

# Glacial Landscapes in the UK

Multiple choice knowledge checker

## Introduction to glacial environments, erosion and weathering

1.	<b>What is name given to the period when the UK last experienced a glacial period?</b>	
<input type="radio"/>	A.	Late Devonian
<input type="radio"/>	B.	Late Devensian
<input type="radio"/>	C.	Late Donovan

2.	<b>True or false?</b> <b>Some 25,000 years ago vast ice sheets spread over the UK from the north and northeast to cover all of northern Wales and northern England.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

3.	<b>Which of the following is not an example of a glaciated upland area in the British Isles?</b>	
<input type="radio"/>	A.	Snowdonia
<input type="radio"/>	B.	The Lake District
<input type="radio"/>	C.	Cairngorms
<input type="radio"/>	D.	Dartmoor

4.	<b>What is the name of permanently frozen land found on the edge of ice sheets?</b>	
<input type="radio"/>	A.	Permahair
<input type="radio"/>	B.	Permaham
<input type="radio"/>	C.	Premafroze
<input type="radio"/>	D.	Permafrost

5.	<b>What is the name given to areas found on the edge of glacial environments?</b>	
<input type="radio"/>	A.	PeriPeriGlacial
<input type="radio"/>	B.	Periglacial
<input type="radio"/>	C.	Proglacial
<input type="radio"/>	D.	Permoglacial

6.	<b>True or false?</b> <b>Glacial processes have been responsible for sculpting some of the UK's most dramatic landscapes.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

7.	<b>Which of the following describes the process of glacial erosion known as plucking?</b>	
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<input type="radio"/>	A.	When meltwater from a glacier freezes around lumps of cracked and broken rock. When the ice moves downhill, rock is pulled from the back wall.
<input type="radio"/>	B.	Rock that is frozen to the base and the back of the glacier scrapes the bedrock. This acts like sandpaper and erodes the bedrock.

8.	<b>Which of the following describes the process of glacial erosion known as abrasion?</b>	
<input type="radio"/>	A.	When meltwater from a glacier freezes around lumps of cracked and broken rock. When the ice moves downhill, rock is pulled from the back wall.
<input type="radio"/>	B.	Rock that is frozen to the base and the back of the glacier scrapes the bedrock. This acts like sandpaper and erodes the bedrock.

9.	<b>Identify the main type of weathering that occurs in glacial environments.</b>	
<input type="radio"/>	A.	Hydrolysis
<input type="radio"/>	B.	Freeze-thaw
<input type="radio"/>	C.	Carbonation

10.	<b>Which of the following conditions are required for freeze-thaw weathering to occur?</b>	
<input type="radio"/>	A.	Frequent temperature changes above and below freezing.
<input type="radio"/>	B.	Temperatures constantly below freezing.
<input type="radio"/>	C.	The presence of liquid water.
<input type="radio"/>	D.	The presence of rocks with cracks/holes.

## Glacial Movement, Transportation and Deposition

11.	<b>What causes glaciers to move?</b>	
<input type="radio"/>	A.	Friction between the ice and bedrock.
<input type="radio"/>	B.	The weight of ice and friction with the bedrock.
<input type="radio"/>	C.	The weight of the ice and gravity.

12.	<b>What is basal slip?</b>	
<input type="radio"/>	A.	The weight of ice causing a glacier to move.
<input type="radio"/>	B.	The slipping and deformation of individual ice crystals within the glacier causing it to move.
<input type="radio"/>	C.	When meltwater beneath a glacier enables it to slide forward a few metres a year.

13.	<b>What is internal deformation?</b>	
<input type="radio"/>	A.	The weight of ice causing a glacier to move.
<input type="radio"/>	B.	The slipping and deformation of individual ice crystals within the glacier causing it to move.
<input type="radio"/>	C.	When meltwater beneath a glacier enables it to slide forward a few metres a year.

14.	<b>What occurs when the amount of additional and ice accumulation in a year exceeds the amount of melting (ablation)?</b>	
<input type="radio"/>	A.	Glacial retreat
<input type="radio"/>	B.	Glacial advance
<input type="radio"/>	C.	Glacial approach

15.	<b>What happens when the amount of ablation exceeds accumulation?</b>	
<input type="radio"/>	A.	Glacial retreat
<input type="radio"/>	B.	Glacial advance
<input type="radio"/>	C.	Glacial approach

16.	<b>What is the name of material transported by a glacier?</b>	
<input type="radio"/>	A.	Bedrock
<input type="radio"/>	B.	Moroon
<input type="radio"/>	C.	Moraine

17.	<b>What is the furthest advance of a glacier marked by?</b>	
<input type="radio"/>	A.	Lateral moraine
<input type="radio"/>	B.	Medial moraine
<input type="radio"/>	C.	Terminal moraine

18.	<b>What is the name of the process that causes smaller glaciers in mountainside depressions to move?</b>	
<input type="radio"/>	A.	Bulldozing

<input type="radio"/>	B.	Advancing slip
<input type="radio"/>	C.	Rotational slip

19.	<b>What is the name of sediment deposited by meltwater towards the snout of a glacier?</b>	
<input type="radio"/>	A.	Till
<input type="radio"/>	B.	Moraine
<input type="radio"/>	C.	Glacial trough

20.	<b>True or false? Till is well sorted.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

21.	<b>Identify the feature formed when meltwater pouring from the snout of a glacier transports then deposits material.</b>	
<input type="radio"/>	A.	Terminal moraine
<input type="radio"/>	B.	Outwash plain
<input type="radio"/>	C.	Roche moutonnée

22.	<b>True or false? Sediment found on outwash plains is better sorted and more rounded.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

### Glacial Landforms of Erosion

23.	<b>What is the name of an arm-chair shaped glacial landform found on mountainsides?</b>	
<input type="radio"/>	A.	Arete
<input type="radio"/>	B.	Pyramidal peak
<input type="radio"/>	C.	Corrie

24.	<b>Identify the erosional process that is responsible for the steep back walls typically found in corries.</b>	
<input type="radio"/>	A.	Plucking
<input type="radio"/>	B.	Basal slip
<input type="radio"/>	C.	Abrasion

25.	<b>What is the name of a lake trapped within the bowl of a corrie?</b>	
<input type="radio"/>	A.	Ribbon lake
<input type="radio"/>	B.	Tarn
<input type="radio"/>	C.	River



26.	<b>Which of the following are processes of erosion and weathering involved in the formation of a corrie?</b>	
<input type="radio"/>	A.	Freeze-thaw
<input type="radio"/>	B.	Plucking
<input type="radio"/>	C.	Abrasion
<input type="radio"/>	D.	Rotational slip

27.	<b>Identify the narrow, steep-sided ridge formed when two or more carries erode back to back.</b>	
<input type="radio"/>	A.	Pyramidal peak
<input type="radio"/>	B.	Arête
<input type="radio"/>	C.	Truncated spur

28.	<b>Identify the pronounced peak formed when several carries erode back to back into a mountain.</b>	
<input type="radio"/>	A.	Arete
<input type="radio"/>	B.	Truncated spur
<input type="radio"/>	C.	Pyramidal peak

29.	<b>Which of the following is an example of a pyramidal peak?</b>	
<input type="radio"/>	A.	Blowderhorn
<input type="radio"/>	B.	Matterhorn
<input type="radio"/>	C.	Prezdahorn

30.	<b>What are u-shaped valleys also known as?</b>	
<input type="radio"/>	A.	V shaped valleys
<input type="radio"/>	B.	Ribbon lakes
<input type="radio"/>	C.	Glacial troughs

31.	<b>Identify the landform created when interlocking spurs are removed by glacial erosion.</b>	
<input type="radio"/>	A.	Trencated spurs
<input type="radio"/>	B.	Trunkated spurs
<input type="radio"/>	C.	Truncated spurs

32.	<b>Identify the landform created when smaller glaciers in tributary river valleys melt.</b>	
<input type="radio"/>	A.	U-shaped valley
<input type="radio"/>	B.	Hanging valley
<input type="radio"/>	C.	Truncated spurs

33.	<b>Identify the deep freshwater lakes found in glacial troughs.</b>	
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<input type="radio"/>	A.	Tarn
<input type="radio"/>	B.	Corrie lake
<input type="radio"/>	C.	Ribbon lake

34.	<b>Which of the following explain the reasons for increased erosion in glacial troughs resulting in the formation of ribbon lakes?</b>	
<input type="radio"/>	A.	A weaker bank of rock that is more easily eroded crosses the valley.
<input type="radio"/>	B.	At a tributary where additional ice flows into the valley.
<input type="radio"/>	C.	Where the valley sides become narrower increasing the depth and power of the glacier.
<input type="radio"/>	D.	At a point where there is a rock lip.



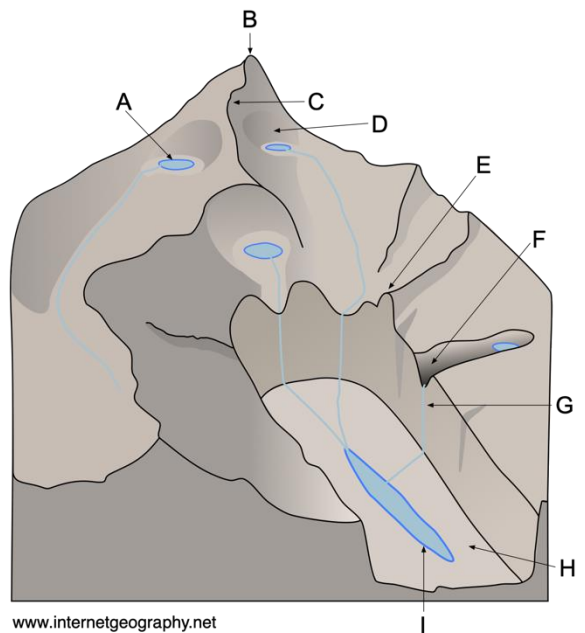
35.	<b>Identify the glacial landform in the image above.</b>	
<input type="radio"/>	A.	U-shaped valley
<input type="radio"/>	B.	Corrie
<input type="radio"/>	C.	Hanging valley



36.	<b>Identify the glacial landform in the image above.</b>	
<input type="radio"/>	A.	Glacial trough
<input type="radio"/>	B.	Corrie
<input type="radio"/>	C.	Hanging valley



37.	<b>Identify the glacial landform in the image above.</b>	
<input type="radio"/>	A.	Pyramidal peak
<input type="radio"/>	B.	Corrie
<input type="radio"/>	C.	Arête



38.	<b>Identify the landform labelled A.</b>	
<input type="radio"/>	A.	Ribbon lake
<input type="radio"/>	B.	Tarn
<input type="radio"/>	C.	Waterfall

39.	<b>Identify the landform labelled B.</b>	
<input type="radio"/>	A.	Arete
<input type="radio"/>	B.	Pyramidal Peak
<input type="radio"/>	C.	Truncated spur

40.	<b>Identify the landform labelled C.</b>	
<input type="radio"/>	A.	Arete
<input type="radio"/>	B.	Pyramidal Peak
<input type="radio"/>	C.	Truncated spur

41.	<b>Identify the landform labelled D.</b>	
<input type="radio"/>	A.	Corrie
<input type="radio"/>	B.	U shaped valley
<input type="radio"/>	C.	Hanging valley

42.	<b>Identify the landform labelled E.</b>	
<input type="radio"/>	A.	Arete
<input type="radio"/>	B.	Truncated spur
<input type="radio"/>	C.	Pyramidal peak

43.	<b>Identify the landform labelled F.</b>	
<input type="radio"/>	A.	Hanging valley
<input type="radio"/>	B.	Tarn
<input type="radio"/>	C.	Waterfall

44.	<b>Identify the landform labelled G.</b>	
<input type="radio"/>	A.	Hanging valley
<input type="radio"/>	B.	Tarn
<input type="radio"/>	C.	Waterfall

45.	<b>Identify the landform labelled H.</b>	
<input type="radio"/>	A.	V shaped valley
<input type="radio"/>	B.	Hanging valley
<input type="radio"/>	C.	U shaped valley

46.	<b>Identify the landform labelled I.</b>	
<input type="radio"/>	A.	Ribbon lake
<input type="radio"/>	B.	Tarn
<input type="radio"/>	C.	Waterfall

### Glacial Landforms of Transportation and Deposition

47.	<b>True or false?</b> <b>Moraines are formed by the deposition of poorly sorted, angular till deposits, carried by ice then dumped when it melts.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False
<input type="radio"/>	C.	
<input type="radio"/>	D.	

48.	<b>Identify the type of moraine found along the sides of a glacier.</b>	
<input type="radio"/>	A.	Medial
<input type="radio"/>	B.	Terminal
<input type="radio"/>	C.	Lateral
<input type="radio"/>	D.	Ground

49.	<b>Identify the type of moraine found where two tributary glaciers meet.</b>	
<input type="radio"/>	A.	Medial
<input type="radio"/>	B.	Terminal
<input type="radio"/>	C.	Lateral
<input type="radio"/>	D.	Ground

50.	<b>Identify the type of moraine found on the bedrock between the ice.</b>	
<input type="radio"/>	A.	Medial
<input type="radio"/>	B.	Terminal
<input type="radio"/>	C.	Lateral
<input type="radio"/>	D.	Ground

51.	<b>Identify the type of moraine found at the snout of a glacier.</b>	
<input type="radio"/>	A.	Medial
<input type="radio"/>	B.	Terminal
<input type="radio"/>	C.	Lateral
<input type="radio"/>	D.	Ground

52.	<b>Which of the following moraines is most likely to be left intact when ice melts?</b>	
<input type="radio"/>	A.	Medial
<input type="radio"/>	B.	Lateral
<input type="radio"/>	C.	Ground
<input type="radio"/>	D.	Terminal

53.	<b>What is the name of a rock transported by ice and deposited in an area of different geology?</b>	
<input type="radio"/>	A.	Moraine
<input type="radio"/>	B.	Drumlin
<input type="radio"/>	C.	Erratic

54.	<b>True or false?</b> <b>By pinpointing the source of an erratic scientists can identify the direction of movement of past ice sheets.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

55.	<b>What are egg-shaped hills of deposited material, that often occur in groups, known as?</b>	
<input type="radio"/>	A.	Erratics
<input type="radio"/>	B.	Drumlins
<input type="radio"/>	C.	Moraines

56.	<b>What are drumlins formed from?</b>	
<input type="radio"/>	A.	Moraine
<input type="radio"/>	B.	Till
<input type="radio"/>	C.	Erratics

57.	<b>Drumlins indicate the past direction of ice movement. Which of the following is correct?</b>	
<input type="radio"/>	A.	The tapered end points in the direction of ice movement.
<input type="radio"/>	B.	The blunt end points in the direction of ice movement.

58.	<b>What is a group of drumlins known as?</b>	
<input type="radio"/>	A.	Swarm
<input type="radio"/>	B.	Group
<input type="radio"/>	C.	Pride

#### Land use in glaciated upland areas

59.	<b>Which of the following economic activities are carried out in glaciated upland areas?</b>	
<input type="radio"/>	A.	Pastoral farming
<input type="radio"/>	B.	Tourism
<input type="radio"/>	C.	Forestry
<input type="radio"/>	D.	Quarrying
<input type="radio"/>	E.	Growing arable crops such as wheat and barley.

60.	<b>Why are opportunities for agriculture limited in upland glaciated areas?</b>	
<input type="radio"/>	A.	Soils are thin and infertile.
<input type="radio"/>	B.	Population density is often high.
<input type="radio"/>	C.	Slopes are steep and often covered in scree.
<input type="radio"/>	D.	The climate is harsh, with high rainfall, low temperatures and strong winds.

61.	<b>Which of the following is the most common crop grown in glaciated upland areas?</b>	
<input type="radio"/>	A.	Barley
<input type="radio"/>	B.	Grass
<input type="radio"/>	C.	Wheat
<input type="radio"/>	D.	Rape seed

62.	<b>Which type of tree is most commonly used in commercial forestry in glaciated upland areas?</b>	
<input type="radio"/>	A.	Deciduous
<input type="radio"/>	B.	Coniferous

63.	<b>True or false? Coniferous trees are fast-growing and well suited to the harsh climate and thin, acidic soils common in glaciated upland areas.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

64.	<b>Which of the following rock is not typically quarried in glaciated upland areas?</b>	
<input type="radio"/>	A.	Slate
<input type="radio"/>	B.	Limestone
<input type="radio"/>	C.	Granite
<input type="radio"/>	D.	Chalk

65.	<b>True or false? Tourism is a hugely important economic activity in upland glaciated areas.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

66.	<b>Which of the following are popular leisure activities in glaciated upland areas?</b>	
<input type="radio"/>	A.	Zip lining
<input type="radio"/>	B.	Hiking
<input type="radio"/>	C.	Cycling
<input type="radio"/>	D.	Climbing
<input type="radio"/>	E.	Yachting

#### Conflicts in upland glaciated environments

67.	<b>True or false? The variety of different land uses inevitably causes disagreements. Most of this conflict results from the mass influx of tourists to the region, especially during the summer months.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False

68.	<b>Which of the following is most likely to experience conflict with farming in glaciated upland areas?</b>	
<input type="radio"/>	A.	Quarrying
<input type="radio"/>	B.	Conservation
<input type="radio"/>	C.	Tourism

69.	<b>Which of the following is most likely to experience conflict with quarrying in glaciated upland areas?</b>	
<input type="radio"/>	A.	Farming
<input type="radio"/>	B.	Tourism
<input type="radio"/>	C.	Conservation

70.	<b>Which of the following is most likely to experience conflict with tourism in glaciated upland areas?</b>	
<input type="radio"/>	A.	Quarrying
<input type="radio"/>	B.	Conservation
<input type="radio"/>	C.	Farming

71.	<b>Which of the following are impacts of energy development in glaciated upland areas?</b>	
<input type="radio"/>	A.	The landscape becomes scarred.
<input type="radio"/>	B.	Local businesses benefit from green energy.
<input type="radio"/>	C.	Wind turbines support wildlife including birds.

72.	<b>Which of the following are impacts of reservoir construction in glaciated upland areas?</b>	
<input type="radio"/>	A.	Destruction of habitats.
<input type="radio"/>	B.	Creation of tourist amenities.
<input type="radio"/>	C.	Flooding will no longer occur in the river beyond the dam.

73.	<b>Which of the following are impacts of forestry in glaciated upland areas?</b>	
<input type="radio"/>	A.	Biodiversity decreases
<input type="radio"/>	B.	Employment opportunities for local people.
<input type="radio"/>	C.	Biodiversity increases

74.	<b>True or false? Conflicts can exist between economic development and conservation in glaciated upland areas.</b>	
<input type="radio"/>	A.	True
<input type="radio"/>	B.	False



## Answers

- |                |                   |
|----------------|-------------------|
| 1. B           | 49. A             |
| 2. A           | 50. D             |
| 3. D           | 51. B             |
| 4. D           | 52. B             |
| 5. B           | 53. C             |
| 6. A           | 54. A             |
| 7. A           | 55. B             |
| 8. B           | 56. B             |
| 9. B           | 57. A             |
| 10. A, B and D | 58. A             |
| 11. C          | 59. A, B, C and D |
| 12. C          | 60. A, C and D    |
| 13. B          | 61. B             |
| 14. B          | 62. B             |
| 15. A          | 63. A             |
| 16. C          | 64. D             |
| 17. C          | 65. A             |
| 18. C          | 66. A, B, C and D |
| 19. A          | 67. A             |
| 20. B          | 68. C             |
| 21. C          | 69. C             |
| 22. A          | 70. B             |
| 23. C          | 71. A and B       |
| 24. A          | 72. A and B       |
| 25. B          | 73. A and B       |
| 26. A, B and C | 74. A             |
| 27. B          |                   |
| 28. B          |                   |
| 29. B          |                   |
| 30. C          |                   |
| 31. C          |                   |
| 32. B          |                   |
| 33. C          |                   |
| 34. B and C    |                   |
| 35. B          |                   |
| 36. A          |                   |
| 37. C          |                   |
| 38. B          |                   |
| 39. B          |                   |
| 40. A          |                   |
| 41. A          |                   |
| 42. B          |                   |
| 43. A          |                   |
| 44. C          |                   |
| 45. C          |                   |
| 46. A          |                   |
| 47. A          |                   |
| 48. C          |                   |