Centre Number			Candidate Number		
Surname					
Other Names					
Candidate Signature					



General Certificate of Secondary Education Foundation Tier June 2015

90301F

## Geography (Specification A)

**Physical Geography** Unit 1

Tuesday 19 May 2015 1.30 pm to 3.00 pm

#### For this paper you must have:

- the colour insert (enclosed)
- a pencil
- a rubber
- a ruler.

You may use a calculator.

## Time allowed

1 hour 30 minutes

#### Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- **Answer THREE questions:**

one question from Section A (Questions 1 - 4)

one question from Section B (Questions 5 – 7)

one other question from either Section A or Section B.

- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want

work. You are advised to allocate your time carefully.

to be marked.  • Use case studies to support your answers where appropriate.
<ul> <li>Information</li> <li>The marks for questions are shown in brackets.</li> <li>The maximum mark for this paper is 75.</li> <li>You are reminded of the need for good English and clear presentation in your answers. Where applicable, questions should be answered in continuous prose. Quality of written communication will be assessed in all answers.</li> </ul>
<ul> <li>Advice</li> <li>Where appropriate, credit will be given for the use of diagrams to illustrate answers and where reference is made to your personal investigative</li> </ul>

. c. <u>-</u>	
Examine	r's Initials
Question	Mark
1	
2	
3	
4	
5	
6	
7	
TOTAL	

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#### **Section A**

Answer **one** question from Section A and **one** question from Section B and **one** other question from **either** Section A **or** Section B.

Use case studies to support your answers where appropriate.

1	Total for the The Restless Earth	is ques	tion: 25	marks
1 (a)	Complete the statements below to describe the characteristics of	contine	ental crus	t.
	Circle the correct answer in each set of brackets.		[3 r	marks]
	Continental crust is [ less than 500 / more than 1500 ] million	n years	old.	
	Continental crust is [ more / less ] dense than oceanic crust.			
	Continental crust [ can / cannot ] be renewed or destroyed.			
1 (b)	Study Figure 1 on the insert, a map showing the world distribution	on of vol	canoes.	
1 (b) (i)	What type of plate boundary is found at <b>X</b> on <b>Figure 1</b> ?		[1	mark]
1 (b) (ii)	Are the following statements about the world distribution of volca	noes <b>tr</b> ı	ue or fals	se?
	Tick the correct boxes.		[4 r	marks]
		True	False	
	There are no volcanoes in Asia.			
	Volcanoes occur around the edge of the Pacific Ocean.			
	There is a line of volcanoes in the middle of the Atlantic Ocean.			
	Volcanoes only occur at plate margins.			



1 (c)	Study Figure 2 on the insert, a photograph of Eyjafjallajökull, a volcano in Iceland.
1 (c) (i)	Three characteristics of the volcano and surrounding area are shown at <b>X</b> , <b>Y</b> and <b>Z</b> .  Write labels for <b>X</b> , <b>Y</b> and <b>Z</b> .
	[3 marks]
	Υ
	Z
1 (c) (ii)	Describe the positive and negative impacts of volcanic activity.  [6 marks]
	Extra space
	Question 1 continues on the next page



1 (d)	Study Figure 3 on the insert, a map sh	nowing the Yellowstone supervolcano	in the USA.
1 (d) (i)	Use information in Figure 3 to complete	e the table below.	[2 marks]
	Distance along line A–B	km	
	Shape of the supervolcano (caldera)		
1 (d) (ii)	How is a supervolcano different from a	volcano?	[2 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence	es of a supervolcano eruption.	[4 marks]
1 (d) (iii)	Describe the likely global consequence		[4 marks]



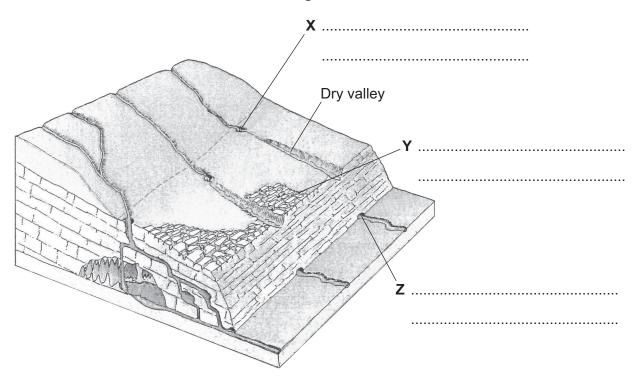
				Total for this qu	uestion: 25 marks
2	Ro	cks, Resources an	d Scenery		
2 (a)	Stu	dy Figure 4 on the	insert, a diagram showi	ng the geological times	scale.
2 (a) (i)	Use	e Figure 4 to compl	ete the following senter	ces.	[2 marks]
	Soi	me granite formed 2	80 million years ago in	the	Period.
	The	e Carboniferous peri	od lasted for	million years.	
2 (a) (ii)	Wit	th the help of <b>Figure</b>	• 4, outline what is mea	nt by an 'era'.	[2 marks]
2 (b)	The	e following statemen	its are about the three t	ypes of rock.	
		mplete the rock type	e table below by writing	the letter for <b>each</b> state	ement in the
	COI	rect column.			[4 marks]
	On	e has been done for	you.		
	Α	These rocks includ	e slate and marble.		
	В	These rocks are fo	rmed by volcanic activit	y.	
	С	These rocks are of	ten formed on the sea l	ped.	
	D	These rocks often	consist of many crystals	S.	
	Ε	These rocks includ	e chalk and clay.		
			Rock Type		
		Igneous	Sedimentary	Metamorphic	
				Α	

Question 2 continues on the next page



**2 (c)** Study **Figure 5**, a block diagram showing limestone features.

Figure 5



2 (c) (i) On Figure 5, label the surface features shown at X, Y and Z.

[3 marks]

2 (c) (ii) The rock type below the limestone is:

pervious / permeable / impermeable.

Circle the correct answer.

[1 mark]

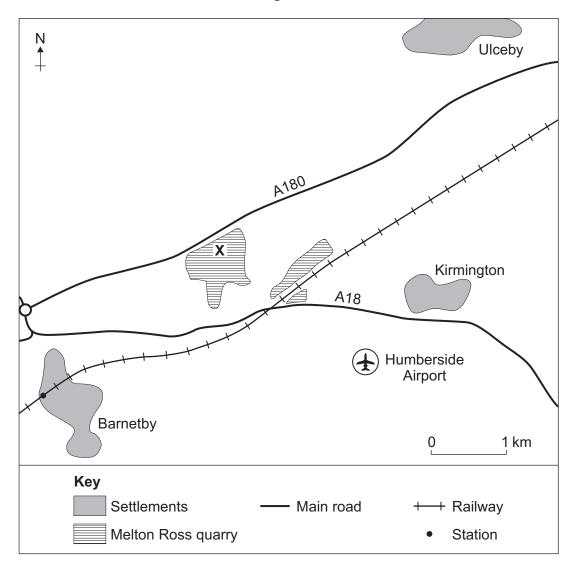


2 (c) (iii)	With the help of <b>Figure 5</b> , explain the formation of a dry valley.  [4 marks]
	Extra space
	Question 2 continues on the next page



**2 (d)** Study **Figure 6**, a sketch map showing the location of Melton Ross quarry.

Figure 6



2 (d) (i) Complete the sentences below to describe the location of Melton Ross quarry.

[3 marks]

Melton Ross quarry is two km ...... of Kirmington.

Barnetby station is ...... km south west of location X at the quarry.

The quarry is north of the main road ......

2 (d) (ii)	Describe advantages and disadvantages of quarrying.  [6 marks]
	Extra space





	Total for this question: 25 marks
3	The Challenge of Weather and Climate
3 (a)	Study <b>Figure 7</b> on the insert, a map showing the average maximum monthly temperatures at four weather stations in the UK from 1981 to 2010.
3 (a) (i)	Use <b>Figure 7</b> to complete the Fact File below.  [3 marks]
	Fact File
	The temperature at Lake Vyrnwy in January was°C.
	The warmest place in July was
	The temperature range in London was°C.
3 (a) (ii)	How does <b>latitude</b> explain the difference in temperature between London and Edinburgh?  [2 marks]
3 (a) (iii)	How does <b>altitude</b> explain the difference in temperature between Llanbedr and Lake Vyrnwy?  [2 marks]



3 (b)	Study <b>Figure 8</b> on the insert, a synoptic chart showing the St Jude storm over the British Isles on 28 October 2013.
3 (b) (i)	Complete the paragraph below to describe the synoptic chart.
	Circle the correct answer in each set of brackets.  [4 marks]
	The lowest pressure on the map is at [ W / X ]. The air pressure at Y is between
	[ 977 and 979 / 981 and 983 ] millibars. The isobars to the south of the British Isles
	are [ close together / far apart ]. There is a [ warm / cold ] front over
	southern England.
3 (b) (ii)	What is the type of weather system centred at Y in Figure 8?  [1 mark]
3 (b) (iii)	Complete the sentences below to outline the weather associated with the passage of a cold front.  [3 marks]
	Cloud cover is
	Precipitation is
	Windspeeds are
	Question 3 continues on the next page



3 (c)	Study <b>Figures 9a</b> and <b>9b</b> on the insert, photographs taken after the Philippines were hit by Typhoon Haiyan (a tropical revolving storm) on 8 November 2013.
	Figure 9a shows Tacloban Airport. Figure 9b shows the Tacloban coast near the airport.
	Describe the effects of Typhoon Haiyan shown in <b>Figures 9a</b> and <b>9b</b> .  [4 marks]
	Extra space
	Laud Space



3 (d)	Use a case study to describe the short-term and long-term responses to a tropical revolving storm in a richer part of the world.
	[6 marks]
	Extra space



		Total for this question: 25 marks
4	Living World	
4 (a)	Study Figure 10 on the insert, a diagram of a simple	e ecosystem.
4 (a) (i)	Name <b>one</b> physical factor affecting the ecosystem.	[1 mark]
4 (a) (ii)	Outline how the soil is affected by the vegetation.	[2 marks]
4 (a) (iii)	Outline how the vegetation is affected by the soil.	[2 marks]



4 (b) (i)	Add an exar	gs for a partly comple for each he	eading to comp			V.
	Onloge the	cxampics irom	uno not.			[3 marks]
	bacteria	caterpillar	sunlight	robin	oak tree	
	Producer		Herbivore	;		Carnivore
4 (b) (ii)	Describe the	e differences bet	tween a produc	cer and a co	onsumer.	[3 marks]
		Question	4 continues o	n the next	page	



4 (c)	Study <b>Figure 11</b> on the insert, a map showing the location of temperate deciduous forest.
	The following statements begin to describe the location of temperate deciduous forest.
	Use information from Figure 11 to complete the sentences.  [4 marks]
	The largest area of temperate deciduous forest is found
	In Africa, there is
	In North America and Asia, temperate deciduous forest is found
	In the southern hemisphere, temperate deciduous forest is found



4 (d)	Study <b>Figure 12</b> on the insert, a photograph of part of Epping Forest, a temperate deciduous woodland in the south of England.
	Use <b>Figure 12</b> to describe the characteristics of this temperate deciduous woodland. <b>[4 marks]</b>
	Extra space
	Question 4 continues on the next page



4 (e)	Use a case study to describe different uses of temperate deciduous woodland.  [6 marks]
	Extra space

**End of Section A** 



#### Section B

Answer **one** question from Section A and **one** question from Section B and **one** other question from **either** Section A **or** Section B.

Use case studies to support your answers where appropriate.

5	Total for this question: 25 marks Water on the Land
5 (a)	Study <b>Figure 13</b> on the insert, a 1:25 000 Ordnance Survey map extract of part of the Peak District.
	Damflask Reservoir is named in grid square 2790. The dam is in grid square 2890.
5 (a) (i)	What is the length of the dam along the line <b>X–Y</b> on the map?  [1 mark]
	km
5 (a) (ii)	What shape is Damflask Reservoir? [1 mark]
5 (a) (iii)	Describe the relief (height and slope of the land) around Damflask Reservoir.  [2 marks]
5 (a) (iv)	A dam is an example of:
	hard engineering / soft engineering.
	Circle the correct answer.  [1 mark]
	Question 5 continues on the next page





5 (b)		<b>gures 14a</b> and <b>14b</b> o 2011) in England an	on the insert, maps showing ra d Wales.	infall (2012) and population
5 (b) (i)	Areas A	and B are shown on	Figures 14a and 14b.	
	Complete	e the table below to	show the missing information.	[2 marks]
	Area	Rainfall (mm)	Population density (people per square km)	
	А		0–99	
	В	600–799		
5 (b) (ii)	area like	ly to have a water de	identify <b>one</b> area likely to have eficit.	[2 marks]
		•		
	Area of v	water deficit		
5 (b) (iii)	Explain '	the need for transfer	' in managing water supply in t	the UK. [3 marks]
	•••••			



5 (c)	Study <b>Figure 15</b> on the insert, a photograph of High Force waterfall on the River Tees in the north of England.
5 (c) (i)	Three characteristics of the waterfall are shown by <b>X</b> , <b>Y</b> and <b>Z</b> .
	Write labels for X, Y and Z.  [3 marks]
	X
	Υ
	<b>Z</b>
5 (c) (ii)	Explain the formation of a waterfall.  [4 marks]
	Extra space
	Question 5 continues on the next page



(d)	Describe how a river transports its load.  [6 marks]
	Extra space



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6	Total for this question: 25 marks lce on the Land
6 (a)	Study <b>Figures 16a</b> and <b>16b</b> on the insert, graphs showing information about the Solheimajökull glacier in Iceland in the years 1931–2012.
	Figure 16a shows the advance and retreat of the glacier.  Figure 16b shows the changes in the position of the snout of the glacier.
6 (a) (i)	Use Figure 16a to complete the sentences below.  [2 marks]
	Most ice was lost from the glacier in
	During the 1980s the glacier
6 (a) (ii)	Use Figure 16b to complete the sentences below.
	Circle the correct answer in each set of brackets.  [2 marks]
	From 1931 to 2012, the glacier snout retreated [ 1000m / 1300m ].
	In this period there was a [ steady / fluctuating ] loss of ice.
6 (a) (iii)	What is the glacial budget?  [1 mark]
6 (a) (iv)	Outline changes in a glacier between summer and winter.  [3 marks]
	Question 6 continues on the next page



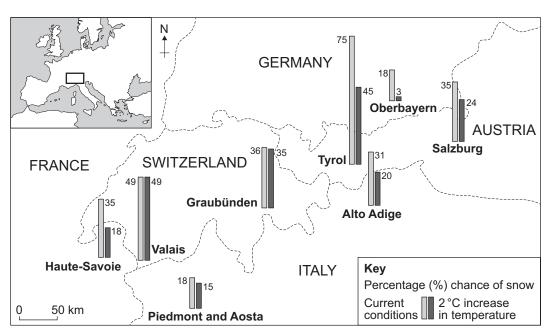


6	(b)	Study <b>Figure 17</b> on the insert, a 1:50 000 Ordnance Survey map extract of the Helvellyn area of the Lake District.	
6	(b) (i)	Red Tarn (grid square 3415) is in a corrie.	
		In what direction does the corrie face?	mark]
6	(b) (ii)	What is the height of Helvellyn at grid reference 342151?	mark]
		m	
6	(b) (iii)	A pyramidal peak is labelled on <b>Figure 17</b> and two other landforms resulting from glacial erosion are identified at <b>X</b> and <b>Y</b> .	
		Name landform X and landform Y. [2 m	narks]
		Landform X	
		Landform Y	
6	(b) (iv)	Explain the formation of a pyramidal peak.  [4 m	narks]
6	(b) (iv)		_
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
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6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	
6	(b) (iv)	[4 m	



6 (c) Study **Figure 18**, a located bars map showing the chance of snow in selected regions of the Alps under current conditions and the chance of snow if there is a 2 °C increase in temperature.

Figure 18



6 (c) (i) Three of the following statements describing the information in Figure 18 are correct.

Tick the **three** correct statements.

[3 marks]

The greatest decrease in the percentage chance of snow with a 2 °C increase in temperature will be in Tyrol.	
Regions in Switzerland will not be affected very much by a 2 °C increase in temperature.	
Under current conditions the region with the highest chance of snow is Valais.	
There would be a change of 3% or less in two regions with a 2 °C increase in temperature.	
The two Italian regions will show the greatest drop in percentage chance of snow with a 2 °C increase in temperature.	
The percentage chance of snow will halve in Oberbayern with a 2 °C increase in temperature.	

Question 6 continues on the next page



6 (c) (ii)	Describe the economic and social impacts of unreliable snowfall on some resorts.  [6 marks]
	Extra space



7	Total for this question: Coastal Zone	25 marks
7 (a)	Study Figure 19 on the insert, a photograph of Happisburgh, Norfolk.	
7 (a) (i)	State the evidence at <b>X</b> and <b>Y</b> suggesting that erosion is taking place on this	coast. [2 marks]
	x	
	Υ	
7 (a) (ii)	With the help of <b>Figure 19</b> , outline <b>one</b> impact of this erosion on people.	[2 marks]
7 (a) (iii)	Name the landform at <b>Z</b> .	[1 mark]
	Question 7 continues on the next page	

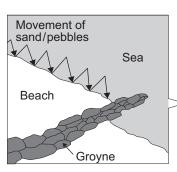


7 (b)	Explain the formation of a wave-cut platform.  [4 marks]
	Extra space



**7 (c)** Study **Figure 20**, a table showing information about three coastal management strategies.

Figure 20



Coastal management strategy	Cost (£)	Construction	Years before significant maintenance
Sea walls	6 000-10 000 per metre	Continuous	30-50
Groynes	5000-10000 each	Every 200 metres	10
Rock armour	1 000-4 000 per metre	Continuous but short distance	10

7 (c) (i)	Use <b>Figure 20</b> to complete the sentences below. [3 marks]
	One advantage of a sea wall is
	One advantage of rock armour is
	Groynes are different from the other strategies because
7 (c) (ii)	With the help of <b>Figure 20</b> , outline how groynes can protect the coast.  [3 marks]
	Question 7 continues on the next page



7 (d)	Study <b>Figure 21</b> on the insert, a 1:50 000 Ordnance Survey map extract of Walton-on-the-Naze.
7 (d) (i)	What is the <b>four figure</b> grid reference of the Nature Reserve marked <b>X</b> ?  [1 mark]
7 (d) (ii)	What is the distance along the line from the coast at point <b>Y</b> to the island at point <b>Z</b> ? [1 mark]
	km
7 (d) (iii)	Grid squares 2223 and 2323 are outlined on the map.
	Describe the coastal features in these grid squares.  [2 marks]



7 (e)	Use a case study to describe the characteristics of a coastal habitat.  [6 marks]
	Extra space

**END OF QUESTIONS** 



#### There are no questions printed on this page

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Figure 5: Block diagram of a Carboniferous limestone landscape taken from David Waugh and Tony Bushell's 'New Key Geography for

GCSE 2nd Edition' (ISBN 978-0-7487-8133-1), first published in 2002. Permission granted by Oxford University Press.

Figure 18: Based on data from OECD.

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General Certificate of Secondary Education Foundation Tier June 2015

# Geography (Specification A)

90301F

Unit 1 Physical Geography

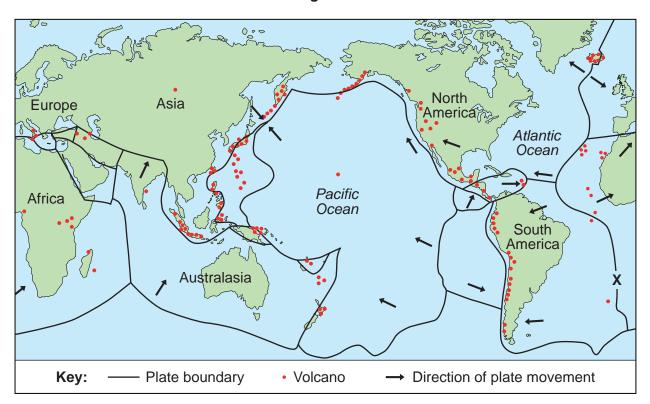
### Insert

The key for Figure 13 (1:25 000 OS map extract) is on page 13.

The key for Figure 17 and Figure 21 (1:50 000 OS map extracts) is on page 14.

Detach perforated pages 13 and 14 and use when referring to the OS map extracts.

Figure 1



Source: Understanding GCSE Geography, Bowen & Pallister, Pearson Education Ltd

Figure 2



Figure 3

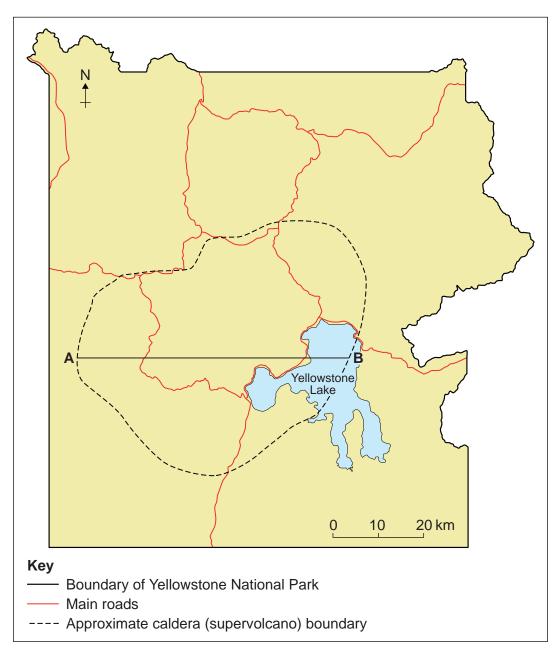


Figure 4

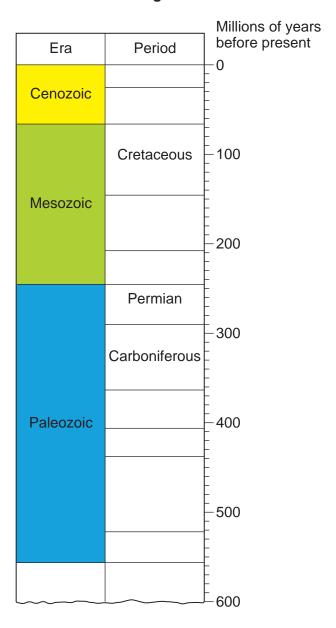


Figure 7

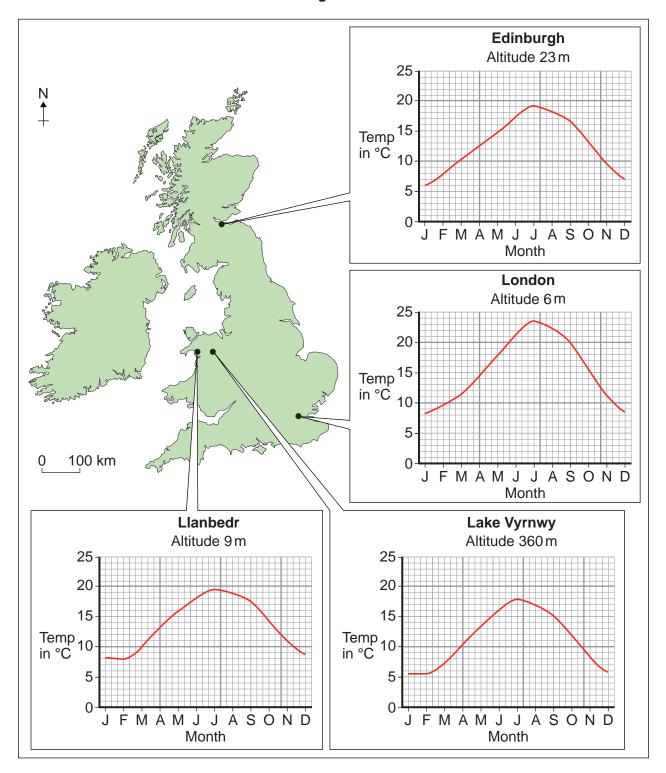


Figure 8

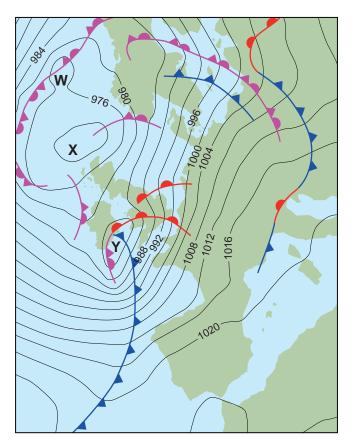


Figure 9a



Figure 9b



Figure 10

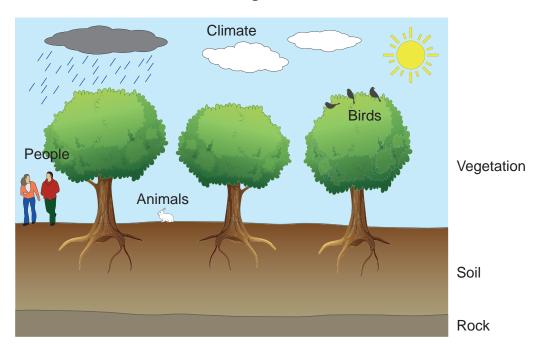
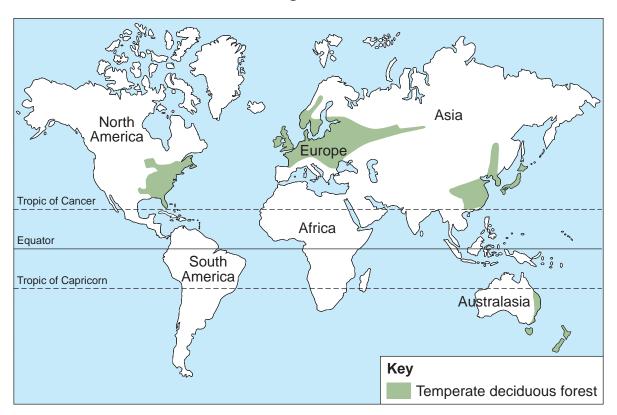


Figure 11



Source: Understanding GCSE Geography, Bowen and Pallister, Pearson Education Ltd

Figure 12

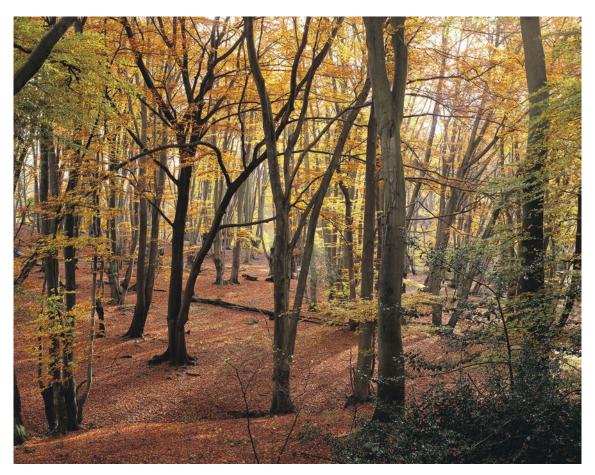
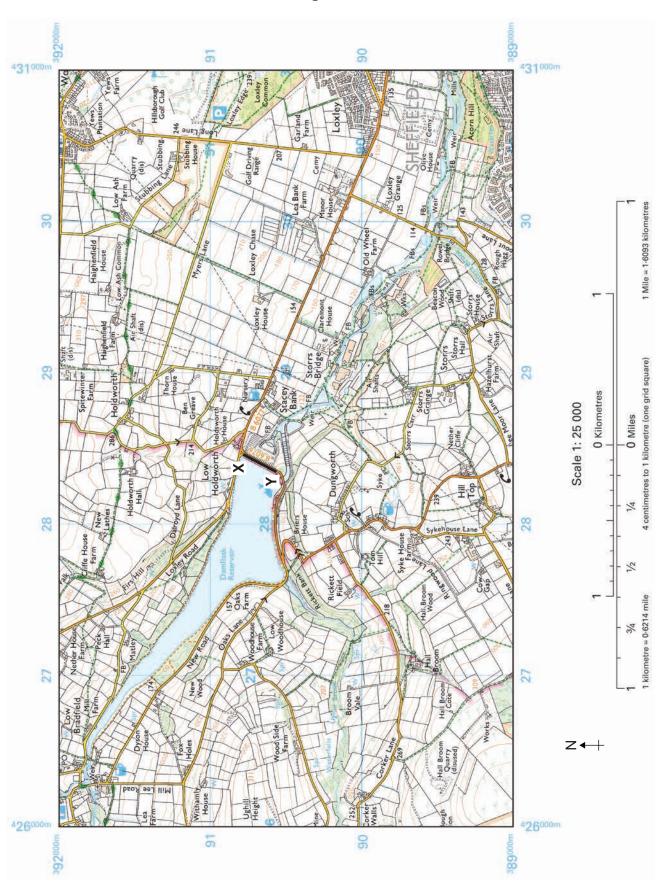
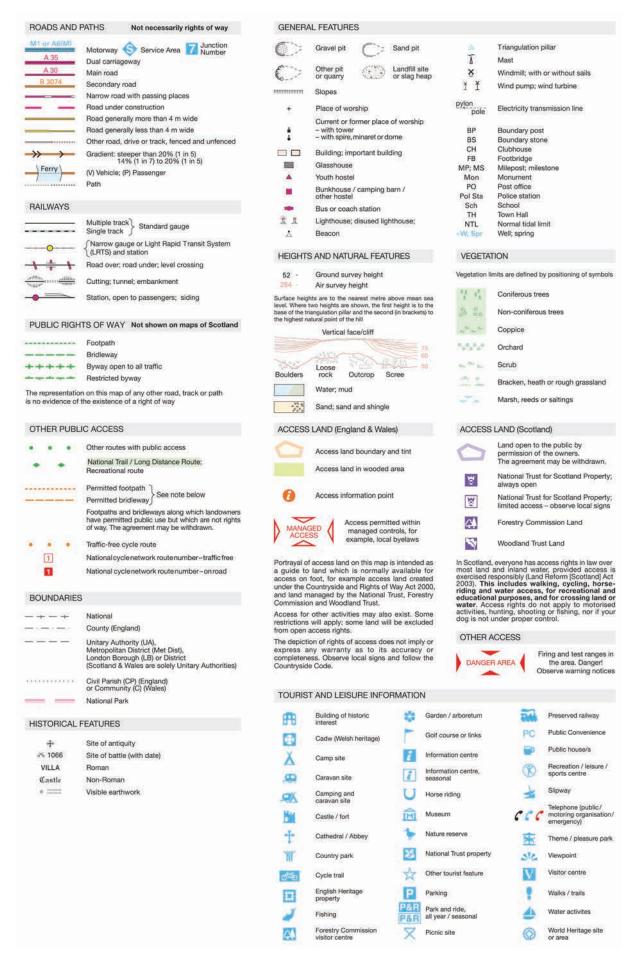


Figure 13



The key for this figure is on page 13

## 1:25 000 OS map extract key for Figure 13



## 1:50 000 OS map extract key for Figure 17 and Figure 21

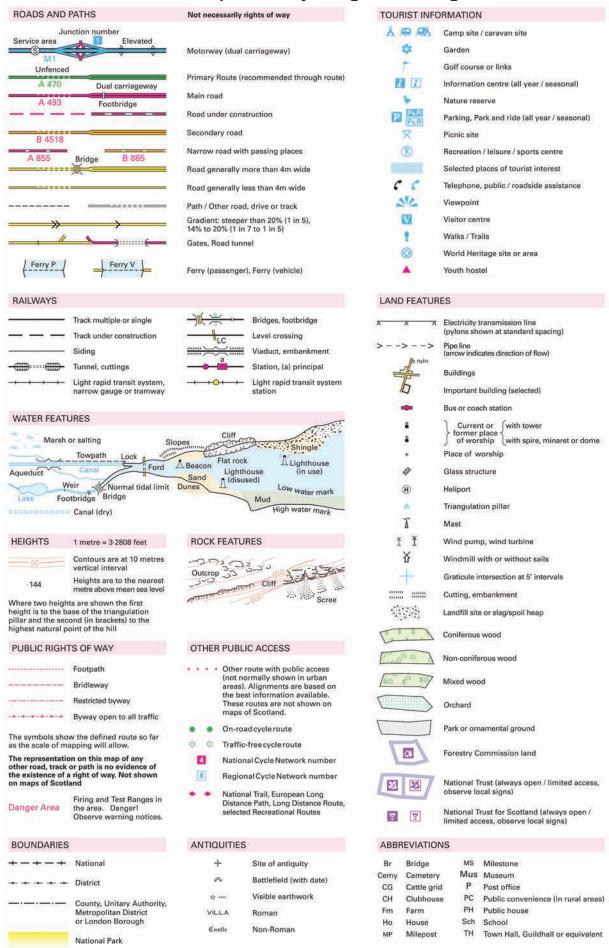


Figure 14a Figure 14b Rainfall, 2012 Population density, 2011 Key Rainfall (mm) Key N † N + People per square kilometre 3500 and above 10000-15000 2500 - 3499 5000 -9999 1500 - 2499 1000 -4999 1000 – 1499 -999 100 800 -999 600 - 799 -99 Greater London В 100 km 100 km

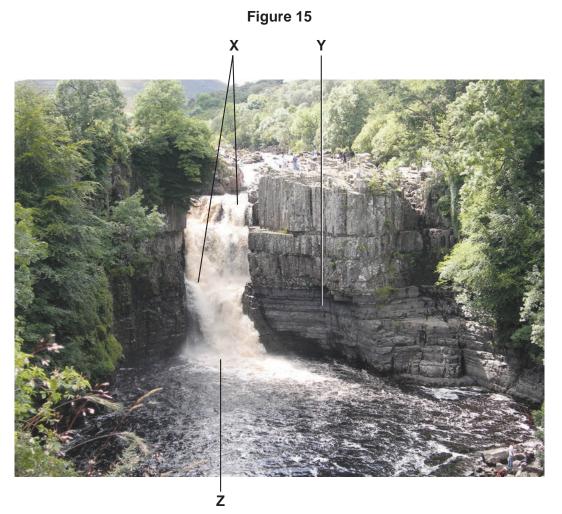


Figure 16a

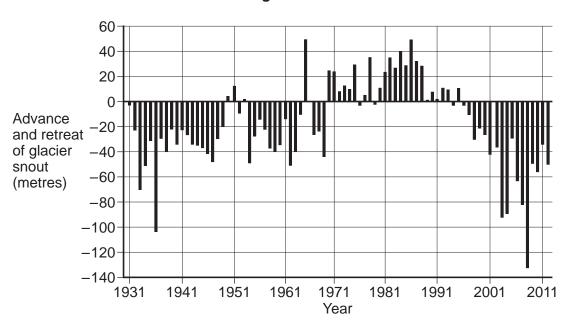


Figure 16b

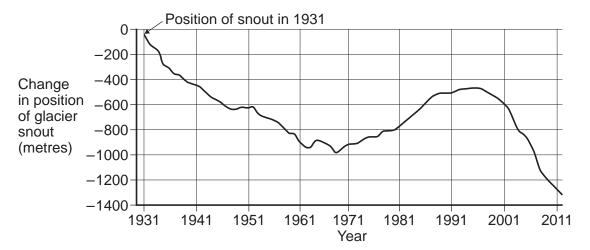
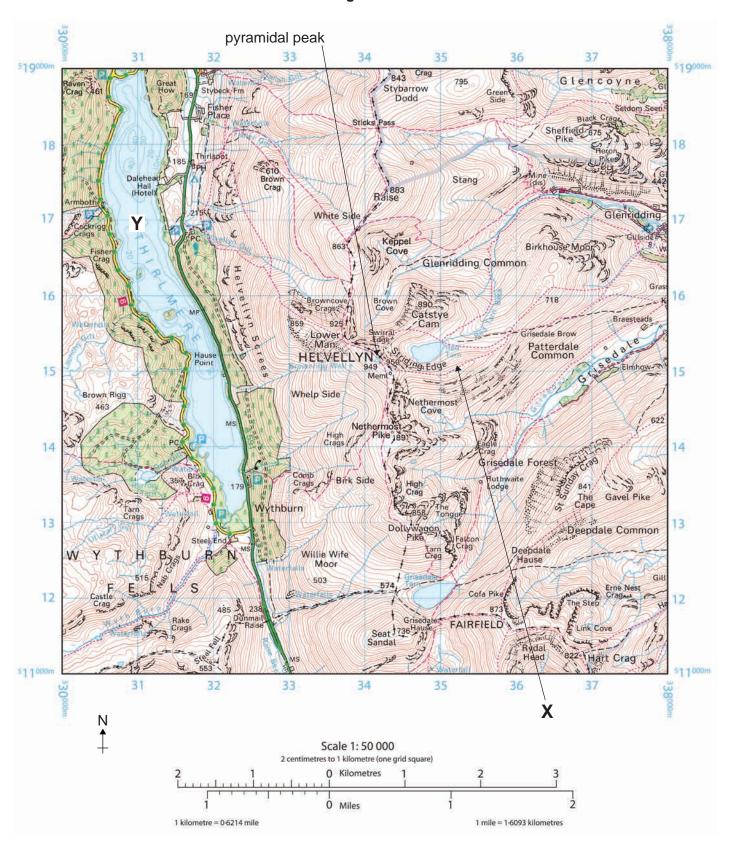


Figure 17



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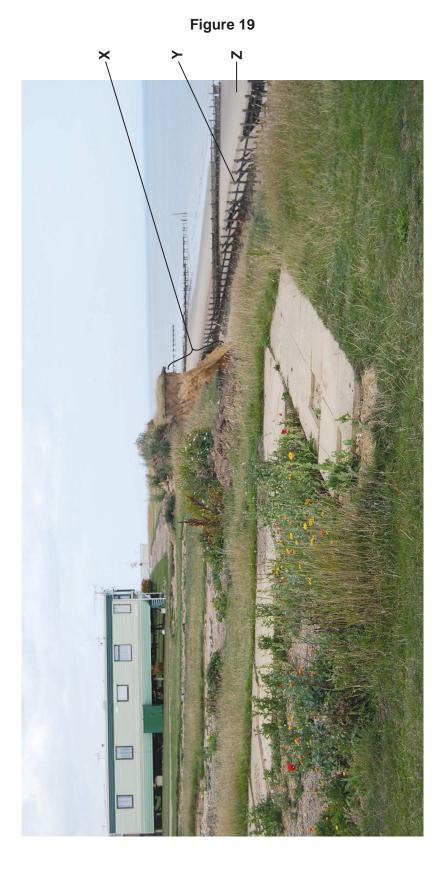
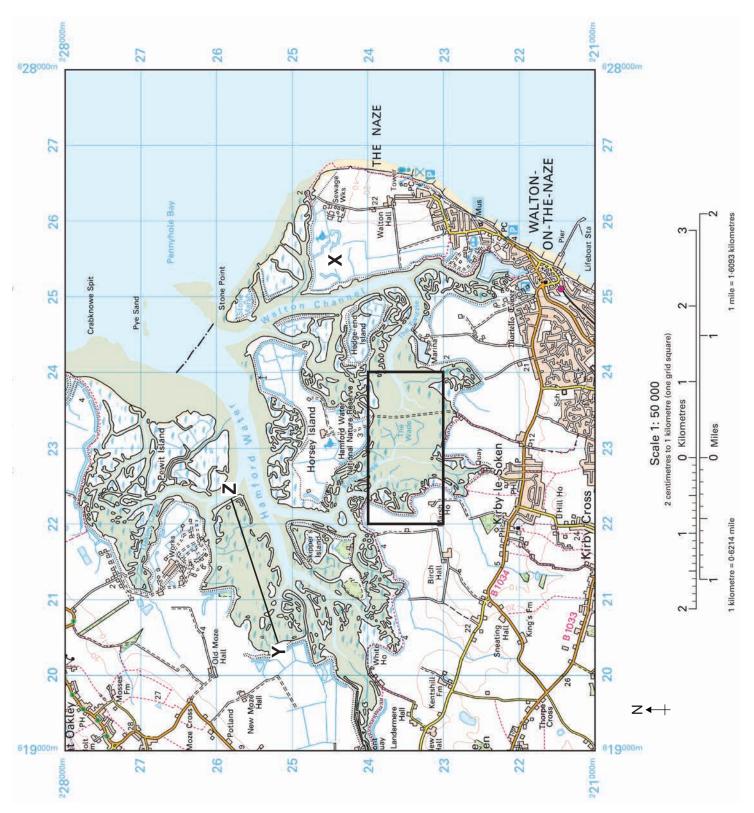


Figure 21



The key for this figure is on page 14

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Figure 15: Derek Teasdale, North Eastern Geological Society

Figures 16a & 16b: Iceland Glaciological Society

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