Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Monday 22 May 2023

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1GA0/01**

Geography A

PAPER 1: The Physical Environment

You must have:
Resource Booklet (enclosed), Calculator

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- In Section A answer Question 1 and **two** questions from Questions 2, 3 and 4.
- In Section B and Section C answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- Where asked you must **show all your working out with your answer clearly identified at the end of your solution**.

Information

- The total mark for this paper is 94.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*
- The marks available for spelling, punctuation and grammar are clearly indicated.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

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P 7 2 5 6 6 A 0 1 2 8

Pearson

SECTION A

The Changing Landscapes of the UK

Answer ALL parts of Question 1. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 The UK's landscape is made up of different rock types.

(a) (i) Identify which **one** of the following is an igneous rock.

(1)

☒ **A** basalt

☒ **B** chalk

☒ **C** sandstone

☒ **D** slate

(ii) State **one** characteristic of igneous rocks.

(1)

.....

(b) Study Figure 1 in the Resource Booklet.

(i) Identify the type of woodland in grid square 7084.

(1)

.....

(ii) Name the settlement at 723828.

(1)

.....

(c) Explain **one** way that geology has affected the development of UK landscapes.

(2)

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(Total for Question 1 = 6 marks)

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Answer only TWO questions from Question 2 (Coastal Landscapes and Processes), Question 3 (River Landscapes and Processes) and Question 4 (Glaciated Upland Landscapes and Processes).

Question 2: Coastal Landscapes and Processes

If you answer Question 2, put a cross in the box ☒ .

2 Coastal landscapes are constantly being changed by different processes.

(a) Name **one** type of mass movement.

(1)

.....

(b) Study Figure 2a in the Resource Booklet.

Identify the year with the greatest amount of coastal erosion.

(1)

☒ **A** 2012

☒ **B** 2015

☒ **C** 2017

☒ **D** 2020

(c) Explain **one** reason why rates of coastal erosion may change over time.

(2)

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(d) Study Figures 2b and 2c in the Resource Booklet.

Examine the role of physical processes in the formation of the spit shown in Figures 2b and 2c.

You must use evidence from Figures 2b and 2c in your answer.

(8)

(Total for Question 2 = 12 marks)

Question 3: River Landscapes and Processes

If you answer Question 3, put a cross in the box ☒ .

3 River landscapes are constantly being changed by different processes.

(a) Name **one** type of erosion.

(1)

.....

(b) Study Figure 3a in the Resource Booklet.

Identify the peak discharge shown on Figure 3a.

(1)

☒ **A** 200 m^3/s

☒ **B** 320 m^3/s

☒ **C** 420 m^3/s

☒ **D** 530 m^3/s

(c) Explain **one** reason why there is a lag time between peak rainfall and peak discharge following a storm.

(2)

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(d) Study Figures 3b and 3c in the Resource Booklet.

Examine the possible advantages and disadvantages of the reservoir and dam shown in Figures 3b and 3c.

You must use evidence from Figures 3b and 3c in your answer.

(8)

(Total for Question 3 = 12 marks)

Question 4: Glaciated Upland Landscapes and Processes

If you answer Question 4, put a cross in the box ☒ .

4 A variety of processes interact to shape glaciated upland landscapes.

(a) Name **one** type of weathering.

(1)

.....

(b) Study Figure 4a in the Resource Booklet.

Identify the grid square in which Red Tarn is located.

(1)

☒ **A** 3412

☒ **B** 3415

☒ **C** 3613

☒ **D** 3115

(c) Explain how arêtes are formed.

(2)

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(d) Study Figures 4b and 4c in the Resource Booklet.

Examine the possible advantages and disadvantages of the development of the ski resort shown in Figures 4b and 4c.

You must use evidence from Figures 4b and 4c in your answer.

(8)

(Total for Question 4 = 12 marks)

TOTAL FOR SECTION A = 30 MARKS

SECTION B

Weather Hazards and Climate Change

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

5 The causes of drought are complex.

(a) Define the term **drought**.

(1)

.....

.....

(b) Study Figure 5a in the Resource Booklet.

(i) Identify the amount of winter rainfall in 1995.

(1)

☒ **A** 155 mm

☒ **B** 220 mm

☒ **C** 325 mm

☒ **D** 400 mm

(ii) Calculate the range of winter rainfall.

You must show your working in the space below.

(2)

..... mm

(c) Explain **one** reason why some locations are more vulnerable to drought than others.

(3)

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(Total for Question 5 = 7 marks)

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6 The global climate was different in the past.

(a) State **one** cause of natural climate change.

(1)

.....

(b) Explain **one** way in which tree rings can provide evidence of natural climate change.

(2)

.....

.....

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.....

(c) Study Figure 6a in the Resource Booklet.

Explain **one** reason for the changes in global temperatures shown on Figure 6a.

You must use evidence from Figure 6a in your answer.

(3)

.....

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.....

(d) Tropical cyclones are extreme weather events.

Study Figure 6b in the Resource Booklet.

Calculate the mean number of deaths per tropical cyclone shown on Figure 6b.

You must show your working in the space below.

(2)

Mean number of deaths .....

(e) Explain **one** reason why some tropical cyclones lead to more deaths than others.

(4)

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(f) Study Figure 6c in the Resource Booklet.

(i) Identify the ocean surface temperature range at **X**.

(1)

- ☒ **A** 0–5°C
- ☒ **B** 5–10°C
- ☒ **C** 20–25°C
- ☒ **D** 25–30°C

(ii) Suggest **one** reason for the link between ocean surface temperature and the location of tropical cyclones.

You must use evidence from Figure 6c in your answer.

(2)

.....

.....

.....

.....

(g) Evaluate the following statement.

'Responses to tropical cyclones are more successful in developed countries than in emerging or developing countries.'

(8)

(Total for Question 6 = 23 marks)

TOTAL FOR SECTION B = 30 MARKS

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SECTION C

Ecosystems, Biodiversity and Management

Answer ALL questions in this section. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Spelling, punctuation, grammar and specialist terminology will be assessed in Question 7(h).

7 Large-scale ecosystems are found in different parts of the world.

(a) Study Figure 7a below.

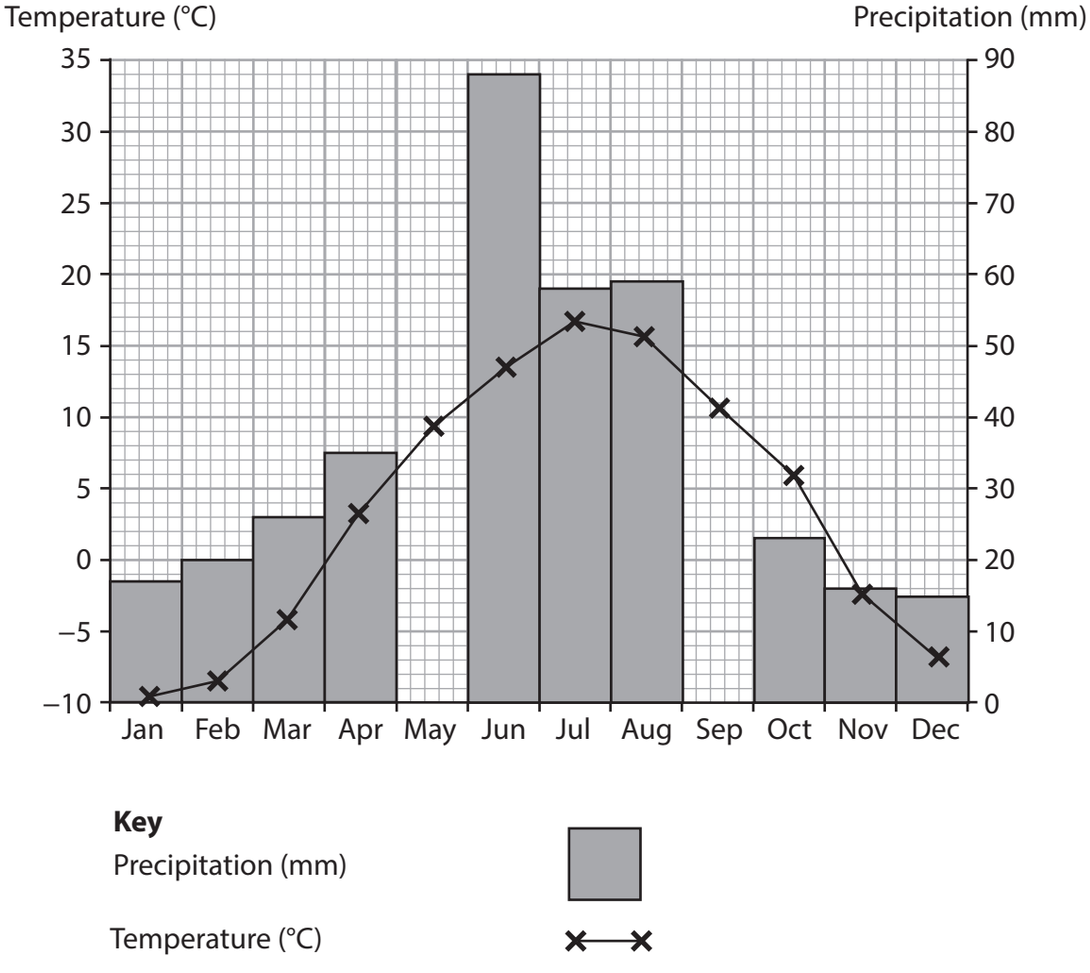

Figure 7a

Climate graph showing mean monthly data for an area of boreal forest in Alberta, Canada

(i) Plot the precipitation data for May and September to complete Figure 7a.

(2)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Temperature (°C)	–9.9	–8.8	–4.4	3.6	9.8	13	16.7	15.1	10.9	5.4	–2.2	–6.6
Precipitation (mm)	17	20	26	35	52	88	58	59	34	23	16	15

(ii) Calculate the median precipitation using the data table above.

You must show your working in the space below.

(2)

..... mm

(b) Explain **one** way climate can influence the distribution of large-scale ecosystems.

(3)

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(c) Tropical rainforests have a range of distinguishing features.

Study Figure 7b in the Resource Booklet.

(i) Identify which animals are eaten by bats.

(1)

- ☒ **A** insects
- ☒ **B** millipedes
- ☒ **C** mice
- ☒ **D** spiders

(ii) Identify which animals eat worms.

(1)

- ☒ **A** butterflies
- ☒ **B** frogs
- ☒ **C** tenrecs
- ☒ **D** spiders

(d) Study Figure 7c below.

In 1900 Indonesia had an estimated tropical rainforest cover of 170 million hectares. By 2000, deforestation had reduced this forest cover to 100 million hectares.

Reasons for this deforestation included:

- Rising demand for goods such as medicines and timber
- Uncertainty about who owns the land
- Political corruption
- Population growth
- Conflicts between local communities and large companies
- Mining for gold
- Oil palm plantations

Figure 7c

Information about deforestation in Indonesia

(i) Calculate the percentage decrease in the estimated forest cover in Indonesia between 1900 and 2000.

Answer to **one** decimal place.

You must show your working in the space below.

(2)

..... %

(ii) Explain **two** economic reasons for the deforestation of tropical rainforest in Indonesia.

You must use evidence from Figure 7c in your answer.

(4)

1 .....

.....

.....

.....

2 .....

.....

.....

.....

(e) Deciduous woodlands are common in temperate areas.

State **one** example of a service provided by deciduous woodland ecosystems.

(1)

.....

(f) Explain **one** way in which animals adapt to the environment in deciduous woodlands.

(2)

(g) Explain **one** approach to the sustainable management of deciduous woodlands.

(4)

In this question, four of the marks awarded will be for your spelling, punctuation, grammar and for your use of specialist terminology.

(h) Assess the view that climate is the most important reason why tropical rainforests have higher biodiversity than deciduous woodlands.

(8)

(Spelling, punctuation, grammar and use of specialist terminology = 4 marks)
(Total for Question 7 = 34 marks)

TOTAL FOR SECTION C = 34 MARKS
TOTAL FOR PAPER = 94 MARKS

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Pearson Edexcel Level 1/Level 2 GCSE (9–1)

Monday 22 May 2023

Afternoon (Time: 1 hour 30 minutes)

Paper reference **1GA0/01**

Geography A

PAPER 1: The Physical Environment

Resource Booklet

Do not return this Booklet with the question paper.

Turn over ▶

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Pearson

SECTION A

Key

- Coniferous wood
- Non-coniferous wood
- Mixed wood
- Orchard

Figure 1

A lowland landscape in Oxfordshire, England

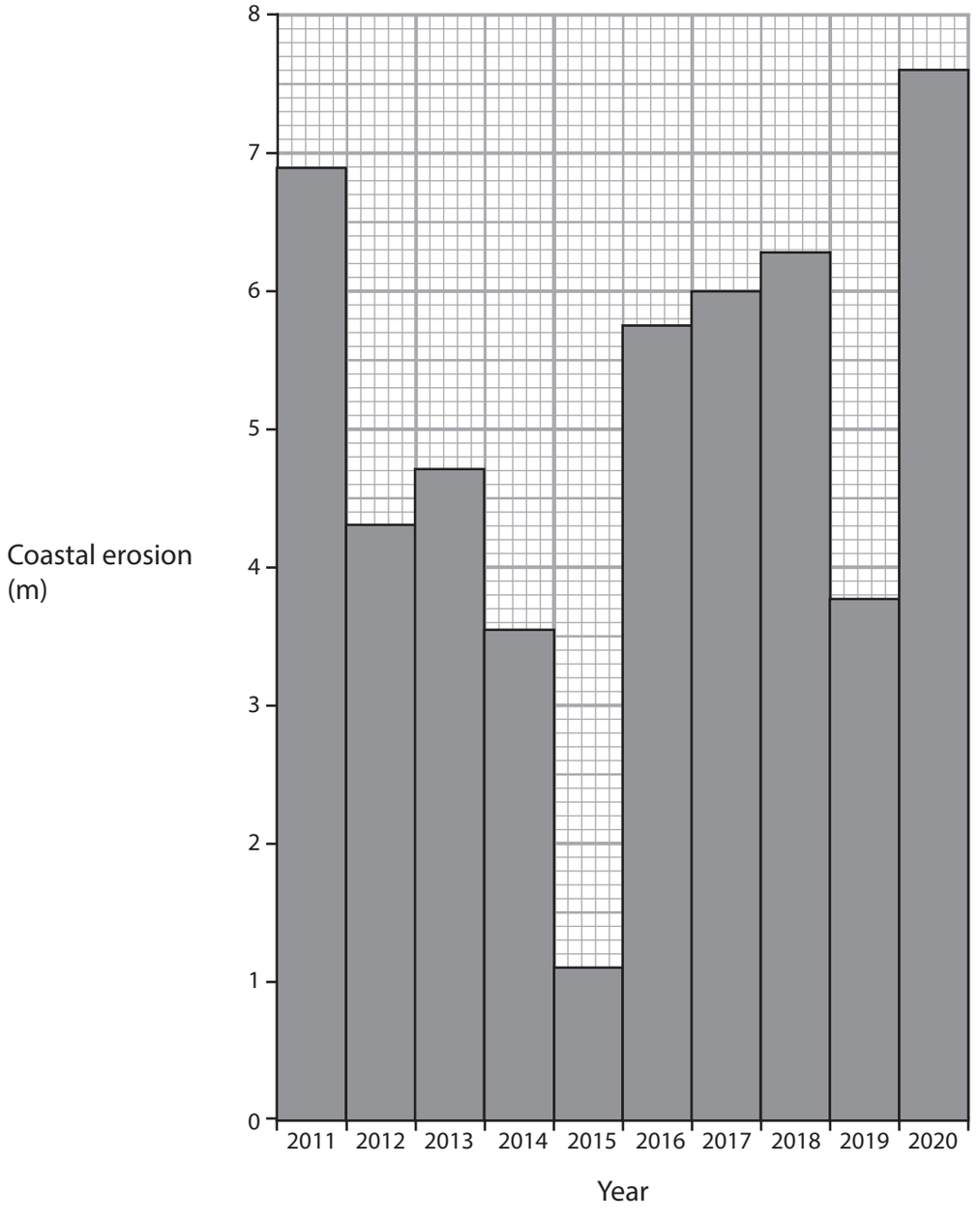


Figure 2a

Annual amount of coastal erosion at Withernsea, England

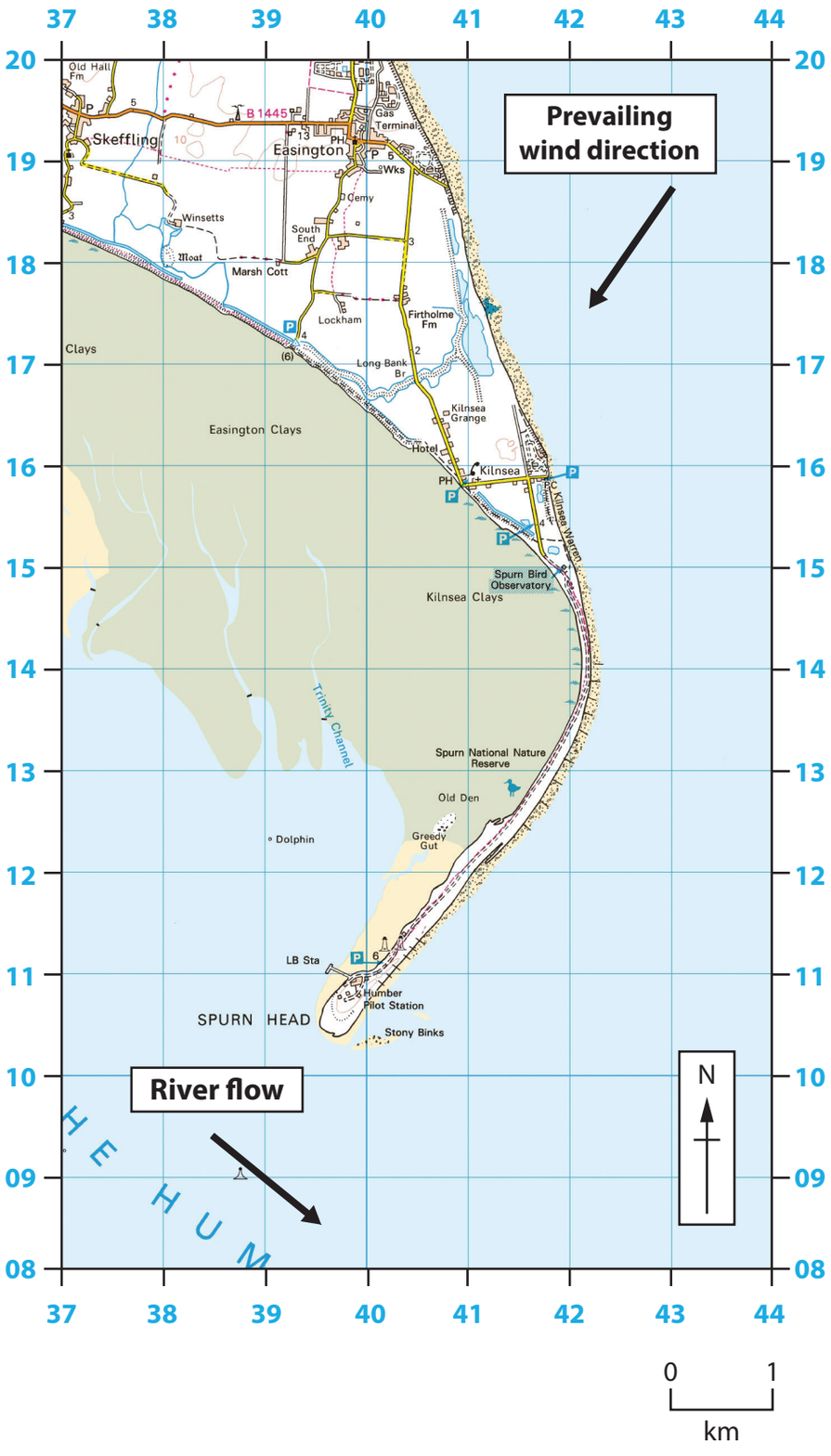
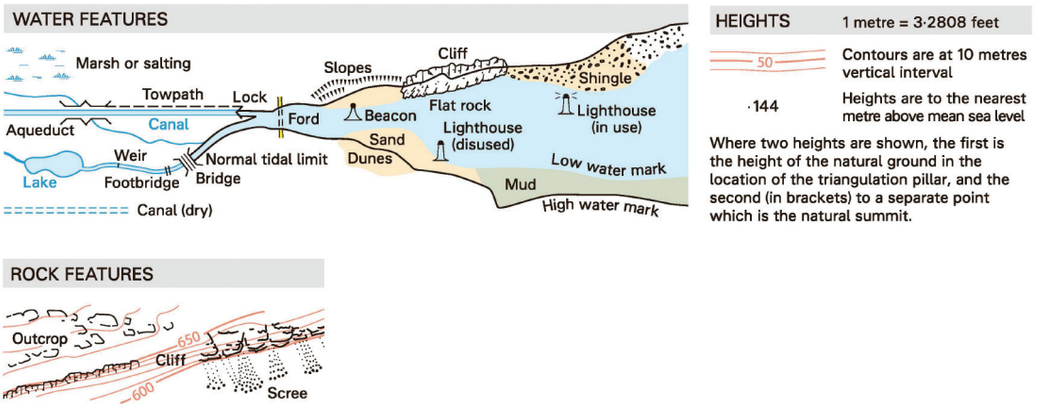


Figure 2b

A spit in East Yorkshire, England

Key for Figure 2b



Spurn Head is a spit located in the North Sea.

It has been formed by physical processes such as longshore drift.

A saltmarsh has developed behind the spit.

In the past groynes have been used to maintain the position of the spit.

Figure 2c

An aerial photograph of a spit in East Yorkshire, England

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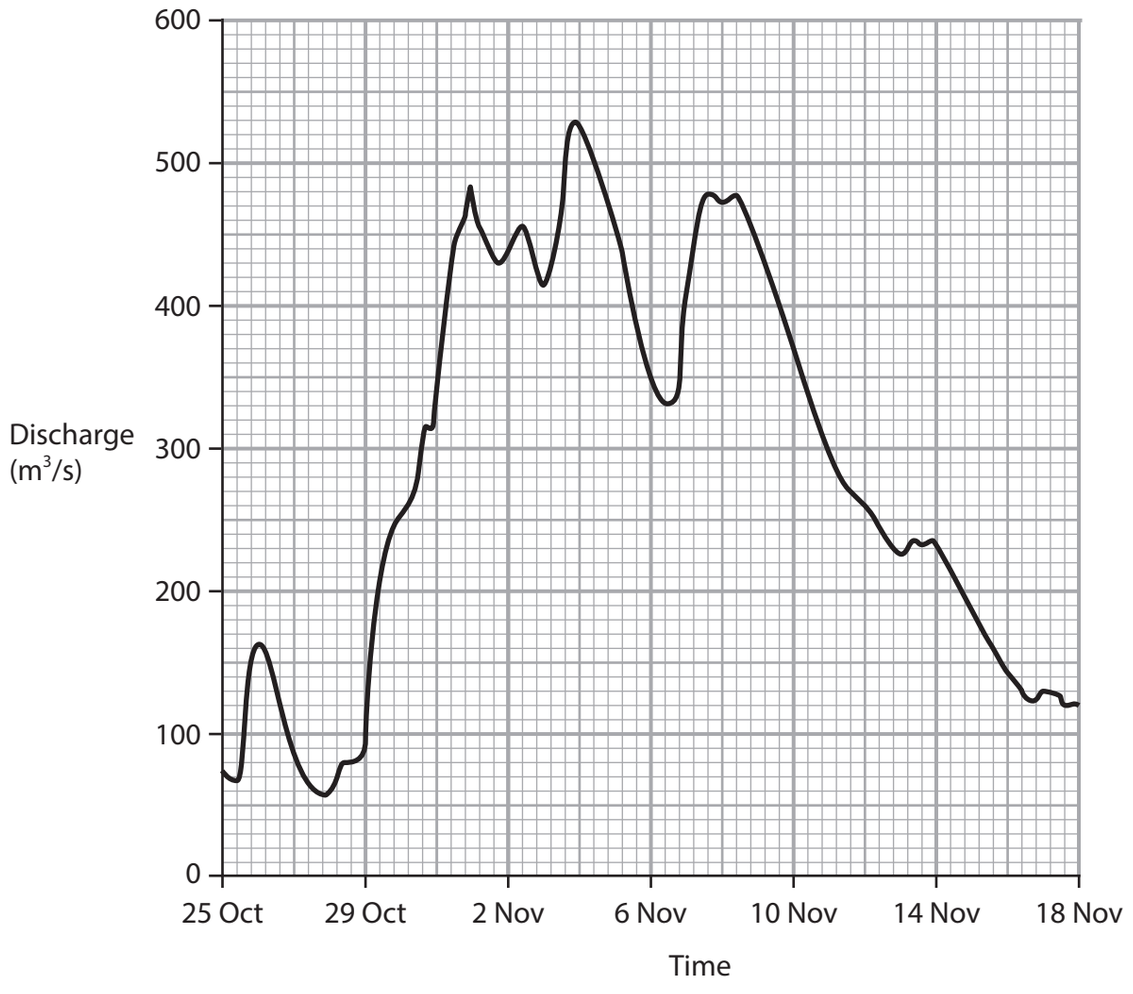

Figure 3a

Discharge for the River Ouse, England

Key

TOURIST INFORMATION	
	Camp site / caravan site
	Garden / aboretum
	Golf course or links
	Information centre (all year / seasonal)
	Nature reserve
P P&R P&R	Parking, Park and ride (all year / seasonal)

HEIGHTS	1 metre = 3·2808 feet
50	Contours are at 10 metres vertical interval
·144	Heights are to the nearest metre above mean sea level

Where two heights are shown, the first is the height of the natural ground in the location of the triangulation pillar, and the second (in brackets) to a separate point which is the natural summit.

General features

Coniferous wood

Non-coniferous wood

Figure 3b

Haweswater reservoir in the Lake District, England

There was a natural lake that was made larger by the dam.

The dam, which was completed in 1935, is 27.5m high.

The village of Mardale Green was flooded as the reservoir filled.

A stream flows out from the base of the dam.

Figure 3c

Haweswater dam in the Lake District, England

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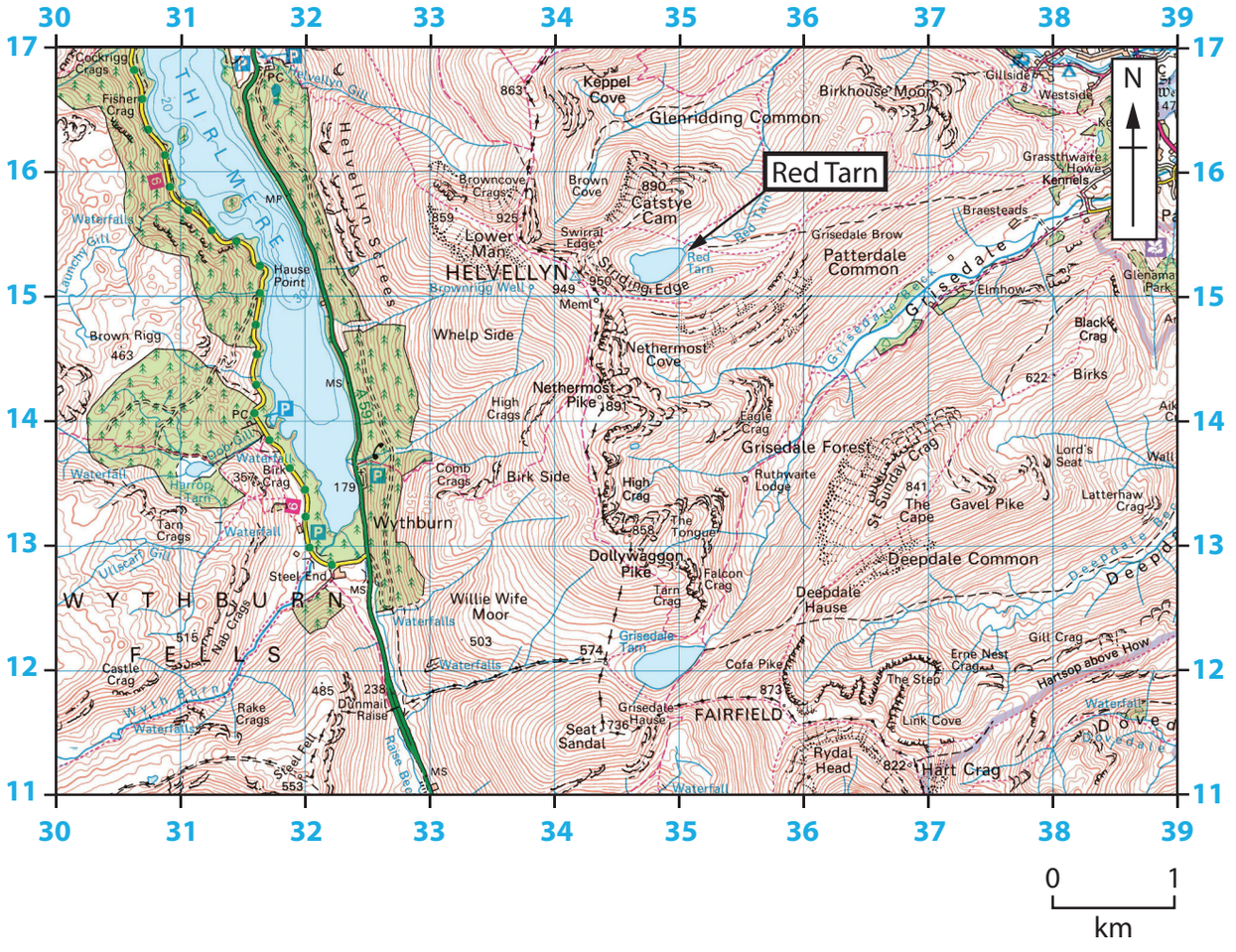

Key

HEIGHTS	1 metre = 3·2808 feet
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ROCK FEATURES

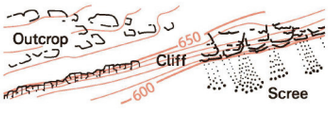
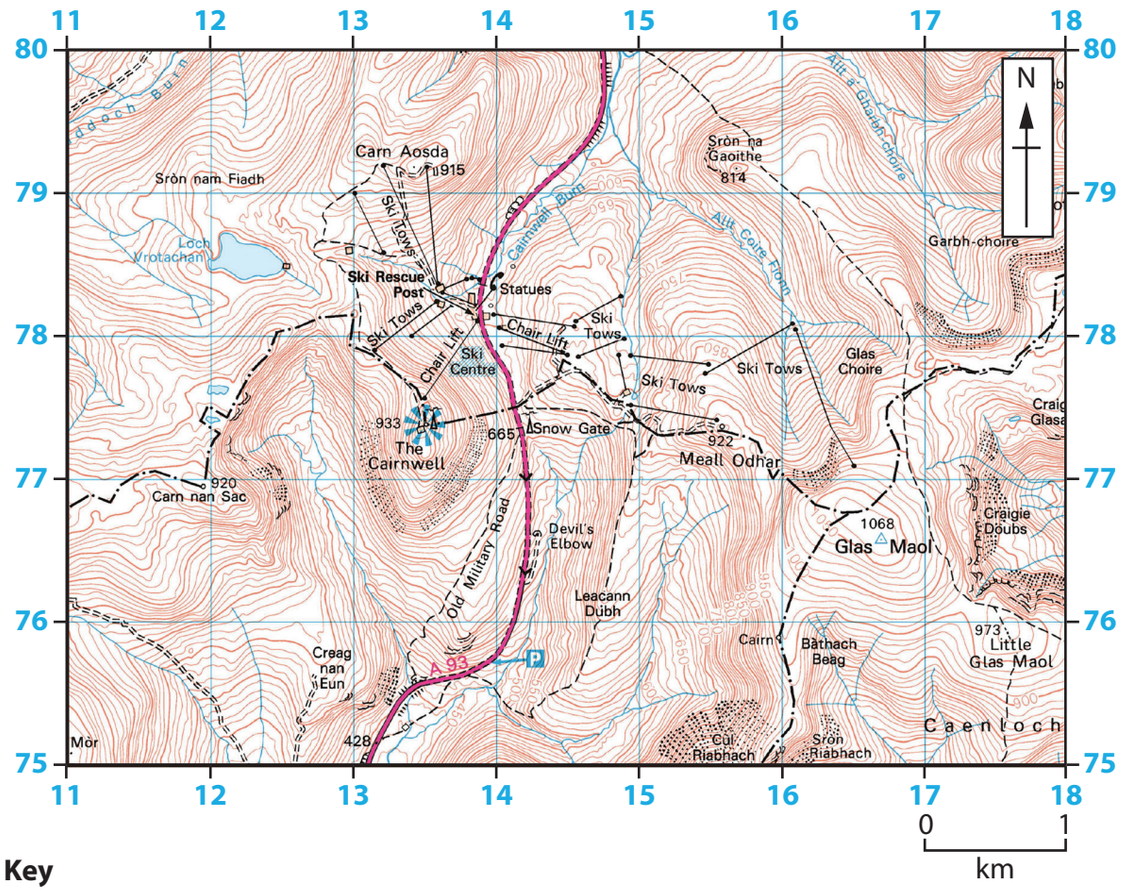


Figure 4a

A glaciated upland landscape in the Lake District, England



Key

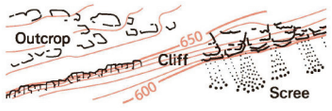
HEIGHTS — 1 metre = 3·2808 feet

50 — Contours are at 10 metres vertical interval

·144 — Heights are to the nearest metre above mean sea level

Where two heights are shown, the first is the height of the natural ground in the location of the triangulation pillar, and the second (in brackets) to a separate point which is the natural summit.

ROCK FEATURES



TOURIST INFORMATION

- Camp site / caravan site
- Garden / aboretum
- Golf course or links
- Information centre (all year / seasonal)
- Nature reserve
- Parking, Park and ride (all year / seasonal) — P, P&R, P&R
- Picnic site
- Recreation / leisure / sports centre
- Selected places of tourist interest
- Phone, public / emergency
- Viewpoint

ROADS AND PATHS — Not necessarily rights of way

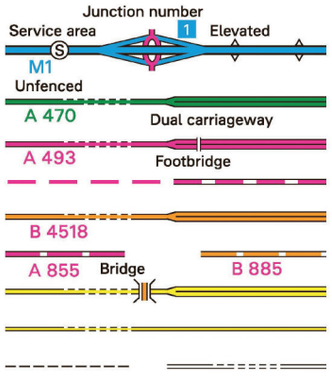


Figure 4b

Glenshee ski resort in the Cairngorms, Scotland

The ski area covers 8.1 km^2.

There are plans to build three double zip wires.

More than 1000 people can visit at busy winter weekends.

There are snowmaking cannons at the resort.

Figure 4c

A view of Glenshee ski resort in the Cairngorms, Scotland

SECTION B

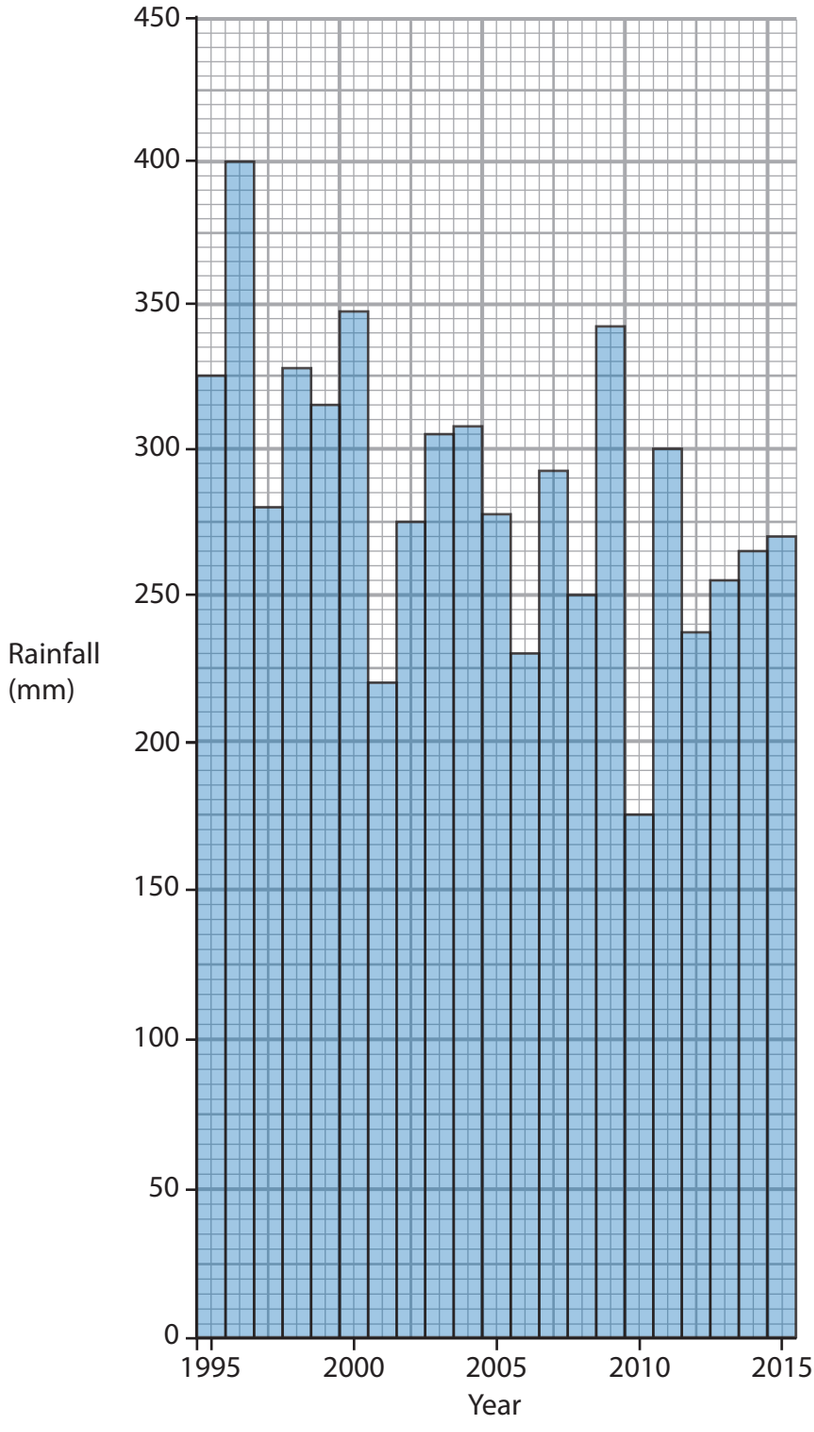
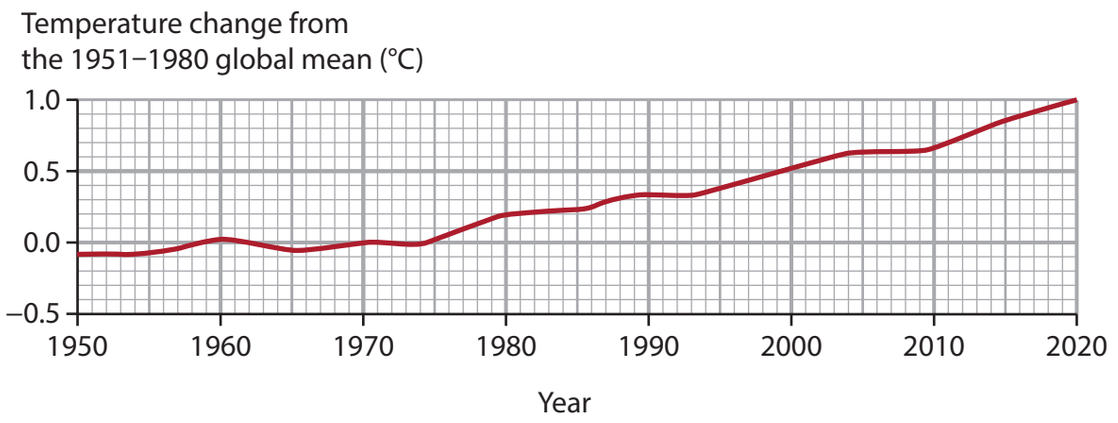


Figure 5a

Winter rainfall in South western Australia, 1995–2015



Key

Change in global temperature compared to the 1951–1980 mean

Figure 6a

Changes in global temperature

Tropical cyclone	Month	Deaths
Idai	March	1303
Kenneth	April	50
Lekima	August	91
Dorian	September	63
Nakri	November	22
Bulbul	November	38
Phanfone	December	50

Figure 6b

Tropical cyclones with the highest number of deaths in 2019

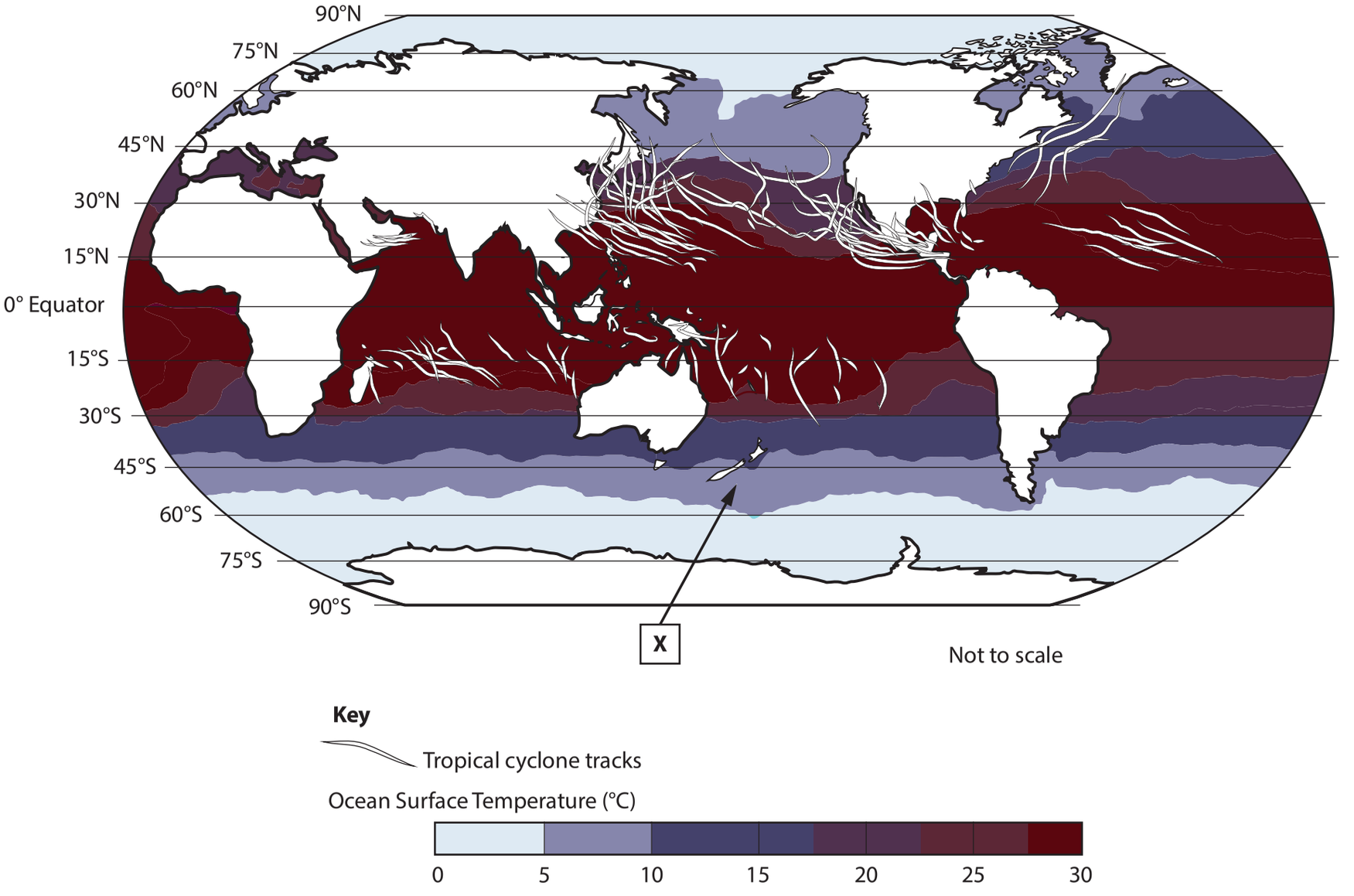


Figure 6c

Global ocean surface temperatures and tropical cyclone tracks

SECTION C

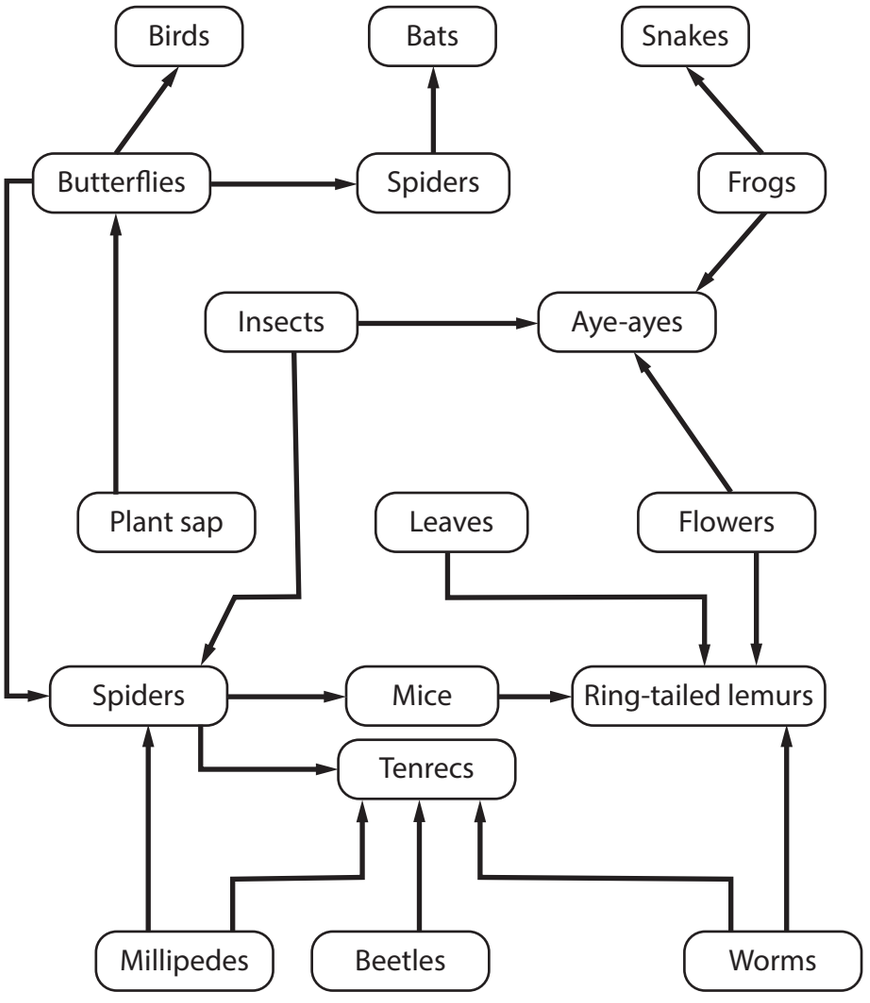


Figure 7b

A food web for an area of tropical rainforest

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Acknowledgements

Pearson Education Ltd. gratefully acknowledges all the following sources used in the preparation of this paper:

Figure 1 Ordnance Survey
Figure 2a https://urbanrim.org.uk/coastal%20erosion.htm#data
Figure 2b © Mr. Nut/Alamy Stock Photo
Figure 2c Ordnance Survey
Figure 3a https://curriculum-press.co.uk/
Figure 3b Ordnance Survey
Figure 3c © STUART WALKER/Alamy Stock Photo
Figure 4a Ordnance Survey
Figure 4b Ordnance Survey
Figure 4c © StockShot/Alamy Stock Photo
Figure 5a Australian Bureau of Meteorology
Figure 6c https://www.ncdc.noaa.gov/cdr/oceanic/sea-surface-temperature-pathfinder