Geography

Exam Board: PEARSON EDEXCEL
Qualification: A Level
Course code: Level 3 Advanced GCE in Geography (9GE0)

Longdean School
'Rejoice in thy youth'

Year 11 into 12 Physical and Human Geography A-Level Summer Task

We cover the Edexcel Geography A-Level Course. The first two physical units we cover are Coasts and Tectonics. The first two human units we cover are Globalisation and Diverse Places.

Physical Geography Task (Paper 1):

Revise the pages from the Coasts Revision Guide for a **test in the first lesson back in September**. If you **do not get 70%** you will need to **retake** the test. To help with your revision we have made four quizzes to test your knowledge. You can redo them as many times as you like. If there are any problems with the quizzes please email us (m.macdonald@longdean.herts.sch.uk or d.pischedda@longdean.herts.sch.uk).

Quiz Links:

Coasts Year 11 into 12 quiz - Quiz 1: A quiz to test your knowledge. This is based on the 'Classifying Coasts' and 'Geological Structure' pages (p49-50) in the revision guide:

https://forms.office.com/Pages/ResponsePage.aspx?id=FKPgQBg02E-HRai-OC_x3NchvCYZ59hChn3fHPSAqnhUREVKUjlaVE40T1FUMDEwNklTTTBaVUNUMC4u

Coasts Places Year 11 into 12 quiz - Quiz 2: A quiz to test your knowledge. This is based on the 'Coastal Erosion Factors' and 'Marine Erosion Processes' pages (p51-52) in the revision guide:

https://forms.office.com/Pages/ResponsePage.aspx?id=FKPgQBg02E-HRai-OC_x3NchvCYZ59hChn3fHPSAqnhURjFZQ0c5VE5BOEYxVFA5M0NDM0RINVQzUC4u

Key Terms:

Like at GCSE there is lots of specialist terminology for you to be familiar with. We have attached a complete key terms glossary from the first physical unit. Go through these and RAG (Red,Amber, Green) the words and definitions to identify which you already know and which you need to learn or to learn better.

Human Geography Task (Paper 2):

1st booklet of new course (Diverse places) ENQUIRY QUESTION 4B1. You will need to have completed this booklet for the first lesson back in September and bring it to this first lesson. This booklet will be handed out in the induction lesson.

Ensure that the Key Term list has RAG applied (Red, Amber, Green) so you know what you need to work on for your understanding.

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Paper 3 Synoptic:

We have attached 4 pages from the Revision Guide to show you the kinds of resources and activities that you will need to be able to understand to complete the synoptic section of the A Level. This paper uses a combination of Human and Physical resources and knowledge to understand a major global issue. Have a go at the questions at the bottom of each page. This will **not be tested in September** but it is an important part of the A Level, and it will be helpful for you to be aware of this.

A couple of great books that you could read would be: Prisoners of Geography (Tim Marshall), Factfulness (Hans, Ola and Anna Rosling), Violent Borders: Refugees and the Right to Move (Reece Jones).

Please let us know if you have any questions.

Best wishes for a great summer and we look forward to seeing you in September,

Mr Macdonald and Mr Pischedda.

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Glossary for Coastal Environments

Term	Definition
Abandon the line	The strategic withdrawal of human occupation in areas of high risk. Use of less expensive and sustainable methods to "abandon the line" of the coast, often unpopular with farmers and property owners. E.g. National Trust policy Studland Bay
Abrasion	The wearing away of the shoreline by sediment carried by waves. Also erosion by friction scraping, scouring and rubbing of load in contact with banks and bed (Corrasion)
Accretion	The accumulation of marine sediments. Where deposition exceeds erosion.
Advance the Line	This involves active intervention to produce a defence line that is seaward in some way of the existing line. This would usually involve some form of reclamation, the construction of offshore breakwaters or similar.
Arch	A raised area left when two caves erode back to back on a headland. E.g. Durdle Door
Attrition	The reduction and rounding of particles of sediment carried in water by repeated collision with each other and the shore.
Attrition	Particles are reduced in size and rounded off by colliding with one another as they are washed in the waves. Erosion grinds down the cliff-fall material.
Backwash	movement of water back towards the sea after a wave has broken
Bar	Coarse grained deposit of sediment extending across the mouth of bay, sometimes reaching the other side and sealing off the entrance. E.g. Looe Bar
Benefit cost ratio	The ratio of the present value (PV) of benefits to the PV of costs. Benefits and costs are compared with the "without project" case for each option.
Berm	Low hill of sand or gravel that forms at the upper limit of the swash. They are short-term features and are removed by successive tides and storms.
Beach nourishment	Sand and shingle brought from elsewhere are added to beaches to maintain their breadth and depth to protect from erosion in a natural way. E.g. Hengistbury Head
Blow -hole	A chimney or pipe leading from a cave up through a cliff to the surface. Caused by erosion and often exploitation of joints in the geology.
Breaching	Failure of defences allowing flooding by tidal or storm action.
Char	An island formed from silt deposited in a delta. The land is about at sea level. It is very fertile and attracts settlers desperate for land. However, it can easily be washed away by monsoon floods and cyclones. Even if the cyclones do not destroy the chars, they flood them with salt water which reduces their fertility.
Constructive waves	Low frequency 6-8 per minute waves which have elliptical water motion, with powerful swash and weak backwash. They build deposition.
Concordant geology	The alignment of geological outcrops which are parallel to the coastline. E.g. Dorset coast Lulworth

Corrasion	Erosion by friction of load in contact with banks and bed (abrasion)
Corrosion	Includes the dissolving of carbonate rocks (e.g. limestone) in sea water and the evaporation of salt crystals which expand on formation and help the rock to disintegrate.
Cusp	Crescent-shaped embayments developed on beaches of mixed sediments.
Cuspate foreland	Is a triangular accumulation of sand and or gravel located along the coastline. This feature is formed by Longshore drift from opposing directions. E.g. Dungeness.
Defence line	The crest of a sea wall/ revetment (man-made defences) or the crest of dunes or the cliff edge (natural defences).
Deltas	Form when the amount of sediment delivered at the mouth of a river exceeds the amount removed by waves and tidal currents
Destructive waves	High frequency 13-15 per minute waves which have circular water motion, with weak swash and powerful backwash. They erode.
Differential erosion	Varying rates of erosion relating to geology, and energy of coastline. Resistant coastlines have hard rocks massive structure consolidated and not susceptible to chemical weathering. E.g. Lands End (granite).
Discordant geology	Coasts which cut across the rock structure. E.g. Dorset North of Swanage Bay
Diurnal range	The difference between the lowest temperature and the highest temperature in a 24 hour period.
Do Nothing	Where no action is taken to protect the coastline.
Downdrift	In the direction of the net Longshore transport of beach material.
Dunes	Concentrations of mound like landforms composed of sand that has been blown off the beach by onshore wind. Embryo dunes first, followed by foredunes (yellow) grey dunes, then wasting dunes.
Eustatic	Changes in sea level caused by variations in the amount of water in the oceans.
Fetch	The distance of uninterrupted water surface over which the wind has blown to form waves. Longer fetch means higher energy waves.
Fiord/Fjord	Very deep U-shaped estuaries formed by the drowning of glaciated valleys on the Western side of land masses in temperate latitudes. E.g. Drygalski Fiord, South Georgia.
Flocculation	River load particles join together on contact with the salt in sea water, increasing their weight and causing them to drop/ be deposited.
Flood	A temporary excess of water that spills over onto land
Frequency	How often floods occur
Gabion	Cages enclosing rocks to defend the coast.
Geo	Steep sided narrow inlet
Groyne	Timber, sheet steel piles, rock or concrete posts and boards which run at right angles to trap sediment drifting along the shore.

Halophytes	0pioneer plants that can tolerate salty conditions which are submerged at high tide e.g. glasswort
Hard engineering	Structures developed to protect the foot of cliffs and prevent erosion. E.g. Sea walls, revetments, groynes and gabions,
High energy coast	Coasts in which wave power is strong for a significant part of the year. e.g. Alaska to Iceland and Chile
Hold the line	Taking action to maintain the current defence line. This line may or may not be artificially defended (hard structures) at the present time. In some cases "the line" might be sand dunes, mud flats or cliffs. Holding the line means that the stretch of coast in question could be the subject of works, as necessary, in the future.
Hydraulic action	Force exerted by moving water on the bed and banks of a river.
Isostatic	Changes in sea level resulting from the rise and fall of land masses
Isthmus	A narrow piece of land connecting two larger pieces of land.
Longshore drift	(LSD) Movement of sediment in a zig-zag pattern up and down the shore with swash and backwash resulting in an overall direction along the coast.
Low energy coast	Coasts in which wave power is weaker, low fetch, few gales enclosed and therefore sheltered. e.g. Mediterranean and Baltic Seas
Magnitude	The size of the flood
Managed retreat	The deliberate re-establishment of the line of defence inland from its existing position to obtain engineering and /or environmental advantages.
Mass Movement	Non- marine processes often seen on cliffs, like slumping, land slides and soil creep. Caused by gravity and often exacerbated by rain.
Plagioclimax	Where succession is stunted by human interference e.g. cattle grazing
Psammosere	Succession of stages of plant growth forming colonisation of bare sand to climax vegetation
Recession	With coasts, it means a retreat.
Recurrence interval	The interval at which particular levels of flooding will occur
Retreat the line	Intervention to set back the line of defences • Building an embankment inland and letting the existing defences fall into disrepair (with monitoring). • Building an embankment inland and dismantling the existing defences. • Where defences are interfering with natural processes or are exposed to unpredicted conditions they are realigned.
Return period	Average time between occurrences of a given event e.g. storms
Revetment	A general term for defences that are aligned parallel to the shore including posts, pillars, or walls of rocks placed on the foreshore.
Ria	A river valley drowned, usually because sea level has risen but it could be because the land level has fallen e.g. Adur and Ouse Estuaries.

Runnel	Breaks in beach ridges result from rip currents which form in the strong backwash. Inland of these, **runnels** form, separating pools of standing water at low tide
Saltation	Sand bounces across the surface of the beach blown by wind
Sediment cell	A length of coastline that is relatively self contained as far as the movement of sand or shingle is concerned.
Sediment sink	Point or area at which beach material is irretrievably lost from a coastal cell, such as an estuary or a deep channel in the seabed.
Slumping	Slumping is triggered by undercutting at the base of cliffs with rotation in the slip plane. E.g. Barton
Soft Engineering	Protecting the foot of cliffs to prevent erosion using more natural methods. They tend to be dynamic rather than static and absorb rather than reflect wave energy. E.g. beach nourishment, planting bushes, grasses and trees to protect dunes.
Spit	Long ridges of sand and shingle attached to land at one end. E.g. Hurst Castle Spit and Spurn Head
Spring tide	These are particularly high or low tides caused when Sun, Moon and Earth all lie in a straight line, which happens twice a month. However, when the Sun is overhead at the Equator, (21st March and 21st September) there is a boost in the gravitational pull – the Spring and Autumn Equinoxes.
Stack	A residual post of rock resulting from the continued erosion of arches. E.g. Old Harry Rock
Strategic coastal defence option	Term for any coastal management strategy includes • Do nothing • Advance • Retreat • Hold The existing coastal defence line.
Subaerial erosion	Mass movement on a cliff e.g. soil creep, solifluction, earthflows, mudflows, slides, slumps, rockfall plus blown (Aeolian) material and runoff.
Surges	Changes in water level as a result of meteorological forcing (may be positive or negative) e.g. storm surges.
Swash	Movement of water up the beach away from the sea as a wave reaches the shore
Swell	A circular motion caused by wind in the open sea which is non-moving.
Tidal bore	In narrow estuaries the effect of tides can be more pronounced e.g. the Severn Bore a 1 metre high wave running upstream at 30 km/hr.
Tidal Range	The variation from mean water level, high ranges on the North Sea and Channel coasts cause a broad zone of wave attack on the cliffs
Tombolo	Shingle ridge linking the mainland to an island. E.g. Chesil Beach.
Updrift	The direction opposite to predominant LSD movement of beach material.
Wave cut platform	A flat rock area in the intertidal zone created by destructive waves (also often by chemical weathering if a limestone area).

Wave crest	The highest point of a wave
Wave energy	E (is proportional to) LH2 where L is wavelength and H is wave height. A small increase in wave height will result in a large increase in energy
Wavelength	The distance between two successive crests.
Wave period	The time taken for a wave to travel one wave length.
Wave steepness	The ratio of the wave height to the wave length (note that this cannot be steeper than 1:7 as this is when the wave breaks).
Wave refraction	As waves enter shallower water approaching the coast they are affected by friction. If there is a headland, then waves are caused to curve inwards and attack the headland, whereas in bays the waves continue uninterrupted and spread outwards and are dissipated.
Wave trough	The lowest point of a wave.
Weathering	The breakdown of rocks in situ (in their original location without them being moved away). This produces finer particles that can then be removed away by agents of erosion such as wing, running water and gravity.