A level Geography

Transition Pack

ORMISTON FORGE ACADEMY

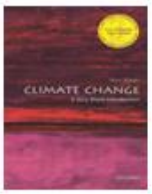
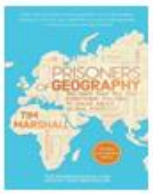
OCR A Level Geography

Transition Pack

RECOGNISING ACHIEVEMENT

Keep Geog-ing On!

The geography department would love you to stay cognitively engaged over the coming weeks despite the cancellation of exams. Below are some suggestions of books, websites, films, podcasts and TV shows you could watch to keep up to date with geographical knowledge and developments.

					
	The Earth: A Very Short Introduction	Landscapes and Geomorphology	Geopolitics: A Very Short Introduction	Climate Change: A Very Short Introduction	Prisoners of Geography

	Royal Geographical Society Youtube	iPlayer Earth from Space
	iPlayer Science and Nature Playlist	iPlayer Stacey Dooley on BBC Three
	iPlayer Climate Change Playlist	iPlayer Race Across the World
	BBC Earth	iPlayer Africa with Ade Adepitan
		iPlayer Fashion Conscious

	Overheard – National Geographic Podcast	Planet Money – The economy explained
	Science Weekly – The Guardian Podcast	RGS Online Lectures
	Ask the geographer Podcasts	BBC Costing the Earth
	The Development Podcast – World Bank	BBC The Documentary Podcast
	The World Economic Forum Podcasts	Living Planet Podcast

					
	An Inconvenient Truth	The Impossible	Dante's Peak	Slumdog Millionaire	Under the Dome: China's Air Pollution

A Level Geography

Welcome:

A Level Geography aims to encourage learners to develop a range of essential skills for Higher Education and the world of work through content which is relevant to any citizen of the planet in the 21st century. Through exciting topics you as a learner will understand the nature of physical and human geography whilst unpicking the debates surrounding contemporary challenges facing the world today.

To access the geography course in September, you will need to complete the tasks set out in this pack and also meet the course entry requirements, which can be found in the sixth form course listing document.

Outline of the course:

Content Overview	**Assessment Overview**	
Landscape systems **Earth's Life Support Systems**	Physical Systems 66 marks 1 hour 30 minute written paper	22% of total A Level
Changing Spaces; Making Places **Global Connections**	Human Interactions 66 marks 1 hour 30 minute written paper	22% of total A Level
Optionality- study 2 from 5 ● **Climate Change** ● **Disease Dilemmas** ● **Exploring Oceans** ● **Future of Food** ● **Hazardous Earth**	Geographical debates 108 marks 2 hours 30 minute written paper	36% of total A Level
Independent Investigation	Investigative Geography 60 marks Non-examination assessment	20% of total A Level

Section 1- Physical Systems

The 'Physical Systems' section of the course is worth 22% of your overall grade and requires you to study the following two themes in depth:

- **Landscape Systems – Option A Coastal Landscapes (Year 12)**
- **Earth's Life Support Systems (Year 13)**

Topics you will study during the first year of the course:

1. How can coastal landscapes be viewed as systems?

- A conceptual overview of:
  - the components of coastal landscape systems, including inputs, processes and outputs
  - the flows of energy and material through coastal systems
  - sediment cells
- Potential influences on coastal landscape systems of:
  - winds, including speed, direction and frequency
  - waves, including wave formation, development and breaking
  - tides, including tidal cycles and range
  - geology, including lithology and structure
  - global pattern of ocean currents.
- The various sources of coastal sediment:
  - terrestrial, including fluvial deposition, weathering and mass movement, marine erosion, aeolian deposition and longshore drift
  - offshore, including marine deposition
  - human, including beach nourishment.

2. How are coastal landforms developed?

- The influence of flows of energy and materials on geomorphic processes, including weathering, mass movement, wave, fluvial and aeolian erosion, transportation and deposition.
- The formation of distinctive landforms, predominantly influenced by erosion, including bays, headlands, cliffs, shore platforms, geos, blow holes, caves, arches, stacks and stumps.
- The formation of distinctive landforms, predominantly influenced by deposition, including beaches, spits, on-shore bars, tombolos and salt marshes.
- Case studies of one high energy coastline **(Isle of Purbeck, Dorset)** and one low energy coastline **(Nile delta)**, to illustrate:
  - the physical factors which influence the formation of landforms within the landscape system
  - the inter-relationship of a range of landforms within the characteristic landscape system
  - how and why the landscape system changes over time from millennia to seconds, such as cliff collapse in seconds, seasonal changes in beach profile and spit growth over millennia.

3. How do coastal landforms evolve over time as climate changes?

- How landforms in emergent landscapes are influenced by falling sea levels due to a cooling climate, including:
    - climate changes that occurred during a previous time period and the resultant sea level fall
    - the influence of sea level fall and geomorphic processes in shaping landforms, including raised beaches, marine terraces and abandoned cliffs
    - the modification of these landforms by processes associated with present and future climate and sea level changes.
- How landforms in submergent landscapes are influenced by rising sea level due to a warming climate, including:
    - climate changes that occurred during a previous time period and the resultant sea level rise
    - the influence of sea level rise and geomorphic processes in shaping landforms, including rias, fjords and shingle beaches
    - the modification of these landforms by processes associated with present and future climate and sea level changes.

4. How does human activity cause change within coastal landscape systems?

- Case study of one coastal landscape that is being managed, **(Barton cliffs, Hampshire)** including:
    - the management strategy being implemented and the reason for its implementation, such as groyne construction or off-shore dredging
    - their intentional impacts on processes and flows of material and/or energy through the coastal system, such as their effect on the sediment budget
    - the effect of these impacts in changing coastal landforms, such as changes in beach profile
    - the consequence of these changes on the landscape, such as extension of the coastal landscape seawards.
- Case study of one coastal landscape that is being used by people **(Dubai's coastline)** to illustrate:
    - the economic development taking place and the reasons for it taking place, such as trade routes, port or tourist resort development
    - their unintentional impacts on processes and flows of material and/or energy through the coastal system, such as disturbance to the sediment cell balance
    - the effect of these impacts in changing coastal landforms, such as beach profiles
    - the consequence of these changes on the landscape, such as coastal retreat or protection.

Landscape Systems Preparatory Tasks

Please complete each of the tasks set out below and bring your answers and/or findings with you to the first lesson in September if you join the course.

Task 1: Key Term Glossary

As with all subjects, A Level geography will introduce you to lots of key terms, many of which are likely to be new to you. In the table below, some of the key terms introduced during the first year of the course are listed. Find definitions for each of the terms using the internet. Once you have done this create a glossary containing the terms and their meanings.

The glossary you create can be a reference document to be used later, so make sure it is well presented and clearly set out.

Aeolian	Dynamic equilibrium	Mass movement
Attrition	Eustatic	Salt crystallisation
Backwash	Fetch	Strata
Corrasion (abrasion)	Flocculation	Sub-aerial processes
Corrosion	Freeze-thaw	Swash
Discordant coastline	Hydraulic action	Wave refraction
Distributaries	Longshore drift	Weathering

Task 2: Development of Coastal Landforms

The second section of the topic builds upon the coastal processes and landforms you have studied at GCSE. In the examination you will be expected to be able to provide a detailed explanation of how a named coastal landform is created.

In the appendix of this document I have included an exemplar detailing the formation of a shore platform. You are to produce a similar information sheet to the exemplar, with a fully annotated diagram to explain the formation of either:

a) Headlands and bays
b) Caves, arches, stacks and stumps
c) Spits
d) Deltas
e) Salt marshes

- Use your knowledge from GCSE and A-level Geography websites to research in detail how your chosen landform is formed.
- You can either use a diagram from a website or you can draw one like I have.
- The annotation boxes must be numbered to show the sequence of formation.

Don't just pick the easy one! Why not challenge yourself to attempt the landform that you know least about. All 5 landforms are on the A-level specification so there is no reason why you couldn't do them all if you wanted to.

Task 3: Researching case studies!

Within the Landscape Systems topic students will research four separate coastal case studies. This next task will help you develop your ability to do this.

Coastal environments provide many opportunities for human activities, and the potential for economic development. Coasts not only provide attractive environments for tourism, but access to the sea for transport, trade and fishing. However, taking advantage of these opportunities can unintentionally cause change within the coastal landscape systems. A perfect example of this is seen in **Dubai**.

Watch and read the listed resources below. Gather information and summarise your research into the economic development taking place in Dubai and the unintentional impacts this is having on coastal processes, flows and landforms. Present your research in a table as shown.

https://www.youtube.com/watch?v=0BXGh0EYJtE

https://www.rgs.org/schools/teaching-resources/coasts/
Download: Coasts lesson 4 UAE Resource Sheet

https://journals.library.mun.ca/ojs/index.php/prototype/article/view/458/531

https://sites.google.com/site/palmislandsimpact/general-information

Case study:	
Location:	
Economic development:	
Outline of development	
Reasons for development	
Unintentional impacts on:	
Longshore drift	
Erosion	

Beaches	
Salt flats / coral reefs	

Section 2- Human Interactions

Changing spaces; making places

Changing Spaces; Making Places is an exciting topic that allows us to look through a local lens to explore global issues. Although a new topic, there is also some familiar content e.g. the influence of globalisation on places and the role of rebranding in reimaging places that you can develop greater understanding of. We will draw on personal experiences and reflect on the local area before looking outwards. This will help you to gain an understanding of what is in a place and the factors that can influence understanding of a place which is essential for this topic. You will need to recognise that place cannot be studied in isolation, that places are dynamic and that they are influenced by changing flows and connections e.g. people and the economy.

Section 1

Key Idea 1.1.a. Places are multi-faceted shaped by shifting flows and connections which change over time

A place profile can be described as telling a 'story of a place'. We need to understand the demographic, socio-economic, cultural, political, built and natural characteristics that shape a place identity. It is also important for students to recognise that place identity is dynamic and changes over time.

Task 1

For each of the characteristics below give examples of what it may involve. The first one has been done for you:

- Physical geography – altitude, slope angle, aspect, drainage, geology.
- Demography
- Socio-economic
- Cultural
- Political
- Built environment

Task 2

As an introduction to place profiles, investigate two contrasting locations within the UK. The village of Kelvedon in Essex and Tower Hamlets in London. Copy and complete the table below:

Place profile factor	The village of Kelvedon in Essex	Tower Hamlets in London
Demographic		
Socio-economic		

Cultural		
Political		
Built characteristics		
Natural characteristics		

Task 3
QUESTION: Do you think the same factors have the most influence creating a place identity in each location? Why? Why not?

Task 4

Complete personal research into the place you live/borough of Dudley, Sandwell or Birmingham. Once you have researched each of the factors, decide which you think has the strongest influence on the profile of the place. Rank the factors in order of influence in the final column. CHALLENGE: Give reasons for the highest/lowest ranking factors.

Place profile factor	**Dudley / Sandwell / Birmingham**	**Rank – Strength of influence on place profile.**
Demographic		
Socio-economic		
Cultural		
Political		
Built characteristics		
Natural characteristics		

Section 3- Geographical Debates

The 'Geographical Debates' section of the course is worth 36% of your overall grade and requires you to study the following two themes in depth:

- **Hazardous Earth (Year 12)**
- **Future of Food (Year 13)**

Topics you will study during the first year of the course:

1. What is the evidence for continental drift and plate tectonics?
• Theories of continental drift and plate tectonics including: - the basic structure of the Earth including the lithosphere, asthenosphere and the role of convection currents - evidence for sea-floor spreading; paleomagnetism; the age of sea floor rocks - evidence from ancient glaciations - fossil records. • Earth's crustal features and processes, including: - the global pattern of plates and plate boundaries - the features and processes associated with divergent (constructive) plate boundaries - the features and processes associated with convergent plate boundaries including oceanic-continental, oceanic-oceanic (destructive) and continental-continental (collision) boundaries - the features and processes associated with conservative plate boundaries.
2. What are the main hazards generated by volcanic activity?
• Different types of volcanoes to investigate their causes and features including: - explosive eruptions (higher viscosity magma) located at convergent (destructive) plate boundaries - effusive eruptions (lower viscosity magma) and landforms located at divergent (constructive) plate boundaries - eruptions not at plate boundaries (hot spots) such as the Hawaiian chain and the East African Rift Valley - size and shape of different types of volcanoes, including super-volcanoes - the volcanic explosive index (VEI) measure of assessing volcanic activity. • Different types of volcanic eruptions and the different types of hazards they generate including: -lava flows, pyroclastic flows, gas emissions, tephra and ash lahars and flooding associated with the melting of ice - tsunamis associated with explosive eruption.
3. What are the main hazards generated by seismic activity?
• Earthquake characteristics to investigate their causes and features including:

- shallow-focus earthquakes
- deep-focus earthquakes
- the different measures of assessing earthquake magnitude (Richter, moment magnitude scale, modified Mercalli intensity scale)
- the effects earthquakes have on landforms and landscapes including the development of escarpments and rift valleys.

- Hazards generated by earthquakes, including:
  - ground shaking and ground displacement
  - liquefaction
  - landslides and avalanches
  - tsunamis associated with sea-bed uplift and underwater landslides
  - flooding

4. What are the implications of living in tectonically active locations?

- Case studies of two countries at contrasting levels of economic development to illustrate:
  - reasons why people choose to live in tectonically active locations
  - the impacts people experience as a result of volcanic eruptions
  - economic, environmental and political impacts on the country.

- Case studies of two countries at contrasting levels of economic development to illustrate:
  - reasons why people choose to live in tectonically active locations
  - the impacts people experience as a result of earthquake activity
  - economic, environmental and political impacts on the country.

5. What measures are available to help people cope with living in tectonically active locations?

- Case studies of two countries at contrasting levels of economic development to illustrate strategies used to cope with volcanic activity including:
  - attempts to mitigate against the event, such as lava diversion channels
  - attempts to mitigate against vulnerability such as community preparedness
  - attempts to mitigate against losses, such as rescue and emergency relief.

- Case studies of two countries at contrasting levels of economic development to illustrate strategies used to cope with hazards from earthquakes including:
  - attempts to mitigate against the event such as land-use zoning
  - attempts to mitigate against vulnerability such as building design
  - attempts to mitigate against losses such as insurance.

- How and why have the risks from tectonic hazards changed over time including:
  - changes in the frequency and impacts of tectonic hazards over time
  - the degree of risk posed by a hazard and the probability of the hazard event occurring (the disaster risk equation)
  - possible future strategies to cope with risks from tectonic hazards.
  - The relationship between disaster and response including the Park model.

Hazardous Earth Preparatory Tasks

Please complete each of the tasks set out below and bring your answers and/or findings with you to the first lesson in September if you join the course.

Task 1: Key Term Glossary

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The glossary you create can be a reference document to be used later, so make sure it is well presented and clearly set out.

Asthenosphere	Collision boundary	Conservative boundary
Continental crust	Continental fit	Convection current
Convergent boundary	Crust	Destructive boundary
Divergent boundary	Glacial deposits	Inner core
Lithosphere	Magnetic reversal	Mid-ocean ridge
Oceanic crust	Outer core	Sea floor spreading
Tectonic plate	Theory of continental drift	Transform fault

Task 2: Theories of continental drift

The opening section of the topic focuses heavily on the evidence for continental drift. To support with this I would advise you to read the following booklet, particular pages 3-8, and then complete the tasks below:

Resource: Chapter 2 Plate Tectonics: A Unifying Theory- http://usuarios.geofisica.unam.mx/cecilia/cursos/PTeCh02_Wicander-PhysG.pdf

Explain how the following theories below provide evidence for continental drift:

- Continental fit
- Similarity of rock sequences and mountain ranges
- Fossil evidence
- Glaciation evidence

Task 3: Researching case studies!

The A Level Geography course requires students to be able to research contemporary case studies covering both ACs (advanced countries) and LIDCs (low income developing countries. This next task will help you develop your ability to do this.

Copy and complete the table below to summarise your research into either the 2015 **Gorkha earthquake** in Nepal or the 2010 **Eyjafjallajökull eruption** in Iceland. To complete your grid you will need to research the information using the internet.

Case study:	
Background information:	
-Date and time	
-Location	
Causes:	
-Type of plate boundary	
-Names of plates involved	
-Processes causing the hazard	
Impacts:	
-Social impacts	
-Economic impacts	
-Environmental impacts	
-Political impacts	

Good websites to use when studying A Level Geography:

https://ocr.org.uk/qualifications/as-and-a-level/geography-h081-h481-from-2016/assessment/

http://usuarios.geofisica.unam.mx/cecilia/cursos/PTeCh02_Wicander-PhysG.pdf

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Thank you for working through the tasks in this transition pack. Doing so will undoubtedly help you make a good start to the A Level Geography course.

Please bring all of the work you have completed to your first A Level geography lesson. We look forward to seeing you in September and helping you further develop your knowledge of geography and essentially the world around us!

Appendix:

Key Question 2: How are coastal landforms developed?

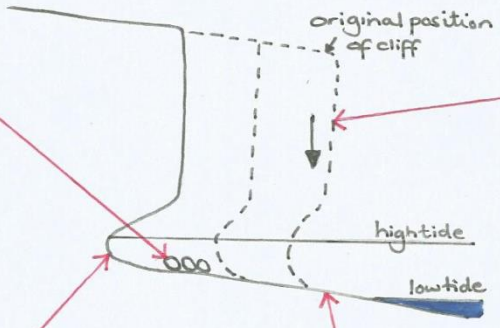
2.a. Coastal landforms develop due to a variety of interconnected climatic and geomorphic processes.

The formation of distinctive landforms, predominantly influenced by erosion:

1) Cliffs and shore platforms

5. Friction from the platform slows down approaching waves sufficiently for them to break on the platform rather than at the base of the cliff and so undercutting slows and eventually ceases. Therefore, shore platforms rarely extend more than a few hundred metres.

3. The regular removal of debris at the foot of the cliff by wave action ensures that the cliff profile remains relatively steep and that the cliffs retreat inland parallel to the coast. Where rock debris is boulder-sized, it may be too large to be removed by the waves and will accumulate at the foot of the cliff, providing some protection.



2. Continual undercutting weakens support for the rock strata above, which eventually collapses under its own weight, producing a steep profile and a cliff. The cliff face can also be weakened by weathering processes such as solution, freeze-thaw, salt crystallisation and marine organisms.

1. When destructive waves break repeatedly on relatively steeply sloping coastlines, waves scour away at the base through processes of abrasion, hydraulic action and corrosion which can cause undercutting to occur in the inter-tidal zone (between high and low tide levels) where it forms a **wave-cut notch**.

4. As the sequence of undercutting, collapse and retreat continues, the cliff becomes higher. At its base, a gently sloping **shore platform** (sloping seawards at angles less than 4°) is cut into solid rock. Shore platforms are often deeply dissected by abrasion due to the large amount of rock debris that is dragged across the surface by wave action. The shore platform is often only fully exposed at low tide.