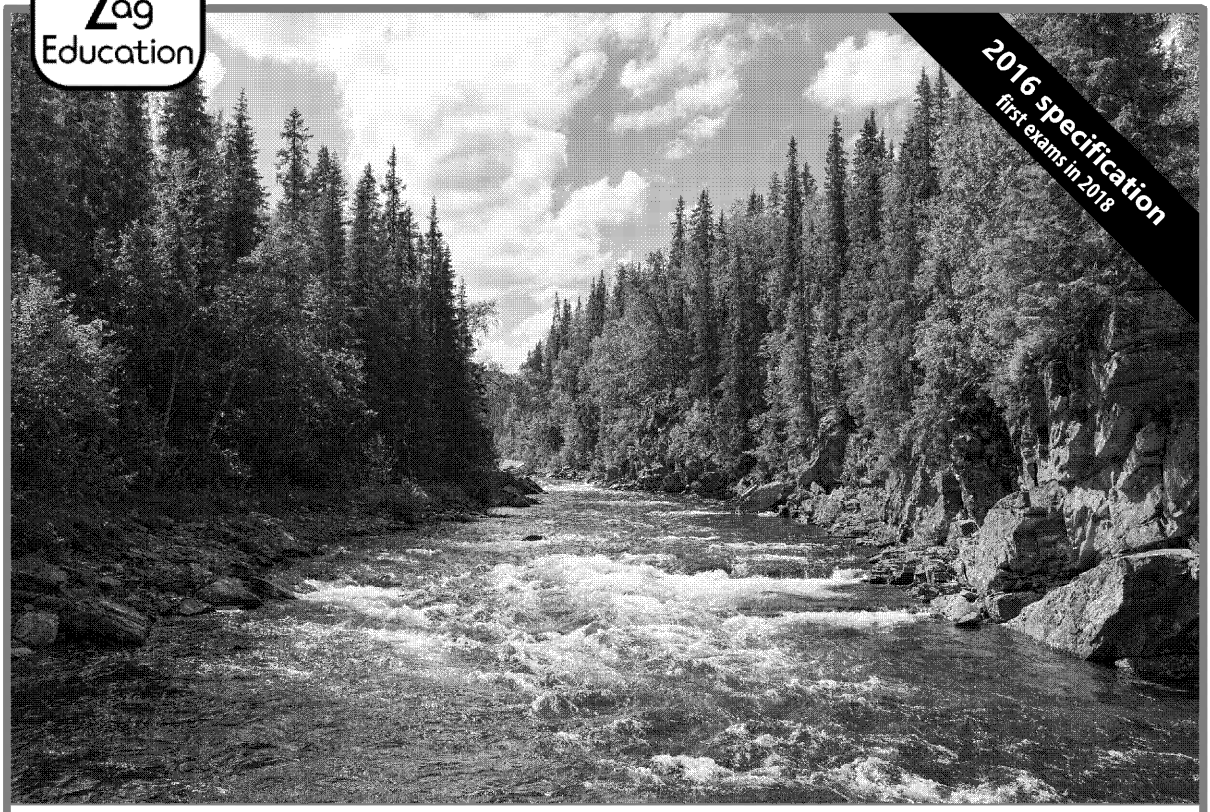
Zig Zag Education

Geography **GCSE (9–1) | Edexcel B | 1GB0**



Topic Tests for GCSE Edexcel B Geography

Component 2: Topic 4b: The UK's Evolving Physical Landscape: River Processes and Pressures

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Contents

Teacher's Introduction

This resource has five tests covering *Component 2, Topic 4b – River processes and pressures* for the Edexcel B GCSE (1GB0) Geography curriculum. Every key aspect of the specification is covered in this resource.

These topic tests are designed to test the student's knowledge and enable the teacher to diagnose the student's strengths and weaknesses in certain areas. Each test covers a range of question types, and there is a wide variety of stimulus material. These tests are not intended to mimic exam papers.

Mark schemes for each topic test can be found at the back of this resource. For 'c one answer is acceptable, a model answer has been provided. For 'open' and ext content has been included.

When to Use This Resource

This resource can be used at the end of a particular topic area, or at the end of the wh consolidation of knowledge. The students can also use the tests towards the end of t either before or after revision. There is scope to provide your students with one test GCSE course over two years.

How to Use This Resource

The tests can be completed individually in class, or set as homework tasks. The tests student or the teacher, at home or in the classroom, as answers are provided.

These structured tests provide an opportunity to mark and score students in order to provided in write-on and non-write-on formats to suit the requirements of the teache

The Benefits to the Student

Students can be confident they have been tested on every key aspect of the specifica will know which areas they are strong in, and which require further work, and can set learning. The answer sections also provide students with an indication of what a good

Differentiation

In order to support lower ability students whilst pushing the more able each test has t first section has approximately 40 marks and has been written to test knowledge of th specification. These questions are for all students and the difficulty or complexity of q the test. The second section has approximately 12 further marks of extension questio This extension is written as a single 12 mark extended writing question and should be 4 SPaG marks, in line with the Edexcel examinations.

Test 2 – River Process and Landfo

1. Outline **four** types of erosion which occur within rivers.

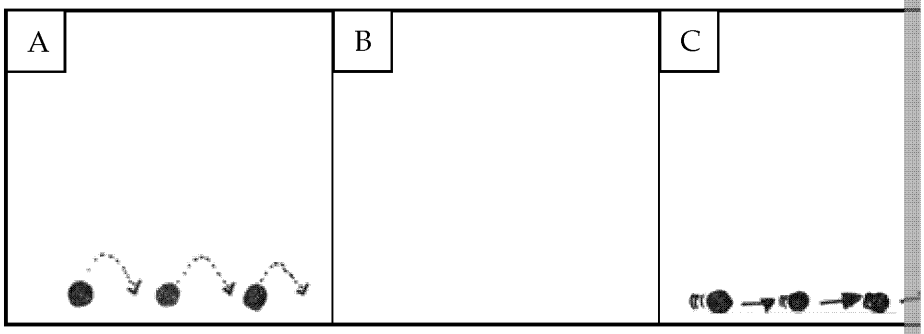
   1. .....

   2. .....

   3. .....

   4. .....

2. Study the diagram below which shows **four** types of transport within
   Fill in the table to identify and explain the types of transport.



	Name	Descriptio
A		
B		
C		
D		

3. Outline why rivers deposit their load.

   .....

   .....

   .....

   .....

   .....

   .....

4. Complete the following paragraph using words from the list below.
Allow one mark for every two correct answers.

In the upper course of the river, the channel is ……

because there is a lot of …… erosion. The bed loa

…… because not much …… h

material can move during ……., and is subject to a

especially …… action.

In the middle course, material transported downstream is ……

……. This leads to an increased amount of ……

…… erosion occurs, meaning that the channel is …

There is more scope for …….

In the lower course, the channel is wide and the load is ……

material occurs, and there are few …… landforms.

hydraulic	suspension	wider	deep	erosion
rounded	vertical	horizontal	fine	smaller

5. Name and describe **two** upland erosional landforms.

1. .....

.....

2. .....

.....

6. Name, and state the stage of a river where you would find the feature i
below.

.....

.....

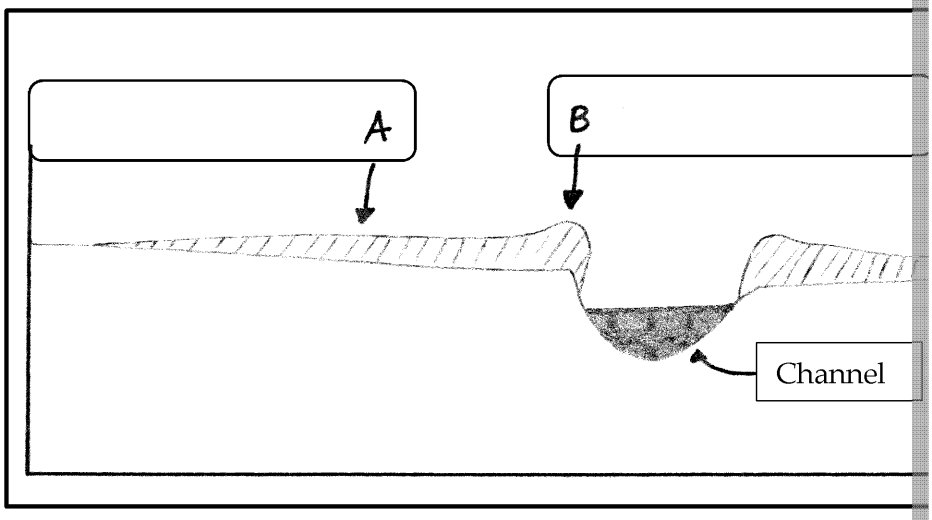
7. Discuss how erosion and deposition work together to form ox-bow lak

.....

.....

.....

8a. Label the features 'A' and 'B' on the diagram below.



8b. For the features that you have identified above, explain their formatio

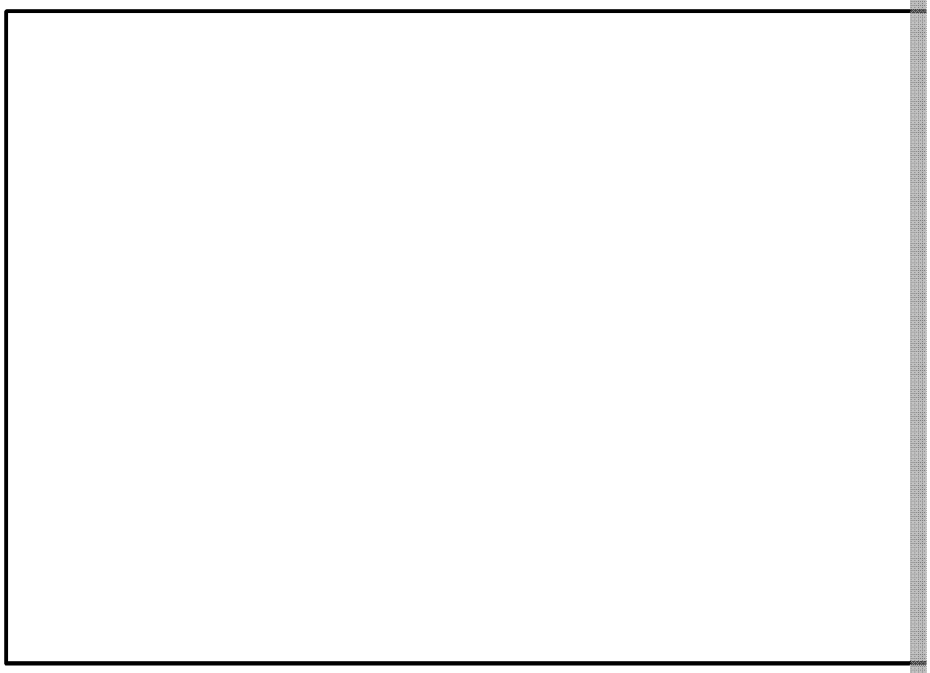
.....

.....

.....

.....

9. Using a diagram to help you, outline the formation and features of a w



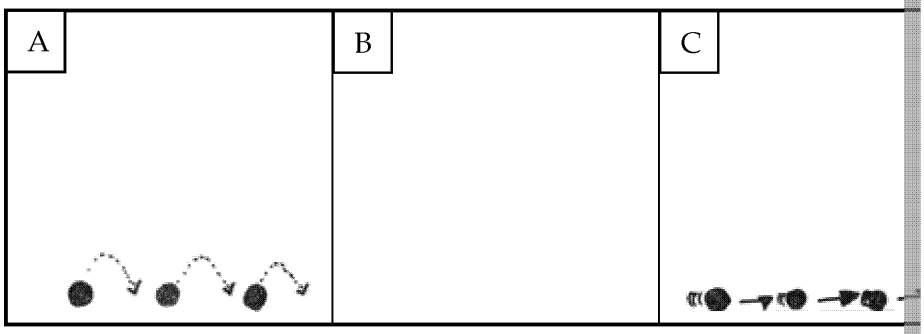
Extension Question

10. Using diagrams if you wish, explain how the landforms of erosion and a river's course.

Test 2 – River Process and Landfo

1. Outline **four** types of erosion which occur within rivers.

2. Study the diagram below which shows **four** types of transport within r each of the types of transport (A-D).



3. Outline why rivers deposit their load.

4. Complete the following paragraph using words from the list below.
Allow one mark for every two correct answers.

In the upper course of the river, the channel is **(1)**.....
because there is a lot of **(2)**..... erosion. The bed l
(3)..... because not much **(4)**.....
material can move during **(5)**....., and is subject t
especially **(6)**..... action.

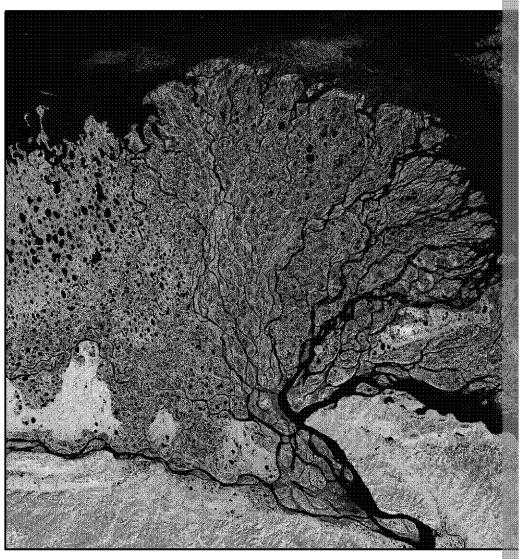
In the middle course, material transported downstream is **(7)**.....
(8)..... This leads to an increased amount of **(9)**..
More **(10)**..... erosion occurs, meaning that the ch
(11)..... There is more scope for **(12)**.....

In the lower course, the channel is wide and the load is **(13)**.....
this material occurs, and there are few **(14)**..... lar
lateral.

hydraulic	suspension	wider	deep	erosion
rounded	vertical	horizontal	fine	smaller

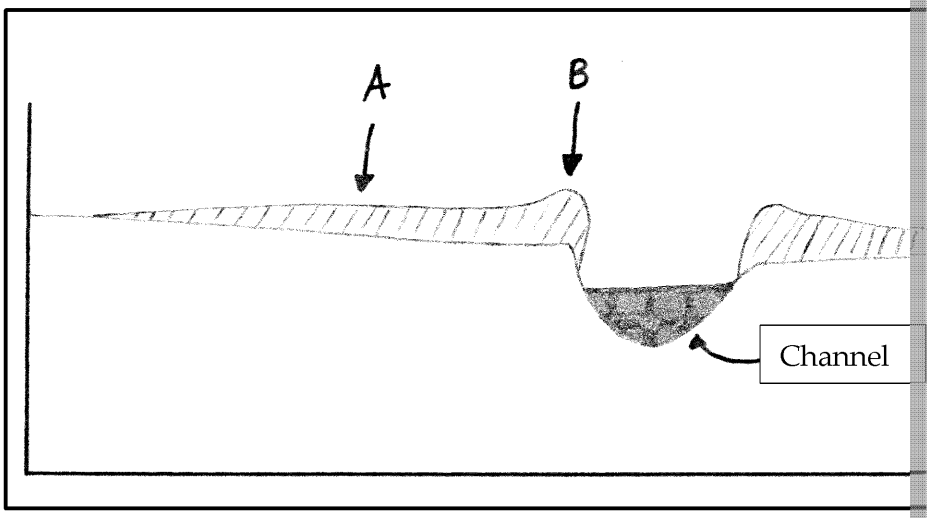
5. Name and describe **two** upland erosional landforms.

6. Name, and state the stage of a river where you would find the feature i
below.



7. Discuss how erosion and deposition work together to form ox-bow lak

8a. Name the features 'A' and 'B' on the diagram below.



8b. For the features that you have identified above, explain their formatio

9. Using a diagram to help you, outline the formation and features of a w

Extension Question

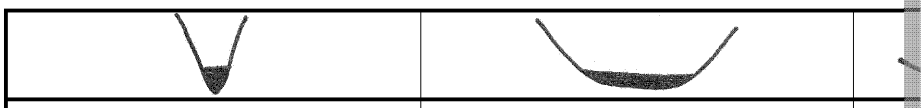
10. Using diagrams if you wish, explain how the landforms of erosion and
a river's course.

Preview of Questions Ends Here

Answers

Test 1 – Landscapes Along a River's Course

1a.



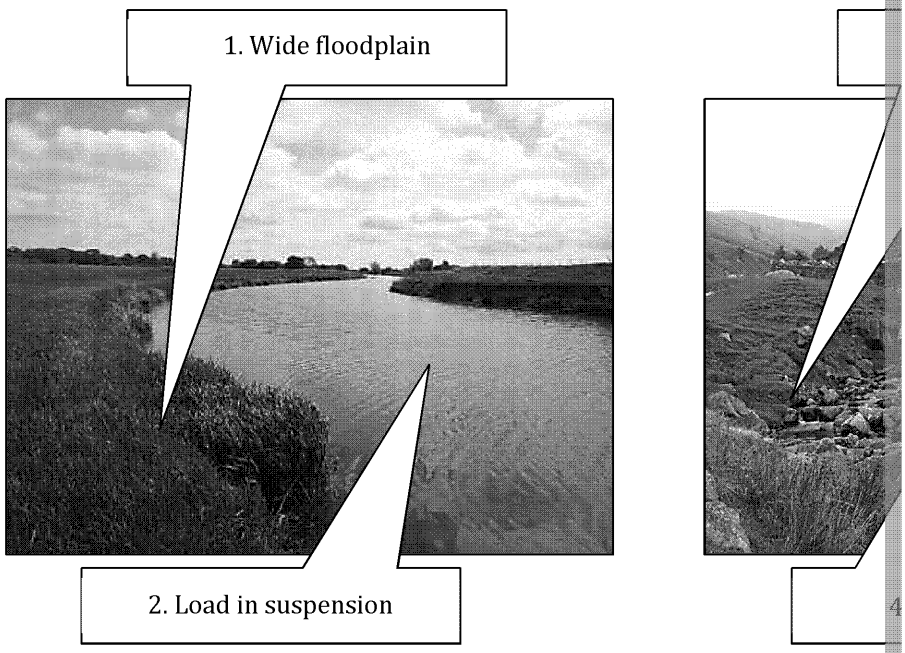
Upper	Middle	

1b. Upper course – shallow and narrow (1 mark) due to horizontal erosion (1 mark) the increased height (1 mark). There is relatively less water in the river (1 mark friction) from the large, angular bedload (1 mark).

Middle and lower courses – there is more water in the rivers (1 mark) and efficie is smaller and rounded (1 mark). The river becomes wider because there is mor

Lower course – a wide floodplain develops (1 mark) because material is deposite friction from the river's bed.

2a.



2b. Photograph A.

2c. Photograph A – likely to be sedimentary rocks (1 mark), laid down by deposition mark). These rocks are soft, and easy to erode (1 mark).

Photograph B – igneous (volcanic) rocks (1 mark) are likely to be found in uplan very hard and difficult to erode (1 mark).

3. Award marks for appropriate shape (convex) at each stage.

4. Increases from tributaries.
Inputs from groundwater flow, surface runoff, etc.

5. High levels of vertical erosion (1 mark) cause deep, narrow valleys (1 mark). Ma movement of rock and soil into the river (1 mark). The river transports this mate

6. Differential geology (alternating areas of hard and soft rock) (1 mark) results in
mark). Rocks and soils of different hardness can affect the depth (1 mark) and w
Rock type also affects the features found in a river, such as interlocking spurs (as
around bands of hard rock) (1 mark), as well as features such as waterfalls and g
limestone, deep gorges can form (1 mark), rivers can dissolve the rock easily (1 r
(1 mark). Soil type also affects the rate (1 mark) and susceptibility (1 mark) of m

7a.
- Discharge increases due to increased tributaries and inputs from soil wate
- Channel width and depth increase because there is more water flowing in the
- Velocity (the speed of flow) increases due to the increased flow of water, an
the friction.
- Load quantity increases because there is more erosion downstream. Partic
meaning that they are easily entrained into the river's flow. The increased v
that material can be suspended for longer.
- Load particle size decreases because more erosion (such as attrition) takes
the river.
- The bed becomes smoother as the bedload decreases in size, i.e. there are li
upstream.
- The slope angle decreases towards the sea – the sources of rivers are often
usually slopes more gently nearer the sea.
- Allow any other valid point(s).

7b. By name, this is only a model (1 mark), therefore it will apply to many, but not al
its own characteristics[1] (1 mark).

Extension Question

8. Allow any suitable techniques, such as choosing three sites based on Ordnance Su
locations for each stage.
- Cross-profile studies to create a graph of depth.
- Channel roughness (Manning's n).
- Calculation of slope.
- Calculation of wetted perimeter/cross-sectional area.
- Flow measurements, discharge calculations.
- Measurements of sinuosity.
- Any other valid technique.

[1] Although there are none in the UK, think of rivers emerging from the base of a glacier – th
daily!) discharge from their source, and a lot of sediment load too (called rock flour).

Preview of Answers Ends Here