Pearson Edexcel

GCSE (9-1) Geography A

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Knowledge Organiser

Paper 3: Geographical Investigations

Issue 2

Key ideas and key content: a student guide

This guide is designed to support students on the key content of the GCSE Geography A specification for Paper 3 Geographical Investigations: Fieldwork and UK Challenges. It covers:

- Topic 7A: Investigating physical environments (river landscapes or coastal landscapes)
- Topic 7B: Investigating human environments (central/inner urban or rural settlements)
- Topic 8: Geographical investigations – UK Challenges

It can be used to identify gaps in learning, as a personalised checklist to aid revision or as a knowledge organiser.

Paper 3: Geographical Investigations: Fieldwork and UK Challenges

This is assessed by Paper 3 (90 minutes). It contains three sections. In Section A, Geographical investigations – physical environments, you must choose one from two optional questions (Rivers or Coasts). In Section B, Geographical investigations – human environments, you must choose one from two optional questions (Central/Inner Urban Area or Rural Settlements). In Section C, UK challenges, you must answer all questions.

Topic 7A: Investigating physical environments (river landscapes OR coastal landscapes)	
Enquiry process point	**General focus and details of fieldwork**
River landscapes – investigation of change in a river channel	
1 Formulating enquiry questions	An enquiry question should relate to a geographical theory and/or example. A key question or hypothesis follows on from the enquiry to be tested. For example: • How do river channel characteristics change along the River Glaven? A key question that follows on from this could be: • Does the depth and width of the River Glaven increase from source to mouth? A hypothesis could be: • The depth and width of the River Glaven increase from source to mouth.
2 Fieldwork methods and techniques	Fieldwork data collection must include at least: • one **quantitative fieldwork** method to measure river discharge – quantitative methods record data that can be measured as numbers (for example, using a tape measure to measure river width) • one **qualitative fieldwork** method to record the landforms that make up the river landscape – qualitative methods

	record descriptive data (for example, constructing a field sketch).
3 Secondary data sources	**Secondary data** is data that somebody else has already collected. For example, a flood risk map from the Environment Agency and British Geological Survey.
Coastal landscapes – investigation of coastal processes through landscape evidence	
1 Formulating enquiry questions	An enquiry question should relate to a geographical theory and/or example. A key question or hypothesis follows on from the enquiry to be tested. For example: • Why does beach morphology Happisburgh change? A key question that follows on from this could be: • Does sediment size and shape change along the North Norfolk Coast? A hypothesis could be: • Sediment size increases from Happisburgh to Sheringham.
2 Fieldwork methods and techniques	Fieldwork data collection must include at least: • one **quantitative fieldwork** method to measure beach shape and sediment characteristics – quantitative methods record data that can be measured as numbers (for example, using ranging poles and a clinometer to measure beach gradient) • one **qualitative fieldwork** method to record the landforms that make up the coastal landscape – qualitative methods record descriptive data (for example, field sketch of the cliff line).
3 Secondary data sources	**Secondary data** is data that somebody else has already collected. For example, a geology map from British Geological Survey and Environment Agency.
Topic 7B: Investigating human environments (central/inner urban area OR rural settlements)	
Changing city environments – investigating change in central/inner urban area(s)	
1 Formulating enquiry questions	An enquiry question should relate to a geographical theory and/or example. A key question or hypothesis follows on from the enquiry to be tested. For example: • How does the quality of the urban environment vary along a transect through the south-west of Norwich? A key question that follows on from this could be: • Does environmental quality improve with increasing distance from the CBD? A hypothesis could be:

	• Environmental quality improves with distance from the CBD.
2 Fieldwork methods and techniques	Fieldwork data collection must include at least: • one **quantitative fieldwork** method to measure the land use function (quantitative methods record numbers that can be measured as numbers for example, land use mapping) • one **qualitative fieldwork** method to record the quality of the environment (qualitative methods record descriptive data for example, field sketch).
3 Secondary data sources	**Secondary data** is data that somebody else has already collected for example, census data from the Office for National Statistics and Multiple Deprivation Index.
Changing rural environments – investigating change in rural settlements	
1 Formulating enquiry questions	An enquiry question should relate to a geographical theory and/or example. A key question or hypothesis follows on from the enquiry to be tested. For example: • Does the flow of traffic vary during the day Happisburgh? A key question that follows on from this could be: • Does the flow of people vary between 9:00am and midday? A hypothesis could be: • Traffic flows will peak between 8:00-9:00am.
2 Fieldwork methods and techniques	Fieldwork data collection must include at least: • one **quantitative fieldwork** method to measure the flows of people (quantitative methods record numbers that can be measured as numbers for example, a pedestrian count) • one **qualitative fieldwork** method to record the views of the quality of life (qualitative methods record descriptive data for example, interview).
3 Secondary data sources	**Secondary data** is data that somebody else has already collected. For example, census data from the Office for National Statistics and Multiple Deprivation Index.

Topic 8: Geographical investigations – UK challenges	
Specification key ideas	**Key content**
8.1 The UK's resource consumption and environmental sustainability challenge	The UK is becoming overpopulated. By 2030, the UK's population is expected to exceed 70 million owing to natural increase and migration. This will put further strain on natural resources and ecosystems.
	Pressure on ecosystems comes from: • building on greenfield sites

	• the destruction of natural habitats and declining biodiversity • pressure on water supply and quality • increased food production intensifying agricultural practices.
	Solutions to tackling sustainable transport include: • increased public transport options • congestion charging and park-and-ride schemes • promoting the use hybrid and electric cars.
8.2 The UK settlement, population and economic challenges	A 'two-speed economy' refers to the uneven growth of the UK economy, with the South East developing fastest. A possible solution to help close the gap between the South East and the rest of the UK is to improve transportation links. For example, HS2.
	Costs and benefits of greenfield development and the regeneration of brownfield sites are listed below. Greenfield benefits • Cheaper land to develop • More space Costs • Loss of valuable farmland • Disruption to wildlife habitats Brownfield benefits • Infrastructure already exists • Improvement to landscape Costs • Restricted development • Land may be contaminated
	UK net migration has increased since 1970. During 2015, net migration was over 300,000 people. However, it is difficult to collect data about migration accurately and data from different sources varies, so net migration statistics may not be reliable. Stakeholders have different views towards migration into the UK. • Some businesses welcome migrant workers to increase the workforce. • Local councils have concerns about providing healthcare and education. • Some people believe migrants reduce the number of jobs available. Note: research has shown that migration has had little or no impact on the average employment and unemployment of UK-born workers (Source: The Migration Observatory, University of Oxford)
8.3 The UK's landscape challenges	The management of the UK's National Parks is divided into different categories – habitats, biodiversity, climate change and historical environments. Approaches to conservation and development include: • using renewable energy sources • river restoration projects • using electric bikes to reduce the number of cars on roads • extending National Parks – the Lake District National Park was expanded in 2016, for example, and there are plans for

	further expansion. Views on this have been mixed though and some residents and community groups may be concerned about increased visitors and traffic pollution, as well as rising house prices due to the popularity of owning second homes in National Parks. However, the local economy may benefit from increased spending by tourists in local businesses, which could create more jobs for local residents.
	The Environment Agency is responsible for the management of the UK's rivers and coasts. Approaches to managing the UK's river and coastal flood risk include: • monitoring and early warning systems • soft and hard engineering • stricter building regulations • afforestation.
8.4 The UK's climate change challenges	The UK's future climate could see temperature rising between 2°C and 4°C, an increase in precipitation and more extreme weather events, although there is uncertainty around these projections.
	Climate change could result in rising sea levels causing coastal flooding. This will increase the rate of erosion on coasts, at a cost to the economy. Temperature increases could cause more frequent heatwaves, leading to longer periods of drought in the UK. This will affect food production and human health.
	UK responses to climate change • **Local scale** – Individuals can reduce their carbon footprint by walking more or using public transport, recycling waste and installing energy efficient devices. • **National scale** – The government can invest in more sustainable practices, such as renewable energy.