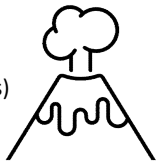
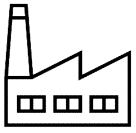
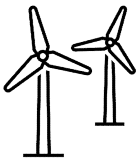
GCSE Geography Course Outline

PAPER 1 Living with the PHYSICAL Environment		

Time: 1 ½ hrs
 	
88 marks in total Including 3 marks for SPaG (Spelling, punctuation & grammar)
 	
35% of GCSE mark
	Section A
	Question 1: Challenge of NATURAL HAZARDS
	• Natural Hazards
	• Tectonic Hazards (Eg HIC & LIC contrasting Effects & Responses)
	• Weather Hazards
	  ○ Tropical Storms (Eg Effects & Responses)
	  ○ UK Extreme Weather (Eg Cause, Impact & Management)
	  ○ Climate Change
	 
		33 marks
		
		Answer all questions.
		
		Last question is 9 marks plus 3 marks for SPaG.

	Section B **Question 2: LIVING WORLD** • Ecosystems (Eg Small scale UK ecosystem) • Tropical Rainforests (CS Causes of deforestation, Impacts & Issues) • Cold Environments CS development opportunities & challenges 	25 marks Answer all questions. Choice of Hot Deserts or **<u>Cold Environments</u>**
	Section C **Physical LANDSCAPES in the UK** Question 3) ~~UK Coastal Landscapes –~~ DO NOT ANSWER Question 4) UK River Landscapes Question 5) UK Glacial Landscapes 	30 marks (15 each) ONLY ANSWER Question 3 & 4

PAPER 2 Challenges in the HUMAN Environment Topics		
Exam Time: 1 ½ hrs 88 marks in total Including 3 marks for SPaG (Spelling, punctuation and grammar) 35% of GCSE mark	**Section A** **Question 1: URBAN Issues & Challenges** • Urban World (Urbanisaton) • Urban growth in LIC/NEE City (CS: Lagos Causes, opportunities & challenges. E.g. Planning) • Urban Change in UK (CS: Importance, migration, opportunities & challenges. E.g. Regeneration) • Urban Sustainability 	33 marks Answer all questions. Last question is 9 marks plus 3 marks for SPaG.
	Section B **Question 2: Changing ECONOMIC world** • Global development gap • Development indicators (social and economic) • Causes and consequences of uneven development • Reducing the global development gap (Eg) • NEE Rapid Economic development (CS) • UK Economic Futures (Eg Industrial sustainability) 	30 marks Answer all questions.
	Section C **Challenge of RESOURCE MANAGEMENT** Question 3) Resource Management (14 marks) Question 4) ~~Food –~~ DO NOT ANSWER Question 5) ~~Water –~~ DO NOT ANSWER Question 6) Energy 	25 marks ONLY ANSWER Question 3 & 6

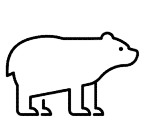
PAPER 3 Geographical Applications		
Exam Time: 1 ¼ hrs 76 marks in total Including 6 marks for SPaG (Spelling, punctuation and grammar) 30% of GCSE marks	Section A: Issue Evaluation on Pre-Release material (Tourism and Development in Grand Cayman) Questions 1-3 based on pre-released material • Critical thinking & problem solving & Geographical skills	37 marks Answer all questions. Last question is 9 marks plus 3 marks for SPaG.
	Section B: Fieldwork on human & physical topics (15% of final grade). Fieldwork to include the Enquiry process: 1) Identifying suitable question; 2) Select, measure & record data; 3) Process & Present data; 4) Describe, analyse & explain results; 5) Reach conclusions; 6) Evaluate geographical enquiry Question 4) Unseen fieldwork Question 5**) Fieldwork in York** – Cycle Friendly (Human) and Flood Resilience (Physical)	39 marks Answer all questions. Last question is 9 marks plus 3 marks for SPaG.

PAPER 1
LIVING WITH THE PHYSICAL ENVIRONMENT

1. The Challenge of Natural Hazards

Topic	Content	Case Study	Notes made	Revised	Exam ready
Natural Hazards	❑ I can define a natural hazard and give some examples of the different types: tectonic, atmospheric, geomorphological and biological ❑ I can explain the different factors that affect risk				
Tectonic Hazards	❑ I can describe the distribution of earthquakes and volcanoes. ❑ I explain the differences between destructive, constructive and conservative plate margins ❑ I can explain how earthquakes and volcanoes occur at each of these plate margins ❑ Using named examples of a tectonic hazard in both rich and poor countries. I can: (1) Explain why the tectonic hazard happened there, (2) Describe the effects that resulted from the earthquakes both primary and secondary. (3) Describe what was done after the earthquake (responses), both in the long and short term. ❑ I can explain why the effects of earthquakes are different in HICs and LICs ❑ I can explain why people continue to live in areas at risk of tectonic hazards (Farming, Mining, Tourism and geothermal Energy). ❑ I can explain how monitoring, planning, prediction and protection of tectonic hazards can reduce their effects.	**CASE STUDY Nepal Earthquake – knowledge of cause, effect and responses** **CASE STUDY Italy Earthquake – knowledge of cause, effect and responses**			
Tropical Storms	❑ I can describe the global atmospheric circulation model. ❑ I can explain how the global atmospheric circulation model affects weather around the world. ❑ I can describe the distribution, formation and structure of tropical storms. ❑ Using a named example I can describe and explain the primary and secondary impacts of tropical storms. ❑ I can assess and evaluate methods of responses tropical storms in both the long and the short term using a named example. ❑ I can explain how tropical storms might be affected by climate change. ❑ I can explain how monitoring, planning, prediction and protection of tropical storms can reduce their effects.	**CASE STUDY Typhoon Haiyan knowledge of cause, effect and responses**			
UK Extreme Weather	❑ I can explain the cause of an extreme weather event using an example. ❑ I can describe and expel the social, economic and environmental using an example. ❑ I can identify evidence of the weather becoming more extreme using an example. ❑ I can explain how extreme events can be managed to reduce the impacts. ❑ I can assess and evaluate the impact that weather conditions have upon people homes, lives, agriculture, health and transport.	**CASE STUDY Cumbria Flooding (Storm Desmond) cause, effect and responses** **Other examples: July 2022 Heatwave Beast from the East (2018)**			
Climate Change	❑ I can explain the evidence both for and against climate change. ❑ I can explain both the natural and human causes of climate change. ❑ I can assess and evaluate the economic, social, environmental and political impacts of climate change both on the world and the UK. ❑ I can describe and evaluate the mitigation strategies used to reduce the impact of global climate change on a local, national and international level. ❑ I can describe and evaluate the adaption strategies used to reduce the impact of global climate change on a local, national and international level.				

PAPER 1
LIVING WITH THE PHYSICAL ENVIRONMENT



2. The Living World

Topic	Content	Case Study	Notes made	Revised	Exam ready
Ecosystem	❑ Using an example from the UK, I can explain the interrelationship within the natural system. ❑ I can define and give UK examples of producers consumers, decomposer, food chain, food web and nutrient cycle ❑ I can explain their interdependence of each of the above and explain how changes might affect each other. ❑ I can describe the distribution and characteristics of global ecosystems around the world.	**CASE STUDY Epping Forest**			
Tropical Rainforests	❑ I can describe the physical characteristics of the tropical rainforests ❑ I can explain the interdependence of the climate, water, soils, plants, animals and people in a tropical rainforest ❑ I can explain how plants and animals have adapted to the physical conditions of tropical rainforests. ❑ I can describe and explain the changing rates of deforestation. ❑ I can use a case study to explain the causes of deforestation 1. Subsistence and commercial farming, 2. Logging, 3. Road Building 4. Mineral Extraction 5. Energy Development, 6. Settlement 7. Population Growth ❑ I can use a case study to explain the impacts of deforestation 1. Economic development 2. Soil erosion, 3. Contribution to climate change. ❑ I can explain the importance and value of the tropical rainforest on a local, national and international scale. ❑ I can explain why it is important the tropical rainforest should be managed sustainably. ❑ I can explain how the tropical rainforest can be managed sustainably using a range of methods: 1. Selective logging and replanting 2. Conservation and education 3. Ecotourism 4. International agreements about the use of tropical hardwoods, 5. Debt reduction.	**CASE STUDY Deforestation in the Amazon**			
Cold Environments	❑ I can describe the physical characteristics of the cold environment ❑ I can explain the interdependence of the climate, water, soils, plants, animals and people in a cold environment ❑ I can explain how plants and animals have adapted to the physical conditions of cold environments. ❑ I can describe and explain the problems and issues with changing biodiversity within the cold environment. ❑ I can use a case study to explain developments in cold environments. 1. Mineral Extraction 2. Energy Development 3. Fishing 4. Tourism ❑ I can use a case study to explain the challenges of developments in cold environments. 1. Extreme temperature 2. Construction 3. Services 4. Inaccessibility ❑ I can describe and explain why developments in cold environments causes issues. ❑ I can describe and explain why cold environments need protecting. ❑ I can explain the value of cold environments as wilderness areas and why they should be protected (ANWR and Antarctica) ❑ I can evaluate strategies that balance economic development and conservation (technology, role of governments, international agreements, and conservation groups)	**CASE STUDY Alaska** **CASE STUDY Antarctica**			

PAPER 1
LIVING WITH THE PHYSICAL ENVIRONMENT

3. Physical Landscapes of the UK – Rivers and Coasts

Topic	Content	Case Study	Notes made	Revised	Exam ready
UKs Physical Landscape	❑ I can describe the location of the major upland and lowland areas within the UK ❑ I can describe the location of the major river systems within the UK				
River Landscapes of the UK	❑ I can describe how a rivers long profile and cross profile varies over it's course and how vertical and lateral erosion changes the cross profile of a river ❑ I can name and explain the four processes of erosion (Abrasion, Attrition, hydraulic Action and Solution) ❑ I can describe the four processes of transportation in a river (Solution, Saltation, Traction and Suspension) ❑ I can explain the reasons why a river deposits its material (load) ❑ I can explain how erosional landforms form: 1. Interlocking spurs 2. V-shaped valleys 3. Waterfalls & gorges ❑ I can explain how erosion and deposition creates: 1. Meanders 2. Ox Bow lake ❑ I can explain how deposition creates: 1. Levees and flood plains 2. Estuaries and mudflats ❑ I can use an example of a river valley to demonstrate my understanding of the erosional and depositional landforms ❑ I can explain how physical and human factors affect the risk of flooding including precipitation, geology, relief and land use. ❑ I can explain what river discharge means & how it is shown on a hydrograph ❑ I can explain how hard and soft engineering can reduce the risk of flooding or the effects of flooding ❑ I can evaluate the effectiveness of these strategies. ❑ Using an example I can explain 1. Why the scheme was required 2. How the area was managed 3. The social, environmental and economic issues. ❑ I can identify on an OS map all of the river landforms and use 4 & 6 fig grid references to locate them on a map.	**CASE STUDY River Wharfe** **CASE STUDY Foss Barrier (York)**			
Glacial Landscapes of the UK	❑ I can describe the maximum extent of ice during the last ice age ❑ I can describe and explain the process of freeze-thaw weathering ❑ I can explain how glaciers erode by plucking and abrasion ❑ I can describe hoe glaciers move and transport sediment by rotational slip and bulldozing ❑ I can explain what happens when glacier deposit sediment – till and outwash, ❑ I can describe erosional landforms and the sequence of: 1. Corries, Arêtes and Pyramidal Peaks 2. Truncated spurs 3. Glacial troughs 4. Ribbon lakes and hanging valleys ❑ I can describe the processes of transportation and deposition of glaciers 1. Erratics 2. Drumlins 3. Types of Moraine ❑ I can give an example of an upland area of the UK (Lake District) and identify its major landforms of erosion and deposition. ❑ I can give an overview of economic activities in glaciated upland areas 1. Tourism 2. Farming 3. Forestry 4. Quarrying ❑ I can explain how conflict can occur between different land uses and between development and conservation ❑ An example (Lake District) to show how tourism is used for: 1. The attractions for tourists 2. Social, economic and environmental impact of tourism 3. Strategies to manage the impact of tourism.	**CASE STUDY Lake District** **CASE STUDY Lake District**			

PAPER 2
CHALLENGES IN THE HUMAN ENVIRONMENT

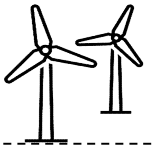
1. Urban Issues and Challenges

Topic	Content	Case Study	Notes made	Revised	Exam ready
Urban Change	❑ 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.				
Urban Change in a LIC / NEE **(Nigeria)**	❑ I can explain why the case study is important nationally and internationally ❑ I can explain why and how the case study has grown ❑ I can explain, analyse and evaluate the opportunities in the case study 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 the case study 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 evaluation the how Lagos can plan to improve the quality of lives for the urban poor. **[use the example of Mokoko in Lagos]**	**CASE STUDY LAGOS** **Opportunities and Challenges of Urban Change** **MAKOKO**			
Urban Change in the UK **(London)**	❑ I can explain why the case study is important nationally and internationally ❑ I can explain why and how the case study has grown ❑ I can explain the impact of national and international migration on the growth and character of the the case study. ❑ I can explain, analyse and evaluation the opportunities in the case study 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 the case study 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 the case study has undergone regeneration.	**CASE STUDY LONDON** **Opportunities and Challenges of Urban Change** **LONDON OLYMPIC PARK**			
Urban sustainability	❑ I can describe how people can live more sustainably ❑ I can explain how sustainable urban living can conserve water and energy, recycle waster and create more green space. [EAST VILLAGE] ❑ I can explain how urban transport strategies are used to reduce traffic congestion .	**EAST VILLAGE Former Olympic Village**			

PAPER 2
CHALLENGES IN THE HUMAN ENVIRONMENT

2. The Changing Economic World

Topic	Content	Case Study	Notes made	Revised	Exam ready
Global Uneven Devlopment	❑ I can describe the methods of classifying countries and use different development indicators. ❑ I can evaluate the use of different developmental indicators. ❑ I can use the Demographic Transition Model (DTM) to explain the link between changing population structure and level of development. ❑ 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				
Changing economy in a LIC / NEE **(Nigeria)**	❑ I can explain why the case study is important within the continent and internationally ❑ I can describe the political, social and culture contact of the case study within a world context. ❑ I can describe the changing industrial structure within in the case study. ❑ I can explain how manufacturing can stimulate economic growth in within the case study. ❑ I can define a Transnational Corporation (TNC) using a case study. ❑ I can explain the advantaged and disadvantages of TNCS to the case study ❑ I can describe how the case study'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 what aid the case study has received and how it has impacted upon the country 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 the case study	**CASE STUDY NIGERIA**			
Changing 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 (postindustrial 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 or 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.	**CASE STUDY UK**			



PAPER 2
CHALLENGES IN THE HUMAN ENVIRONMENT

3. The Challenge of Resource Management

Topic	Content	Case Study	Notes made	Revised	Exam ready
Access to resources	❑ I can describe the importance of food, water and energy to the economic and social wellbeing. ❑ I can describe the distribution of resources around world. ❑ I can explain why resources are unevenly distributed around the world.				
Food, Energy and Water in the UK	❑ I can describe the distribution of resources around the UK. ❑ 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.				
Global Energy **(Question 6)**	❑ I can describe the global distribution of energy surplus and deficit ❑ I can explain why energy consumption is increasing ❑ I can explain and evaluate the different factors which effect energy supply including: 1. Physical Factors 2. Cost of exploitation and production 3. Technology 4. Political factors ❑ I can analyse the impacts of energy insecurity including: 1. Exploration of difficult and environmentally sensitive areas, 2. economic and environmental costs, 3. food production, 4. industrial output, 5. potential for conflict where demand exceeds supply. ❑ I can explain and evaluate how energy supplies can be managed to increase supply in certain areas renewable (biomass, wind, hydro, tidal, geothermal, wave and solar) and non-renewable (fossil fuels and nuclear power) sources of energy ❑ I can use an example of how the extraction of fossil fuels has both advantages and disadvantages ❑ I can explain how energy resources can be managed sustainably including individual energy use and carbon footprints. Energy conservation: designing homes, workplaces and transport for sustainability, demand reduction, use of technology to increase efficiency in the use of fossil fuels ❑ I can use an example of a local renewable energy scheme in an LIC or NEE to provide sustainable supplies of energy.	**DASH FOR GAS (Fossil Fuel Extraction)** **FRACKING** **NEPAL Hydroelectric Small Scale**			

PAPER 3
GEOGRAPHICAL APPLICATIONS

FIELDWORK

Topic	Content	Notes made	Revised	Exam ready
Suitable Enquiry Question	❑ I know the factors that need to be considered when selecting suitable questions. ❑ I understand the geographical theory/concept underpinning the enquiry ❑ I know the different sources of primary and secondary evidence including locations ❑ I know the potential risks of both human and physical fieldwork and how reduced			
Selecting, measuring and recording appropriate data	❑ I can explain the difference between primary and secondary data ❑ I can identify and select appropriate human and physical data ❑ I can explain the measuring and recording of data using different sampling methods			
Select appropriate ways of processing and presenting fieldwork data	❑ I appreciate that there are a range of visual graphic and cartographic methods ❑ I can select and use accurately appropriate presentation methods ❑ I can describe, explain and adapt presentation methods ❑ I can explain the causes of a tropical storm.			
Describing, analysing and explaining fieldwork data	❑ I can describe, analyse and explain the results of fieldwork data. ❑ I can establish links between data sets. ❑ I can use appropriate statistical techniques ❑ I can identify anomalies in fieldwork data			
Reaching conclusions	❑ I can draw evidenced conclusions in relation to original aims of the enquiry			
Evaluation of geographical enquiry	❑ I can identify the problems of data collection methods ❑ I can identify the limitations of data collected ❑ I can suggest other data that might be useful ❑ I can explain the extent to which conclusions were reliable			

Exam tips – Are you actually answering the question?

B **Box the command words**. This is a word which tells you what you need to do to answer the question e.g. describe or explain

U **Underline the key words**, content and how many marks its worth. Do you have to use the figure or a case study?

G Make a plan, answer and then **go back and check** before answering. Are you answering what the question is asking? **Have you missed anything?**

What to look for

Both components need to be mentioned as part of your answer

Managing climate change involves both reducing causes (mitigation) and responding to change (adaptation).'

Do you agree?

Explain your answer

Use **Figure 6** and your own understanding

The best answers will argue both sides and given an opinion based on this information. This is your conclusion

[9 marks]
[+3 SPaG marks]

You need to set out purposes or reasons – say why and/or how.

To get top marks you must mention the figure and use it as part of your answer. Don't rely on it though – you must use your own knowledge too!

You do not need to do loads to get 3 marks for SPaG – use capital letters, full stops, paragraphs and subject specific vocabulary

Exam Command Words

Command Word	Description	Example 1	Top Tips
Calculate	Work out the value of something.	Calculate the range in life expectancy shown in Figure 4. [1 mark]	• Look for the instructions in the question about rounding to significant figures • Give units in their answer if they're not provided in the answer space • Use a calculator!
Compare	Identify similarities and differences.	Using Figure 11, compare two features of destructive and constructive waves. [2 marks	• Write about similarities **and** differences • Use comparative words, eg 'whereas', 'however', 'compared to', 'similarly' • Use adjectives like 'higher', 'lower', 'stronger', 'weaker' • Comment on anomalies • Include evidence e.g. 'X is 5 times higher than Y'.
Complete Draw Label	Draw – sketch a map or diagram Label – add specific names or detail to a stimulus	Most tropical storms happen between latitudes 5 degrees and 30 degrees north and south of the _____ .	• Practice spotting questions like this in the paper – they get missed as there's often no written answer space • Use a ruler when drawing lines of best fit (draw a slightly curved line when appropriate) and when completing diagrams

Command Word	Description	Example 1	Top Tips
Describe	Set out characteristics – to say what something is, is like, or appears like.	Describe the role of producers in an ecosystem. [1 mark]h,	• Spot the geographical terms in the question and use them in their answer, eg 'distribution', 'change', 'track'. • A 2-mark question will usually require two ideas, a 2-mark question requiring one idea will usually need a development to be made. • use adjectives, eg 'largest/smallest' 'highest/lowest', 'increasing/decreasing', 'rapidly/slowly' • in graphs, look for: trends and patterns; the difference between recorded data and projections; anomalies • on maps, look for: patterns in the data; anomalies; names of locations and places; compass directions.
Discuss	Present key points about different sides of an argument, issue or the strengths and weaknesses of an idea.	Using Figure 10 and your own understanding, discuss the issues arising from the UK's changing energy mix. [6 marks,	• present both sides of the argument, but it doesn't need to be balanced • refer back to the question in answers using words from the question, eg important, significant, useful • opening with one side of the argument, making multiple points to support the argument then making counter-arguments • finishing with a clear conclusion that links back to the question • use wording from the statement, if the question has one • use evidence from examples, case studies or fieldwork, linking it back to the
Evaluate Assess / To What Extent	Judge from evidence, weighing up both sides of an argument. Approach this similarly to other evaluative commands (assess, to what extent, discuss).	Using a named example, evaluate the immediate and long-term responses to tropical storms. [9 marks]	• refer back to the question in answers using words from the question, eg 'important', 'significant', 'useful' • consider structuring responses appropriately, eg: opening with a judgement to focus the answer, making multiple points to support the judgement, making a counter-argument if needed • finishing with a clear conclusion, emphasising the judgement • use evidence from examples, case studies or fieldwork, linking it back to the question • link ideas from the figure if there's one • extend their argument using phrases like, 'because…', 'this means that…', this leads to…', 'as a result…' • use comparative words to evaluate, eg 'whereas', 'however', 'although'
Explain	Set out purposes or reasons – say why or how.	Explain how the increasing use of fossil fuels and changes in agriculture may have contributed to global changes in temperature.	• understand that 'explain' is one of the most common command words and used in many different ways • use key geographical terms • cover 'why', 'what' and 'how' to develop answers and evaluate where appropriate • make explicit references to the figure if there's one eg, 'I can see... in Figure 1... which shows that...' • extend ideas with phrases like 'because…', 'this leads to…'
Identify Name State Give Define	State – express in clear terms Give – produce an answer from recall Define – state the meaning of a term	Give one disadvantage of using an economic measure of development such as GNI. [1 mark]	• keep answers short and focused • refer to the stimulus if there's one • use key geographical terms • give only the number of answers the question asks for.
Justify	Support a case with evidence – give detailed reasons for an idea.	'Transnational corporations (TNCs) only bring advantages to the host country.' Do you agree with this statement? Yes or No? Justify your decision. [9 marks	• focus on why rather than what, e.g. for fieldwork, why certain data collection methods or data presentation methods were chosen • develop answers with phrases like 'I think/know this because...', 'We did this because...' **Consider approaching 9-mark questions by:** • opening their answer with their opinion if the question asks to agree/disagree • giving an argument that could be one-sided or balanced • making multiple points to support arguments • linking ideas from the figure if there's one • use evidence from examples, case studies or fieldwork, linking it back to the question • extending ideas with phrases like 'because…', 'this leads to…', 'this means that…' coming to a conclusion.
Suggest	Present a possible case, to propose an idea, solution or answer.	Using Figure 2 and your own understanding, suggest how plate movements cause tectonic hazards in Iceland. [6 marks	• understand that 'suggest' is one of the most common command words and used in many different ways, • refer back to the question in answers using words from the question • use key geographical terms • cover 'why', 'what' and 'how' to develop answers and evaluate where appropriate • extend ideas with phrases like 'because…', 'this leads to…', 'this means that…'.

Paper 3 – Geographical skills

Scatter graphs show relationships

Scatter graphs tell you how closely related two things are, e.g. altitude and air temperature. The fancy word for this is correlation. Strong correlation means the two things are closely related to each other. Weak correlation means they're not very closely related. The line of best fit is a line that goes roughly the middle of the scatter of points and tells about what type of correlation there is.

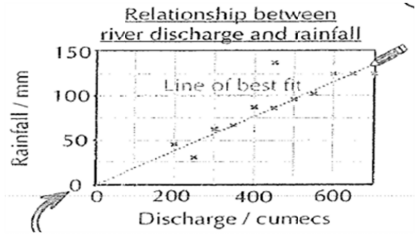
Data can show three types of correlation:

1) Positive – as one thing increases the other increases
2) Negative – as one thing increases the other decreases
3) None – there's no relationship between the two things

Reading scatter graphs

If you're asked to describe the relationship, look at the slope of the graph, e.g. if the line's moving upwards to the right it's a positive correlation. You also need to look at how close the points are to the line of best fit – the closer they are the stronger the correlation.

If you're asked to read off a specific point, just follow the rules for the line graph (top right of the page).



You can use your line of best fit to make predictions by reading off values from the graph. If you're confident your best fit line will continue, you can extend it beyond the data you have collected. This means you can make predictions outside the range of data you collected.

Histograms are a lot like bar charts

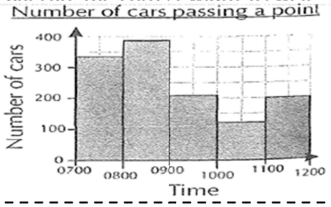
1) Histograms are very similar to bar charts, but they have a continuous scale of numbers on the bottom and there can't be any gaps between the bars.
2) You can use histograms when you data can be divided into intervals.
3) You draw and plot them just like a bar chart, but you have to make sure that the bars are the correct width as well as the correct height

Line graphs – the points are joined by lines

To read a line graph:

1) Read along the correct scale to find the value you want
2) Read across or up to the line you want, then read the value off the other scale

Time	Cars
0700-0800	334
0800-0900	387
0900-1000	209
1000-1100	121
1100-1200	?



Pie charts show amounts or %

Reading pie charts:

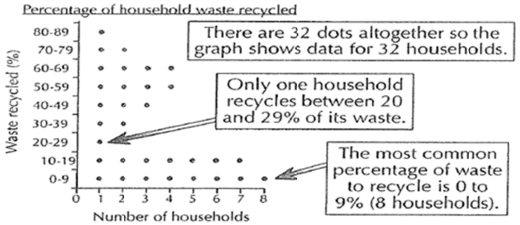
1) To work out the % for a wedge of the pie, use a protractor to find out how large it is in degrees. Then divide that number by 360 and times by 100
2) To find the amount a wedge of the pie is worth, work out your % then turn it into a decimal. Then times the decimal by the total amount of the pie

Completing pie charts

1) To draw a new wedge that you know the % for, turn the % into a decimal and times it by 360. Then draw a wedge of that many degrees
2) To add a new wedge that you know the amount for, divide your amount by the total amount of the pie and times the answer by 360. Then draw on a wedge of that many degrees

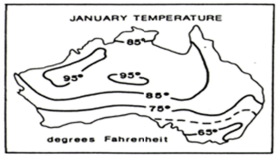
Dispersion diagrams show the frequency of data

1) Dispersion diagrams are a bit like a cross between a tally chart and a bar chart
2) The range of the data that's measured goes on axis. Frequency goes on the other axis
3) Each dot represents one piece of information – the more dots there are in a particular category, the more frequently that event has happened
4) The dispersion diagram to the right shows the % of household waste that's recycled for households in a particular village



Isoline maps

1) Isolines are lines drawn to link different places that share a common value. The prefix '*iso*' is a greek word meaning equal, so an isoline must be a line joining equal points.
2) For example, a line drawn on a map to join up all the places that are the same height above sea level is called a contour. Contour lines are isolines joining places that have the same height value. Another common isoline is the isobar, a line that joins places with the same atmospheric pressure. These are often shown on weather maps in newspapers and TV weather forecasts.
3) Geographers often use isolines to help them map the distribution of things. When isolines are combined with colouring or shading they make it possible to easily see data that would be hard, or impossible, to understand as a table or chart of numbers.



Interquartile range

We know that the **median** divides the data into two halves. We also know that for a set of n **ordered** numbers the median is **(n + 1) ÷ 2 value**.

Similarly, the **lower quartile** divides the bottom half of the data into two halves, and the **upper quartile** also divides the upper half of the data into two halves.

Lower quartile is the (n + 1) ÷ 4 th value.

Upper quartile is the 3 (n + 1) ÷ 4 th value

Interquartile range = Q3 – Q1

The median is the middle value.
To find the median, order the numbers and see which one is in the middle of the list.
If there are two middle values the median is halfway between them. This might not be a whole number.

The mode is the number that appears the most.
To find the mode, order the numbers lowest to highest and see which number appears the most often.

The mean is the total of the numbers divided by how many numbers there are.
To find the mean, add all the numbers together then divide by the number of numbers.

The range is the difference between the biggest and the smallest number.
To find the range, subtract the lowest number from the biggest number.

Sampling Strategies

Type of sampling	Strategy
Random	This involves selecting measuring points on a transect at random. You might use a random number generator.
Systematic	This involves selecting measuring points on a transect at selected points. For example every 10m along the transect.
Stratified	This involves selecting measuring points on a transect as selected points when you are looking for something specific. For example if you want to look at impact of traffic you might chose to look at traffic junctions.

Different sources of data:

Quantitative data	This is information about quantities –this is information that can be measured and written down in numbers
Qualitative data	This is information about qualities and this information cannot be measured and it more descriptive
Primary data sources	This is data collected by a researcher themselves. For example: • Raw data – traffic counts, building surveys, footpath measuring • Photographs • Video • Letters
Secondary data sources	This is data that has been collected by somebody else other than you. For example: • Census data • Met office • Environment Agency Database

Method	Strength	Weakness
Bar	Easy to draw and understand Good visual representation of statistical data	Graph categories can be recorded to emphasise certain effects Use only with discrete data
Scatter graphs	It will show you a correlation between two data sets, Relatively easy to construct Shows data spread clearly and any animalises stand out	Too many datapoints can produce skewed results producing incorrect graph analysis Too many data points can quickly make the graph unreadable
Pie charts	Shows % of each segment, Easy to draw Can represent a wide range of statistical data	Too many segments make the graph hard to read No exact numerical data just %
Isoline maps	Data can be represented without artificial area boundaries. Therefore changes in value occur This makes maps useful for interpreting general trends in distribution	Can be difficult to construct Element of guesswork involved in the position of the isolines between values. This makes them rather subjective, especially if there is a lack of known values.
Dot maps	Good visual representati0on of distributions	Lacks precise location and value of each individual item
Choropleth map	Visually effective, you can see clear spatial patterns	The whole of an area with one shading pattern appears to have the same density with no variations in it , but in reality this is not the case and there will be variation within each area