

**Business park** - An area of land occupied by a number of businesses

**Commonwealth** - The Commonwealth is a voluntary association of 53 independent and equal sovereign states, most being former British colonies

**Death rate** - The number of deaths in a year per 1000 of the total population

**Debt crisis** - When a country cannot pay its debts, often leading to calls to other countries for assistance

**Debt relief** - Cancellation of debts to a country by a global organisation such as the World Bank

**De-industrialisation** - The decline of a country’s traditional manufacturing industry due to exhaustion of raw materials, loss of markets and overseas competition

**Development** - The progress of a country in terms of economic growth, the use of technology and human welfare

**Development gap** - Difference in standards of living and wellbeing between the world's richest and poorest countries

**European Union** - A politico-economic union of 28 European countries – the UK is a member state

**Fair trade** - Producers in LICs given a better price for their goods such as cocoa, coffee and cotton

**Free trade** - When trade between countries is not restricted by, for example, import duties or not being a member of a group of trading nations. When there are no barriers.

**Globalisation** - Process creating a more connected world, with increases in the global movements of goods (trade) and people (migration & tourism)

**Gross national income (GNI)** - Measurement of economic activity calculated by dividing the gross (total) national income by the size of the population

**High income country (HIC)** - A country with GNI per capita higher than $12746 (World Bank, 2013)

**Human Development Index (HDI)** - A method of measuring development where GDP per capita, life expectancy and adult literacy are combined to give an overview

**Industrial structure** - Relative proportion of the workforce employed in different sectors of the economy

**Infant mortality** - Number of babies that die under one year of age, per 1000 live births

**Information technologies** - Computer, internet, mobile phone and satellite technologies
**Integrated transport system** - Different forms of transport are linked together to make it easy to transfer from one to another

**International aid** - Money, goods and services given by single governments or an organisation like the World Bank or IMF to help the quality of life and economy of another country

**Life expectancy** - The average number of years a person is expected to live.

**Literacy rate** - Percentage of people in a country who have basic reading and writing skills

**Low income country (LIC)** - A country with GNI per capita lower than $1045 (World Bank, 2013)

**Microfinance loans** - Very small loans which are given to people in the LICs to help them start a small business

**Newly-Emerging Economies (NEEs)** - Countries that have begun to experience high rates of economic development, usually along with rapid industrialisation

**North-south divide (UK)** - Economic and cultural differences between southern England and northern England

**Post-industrial economy** - The shift of some HIC economies from producing goods to providing services

**Science park** - A collection of scientific and technical knowledge-based businesses located on a single site

**Service (tertiary) industries** - The economic activities that provide services - commercial, professional, social, entertainment and personal

**Trade** - Buying and selling of goods and services between countries

**Transnational corporation (TNC)** - A company that has operations (factories, offices research and development, shops) more than one country
Section C: The challenge of resource management

**Aeroponics** - Growing plants in an air or mist environment without the use of soil

**Appropriate (or intermediate) technology** - Technology suited to the needs, skills, knowledge and wealth of local people and their environment

**Biomass** - Renewable organic materials, such as wood, agricultural crops or wastes, especially when used as a source of fuel or energy

**Biotechnology** - The genetic engineering of living organisms to produce useful commercial products

**Carbon footprint** - Measurement of the greenhouse gases individuals produce, through burning fossil fuels

**Energy conservation** - Reducing energy consumption by using less energy and existing sources more efficiently

**Energy exploitation** - Developing and using energy resources to the greatest possible advantage, usually for profit

**Energy mix** - Range of energy sources of a region or country, both renewable and non-renewable

**Energy security** - Uninterrupted availability of energy sources at an affordable price

**Famine** - Widespread, serious, often fatal shortage of food

**Food insecurity** - Being without reliable access to enough affordable, nutritious food

**Food miles** - The distance covered supplying food to consumers

**Food security** - Access to sufficient, safe, nutritious food to maintain a healthy and active life

**Fossil fuel** - A natural fuel such as coal or gas, formed in the geological past from the remains of living organisms

**Geothermal energy** - Energy generated by heat stored deep in the Earth

**Green revolution** - An increase in crop production, especially in poorer countries, using high-yielding varieties, artificial fertilisers and pesticides

**Grey water** - Recycled domestic waste water

**Groundwater management** - Regulation and control of water levels, pollution, ownership and use of groundwater

**Hydroelectric power (HEP)** - Electricity generated by turbines that are driven by moving water

**Hydroponics** - Growing plants in water using nutrient solutions, without soil
Intermediate (or appropriate) technology - Simple, easily learned and maintained technology used in LICs for a range of economic activities

Irrigation - Artificial application of water to the land or soil

Local food sourcing - Food production and distribution that is local, rather than national and/or international

Mineral extraction - Removal of solid mineral resources from the earth

Nuclear power - Energy released by a nuclear reaction, especially by fission or fusion

Organic produce - Food produced without the use of chemicals such as fertilisers and pesticides

Over abstraction - When water is used more quickly than it is being replaced

Over-cultivation - Where the intensive growing of crops exhausts the soil leaving it barren

Overgrazing - Feeding too many livestock for too long on the land, so it is unable to recover its vegetation

Renewable energy sources - A resource that cannot be exhausted, i.e. wind, solar and tidal energy

Resource management - Control and monitoring of resources so that they do not become exhausted

Shale gas - Natural gas that is found trapped within shale formations of fine grained sedimentary rock

Solar energy - Sun's energy exploited by solar panels, collectors or cells to heat water or air or to generate electricity

Subsistence farming - A type of agriculture producing only enough food and materials for the benefit of a farmer and their family

Sustainability - Actions that meet the needs of the present without reducing the ability of future generations to meet their needs

Sustainable energy supply - Energy that can potentially be used well into the future without harming future generations

Sustainable food supply - Food production that avoids damaging natural resources, providing good quality produce and social and economic benefits to local communities

Sustainable water supply - Meeting the present-day need for safe, reliable and affordable water without reducing supply for future generations

Undernutrition - When people do not eat enough nutrients to cover their needs for energy and growth, or to maintain a healthy immune system
**Urban farming** - Growing food and raising animals in towns and cities; processing and distributing food; collecting and re-using food waste

**Water conflict** - Disputes between different regions or countries about the distribution and use of freshwater

**Water deficit** - When demand for water is greater than supply

**Water insecurity** - When water availability is insufficient to ensure the good health and livelihood of a population, due to short supply or poor quality

**Water security** - Availability of a reliable source of acceptable quantity and quality of water

**Water quality** - Measured in terms of the chemical, physical and biological content of the water.

**Water stress** - When the demand for water exceeds supply in a certain period or when poor quality restricts its use

**Water surplus** - When water supply is greater than demand

**Water transfer** - Matching supply with demand by moving water from an area with water surplus to another with water deficit

**Wind energy** - Electrical energy produced from the power of the wind, using windmills or wind turbines
### Urban issues and challenges

<table>
<thead>
<tr>
<th>Covered in class?</th>
<th>Revision undertaken</th>
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**I can explain how urbanisation has happened at different rates and at different times in different parts of the world making reference to LICs and HICs.**

**I can explain some of the causes of urbanisation in different parts of the world making reference to LICs and HICs.**

**Case study of the LIC or NEE – Mumbai**

**I can explain why Mumbai is important nationally and internationally.**

**I can explain why and how Mumbai has grown.**

**I can explain, analyse and evaluate the opportunities in Mumbai including:**
1. Access to services - health
2. Access to services - education
3. Access to resources - water supply
4. Access to resources - energy
5. How urban industrial areas can promote economic development

**I can explain, analyse and evaluate the challenges in Mumbai including:**
1. Managing urban growth – slums, squatter settlements
2. Clean water, sanitation systems and energy
3. Access to services - health and education
4. Unemployment and crime
5. Managing environmental issues - waste disposal, air and water pollution, traffic congestion

**I can explain and evaluate the how Mumbai can plan to improve the quality of lives for the urban poor. (use the examples in Dharavi and Navi Mumbai.)**

**Case study of a HIC - London**

**I can explain why London is important nationally and internationally.**

**I can explain why and how Plymouth has grown.**

**I can explain the impact of national and international migration on the growth and character of the Plymouth.**

**I can explain, analyse and evaluation the opportunities in Plymouth including**
1. Cultural mix
2. Recreation
3. Entertainment
4. Employment
5. Integrated transport systems
6. Urban greening

**I can explain, analyse and evaluation the challenges in Plymouth including**
1. Inequalities in housing, education and employment.
2. Urban deprivation
3. Dereliction of buildings
4. Building on brown and greenfield sites.
5. Water disposal
6. Urban sprawl on the rural – urban fringe and of commuter towns

**I can explain, analyse and evaluation the how London has undergone regeneration [London Olympics 2012 regeneration strategies]**

**Urban sustainability**

**I can describe how people can live more sustainably.**

**I can explain how sustainable urban living can conserve water and energy, recycle waste and create more green space. [BedZED]**

**I can explain how urban transport strategies are used to reduce traffic congestion.**
**What is Urbanisation?**

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.

**Where is Urbanisation happening?**

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.

**Causes of Urbanisation**

<table>
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<tr>
<th>Rural - urban migration (1)</th>
<th>The movement of people from rural to urban areas.</th>
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<tr>
<td><strong>Push</strong></td>
<td>• Natural disasters</td>
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<td></td>
<td>• War and Conflict</td>
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<tr>
<td></td>
<td>• Mechanisation</td>
</tr>
<tr>
<td></td>
<td>• Drought</td>
</tr>
<tr>
<td></td>
<td>• Lack of employment</td>
</tr>
<tr>
<td><strong>Pull</strong></td>
<td>• More Jobs</td>
</tr>
<tr>
<td></td>
<td>• Better education &amp; healthcare</td>
</tr>
<tr>
<td></td>
<td>• Increased quality of life.</td>
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<td>• Following family members.</td>
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<tr>
<th>Natural Increase (2)</th>
<th>When the birth rate exceeds the death rate.</th>
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<tr>
<td>Increase in birth rate (BR)</td>
<td>Higher percentage of population are child-bearing age which leads to high fertility rate.</td>
</tr>
<tr>
<td>Lower death rate (DR)</td>
<td>Higher life expectancy due to better living conditions and diet.</td>
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<td>Improved medical facilities helps lower infant mortality rate.</td>
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**Types of Cities**

| Megacity | An urban area with over 10 million people living there. |

**Sustainable Urban Living**

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.

**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.

**Creating Green Space**

Creating green spaces in urban areas can improve places for people who want to live there.
- Provide natural cooler areas for people to relax in.
- Encourages people to exercise.
- Reduces the risk of flooding from surface runoff.

**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.

**Urban Issues & Challenges**

**Sustainable Urban Living Example: Freiburg**

Freiburg is in west Germany. The city has a population of about 220,000. In 1970 it set the goal of focusing on social, economic and environmental sustainability.

**Background & Location**

- The city’s waste water allows for rainwater to be retained.
- The use of sustainable energy such as solar and wind is becoming more important.
- 40% of the city is forested with many open spaces for recreation, clean air and reducing flood risk.

**Sustainable Strategies**

- Brownfield sites are an area of land or premises that has been previously used, but has subsequently become vacant, derelict or contaminated.

**Integrated Transport System**

This is the linking of different forms of public and private transport within a city and the surrounding area.

**Traffic Management Example: Bristol**

In 2012 Bristol was the most congested city in the UK. Now the city aims to develop it’s integrated transport system to encourage more people to use the public transport. The city has also invested in cycle routes and hiring schemes.

**Greenbelt Area**

This is a zone of land surrounding a city where new building is strictly controlled to try to prevent cities growing too much and too fast.

**Urban Regeneration**

The investment in the revival of old, urban areas by either improving what is there or clearing it away and rebuilding.
Urban Change in a Major UK City: London Case Study

Location and Background

- London is in the South East of England, located on the River Thames. It has the UK’s densest population.
- London’s population is 12.5% of the UK’s on just 0.6% of the land. It is the world’s 14th largest Capital city.
- London gained over 100,000 people a year between 2008 and 2013. A gain greater than the population of the city of Newcastle!

Causes of growth

- Internal migrants into London tend to be in the age groups 20-30, whilst those who tend to leave are over 30 children - generally people migrate into London for work; and leave when they start having families.
- International migration has helped create one of the most multicultural places on the planet with many different races, cultures and languages in evidence throughout the city.

City’s Importance

- Hosts the UK parliament.
- 6th largest city economy after Tokyo, New York, Los Angeles, Chicago and Paris.
- Londoners earn 23% more than the UK average and spend 24% more than the average.
- Generates 22% of the UK’s GDP
- 800,000 people commute to London daily
- 40 higher education institutions (1/3 of UK total & 1/5 of UK students). Over 1/5 of Londoners have a degree.
- Highest number of businesses per 1000 people in the UK (54) and home to 15 head offices of the 250 largest companies in the world.
- Major airports include Heathrow, Gatwick and Stansted.
- Car travel has fallen 15% since 1997, but transport has increased by 40% since 2000. 0.5 million bike journeys daily.
- Highest tourist spend in the world with $21.1 billion in 2011 - most visit from the USA, but 2/3 of all visits are from Europeans.
- 65% is either gardens, public green space or water. 223 parks hold Green Flag awards. It has 8 Royal Parks.
- 2 million don’t speak English at home (most common languages other than English are Bengali, Urdu & Polish)
- 1/3 born abroad (top 3 India, Poland and Bangladesh).
- 36% are from Black, Asian or minority ethnic groups.

City’s Opportunities

Social: -Multicultural mix – a variety of food, music, religions, languages and cultural parties, cultural events such as the Notting Hill Carnival.
- Recreation and leisure – cultural attractions (British Museum, National Gallery, Natural History Museum), the West End, tourist attractions (Buckingham Palace, Houses of Parliament), concert venues (Millenium Dome), sporting events and venues (Oxford-Cambridge Boat race, Wimbledon Tennis Open, Wembly Stadium), many big name football teams and even hosted the Olympics.
- Mix of bars, restaurants and street entertainment

Economic: UK’s largest economy.
- Employment – The City of London is dominated by financial & insurance services.
- Generates 22% of the UK’s GDP
- Highest number of businesses per 1000 people in the UK (54) and home to 15 head offices of the 250 largest companies in the world.

Environmental: Integrated transport systems - different forms of transport link to one another. Public transport = 25% of London’s journeys. Majority of motorways converge on London’s orbital ring road the M25, international airports, buses and trains link the UK together at stations like Kings Cross and connect to Europe via Eurostar from St Pancras. London Underground and integrated cycle networks for transport around the city.

Urban greening – London is increasing the amount and proportion of green spaces within the city (roof top gardens, public green spaces, improving river ways and canals)

City Challenges

- Social: Inequalities (high house rents, schools in poorer areas get poorer grades and have poorer health, 2011 employment rate was 67.5 % below UK average of 70.3%, unemployment rate was 10.0% compared with 8.4%).
- Economic: The poorest 80% share just 20% of all asset wealth. 16% are in the poorest tenth nationally, 17% are in the richest tenth.

London Olympic Park regeneration projects

- Aim of London Olympics 2012 Legacy project 4 – urban regeneration (whole sale improvement of the buildings and infrastructure of an area) focused on East London.
- ding the Olympic Stratford and nearby Tower Hamlets needed regeneration (abandoned old industrial sites, low achievement at school in terms of GCSE points score, higher than average unemployment, higher deprivation and poverty, lower household incomes). Regeneration has included:
  - New housing estates, schools, shopping centres
  - New leisure and sports facilities
  - New tube station at Stratford and 2 new lines
  - Stadiums built with 25% recycled materials and largely on 560 acres of brownfield land.
  - Wastelands cleaned up and new green spaces.

Urban Change in a Major NEE City: Mumbai, India Case Study

Location and Background

- Mumbai is in Maharashtra state in the West of India. It is not one of the most populated Indian cities but it is one of the most important economically and culturally. It has over 12 million people. It is on a major shipping route through the Mediterranean Sea via the Suez Canal.

Causes of growth

- Job opportunities in services and manufacturing pay higher wages. There are more access basic medical services compared to rural areas.
- Social: Population growth, but limited in where it can grow as the island surrounded by the Arabian Sea & 2 rivers.
- Economic: Mumbai is the largest squatter settlement located in Mumbai (formerly Bombay) in India. There are a million people crammed into one square mile. Slum problems are:
  - People go to the toilet in the street & there are open sewers because 500 people share one public toilet.
  - Children play in sewage waste & doctors see 4000 cases a day of diphtheria & typhoid.
  - Few water pipes, people queue (council switch on for 2 hours a day).
  - Water pipes can crack in sewage.
  - Dharavi slum is built on an old rubbish tip.
  - Settlement not planned & people have no legal rights to the land.
  - houses insecure. Crime eg pick pockets and organised begging.
  - Life expectancies in the squatter settlements are low

City’s Importance

- Social: Health care – easier access to doctors, hospitals, nurses; even poorer can access basic medical services compared to rural areas.
- Education – migrants often move to cities to have access to schools for their children to have a better chance in life. Water – access to clean water that does not transmit parasites or cause cholera, even slums compared to rural.
- Energy – some remote parts of India still have no electricity. Mumbai allows people the benefits of energy.

City’s Opportunities

Social: Health care – easier access to doctors, hospitals, nurses; even poorer can access basic medical services compared to rural areas.

Dharavi Redevelopment and Self-help schemes

- Current approaches across Mumbai are for wholesale demolition of the slums which are replaced by high rise tower blocks, well planned roads and green spaces.
- The Maharashtra Housing & Area Development Authority (MHADA) are in charge of Dharvari’s Sector 5, private developers or in charge of the other four sectors.
- Currently densely populated redevelopment are not good for the community. 266 families were found eligible for free MHADA housing. 255 slum families have been given 27m2 houses (18 Floor building with 258 flats, each costing $25000). So far, less than 0.5% of Dharvari’s population have been rehomed. Well developed slum communities are at risk of demolition along with shops and markets and the community spirit which has taken generations to develop. Locals would prefer small improvements to the existing slum such as improvements in drainage. The value of land is so high that redevelopment is now a real threat.
- Social: Inequalities (high house rents, schools in poorer areas get poorer grades and have poorer health, 2011 employment rate was 67.5 % below UK average of 70.3%, unemployment rate was 10.0% compared with 8.4%).
- Economic: The poorest 80% share just 20% of all asset wealth. 16% are in the poorest tenth nationally, 17% are in the richest tenth.

Environmental: Urban sprawl has led to increased pressure and decline of greenfield sites around the city. Air pollution, mainly due to the sheer size of the city, a dense road network and high buildings. London has failed many of the standards set by the EU. London produces huge amounts of waste.
Global Patterns

UK urban areas

Urban Issues and Challenges

Economic

Social

Cultural

Transport

Greening

Importance

Opportunities

Challenges

Location

Urban growth

Urban change

Megacities

Sustainable urban transport

Sustainable urban living

Regeneration project – Olympics site

UK location

Factors affecting urbanisation rates
### The changing economic world

<table>
<thead>
<tr>
<th>I can describe the methods of classifying countries and use different development indicators.</th>
<th>Covered in class?</th>
<th>Revision undertaken</th>
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<tbody>
<tr>
<td>I can evaluate the use of different developmental indicators.</td>
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<tr>
<td>I can use the Demographic Transition Model to explain the link between changing population structure and level of development.</td>
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</tbody>
</table>
| I can explain the causes of uneven development:  
1. Physical  
2. Economic  
3. Historical | | |
| I can explain the impacts of uneven development on people | | |
| I can explain how the development gap can be reduced looking at:  
1. Investment  
2. Industrial development and tourism  
3. Aid  
4. Using intermediate technology  
5. Fairtrade  
6. Debt relief  
7. Microfinance loans | | |
| I can use an example to show how tourism in an LIC can help to reduce the development gap | | |
| Case study of the LIC or NEE - India (revision guide (or Nigeria 100% sheet) | | |
| I can explain why India is important within Asia and internationally | | |
| I can describe the political, social and culture contact of India within a world context. | | |
| I can describe the changing industrial structure within India. | | |
| I can explain how manufacturing can stimulate economic growth in within India. | | |
| I can define a Transnational Corporation (TNC) using a case study. | | |
| I can explain the advantaged and disadvantages of TNCs to India | | |
| I can describe how India's politics and trading relationship have changed over time. | | |
| I can described what aid is where is comes from using a case study. | | |
| I can explain and evaluation the environmental impacts of economic development. | | |
| I can explain and evaluation impacts of economic development on the population of India | | |

### Economy of the UK

| I can explain why deindustrialisation has occurred in the UK | | |
| I can explain the advantages and disadvantages of the UK move in the tertiary sector (post-industrial economy) | | |
| I can explain, using an example, how modern industry can reduce its impact upon the environment and become more sustainable | | |
| I can explain, using an example, the social and economic impacts of population growth on a rural landscape. | | |
| I can explain, using an example, the social and economic impacts of population decline on a rural landscape. | | |
| I can describe and explain the impact of transport developments in road, rail, port and airports. | | |
| I can describe the North - South divide in the UK | | |
| I can evaluate and explain the strategies use to solve regional differences within the UK | | |
| I can examine the global links made with the wider world through trade, culture, increased communication, economics and political groupings such as the commonwealth and the European Union. | | |
| I can analyse the growing interdependence and globalisation of the UK in relation to its economy and politics. | | |
Development measures how economically, socially, culturally or technologically advanced a country is. It suggests: advancement, evolution, expansion, growth, improvement, increase, maturity, progress, changes for the better.

**Development Indicators**

**Gross National Income (GNI)** Measurement of economic activity calculated by dividing the gross (total) national income by population size.

**Human Development Index (HDI)** A measure of development where GDP per capita, life expectancy & adult literacy are combined as an overview.

**Infant mortality** - Number of babies that die under one year of age, per 1000 live births.

**Literacy rate** - Percentage of people in a country who have basic reading and writing skills.

You need to know the advantages and disadvantages of each of these:

### Classifying the World's Development

Many years ago, Dr Brandt classified the world into the rich north and the poor south.

- **HIC** has an GNI per capita of over ~$12000
- **NEE** has an economy that is rapidly progressing
- **LIC** has a GNI per capita of below $800

Dr Brandt drew this line called the Brandt Line or the North-South Divide. However over time, countries in the south began to develop like Singapore and China and the line became outdated.

### Sol/QoL

**Standard of life** refers to the economic level of a person’s daily life. **Quality of life** looks at social measures of well being.

### Measuring Population

The Demographic Transition Model shows how a country’s population changes as it becomes more developed from subsistence farming cultures to HICs.

- **Stage 1** – High DR and BR
- **Stage 2** – declining DR
- **Stage 3** – declining BR
- **Stage 4** Low DR and BR

Population pyramids/structures change over time too – from having a lot of babies and a wide bottom, to good healthcare and more elderly people.

### Measuring Development

**Factors Causing Uneven Development**

- **Physical Environment**
  - Soil erosion, desertification, climate change, overgrazing and infertile soils affect farming.
  - Areas without fertile land, natural resources, water and energy suffer.
  - Natural hazards make little progress with development e.g. Haiti.

- **Health**
  - Diseases can make people too weak to work or go to school.
  - 80% of all developing world disease is water-related. 2 million die a year.
  - LIC’s are unable to invest in good quality health care

- **Trade**
  - Trade blocs favour it's members.
  - Primary products sold by LIC's are sold for cheap prices that can fluctuate. HICs make more expensive products so earn more.
  - Poor infrastructure or conflict means some people cannot sell their goods at all.

- **History**
  - Colonialism: Many countries in Asia, S. America and Africa have spent a lot of time and money on civil wars and political struggles for power since being made separate from European superpowers.
  - Many LIC’s haven’t had time to develop fully.

### Solutions to Uneven Development

**TNCs**
- Aid

**Industrial Development**
- Intermediate Technology

**Fair Trade**
- Debt Relief

**Microfinance**
- Tourism

### Tourism in Kenya

**Background**: Kenya is in East Africa. It has 333 miles of coastline on the Indian Ocean. It has a GNI per capita of $760.

**Positive Impacts**:

**Negative Impacts**:
- Economic – only 15% of profits stay in the country; the rest goes to HICs. The jobs are seasonal. Social – local people can be offended by dress ware that’s considered inappropriate. Most people visit the south so the north isn’t benefiting. Environmental – wildlife can be disturbed affecting breeding. Increased air pollution. Soil erosion from jeeps.

### Ecotourism

Ecotourism, is a type of tourism which involves protecting the environment and the way of life of local people. E.g. Tsavo National Park. People camp, they stick to roads and don’t get close to the animals.
Economic and Industrial Change in the UK

Primary industry – agriculture, mining, forestry, oil extraction
Secondary industry – manufacturing from raw materials@Component parts
Tertiary industry – providing services
Quaternary industries – high tech, R&D, health care research
Trade – buying and selling of goods
Globalisation – process that has created a more connected world

The UK has experienced de-industrialisation
• Nigeria is a former colony of the UK
• NEE – 3rd largest manufacturing economy in Africa
• Largest economy in Africa
• By 2020 should be one of the top economies
• Rich in oil (makes 75% of government money), but the rapid economic growth

Business park – An area of land occupied by a number of businesses, often located on the edges of towns and cities
• Cobalt Business Park in Wallsend, east Newcastle-upon-Tyne, is the UK’s largest business park
• Close to A1 & A19 that run north and south, Metro station and 20 mins from Newcastle International Airport.
• Well known industries include Siemens, IBM, proctor and gamble, Barnados and Santander.
• Links to Newcastle City Council. Major universities close.
• Also shops, fitness centre, cyleways and greenspaces.

Science park – group of scientific and technical knowledge-based businesses, located on a single site. Most of these are associated with universities, in order to use research facilities and employ skilled graduates. Over 100 in UK.
• University of Southampton Science Park, outskirts of Southampton, south England.
• 100 small science and innovation businesses
• Also shops, fitness centre, cyleways and greensspaces.

Environmental impacts of industry – quarrying
• Destroy natural habitats
• Pollute nearby waterways
• Scars landscape
• Noise/air pollution from vehicles & machines
- Torr Quarry, Somerset, SW England in Mendip Hills, close to Bristol (2.5km²). Set up 1940s.
- Operated by Aggregate Industries, employs 100+ people. Contributes £15m to local economy.
- High standards of employment and environmental stewardship
- Promoted improvements in health care, education & water supply
- Regular monitoring of noise, vibrations, dust and water quality
- Rail transport minimises the impact on local roads and small villages
- Plan to deepen (rather than extend out) to extend operations until 2040

Rural Changes
• Rural areas = less than 10,000 people, usually sparsely populated, farming or wilderness as major economic activity
• Britain is experiencing counter-urbanisation where people move to the countryside in search of a better quality of life away from pollution and overcrowding. This causes commuter villages: people live close to their work but drive there by car.
• Northumberland – most northern county in England (south part – old industrial towns, north part – more rural)

Growth; Almwick, Northumberland

Decline; Milfield village nr Wooler, Northumberland Remote rural area. Population was only 315 in 2011. Population aging (pressure on social services), few young. Loss of services and job opportunities (Post Office closed 2013, primary school with 7 students closed 2014, local shop under threat, local maternity ward in Berwick closed)

Strategies to deal with this – Devolve power, Enterprise Zones, Northern Powerhouse, improve transport networks

De-industrialisation hit the North worse. This means that the South is growing with migrants looking for work

More unemployment in the North (9.9% in NE vs 4.4% in SE) links to poverty (2% higher in North).
For every 12 jobs created in the South, only 1 is in the North.
Average pay is £44 more in the South and you’ll live on average 2.5 years longer

West Africa, North of the Equator
• Nigeria is a former colony of the UK
• Largest population of Africa – 184 million (4th largest in the world after India, China and the USA (320 million by 2040).
• NEE – 3rd largest manufacturing economy in Africa
• Largest economy in Africa
• By 2020 should be one of the top economies
• Rich in oil (makes 75% of government money), but the rapid economic growth

Political, social, cultural and environmental context
• 1960 Gained independence from the UK
• 1967–1970 Civil war then 28 years of military government.
• 2009–2013: 60 million mosquito nets distributed. The most successful projects are community based
• UK gives US$300 million year of aid. Receives 4% of aid given to Africa

UNILEVER – UK/Dutch company – food, drinks and home items.
- palm oil based soap and employs 1500 people
- High standards of employment and environmental stewardship
- Promoted improvements in health care, education & water supply

SHELL OIL – UK/Dutch company. Huge investment
- 65000 directly employed and 250,000 indirectly employed
- 91% of contracts with Nigerian companies
- Issues – oil spills, oil flares (toxic fumes), militant groups
- Manufacturing growth – processed food, leather, textiles, soap
- Rapid increase in telecommunications and retail

TNCS in Nigeria
• Niger delta – oil. Royal Dutch Shell, Exxon Mobil, Total
• Platforms and pipelines installed. Oil shipped to Europe and USA to be refined. Most profit leak
• Nigerian National Petroleum Corporation – joint with TNCS
• 40 TNCS – mostly UK, Europe and USA
• Damage to wetland & coastal ecosystems people rely on

Pros : investment, jobs, expertise / skills, international links, new technology, multiplier effects, export revenues
Cons : leakage of profits, lower wage levels, environmental damage, can withdraw investment, exert political influences, poor working conditions, management jobs go to foreigners

Poverty
• 60% live on less than US$1.25 a day. Growing inequality
• GDP 2006 – US$1110 billion, GDP 2015 US$560 billion
• Money earned from Services 52%, Manufacturing 7%, Oil and gas 14%, Agriculture 22%, Other 5%
• Hollywood – 3rd largest film industry in the world
• 70% employed in agriculture
• Shifting from primary (farming and oil) to manufacturing and services (see graph above)

Youthful educated population – skilled workers for manufacturing & services
• But, it has 1/4 of Africa’s extreme poor people, 100+ women die every day from complications during pregnancy and childbirth. 2,000+ children under 5 die every day from preventable diseases and 8.5 million children do not go to school (most in world).

2009 – 2013 : 60 million mosquito nets distributed. The most successful projects are community based
• UK gives US$300 million year of aid. Receives 4% of aid given to Africa

• Problems include government corruption, government diverting money, donors have political influence

Social
- Rated 152/187 countries in terms of HDI. Improving and is increasing quickly
- New jobs mean more income and increased quality of life
- Large differences between north and south; rural and urban; educated and uneducated
- Poor access to safe water, sanitation and reliable electricity supply
- Oil wealth not used effectively.
- Overdevelopment on oil may be as issue as oil prices fall and new technology such as fracking develop

Oil pollution
- Water pollution
- Destruction of forests
- Chemical waste
- Desertification
- Traffic congestion
- Squatter settlements
- Waste disposal
- Poor access to safe water, sanitation and reliable electricity supply
- Oil wealth not used effectively.
Post-industrial economy
Causes of economic change
UK
Demographic Transition Model and Development
Developments in infrastructure
Role in the wider world
Post-industrial economy
Rural economy
North-South Divide
Debt
Trade
Aid
TNCs
Industrial structure
Nigeria
India
Importance
Location
Kenya
Tourism
Development gap
Demographic Transition Model
Mapping and classifying
Factors affecting
development
Consequences of uneven development
Managing differences
Development Gap
### The challenge of resource management

| I can describe the importance of **food**, **water** and **energy** to the economic and social wellbeing. | Covered in class? | | | | | | Revision undertaken |
|---|---|---|---|
| I can describe the distribution of **resources** around world. | | | | | | | |
| I can explain why **resources** are unevenly distributed around the world. | | | | | | | |

#### Resource management core content

| I can describe the distribution of **resources** around the UK. | Covered in class? | | | | | | Revision undertaken |
|---|---|---|---|
| I can explain the **changing demand** for different foods in the UK. | | | | | | | |
| I can explain why **food miles** are increasing in the UK. | | | | | | | |
| I can explain how **food miles** can be reduced in the UK. | | | | | | | |
| I can describe the different industries involved in agriculture (**agribusiness**) and explain how they are changing in the UK. | | | | | | | |
| I can explain the **changing demand** for water in the UK. | | | | | | | |
| I can describe the problems with **water quality** and **pollution** in the UK and how they can be managed. | | | | | | | |
| I can explain how the UK is trying to manage water to meet **supply** and **demand**. | | | | | | | |
| I can describe the UKs **energy mix** and how it has changed over time. | | | | | | | |
| I can explain how the UK can reduce its reliance on **fossil fuels**. | | | | | | | |
| I can describe and explain the economic and environmental issues with exploitation of energy sources. | | | | | | | |

#### Resource management option: Food

| I can describe the global distribution of food both **surplus** and **deficit** (**calorie intake** and food supply) | Covered in class? | | | | | | Revision undertaken |
|---|---|---|---|
| I can explain why food consumption is increasing | | | | | | | |
| I can explain and evaluate the different factors which effect **food supply** including: | | | | | | | |
| - Climate | | | | | | | |
| - Technology | | | | | | | |
| - pests and disease | | | | | | | |
| - water stress | | | | | | | |
| - conflict | | | | | | | |
| - poverty | | | | | | | |
| I can analyse the impacts of food insecurity including: | | | | | | | |
| - famine | | | | | | | |
| - under nutrition | | | | | | | |
| - soil erosion | | | | | | | |
| - rising prices | | | | | | | |
| - social unrest | | | | | | | |
| I can explain strategies for increasing food supply: | | | | | | | |
| - irrigation | | | | | | | |
| - aeroponics and hydroponics | | | | | | | |
| - the NEW Green Revolution compared to the original Green Revolution (1960s) | | | | | | | |
| - use of biotechnology | | | | | | | |
| - appropriate technology | | | | | | | |
| I can use an example of a large-scale irrigation scheme to show how its development has both advantages and disadvantages. **Thanet Earth, Kent UK** | | | | | | | |
| I can explain how food can be produced more **sustainably**: | | | | | | | |
| - organic farming | | | | | | | |
| - urban farming initiatives | | | | | | | |
| - permaculture | | | | | | | |
| - fish and meat from sustainable sources | | | | | | | |
| - seasonal food consumption | | | | | | | |
| - reduced waste and losses | | | | | | | |
| I can use an example of a **local scheme** in an LIC or NEE to increase sustainable supplies of food. **Agroforestry in Mali, Africa** | | | | | | | |
## How are Resources Distributed?

Resources include food, water, and energy. We need these for basic human development. Access to them affects our economic and social well-being.

### Food
Depends on climate, soils and technology. Europe, Asia, and N and S America tend to have a surplus. Africa has a deficit.

### Water
Depends on climate. The Middle East and Africa have shortages. Water is essential and many people spend large amounts of their days collecting water meaning they cannot work.

### Energy
Affected by the distribution of fossil fuels. In theory more use of renewable energy should reduce uneven distribution but in practice knowledge and money to develop these limits use in LICs.

## Water in the UK

The amount of water used by the average household in the UK has increased by 70% since 1985.

<table>
<thead>
<tr>
<th>Causes</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population growth</td>
<td>It tends to rain in the North West (highland areas) where there is a surplus</td>
</tr>
<tr>
<td>Wealth so have more water-intensive appliances (eg. dishwashers)</td>
<td>Demand is highest in the South East due to population concentration. Here rainfall is lower. There is a deficit</td>
</tr>
<tr>
<td>Demand of out of season food needs irrigation</td>
<td>This causes water stress</td>
</tr>
<tr>
<td>Leisure use (esp. golf courses)</td>
<td>Water needs to be managed by transferring it to where demand is.</td>
</tr>
<tr>
<td>Power showers</td>
<td></td>
</tr>
</tbody>
</table>

## Energy in the UK

The UK consumes less energy than it did in 1970 even though there are 6.5 million more people. The average energy consumption has declined 12%. Heavy industry has declined and energy efficient products have reduced household demand.

### UK Energy Mix
- Coal 35%
- Gas 25%
- Nuclear 19%
- Renewables 21% (wind, solar, tidal, biofuel, HEP)
- Geothermal energy is limited to tectonically active countries like Iceland

## Food in the UK

The UK imports 47% of its food.

### Trends
- Often it is cheaper to produce food abroad. LICs benefit from the money, creating jobs and generating taxes to improve infrastructure, but this can affect their own livelihoods as land is used for export crops only and it places pressure on water supply.
- Supermarkets mean that we demand year round food so we need to import food to make up the shortfall.
- UK food travels 30 billion km each year. Food contributes 17% of the UK’s carbon emissions. We call this the carbon footprint.

### Surplus
- Surplus = more than is needed

### Deficit
- Deficit = less than is needed

### Security
- Security = having a reliable supply of affordable resources

### Organic Food
- Organic food – does not use pesticides or fertilisers. Tends to be more expensive because yields are lower but people think it is healthier.
- Agribusiness is industrialised agriculture on a large scale. Farms are large, leading to loss of hedgerows to allow machinery to operate. Less people are employed in farming.
- Eat local and Eat seasonal. These are movements to encourage a reduction in the carbon footprint.

## Water Quality

### Causes of Pollution
- Fertilisers from farming
- Hot water from industrial cooling
- Oil from ships
- Untreated waste
- Oil from roads

### Effects of Pollution
- Kills wildlife
- Fertilisers cause eutrophication which kills fish
- Toxic chemicals can enter food chain eg through shellfish
- Contaminated water

### Managing Pollution
- Legislation – strict UK laws on discharge from farms and industry
- Education campaigns not to dispose waste in water
- Waste treatment plants
- Investing in sewers
- Green roofs filter out pollutants

## Non-Renewables

### Economic Issues
- High set up costs
- Biomass means land not used for food production so may increase costs of food
- Tourism declines as visual appeal is damaged
- Low profitability

### Environmental Issues
- Carbon dioxide released leads to acid rain and climate change
- Fracking can cause ground water pollution
- Waste is radioactive for 100 years
- Nuclear accidents, while rare, have long term impacts on wildlife and people

### Renewables
- Considered ugly and ruins views
- Wind turbines can affect bird migration
- HEP dams flood land upstream and affects ecology of water
- Biomass reduces biodiversity as only one crop is grown (eg. sugar cane)

## Resource Management - Food

### Organics
- Does not use pesticides or fertilisers.
- Tends to be more expensive because yields are lower but people think it is healthier.

### Supermarkets
- Mean that we demand year round food.
- Lead to loss of hedgerows to allow machinery to operate.
- Less people are employed in farming.

### Surplus
- More than is needed

### Deficit
- Less than is needed

### Security
- Having a reliable supply of affordable resources

### Unit 2

### Resource Management - Food

### Water quality

### Causes of pollution
- Fertilisers from farming
- Hot water from industrial cooling
- Oil from ships
- Untreated waste
- Oil from roads

### Effects of pollution
- Kills wildlife
- Fertilisers cause eutrophication which kills fish
- Toxic chemicals can enter food chain eg through shellfish
- Contaminated water
Global Food Supply & Demand

The world produces enough food for everyone but it is not distributed evenly. Countries with highest food insecurity are in Africa, the Middle East and parts of Asia. HICs in the western world enjoy food security.

Food security – people have enough nutritious food to eat to stay healthy and active.

Food insecurity is when people can’t get enough food to stay healthy or lead an active lifestyle. They cannot grow enough or afford to import the food they need.

Global food consumption is increasing because:
- Global population is growing (expected to reach 9 billion in 2040).
- Economic development means people are getting wealthier. Wealthier people tend to spend more on food and change diets to more meat-based diets.
- Industrialisation of food production means some foods are cheaper so more affordable.

Factors Affecting Food Supply

<table>
<thead>
<tr>
<th>Climate</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Drought and climate change affect food production</td>
<td>• LICs lack farm machinery, irrigation, storage facilities, transport infrastructure and processing facilities</td>
</tr>
<tr>
<td>• In sub-Saharan Africa farmers rely on seasonal rains</td>
<td>• The Green Revolution allowed India to grow drought and pest resistant crops but Africa could not afford the seeds.</td>
</tr>
<tr>
<td>• Flooding affects crops in Haiti</td>
<td></td>
</tr>
<tr>
<td>• Patterns of rainfall are changing leading to more frequent and intense floods</td>
<td></td>
</tr>
</tbody>
</table>

Insects Disease Water Stress

| Tropical regions in particular suffer from pests and diseases and lack money to protect crops and animals | Lack of water means plants don’t grow |
| Locusts can eat crops before picked | LICs cannot afford expensive water transfer schemes to irrigate crops |
| Cattle suffer from bacteria | Climate change may make this more of a risk |

Pests & Disease Water Stress

Famines and Foodshortages

| Famine leads to malnutrition and weakened immune systems. | Overcultivation and overgrazing together with a lack of rainfall leads to soil erosion. This reduces the fertility of the soil and limits food production |
| UN estimates 800 million people suffer from chronic malnourishment – almost all in LICs |

Rising Prices

• When food supply falls, prices rise. Poor harvest in Russia, Australia and Pakistan in 2010 led to shortage of supply and prices around the world increased. Poorer people are most affected

Social Unrest

• Food shortages can lead to rioting and social unrest. This has been seen in North Africa and the Middle East in recent years.

thanet earth – Industrial Agribusiness

Thanet Earth is a large scale agricultural development in Kent, South East England. In 4 large greenhouses they grow salad vegetables using hydroponics all year round. It has its own power station and recycles water used in irrigation. Hot air and carbon dioxide is pumped into the greenhouses to improve plant growth.

| Irrigation | Aeroponics and Hydroponics |
| Watering crops | Modern techniques using no soil involving artificially lit and heated greenhouses. Plants grow quickly and diseases are eliminated. |
| Can be wasteful – drip irrigation is more effective | However these are expensive and require expert knowledge. |
| Usually involves taking ground water which can run dry. | |

Biotechnology

| The “new green revolution” promotes sustainable and environmental techniques using nutrient recycling, crop rotation and mixed farming. | A low tech solution using local, cheap or recycled materials. Widely used in LICs eg using bicycle power to de-husk coffee beans. |
| Genetically Modified crops (GM) can increase crop production. However their use is controversial in some places as long term effects are not known. | |

Appropriate Technology

| • The use of natural predators to control pests so does not use lots of chemicals | • 500 jobs created in an area of high unemployment |
| • The Green Revolution allowed India to grow drought and pest resistant crops but Africa could not afford the seeds. | • Reduces food miles and grows crops all year round increasing food security |
| • Farmers in LICs cannot afford high quality seeds or fertiliser or mechanisation. | • Uses natural predators to control pests so does not use lots of chemicals |

Sustainable Fish Supply

• Farmers in LICs cannot afford high quality seeds or fertiliser or mechanisation. They also suffer from malnourishment or undernourishment of a balanced diet so this reduces their ability to work.

Better storage would help.
Patterns of food supply

Challenge of Resource Management

- Sustainability
  - Food, water and energy - impact on social well-being
  - Overview of water resources
  - Food resources
  - Energy resources
  - Consumption of resources
  - Supply of resources
  - Inequalities
  - Factors affecting food supply
  - Impacts of food insecurity
  - Increasing food supply
  - Strategies used - large-scale agriculture
  - Example of sustainable farming - Agroforestry Mall
  - Sustainable food supplies
**Question: Are the sea defences at Blyth effective?**

**Graph 1 – Groyne Height Graph**

The graphs show that the North side of the groyne is higher than the south.

What is the mean height on the North side?

- Groyne 1 38mm
- Groyne 2 112mm
- Groyne 3 12mm

**North side average = 54mm**

What is the mean height on the South side?

- Groyne 1 113mm
- Groyne 2 150mm
- Groyne 3 50mm

**South side average = 104mm**

**Interpretation:**

This shows that since the heights from the top of the groyne to the sand are all lower on the North side that there is less sand on the south than the north. This proves that the groynes are stopping material from moving down the beach by interrupting the process of longshore drift operating N-S along the coast. This has the effect of stabilising and building up the beach, allowing for the development of tourist facilities in the area without the risk of land being lost to the sea.

**Conclusion:** This proves that the sea defences are effective at reducing coastal erosion and removal of material by longshore drift.

**Risks and how to avoid them**

1. Tides – consult tide timetables, particularly along cliff sections, headlands and wide beaches.
2. Avoid walking near the foot of cliffs in case of cliff collapse. Students warned of this and kept well away from the back of the beach.
3. Watch out for and avoid slippery rocks on the foreshore at low tide. Students advised to wear sensible footwear and warned of the risks.
4. Weather - hot weather. Students advised to bring plenty of water and sun cream if needed.

**Evaluation of the groyne measurements and field sketch**

**Field sketch:** We completed this by spending a short time sketching the general areas to set the scene this was appropriate because it helped us to set the scene and remember important facts about the area around the location. Problems included not being sure what to include as where we sat was not completely in view of the sea defences. This could be improved by moving location onto the beach itself and ensuring enough detail was included. This would make it more accurate by including more of the details we needed.

**Groyne Height measuring:** We completed this by splitting into 3 groups and each group measured the height of the sand on both sides of the beach at 3m intervals and recorded it in a table. It was appropriate because if we found the height on the North side of the groyne to be higher than the south side it would prove that the groynes were effective at stopping the material being carried by longshore drift. Problems included that the groynes were of differing length and some groups didn’t measure all the way to the end, the measurements may have been inaccurate and this made it harder to analyse the results. This could be improved by having a second group check the measurements and then take an average of the results. This would make the results more accurate.

Blyth is a good choice of location because it is relatively close to the school and has three wooden groynes that are easily accessible for us to measure.
**Question: What are the recreation opportunities in Whitley Bay?**

Whitley Bay is a good choice of location because it is within easy travel time of school and it has a wide range of recreation opportunities like the beach, amusements, restaurants, the playhouse and Spanish City.

**Risks and how to avoid them**
1. Getting lost – use the map and remember the meeting point in case of emergency.
2. Talking to strangers – only ask people questions in busy public areas. Walk away if there is trouble.
3. Traffic – take care when crossing roads, cross at pedestrian crossings and be sensible.

**Evaluation of land use map**
We completed a land use map by using a key to mark on the use of buildings along a route around Whitley Bay looking for Accommodation (tourists), Accommodation (locals), Food, Shops (tourist), Shops (locals) and Named attractions.

This was useful in telling us what types of recreation opportunities were available in Whitley Bay.

The negatives were that it was a long route and hard to work out what exact location related to what on the map. It was sometimes hard to differentiate between whether a business was for tourists or locals.

To improve this we could change this to be a survey and stop at a number of specific destinations and count how many examples of each business we could find. This would be more accurate and less time consuming.

**Graph 1 – Compound Bar Graph**
This graph shows what the people we asked said about their purpose for visiting Whitley Bay.

- The highest value was for Leisure – 46% (47 people)
- The lowest value was for other – 13% (13)

This shows that Leisure was over three times higher than other.

This tells me that Whitley Bay must have many opportunities for recreation and leisure otherwise people wouldn’t have chosen it as their reason for visiting. The next highest is work (22%) which also backs up the question as the recreation opportunities are creating jobs for people. The lowest figures were visiting family and other.

**Conclusion:** the questionnaire shows that there are plenty of recreation opportunities in Whitley Bay.

**Graph 2 Bar Graph**
This graph shows what type of recreation facility people are using in Whitley Bay.

- Entertainment was the highest value at 52% and household was the lowest at 3% making entertainment over 17 times more popular than household. This proves that there are recreation opportunities in Whitley Bay. The next highest score was food and drink at 36% which also proves there are opportunities for recreation.

**Conclusion:** the questionnaire shows that the people we questioned regularly used the recreation facilities in Whitley Bay.

**Evaluation of the questionnaire**
We complete the questionnaire by asking different members of the public questions:

- **Question 1.** Where have you come from today?
- **Question 2.** What is the purpose of your visit? (Choice of a) Work b) Leisure c) Visiting Family d) Other
- **Question 3.** How would you rate the recreation facilities 1-5?
- **Question 4.** Which recreation facilities do you use? (Open question)

We all tried to ask 5 people and combined data.

This method was appropriate because it helped us to find out what the public felt about the range of recreation opportunities available to them in Whitley Bay.

Problems included some people not asking enough people, some people not answering honestly or students making up data, and having an open question for question 4.

To improve this we could make sure people ask the correct numbers of people and not make up data. We could provide people with a choice of options for question 5 to narrow down the responses and make it easier to analyse.

**Whitley Bay is a good choice of location because it is within easy travel time of school and it has a wide range of recreation opportunities like the beach, amusements, restaurants, the playhouse and Spanish City.**

**Risks and how to avoid them**
1. Getting lost – use the map and remember the meeting point in case of emergency.
2. Talking to strangers – only ask people questions in busy public areas. Walk away if there is trouble.
3. Traffic – take care when crossing roads, cross at pedestrian crossings and be sensible.

**Evaluation of land use map**
We completed a land use map by using a key to mark on the use of buildings along a route around Whitley Bay looking for Accommodation (tourists), Accommodation (locals), Food, Shops (tourist), Shops (locals) and Named attractions.

This was useful in telling us what types of recreation opportunities were available in Whitley Bay.

The negatives were that it was a long route and hard to work out what exact location related to what on the map. It was sometimes hard to differentiate between whether a business was for tourists or locals.

To improve this we could change this to be a survey and stop at a number of specific destinations and count how many examples of each business we could find. This would be more accurate and less time consuming.

**Graph 1 – Compound Bar Graph**
This graph shows what the people we asked said about their purpose for visiting Whitley Bay.

- The highest value was for Leisure – 46% (47 people)
- The lowest value was for other – 13% (13)

This shows that Leisure was over three times higher than other.

This tells me that Whitley Bay must have many opportunities for recreation and leisure otherwise people wouldn’t have chosen it as their reason for visiting. The next highest is work (22%) which also backs up the question as the recreation opportunities are creating jobs for people. The lowest figures were visiting family and other.

**Conclusion:** the questionnaire shows that there are plenty of recreation opportunities in Whitley Bay.

**Graph 2 Bar Graph**
This graph shows what type of recreation facility people are using in Whitley Bay.

- Entertainment was the highest value at 52% and household was the lowest at 3% making entertainment over 17 times more popular than household. This proves that there are recreation opportunities in Whitley Bay. The next highest score was food and drink at 36% which also proves there are opportunities for recreation.

**Conclusion:** the questionnaire shows that the people we questioned regularly used the recreation facilities in Whitley Bay.

**Evaluation of the questionnaire**
We complete the questionnaire by asking different members of the public questions:

- **Question 1.** Where have you come from today?
- **Question 2.** What is the purpose of your visit? (Choice of a) Work b) Leisure c) Visiting Family d) Other
- **Question 3.** How would you rate the recreation facilities 1-5?
- **Question 4.** Which recreation facilities do you use? (Open question)

We all tried to ask 5 people and combined data.

This method was appropriate because it helped us to find out what the public felt about the range of recreation opportunities available to them in Whitley Bay.

Problems included some people not asking enough people, some people not answering honestly or students making up data, and having an open question for question 4.

To improve this we could make sure people ask the correct numbers of people and not make up data. We could provide people with a choice of options for question 5 to narrow down the responses and make it easier to analyse.

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