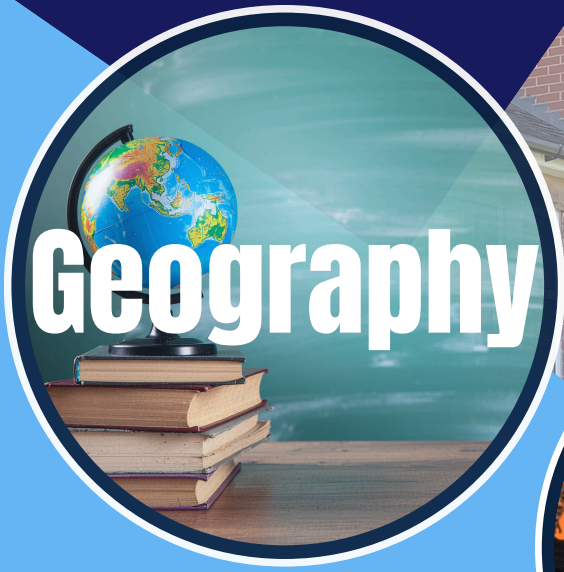
Saint Benedict
Catholic Voluntary Academy

2026

BE PREPARED



Geography

St Ralph Sherwin
Catholic Multi Academy Trust

A level Geography '*Be Prepared*' Booklet

Welcome to A level Geography

This work is designed to help you to bridge the gap between your GCSE Geography studies and the A Level Geography course.
Preparation is crucial for studying A Level Geography. After completing these exercises, you will need to highlight any areas that you really had trouble understanding. We are expecting you to put 100% effort into these tasks to show your commitment to studying Geography.

We want you to be successful at A-level Geography and some students find the change from GCSE quite a challenge. Although you have fewer subjects, there are different skills post-16 and the volume of work is greater due to the increased demand of depth and detail.

This work should help you to gauge your current understanding of the subject and introduce you to the depth of understanding that is required for study at post-16.

Is this work assessed?
You will be asked to bring to your first Geography lesson. Please keep all the work you complete in a folder until then.

Geography A-level
We study **AQA Geography A Level** and your Year 12 Geography Qualification will cover the
following 3 units:

1- Coasts
2. Contemporary Urban Environments
2. Changing Places

If you would like to find out more about the course content, you can find the specification on the AQA website:

https://www.aqa.org.uk/subjects/geography/as-and-a-level/geography-7037/specification-at-a-glance

Studying Geography (or, in fact any subject) at A-level will require you to be highly organised and effective with your own independent work. Not only will you have to balance the workload of this subject and the other subjects you have chosen, you will also be required to commit to the subject and do the very best that you can.

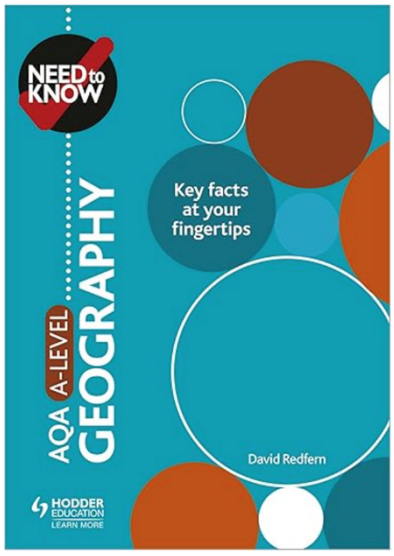
To support your learning, you will be provided with 2 textbooks for the current A-Level course – a Physical and a Human Geography textbook. You will also have a Geography book called 'Prisoners of Geography' which we will be reading different chapters throughout the year. This book will give you a wider and deeper understanding of the issues facing the world and the influence that Geography plays in Global Politics.

We will also be signposting you to videos, podcasts, articles, and TV and Radio programs to deepen your understanding of the different topics and issues you will be studying.
Your teachers are, of course, an excellent source of support, both in and out of lessons.

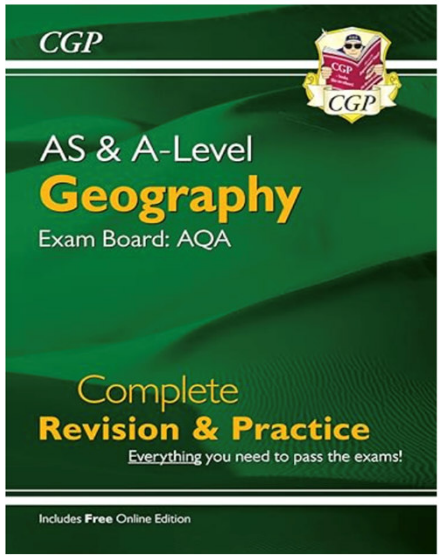
If you feel you want or need to do more preparation…

Please don't think you have to buy any other books, but below are links to 2 books that previous A level pupils say that have found very helpful .

Need to Know: AQA A-level Geography
Cost approx. £10 from Amazon and other retailers



AS and A-Level Geography: AQA Complete Revision & Practice
Cost approx. £20 from Amazon and other retailers



HOW TO TAKE NOTES

THE CORNELL METHOD

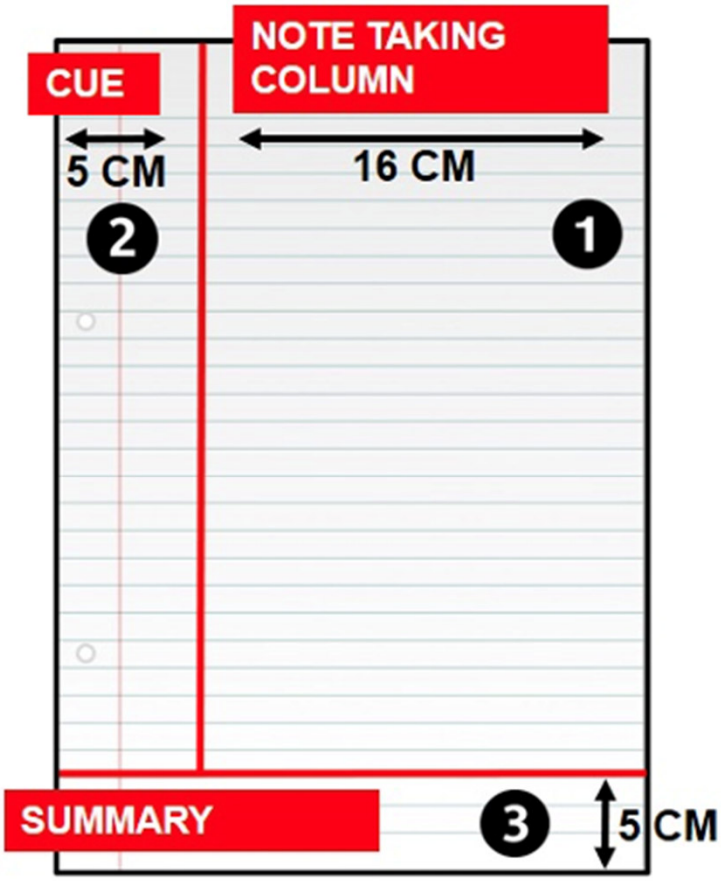
ABOUT

The Cornell note-taking method was devised in the 1940's by Dr Walter Pauk, at Cornell University.

- **Efficient method of taking notes**
- **Encourages reflection**
- **Makes an effective study guide for revision and exam preparation**

HOW

- Divide an A4 page into the three sections as shown.
- You can use different dimensions for each section if you prefer
- Each section has a specific purpose:



1

- Write your notes in this section **during the lesson**
- Use **any format** you like to record these notes (for example, mind-mapping)
- Record only the **important information** (don't write in full sentences)
- Focus on **ideas** rather than the actual words

2

- This section is for **recall**.
- **Do not write** in this section **during the lesson**
- The cue section is created **when you review your notes.**
- Do this **as soon as possible** after the lesson
- Cues are **in the form of questions** that you can use the notes to answer.

3

- A **summary** of the notes taken
- It should be **concise** focusing on **key ideas** only
- Written in **your own words**
- **NOTES + CUES + SUMMARY** should show how all ideas fit together

Below and on the next few pages, are tasks to complete based on the 3 Geography topics that you will be studying in Year 12. Some of the topics , such as Coasts, will be familiar to you from your GCSE exams, but some such as ‘Changing Places’ will be new to you.

Coasts Unit

Task 1: Complete the glossary of terms:

Term	Definition	Coastal example
Input		
Output		
Energy		
Store		
Flow/transfer		
Positive feedback		
Negative feedback		
Dynamic equilibrium		
Fetch		
Swash		
Backwash		
Constructive		
Destructive		
Spring tide		
Neap tide		
Sediment cell		
Mass movement		
Emergent coast		
Submergent coast		

Term	Definition	Coastal example
Eustatic		
Isostatic		
Shoreline Management Plan		
Integrated Coastal Zone Management		

Task 2: Read the article and highlight the key points.

- **Coasts as an Open System**
- Coastal systems are dynamic environments where the land meets the sea, constantly influenced by natural processes and human activities. They are considered open systems because they involve the exchange of energy and matter with other systems, such as the atmosphere, hydrosphere, and lithosphere.
- Key components of the coastal system include:
- **Inputs:** These are elements that are introduced into the coastal system. They include wave energy, sediment from rivers, tidal currents, wind, and human activities such as coastal engineering.
- **Outputs:** These are elements that leave the coastal system. They include sediment lost to deeper water, evaporation of water, and human activities such as sediment extraction.
- **Processes:** These are the actions that take place within the coastal system, transforming inputs into outputs. They include erosion, transportation, and deposition of sediments.
- Understanding coasts as open systems helps geographers to analyze the complex interactions between physical processes and human activities, and how they influence the shape and behavior of the coastline.
- **High Energy Coastlines**
- High energy coastlines are characterized by strong wave action, which results in significant erosion and transportation of materials. These coastlines typically have steep gradients and are often found along exposed coasts facing the open ocean.
- **Features associated with high energy coastlines:**
- **Cliffs:** Steep rock faces formed by the action of powerful waves that erode the base of the rock, causing it to collapse.
- **Wave-cut platforms:** Flat areas found at the base of cliffs, formed by the erosion of waves at the high tide level.
- **Headlands and bays:** Headlands are points of high land jutting out into the sea, formed where harder rock resists erosion. Bays are recessed coastal bodies of water formed where softer rock is eroded away.
- **Sea arches, stacks, and stumps:** Features formed by the erosion of headlands, where sea arches are created by waves eroding through a headland, stacks are isolated columns of rock left standing after an arch collapses, and stumps are eroded remnants of stacks.
- **Low Energy Coastlines**
- Low energy coastlines are characterized by gentle wave action, which results in the deposition of materials rather than erosion. These coastlines typically have gentle gradients and are often found in sheltered areas, such as bays and estuaries.
- **Features associated with low energy coastlines:**
- **Beaches:** Accumulations of sand and pebbles deposited by gentle waves. Beaches can vary in composition and shape depending on the dominant processes and sediment supply.
- **Spits:** Narrow extensions of sand or shingle projecting from the coastline into the sea, formed by the deposition of sediment carried by longshore drift.
- **Bars:** Ridges of sand or shingle that run parallel to the coast, often creating a lagoon between the bar and the mainland.
- **Salt marshes:** Coastal wetlands formed in sheltered areas behind spits and bars, where fine sediments are deposited and colonized by salt-tolerant plants.

- **Interactions and Human Impact**
- Human activities significantly influence coastal systems, often altering the natural processes and leading to various consequences. Coastal management strategies, such as the construction of sea walls, groynes, and breakwaters, aim to protect human settlements and infrastructure but can also have unintended effects on sediment transport and erosion patterns.
- **Conclusion**
- Understanding coastal systems as open systems allows geographers to appreciate the dynamic interactions between physical processes and human activities. High energy and low energy coastlines exhibit distinct features shaped by the prevailing forces of erosion and deposition, respectively. Effective coastal management requires a comprehensive understanding of these processes to mitigate the impacts of human activities and natural hazards on coastal environment.

Task 3: Using your knowledge and any additional reading complete the questions

•**Which of the following best describes a high energy coastline? (1 Mark)**
•A) A coastline with gentle wave action and significant sediment deposition.
•B) A coastline with strong wave action, steep gradients, and significant erosion.
•C) A coastline protected by sea walls and groynes.
•D) A coastline characterized by extensive salt marshes and estuaries.

•**What is a spit? (1 Mark)**
•A) A flat area at the base of a cliff formed by wave erosion.
•B) A narrow extension of sand or shingle projecting from the coastline into the sea.
•C) An isolated column of rock left standing in the sea after an arch collapses.
•D) A coastal wetland formed in sheltered areas behind bars.

Explain why coastal systems are considered open systems. (4 Marks)

Compare the features of high energy and low energy coastlines. (6 Marks)

Task 4: Read and make Cornell notes on the article below (use the Cornell notes template from P3 to help you) .

- Sources of Sediment Along Coastlines: AQA A Level Geography
- Sediment supply is crucial to the development and maintenance of coastal landscapes. Various sources contribute to the sediment budget of coastlines, and understanding these sources is key to comprehending coastal processes and landform dynamics. The primary sources of coastal sediment include rivers, cliff erosion, longshore drift, wind, glaciers, and offshore deposits.
- 1. Rivers
- Rivers are significant contributors to coastal sediment. They transport sediment from inland areas to the coast, where it is deposited at river mouths and deltas. This sediment originates from the weathering and erosion of rocks and soils within the river's drainage basin. The size and volume of sediment delivered by rivers can vary greatly depending on the geology, climate, and land use within the catchment area. For example, the Nile River has historically delivered large quantities of sediment to the Mediterranean coast, forming the extensive Nile Delta.
- 2. Cliff Erosion
- Cliff erosion is a prominent source of sediment in many coastal areas. As waves continuously pound against cliffs, they erode the rock and soil, contributing debris to the coastal system. The rate of cliff erosion depends on factors such as rock type, wave energy, and weather conditions. Harder rock types, such as granite, erode more slowly, while softer rocks, like clay or sandstone, erode more rapidly. The sediment produced by cliff erosion can range from fine particles to large boulders, influencing the texture and composition of beaches and other coastal features.
- 3. Longshore Drift
- Longshore drift is a process by which sediment is transported along the coast by wave action. Waves approaching the shore at an angle move sediment laterally in a zigzag pattern along the coastline. This process can lead to the formation of features such as spits, bars, and tombolos. Longshore drift redistributes sediment along the coast, affecting sediment budgets and the shape of the shoreline. For instance, sediment from eroding cliffs can be transported down the coast to nourish beaches further along.
- 4. Wind
- Wind is another important agent in coastal sediment dynamics, particularly in the formation of dunes and other aeolian (wind-blown) features. Wind can pick up and transport fine, dry sediment from beaches and coastal plains, depositing it further inland. This process is most effective in arid and semi-arid regions where vegetation cover is sparse, and loose sediment is readily available. Coastal dunes, such as those found along the western coast of the Netherlands, are formed and continually reshaped by wind action, providing a vital source of sediment to the coastal system.

Task 4: Continued

- 5. Glaciers
- In regions with glacial activity, glaciers can be a source of coastal sediment. As glaciers move, they erode the underlying rock, transporting sediment within the ice. When glaciers reach the coast and calve into the sea, they release this sediment, which can be deposited directly on the shore or redistributed by marine processes. Glacially-derived sediment tends to be poorly sorted, with a mix of particle sizes from fine silt to large boulders. This is evident in coastal areas of Alaska and parts of Scandinavia, where glacial deposits form distinct landforms such as moraines and outwash plains.
- 6. Offshore
- Offshore sources of sediment include materials that are transported from the seabed to the coast by waves, tides, and currents. This sediment can come from a variety of sources, including relict deposits from past sea levels, shell fragments, and eroded material from submerged landforms. Offshore bars and sandbanks can serve as reservoirs of sediment that are periodically moved onshore by storm events or changes in sea level. This process can play a critical role in replenishing beaches and maintaining coastal stability. For example, in some parts of the UK, dredged material from offshore is used in beach nourishment projects to combat erosion.
- Conclusion
- The sources of coastal sediment are diverse and interconnected, contributing to the dynamic nature of coastal environments. Rivers, cliff erosion, longshore drift, wind, glaciers, and offshore deposits each play a role in shaping coastal landscapes. Understanding these sources is essential for managing coastal zones, predicting changes, and implementing effective conservation and mitigation strategies. By comprehending the origins and pathways of sediment, geographers can better appreciate the complexities of coastal systems and their responses to natural and anthropogenic influences.

Task 4: Cornell notes:

Changing Places

The Changing Places topic is a new topic that all A level specifications have to study. It is quite complex and mixes skills that you may have learnt in Media and English lessons – such as analysing images texts and poems about a place, with statistical skills you will have used in Math's lessons

We will be using many case-studies throughout this topic, but we will begin by using the city that most of you live in - Derby

Task 1 : Key terminology

Key Term	**Definition –some words are used in many topics, your definition needs to be linked to Geography**
Multicultural	
Place	
Space	
Sense of place	
Placelessness	
Identity	
Endogenous	
Exogenous	
Qualitative	
Quantitative	

Task 2 : Using Qualitative sources (Poems) to investigate 'Place'

Annotate the poem below to show what the poet is trying to tell us about the 'Place' that is Derby. Use the page after this poem to answer the questions below.
According to the Poet - what are we famous for ?
If somebody read this poem , what images / impression would they get about Derby ?
Is it accurate – what else would you add, to help describe the 'Place' of Derby ?

We Are Derby, by Jamie Thrasivoulou

We Are Derby

-

Rail-track city; birthplace of the industrial revolution

Where inventors span cogs to engineer solutions

-

We're a city that delivers

From Royal Mail PO boxes

To Royal Crown Derby china

Craft and specialism's our definer

-

We Are Derby

-

Bearers of Joseph Strutt's philanthropy

Erasmus Darwin's philosophy

Where Florence Nightingale hatched plans

To revolutionise the healthcare of England

-

We're engineers with dirty fingernails

Graft and sweat pump through our veins

We're Rolls-Royce engines, Belper nails

Toyota motors, Bombardier trains

We Are Derby

-

A picture painted by Wright

A building designed by Pickford

We're artistic souls and working minds

With a heritage built on cognizance

-

The underdog city of Middle England

Entrepreneurship exemplified

Where independent businesses thrive:

The real-ale capital; a beer festival every night!

-

We Are Derby

We Are Derby

-

Where the ram is our symbol

The city its beating heart

We've lived through hard times, persevered

Our people possess the spark

Task 3 : Using Qualitative sources (paintings and pictures) to investigate ‘Place’

Using the internet, research and print 2 pictures or paintings of Derby. Stick them below and annotate them to explain what the artist / photographer was trying to say about Derby. The pictures / paintings can be old or recent

Contemporary Urban Environments

The Contemporary Urban Environments topic has links to some fo the GCSE topics such as ‘Global Cities’ and ‘Urban - Rural Processes’ but also links to the problems cities are facing in trying to become sustainable.

Your task for this unit is to read the article on the next 2 pages. Use the ‘Cornell notes template from P3 of this booklet and ‘Cornell Notes’ the article.
You then need to answer the questions on the final page of this booklet.

If you've felt uncomfortably hot in a city this summer, chances are it's not just because of the weather. Look around any urban centre and you'll see the built environment itself exacerbates summer temperatures.
Vehicles stuck in traffic emitting heat. Air conditioners pumping waste heat into the air. Concrete and asphalt across almost every surface, absorbing and radiating the sun's rays. Urban canyons formed between tall buildings, trapping heat at the street level.
All these factors contribute towards a phenomenon called the "urban heat island" effect, which results in cities being up to 10C hotter than the surrounding countryside. How do we to tackle this?
A typical response on a hot day might be to turn up the aircon. But this fuels a vicious circle of heating the outdoors to cool the indoors, making external spaces more uncomfortable still, and at a significant cost. Air conditioning currently accounts for around one-fifth of building-related global electricity usage, or 2.5 times the total electricity use in Africa.

With a warming climate and rapid population growth in hotter, increasingly wealthy countries, our use of air conditioning is set to skyrocket in what the International Energy Agency calls a "looming cold crunch". They estimate that the energy needed for cooling buildings will triple by 2050 – a growth equivalent to the current electricity demand in the USA and Germany combined.
In the US heatwaves kill more people on average than any other natural disaster
Yet our disproportionately warm cities do not simply pose an energy challenge. Ultimately, urban temperature presents us with life-or-death situations; an increase in mortality and strokes is reported when temperatures head above 25C. In the US heatwaves kill more people on average than any other natural disaster, while in the UK heat-related deaths are set to increase 257% by 2050 and 535% by 2080. And it is not just an issue in hot countries – in Moscow an estimated 11,000 people died due to a heatwave in 2010.

As is obvious to anyone who has sat under a tree on a hot day, vegetation can be a powerful tool in the fight against excessive city heat. Not only does greenery provide shade, it stimulates evapotranspiration, the process by which water evaporating from plants' leaves reduces the adjacent air temperature. Many cities recognise the value of parks and trees for urban cooling, not to mention residents' psychological wellbeing, but few have embraced greenery to the extent of Singapore. The city-state embarked on its ambitious "garden city" plan in 1967 through intensive tree-planting and the creation of new parks. As the population grew and buildings got taller, the focus shifted to include skyrise greenery encompassing "skygardens", vertical planting and green roofs.

If we are to make cities cooler we must also change the materials they're built from. Urban areas are dominated by dark and hard materials – concrete, asphalt, paving – most of which absorb, rather than reflect, solar radiation. According to Australia's Cooperative Research Centre for Low Carbon Living, conventional paving can reach temperatures up to 67C and conventional roofs up to 50–90C on a hot day.

Such temperatures can have significant health impacts. According to Arthur Rosenfeld of the Lawrence Berkeley National Laboratory, living on the top floor of a building with a dark roof was identified as a risk factor of mortality in the 1995 heatwave in Chicago. "Government has a role to ban or phase out the use of black or dark roofs, at least in warm climates, because they pose a large negative health risk," he said.

The best way to overcome this is to use cool coatings– typically lighter pigments in asphalt or white-coloured coatings applied to roads, roofs and facades, which reflect more solar energy away from the city.

The New York Cools Roofs initiative, for example, has seen more than 500,000m² of roof space covered in a white reflective coating, saving an estimated 2,282 tonnes of CO2 per year from cooling emissions. Cool roofs are installed at no cost in public buildings, for non-profit organisations and in affordable housing. In other buildings free labour for installation is offered by the city with the owner just paying for the materials.

It may sound simple, but the results can be significant – research by Nasa has suggested a white roof could be 23C (42F) cooler than a typical black roof on the hottest day of the New York summer.

In Los Angeles, it's roads, not roofs, that arethe challenge. More than 10% of the city's land area is black asphalt, which absorbs up to 95% of the sun's energy, contributing to the urban heat island. The city is responding by painting roads in a white-coloured sealant with a high reflectivity, at a cost of $40,000 per mile.

Key questions

1. What is the ‘Urban Heat island’ effect ?

2. What factors are talked about in the article that are adding to the Urban Heat island effect ?

3. Why is the Urban Heat island also an economic problem ?

4. In the article , what is the link between Urban Head island effect and Health ?

5. What solutions are discussed in the article. Which cities / Urban areas are introducing these solutions ?