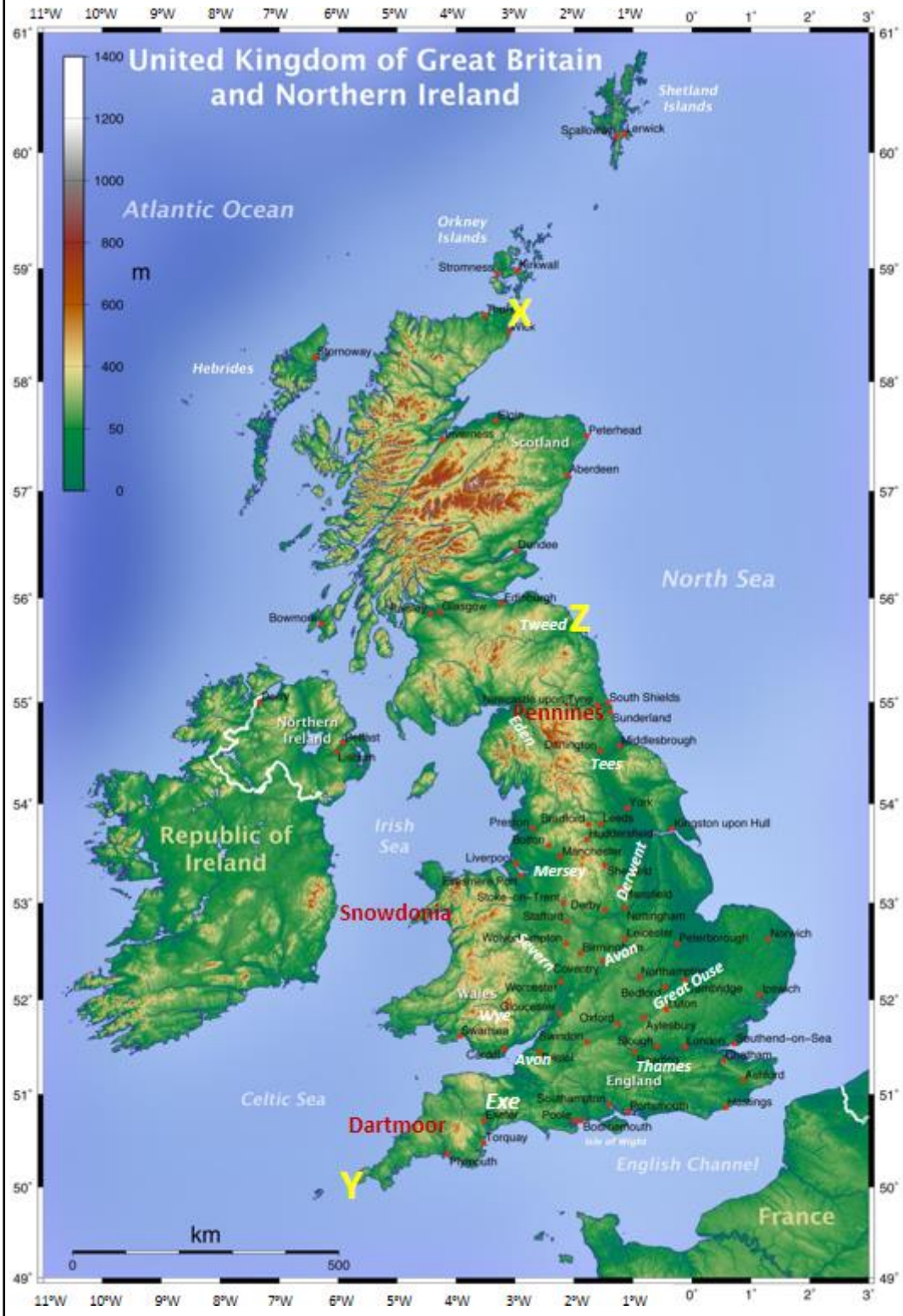
AQA GCSE Geography 9 to 1 - Cool Geography Homework Book

Physical Landscapes in the UK Homework Booklet

	Topic area	Score /10	Targets/comments
UK relief and landscapes.	3.01 The location of major upland/lowland areas and river systems.		
Coastal Processes and Landforms	3.02 Waves		
	3.03 Coastal processes		
	3.04 Landforms of erosion – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.		
	3.05 Landforms of deposition – beaches, sand dunes, spits and bars.		
Protecting and managing coastlines.	3.06 Soft and hard engineering – Coastal management		
	3.07 A case study of a coastal management scheme		
The shape of river valleys changes as rivers flow downstream	3.08 The long profile and changing cross profile of a river and its valley.		
	3.09 Fluvial (River) processes:		
Distinctive fluvial landforms result from different physical processes.	3.10 Erosion Landforms – interlocking spurs, waterfalls and gorges.		
	3.11 Erosion and deposition landforms – meanders and ox-bow lakes.		
	3.12 Deposition landforms - levées, flood plains and estuaries.		
Flooding and river management	3.14 Flooding - physical and human factors		
	3.15 Hydrographs		
	3.16 Flood management – hard and soft engineering		
	3.17 Flood management scheme Case Study		

Remember to read the relevant pages in your cool geography textbook or on the website BEFORE you do your homework

Homework 3.01 The location of major upland/lowland areas and river systems and wave types and characteristics (READ pages 2 to 4)



Using the map opposite answer the following questions:

1. Give the compass directions;

a) From The Hebrides to the Pennines_____

_____

b) From The River Thames to the River Mersey

_____

c) From the Orkney Islands to the River Tweed

_____

2. Use the scale to measure the following straight-line distances

a) From Middlesbrough to Exeter (the Tees Exe Line!)_____

_____

b) From X (John O'Groats) to U (Lands end)

_____

c) From Liverpool to Kingston upon Hull_____

_____

3. Provide the latitude and longitude of;

a) X_____

b) Y_____

c) The mouth of the River Tweed (Z)_____

_____

4. Describe where the upland areas of the UK are.

_____

_____

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Homework 3.02 Waves
Read pages 2 to 4 first

1. Explain why waves break_____

2. Label the photograph with the key features of a wave – mention wave height, length, crest, trough breakers

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3. Complete the table below to contrast Constructive and Destructive waves

	Constructive	Destructive
Which is stronger, swash or backwash ?		
Erosion or deposition ?		
Large or small wave height ?		
Frequent or infrequent ?		
Is the gradient of the beach steep or gentle ?		

Homework 3.03 Coastal processes.
(READ pages 5 to 6)
Odd One Out

1. Hydraulic Power	*2. Land slide*	*3. Abrasion*	*4. Rock Type*	*5. Long shore Drift*
6. Backwash	*7. Freeze Thaw*	*8. Attrition*	*9. Solution*	*10. Chemical Weathering*
11. Acids	*12. Biological Weathering*	*13. Constructive Waves*	*14. Cracks in Rocks*	*15. Limestone*
16. Mass Movement	*17. Destructive Waves*	*18. Roots*	*19. Swash*	*20. Burrowing Animals*
21. Soil Creep	*22. Mechanical Weathering*	*23. Rotational Slipping*	*24. Slumping*	*25. Water*
26. Low energy	*27. Deposition*			

Instructions

For each set

1. Write down the word that corresponds to the number.
2. State which word is the *odd one out*.
3. Give a reason why.
4. Now that you have started to see a pattern, add another word from the table, but keep the ***same*** *odd one out*.

	Write down the word that corresponds to the number			Reason	Extra word to keep the odd one out the odd one out!
Set A	16	20	21		
Set B	11	3	9		
Set C	23	25	22		
Set D	13	18	20		
Set E	16	1	8		
Set F	22	7	10		
Set G	14	4	17		
Set H	6	17	19		
Set I	15	27	26		

Extension

1. Try to put together your own group of words with an odd one out. You must have a good and obvious reason. Swap your group of words with a partner and see if they can work yours out and vice versa.
2. Now try and sort out all of the words in the table into 4 to 6 groups. Write a justification of your groupings.

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Homework 3.04 Erosion Landforms – headlands and bays, cliffs and wave cut platforms, caves, arches and stacks.

(READ pages 8 to 10)

1. Label the diagram below to describe the key features of this coastal environment

2. Produce a sequence on how stumps are created, mention processes of weathering and erosion in your answer

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Useful words to use;

- **Cliffs, cliff face**
- **Crack/fault, Crevice, cave Arch, Stack Stump**
- **Low and High Tide**
- **Erosion – Wave Pounding, Abrasion**
- **Weathering – Freeze Thaw, biological, chemical**
- **Rock falls**

Homework 3.05 Deposition Landforms – beaches, sand dunes, spits and bars.
(READ pages 11 to 12)

1. Complete the flow chart below to explain FULLY how a SPIT is created. Mention Longshore drift in your answer.

1

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2. Explain how a bar differs from a spit_____

_____

_____

_____

_____

3. Describe how sand dune vegetation changes from the front of a sand dune system to the back (mature Dune)

 **Foredune**	 **Mature Dune**

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Homework 3.06 Different management strategies can be used to protect coastlines from the effects of physical processes.
Read pages 15 to 17

1. Define the terms below:

- Hard engineering_____

- Soft engineering_____

2. Annotate the photograph below to EXPLAIN how sand dune management can protect the coastline

3. Which do you prefer, hard or soft engineering? JUSTIFY fully your choice_____

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Homework 3.07 The Holderness coastline - A case study of a coastal management scheme.

(READ pages 18 to 19)

Complete the case study table below

Background to Holderness (where, when, why)		
Causes of cliff collapse		
Effects	Environment	
	People and economy	
Responses and management	Individuals	
	Agencies	
	Governments	

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Homework 3.08 The shape of river valleys changes as rivers flow downstream.

(READ pages 20 to 21)

A) What is the difference between abrasion and attrition? _____

_____

_____

_____

A) Sediments in Northumberland

B) Silt found in Idaho, USA

B) Compare the sediment (stones) in photographs A and B in terms of its size and shape_____

_____

_____

C) Which part of the LONG Profile of a river do you think the 2 photographs are situated?

Photograph A	Photograph B
Upper Course Middle course Lower Course	Upper Course Middle course Lower Course

D) Complete the odd one out in the sets below in your book and give a reason why:

Set 1 - Hydraulic action **Traction** **Abrasion**

REASON:_____

Set 2 - Low river velocities **Suspension** **Saltation**

REASON:_____

Set 3 - Deposition **Mountainous areas** **Erosion**

REASON:_____

Set 4 - Solution **Saltation** **Corrosion**

REASON:_____

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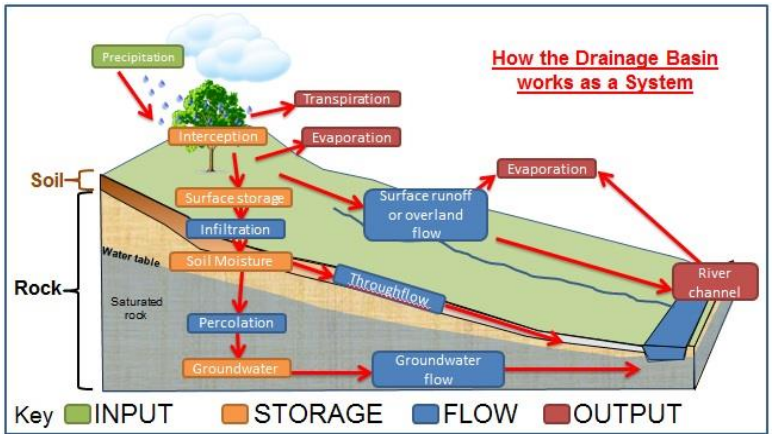
Homework 3.09 The long profile and changing cross profile of a river and its valley. (READ pages 22 to 24)

1. Define 4 of the key terms around the drainage basin systems diagram



2. Explain what would happen to the features of the drainage basin system shown above if an area was deforested (and hence interception removed)_____

3. Draw a picture to show what happens to the shape of river valleys as you move from the source to the mouth of a river.

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Homework 3.10 River erosion landforms – interlocking spurs, waterfalls and gorges. (READ pages 24 to 25)

1. Produce a labelled sketch to show all of the features of the V shaped valley with its interlocking spurs shown in the photograph.

Bob Bowyer via Wikimedia Commons

SKETCH

2. Produce and complete the flow chart below to explain FULLY how a GORGE is created. Mention erosion processes, rock resistances, Plunge pools and rock types in your answer.

1

2

3

4

3. On the High Force in Teesdale image below add full labels– labels to add – Whin Sill (harder rock), Limestone (softer rock), Sandstone (baked hard by Whin Sill), Plunge pool, Waterfall, Gorge sides, Bedding planes.

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Homework 3.11 Erosion and deposition Landforms – meanders and ox-bow lakes, levées, flood plains and estuaries.

READ pages 29 to 30)

1. Draw a sequence of diagrams to EXPLAIN the development of Ox bow lakes mention processes of erosion and deposition on your diagrams

2. Annotate fully the photograph below to DESCRIBE the key river features

By Oliver Kurmis

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3. Produce a flow chart explaining how estuaries are created

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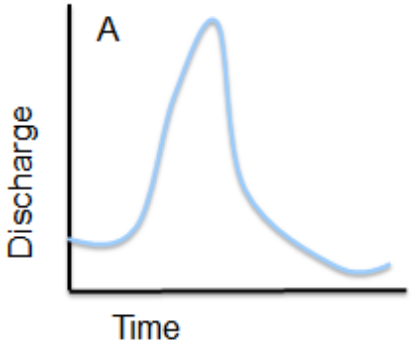
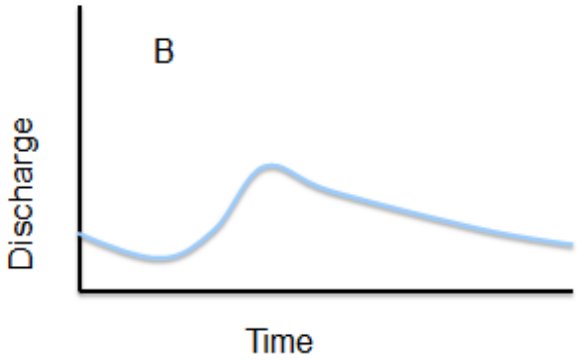
Homework 3.14 Hydrographs.
(READ pages 32 to 33)

1. Define the term discharge _____

2. Explain why discharge can vary over the course of a year in the UK. _____

3. Look at the images below and complete the table

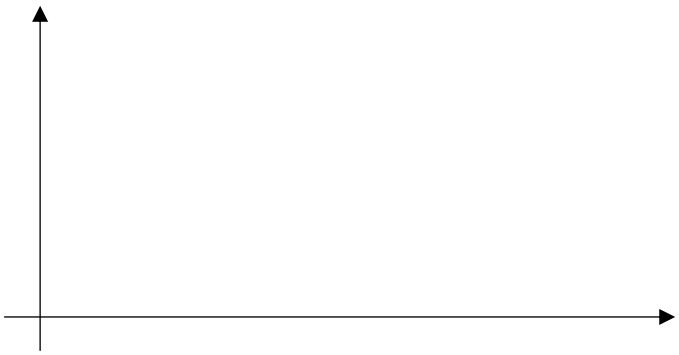




10 9 8 7 6 5 4 3 2 1 0

Which of the 2 hydrographs is most likely to:	A	B	REASON
Flood			
Have thick deciduous vegetation			
Be in an Urban area			
Have flood defences along the river			
Have permeable soils			
Have had a prolonged period of rainfall prior to this event			
Have a LOW water table			

Draw a **simple annotated sketch hydrograph** for a river close to saturated fields. Assume that the valley is steep sided, the soils are permeable and that 24 hours of heavy rainfall have just fallen.



Homework 3.15 Factors that increase the flood risk.
(READ pages 34 to 35)

1. Describe the patterns on the graph below – be sure to QUOTE DATA in your response_____

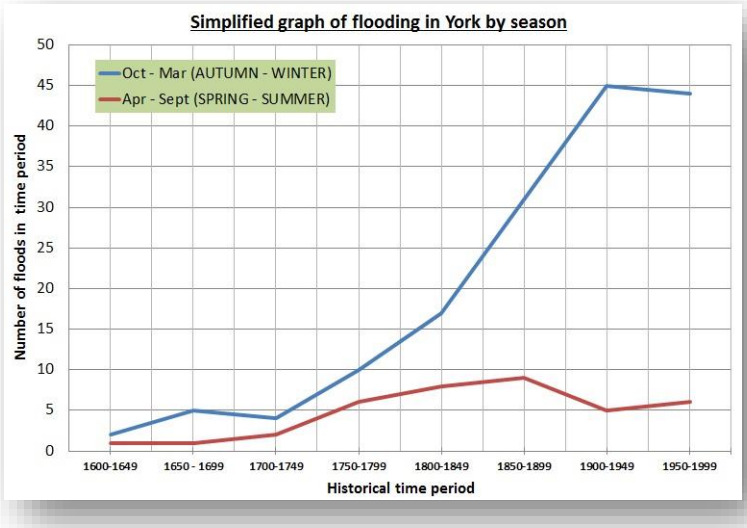
_____

_____

_____

_____

_____



2. Produce a mind map of all of the factors that can affect discharge below

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Homework 3.16 Flood management for rivers - Hard and soft engineering management strategies
READ Pages 36 to 37

JUDGE which strategies to manage river processes and flooding (hard or soft engineering) are most effective and why?

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Homework 3.18 Morpeth - A case study of a flood management scheme in the UK. (READ pages 38 to 40)

Complete the case study table below to summarise the ESSENTIAL information about this flood;

Background (where, when, size)		
Causes		
Effects	Short term	
	Long term	
Responses	Short term	
	Long Term	

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