

Paper Reference 4GE1/01
Pearson Edexcel
International GCSE (9–1)

Geography

PAPER 1: Physical geography

Resource Book

Do not return this Resource Book with the Question Paper.

Contents

For some Figures there is a modified colour and modified black and white diagram. You may use whichever version is easier for you to view. Some diagrams are only in modified colour but you are then provided with a description of the diagram.

Page

4	Figure 1a – Diagram 1
5	Figure 1a – Diagram 2
6	Figure 1b
7	Figure 1c – Information
8	Figure 1c – Colour
9	Figure 1c – Black and White
10	Figure 2a
11	Figure 2b
12	Figure 2c – Information
13	Figure 2c
14	Figure 3a
15	Figure 3b – Colour
16	Figure 3b – Front and Top View – Colour
17	Figure 3b – Black and White
18	Figure 3b – Front and Top View – Black and White
19	Figure 3c – Information

(continued on the next page)

Contents continued.

20	Figure 3c – Colour
21	Figure 3c – Black and White
22	Figure 4a
23	Figure 4b
24	Figure 4b – Information
25	Figure 5a
26	Figure 5b
27	Figure 5b – Information
28	Figure 6a
29	Figure 6b
30	Figure 6b – Information

Figure 1a – Diagram 1
Two storm hydrographs

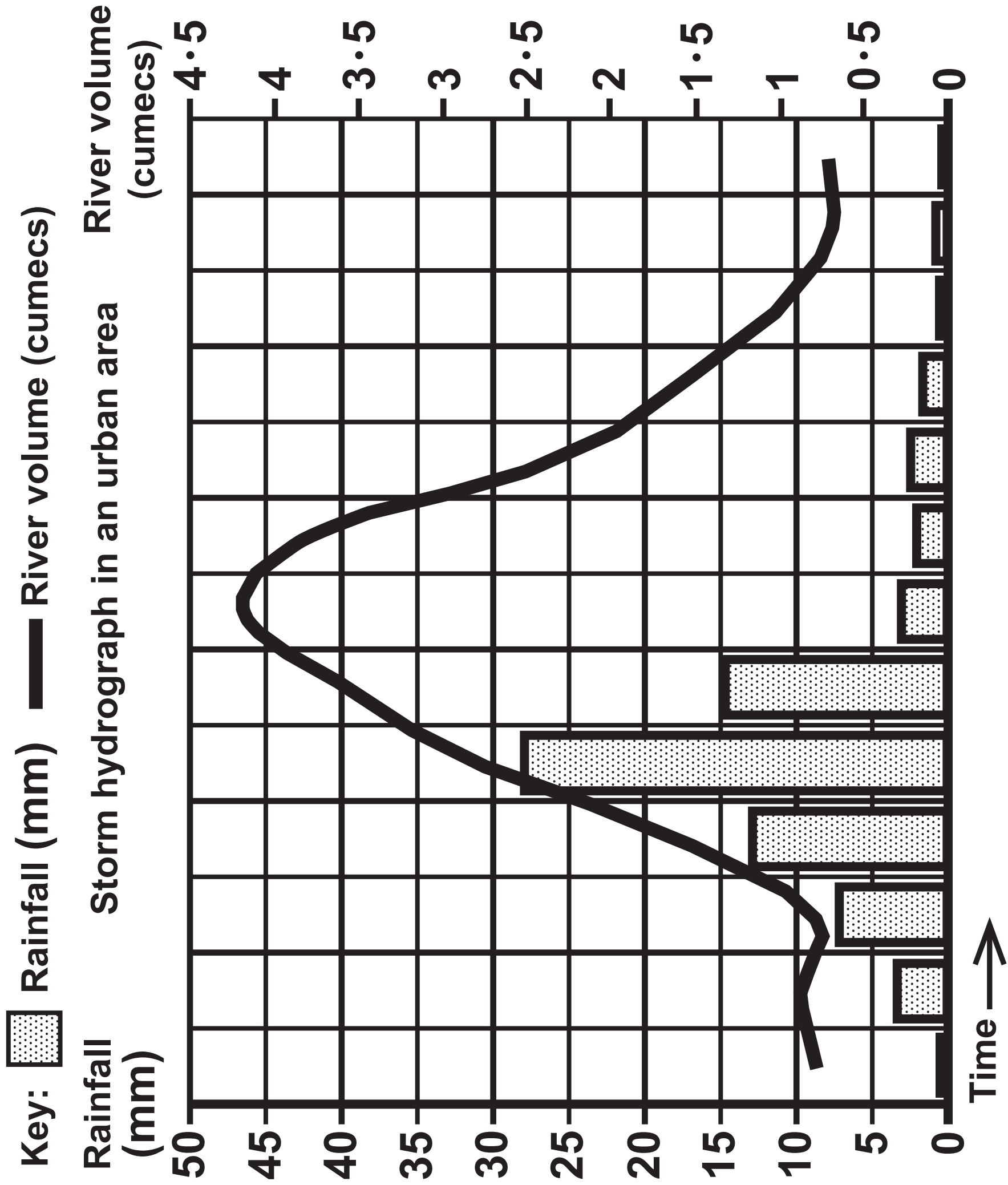


Figure 1a – Diagram 2

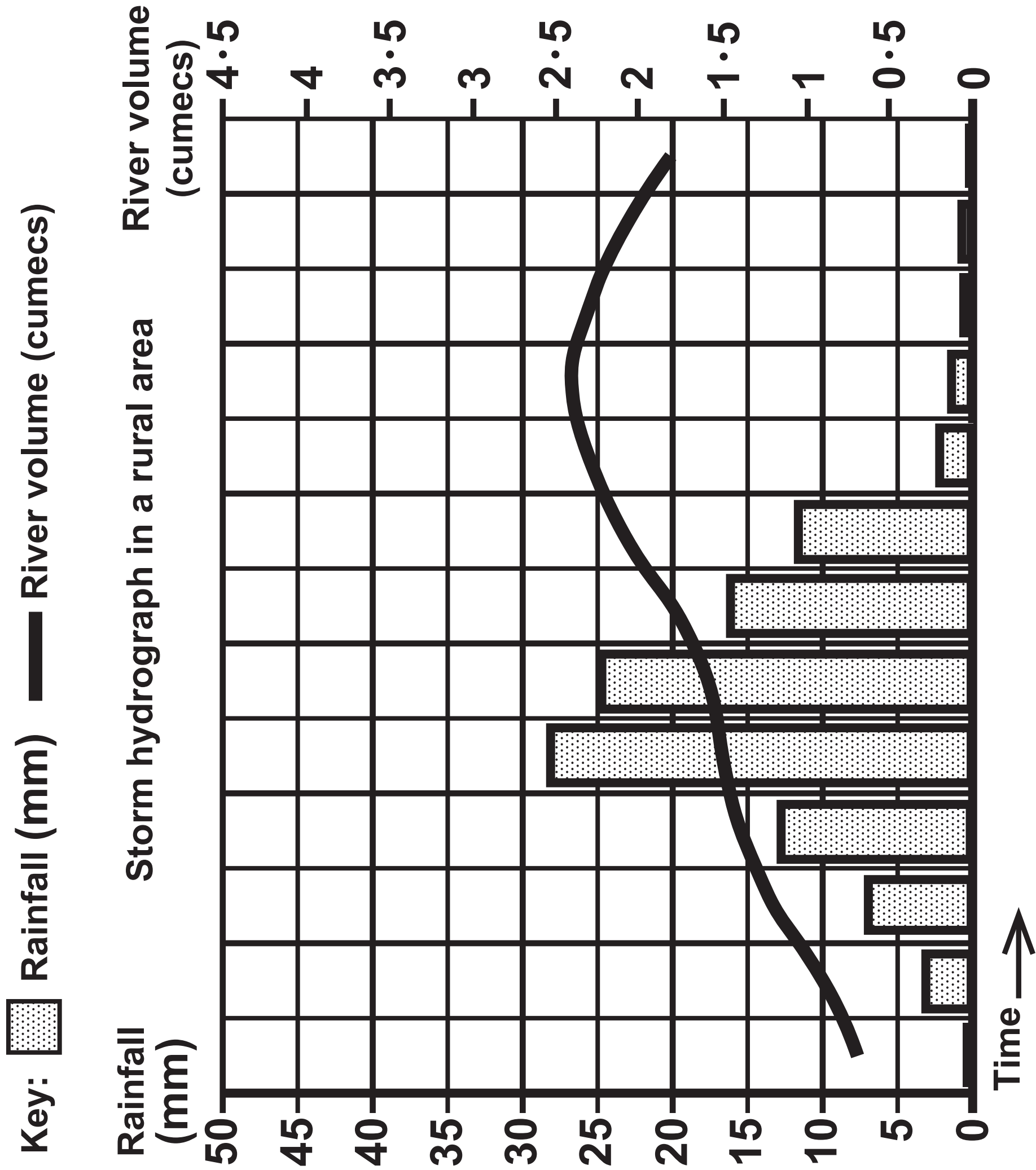
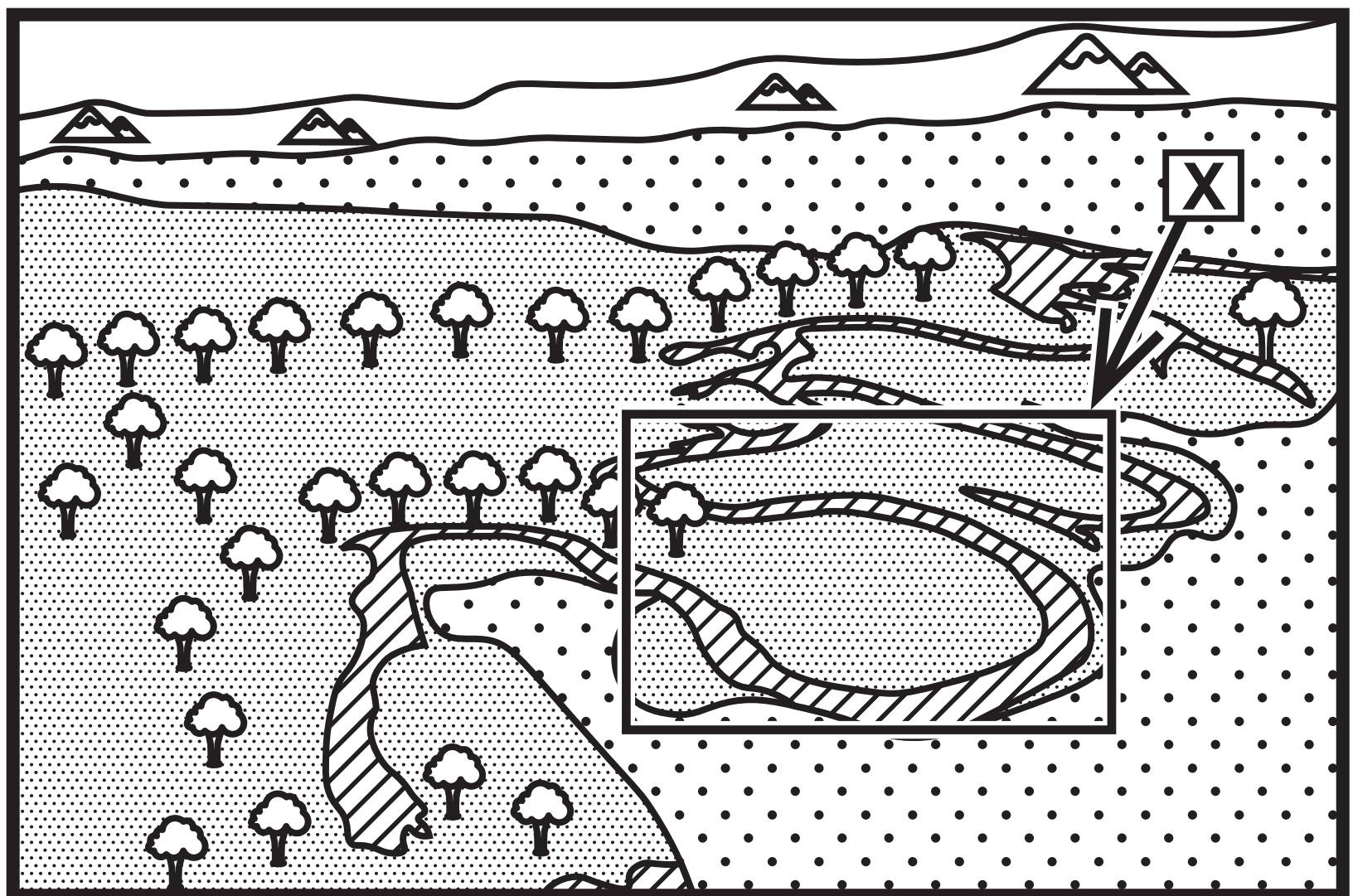


Figure 1b
Vltava River in the Czech Republic



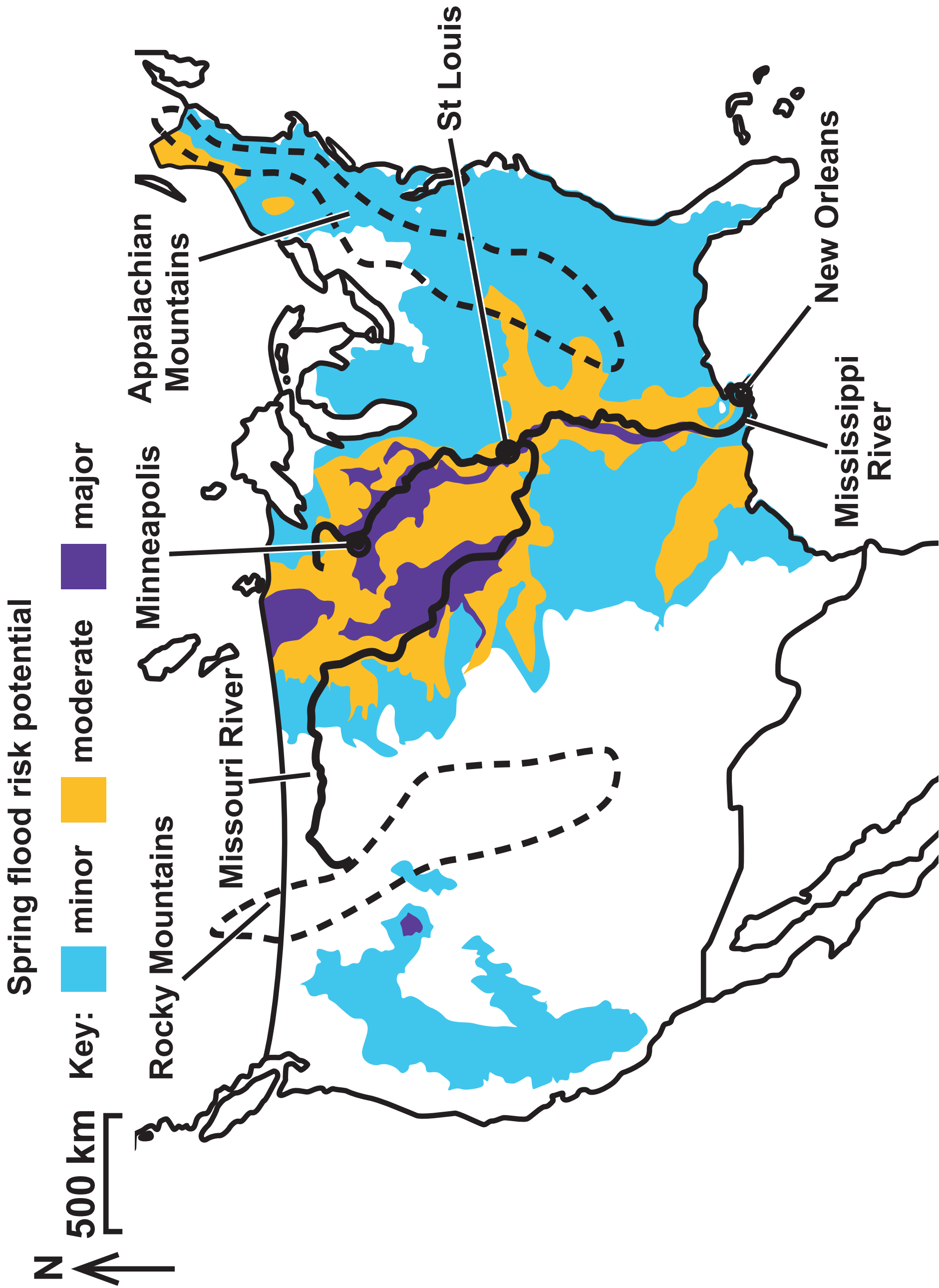
Key:  River  Grass  Forest
 Trees  Mountain

Figure 1c – Information

Risk of flood in the USA, spring 2019

- **Glacier and snowmelt from mountains occur in spring.**
- **2019 January to May experienced more rainfall than any other year on record.**
- **2019 Midwestern flood involving the Mississippi and Missouri rivers in the USA caused US\$2·9 billion property damage.**
- **Flooding worst along the Missouri River.**
- **At least 1 million acres of farmland was flooded.**

Figure 1c – Colour
Risk of flood in the USA, spring 2019



Risk of flood in the USA, spring 2019

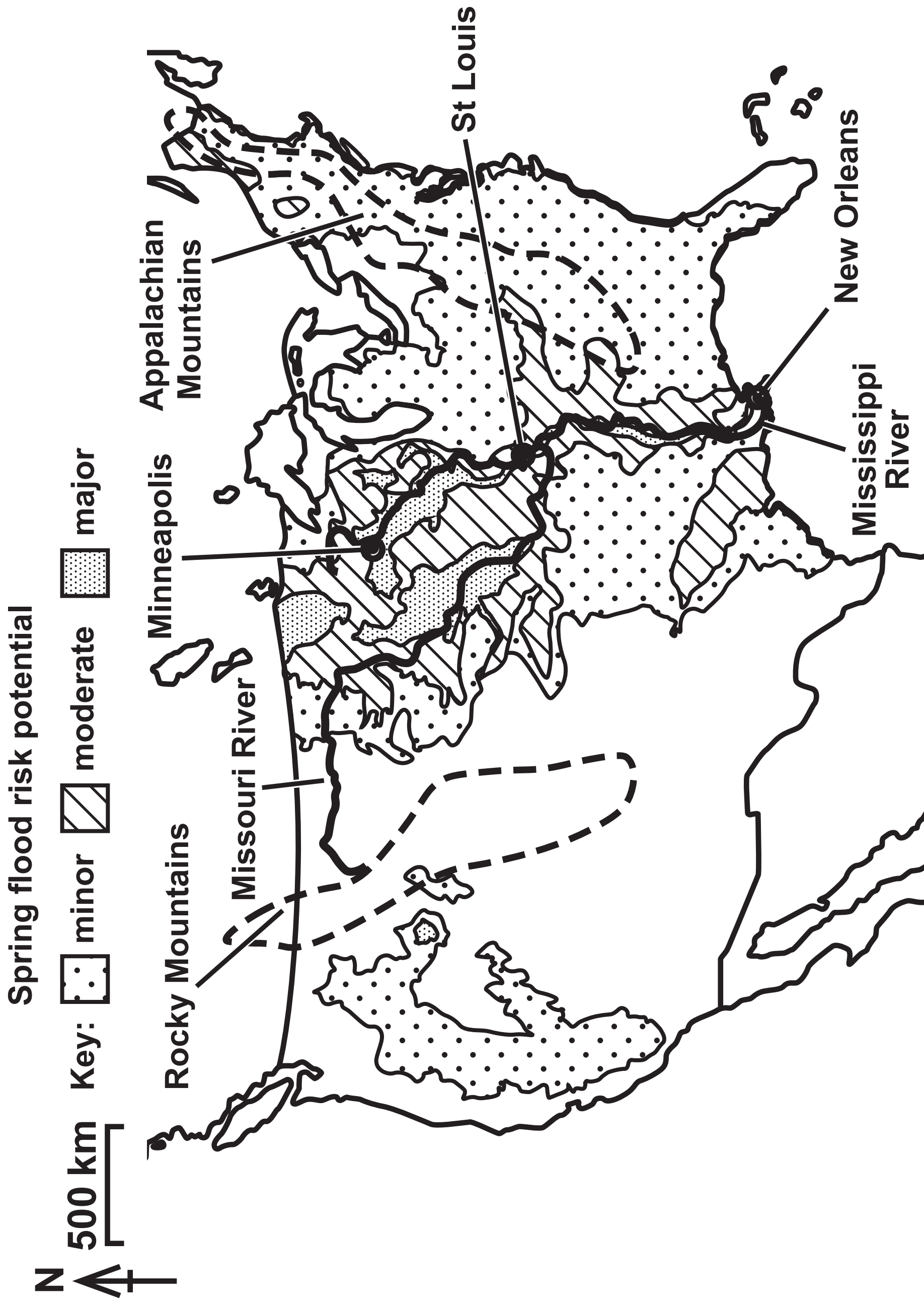


Figure 2a

Diagram of coastal landforms at a headland

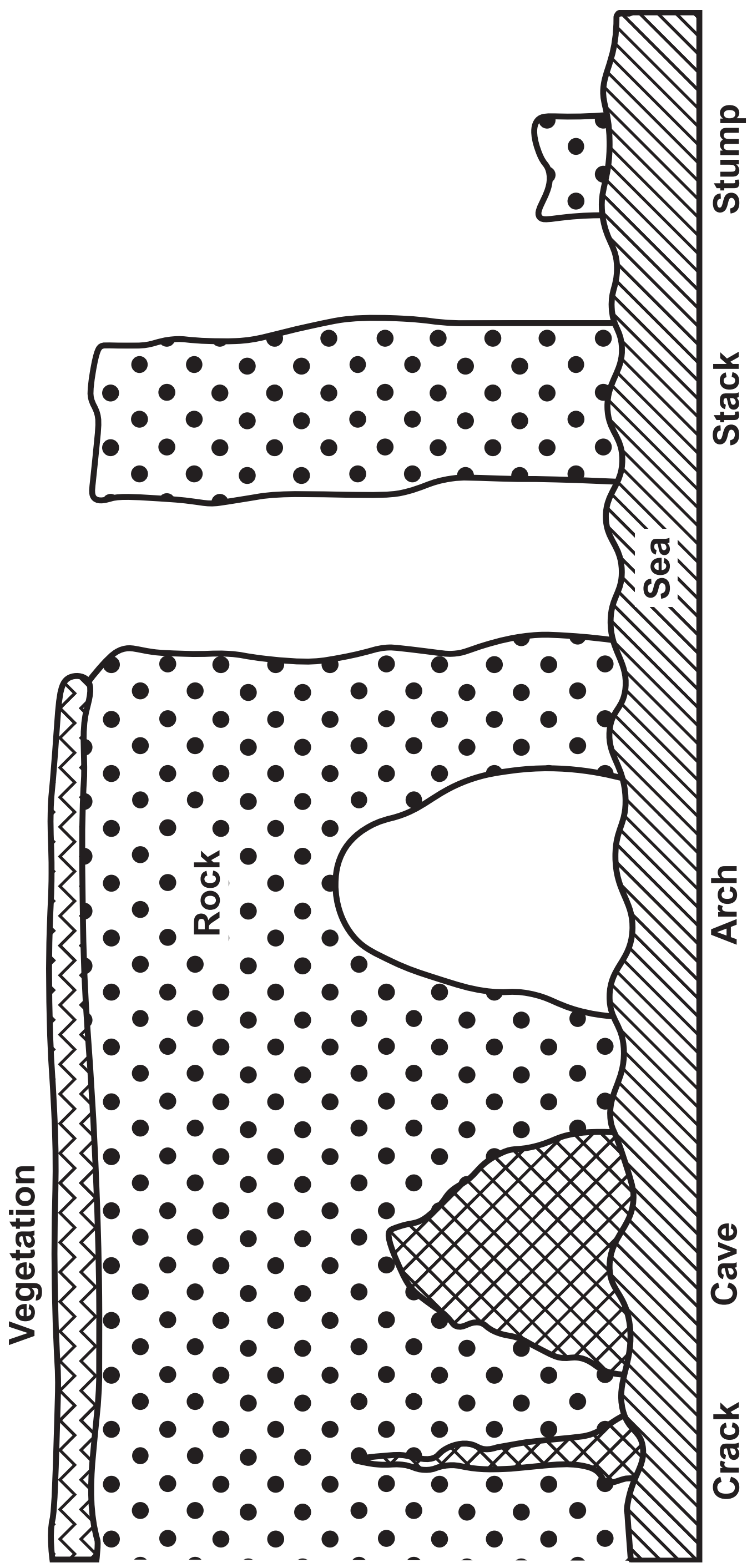
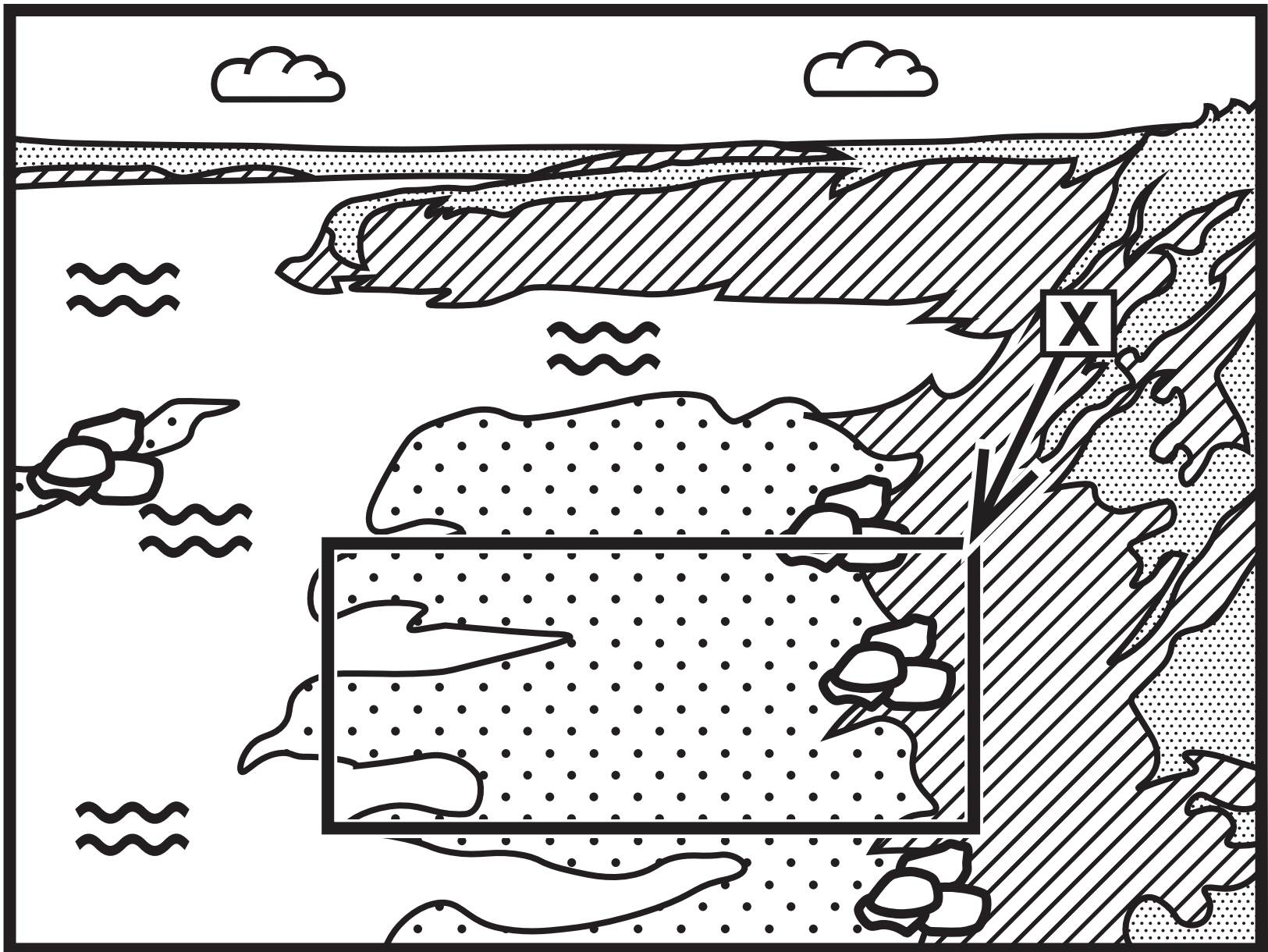
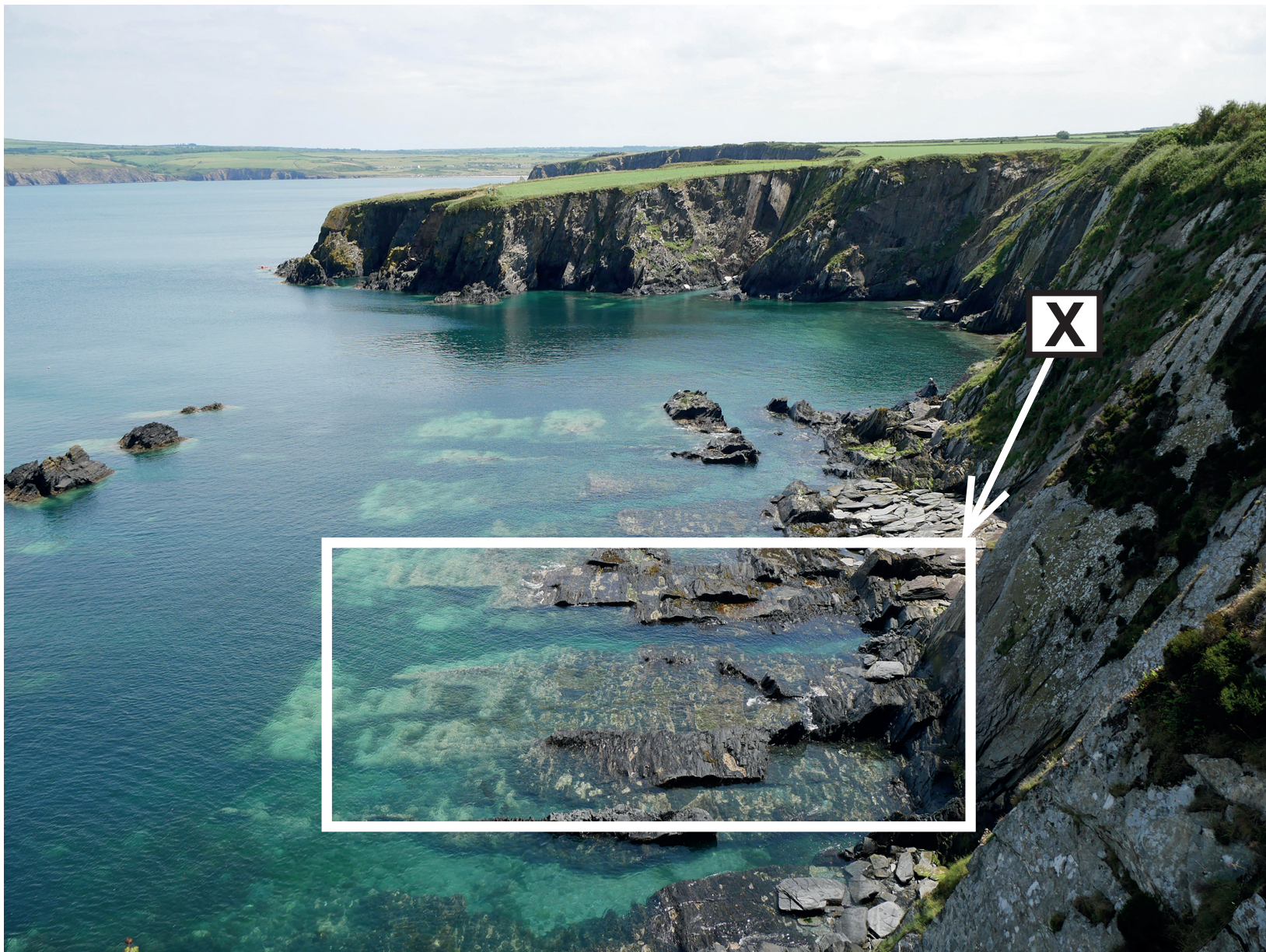


Figure 2b
Coastal landscape in Pembrokeshire, UK




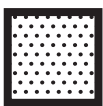




Key:  Cliff  Vegetation  Sea  Rock
 Water over rock  Clouds

Figure 2c – Information

Different views on coastal management strategies along the Dorset coast, UK

- **“We need the groynes and the sea walls; our coastline attracts over 25 million day visitors annually.”
Local business owner**
- **“We just need to let nature takes its course and conserve the land to protect species diversity.” Conservationist**
- **“We recognise the need to protect the natural beauty of our coastline, as well as protect the biodiversity, but we also have to protect our residents and their livelihood as tourism is a major employer.” Local councillor**
- **“The sea walls and groynes do ruin the scenery a bit. I can understand why they are there, but we prefer that the area is just left alone.” Tourist**

Figure 2c

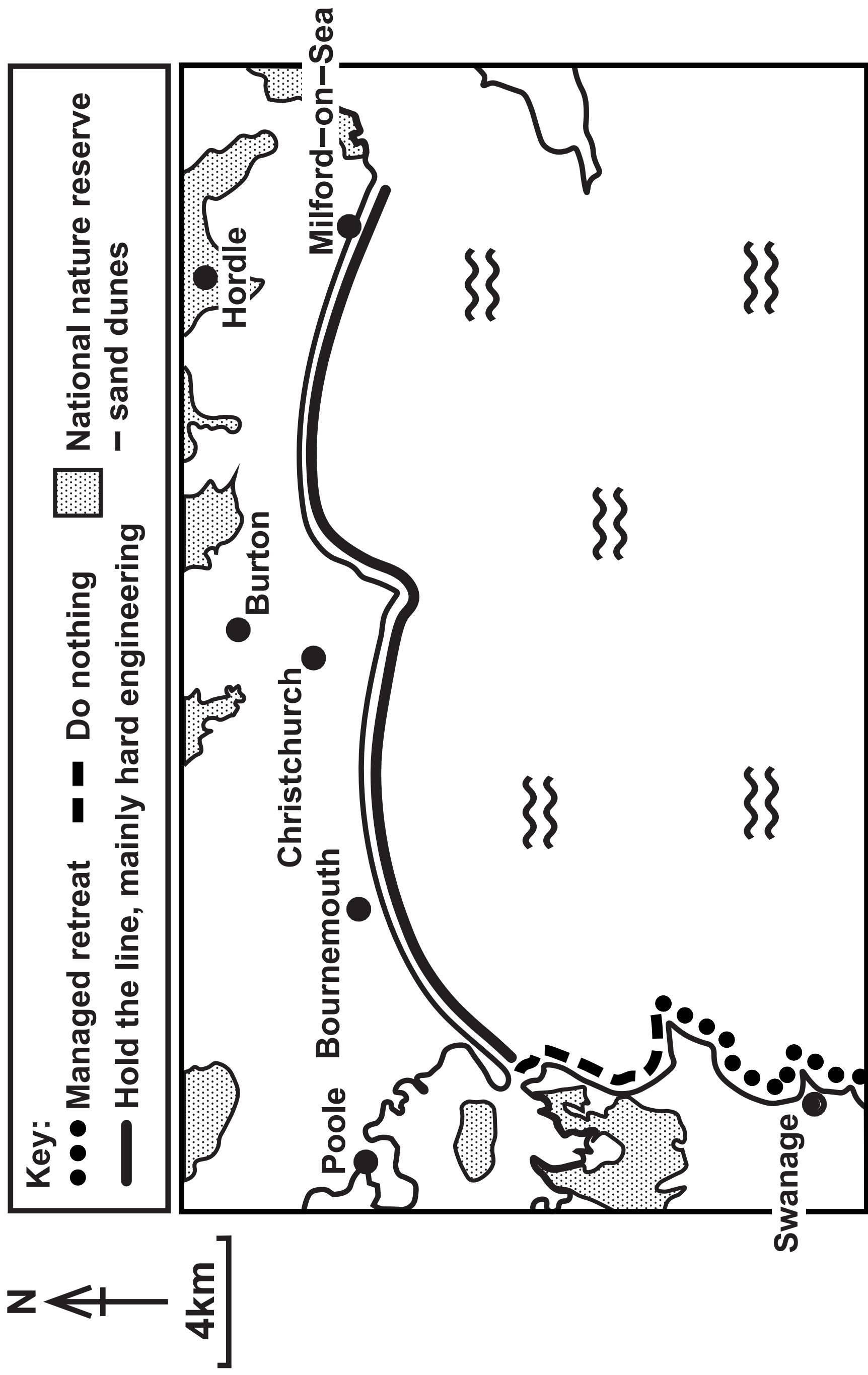


Figure 3a

Tectonic plate boundaries and megacity locations

Key:  Megacity
 Tectonic plate boundary
 Direction of plate movement

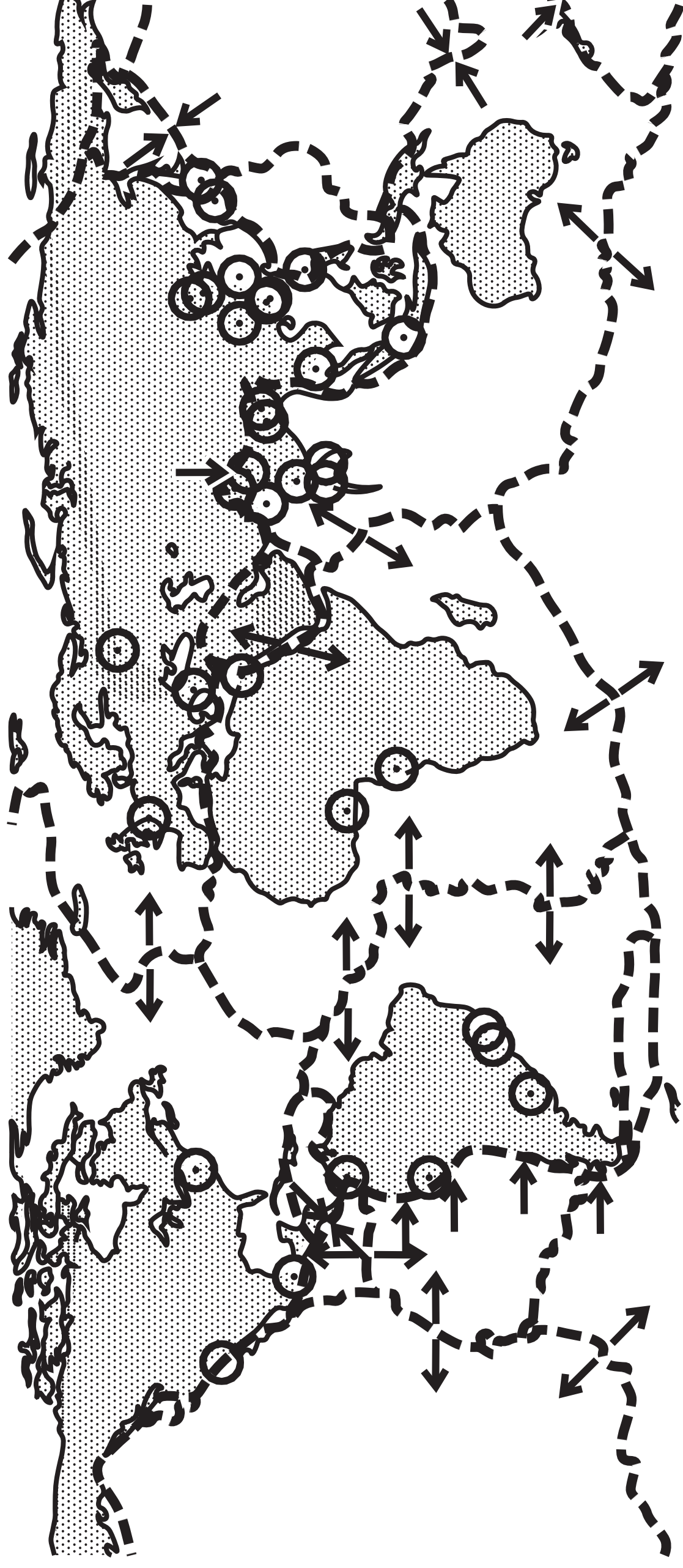


Figure 3b – Colour

Diagram of a plate boundary

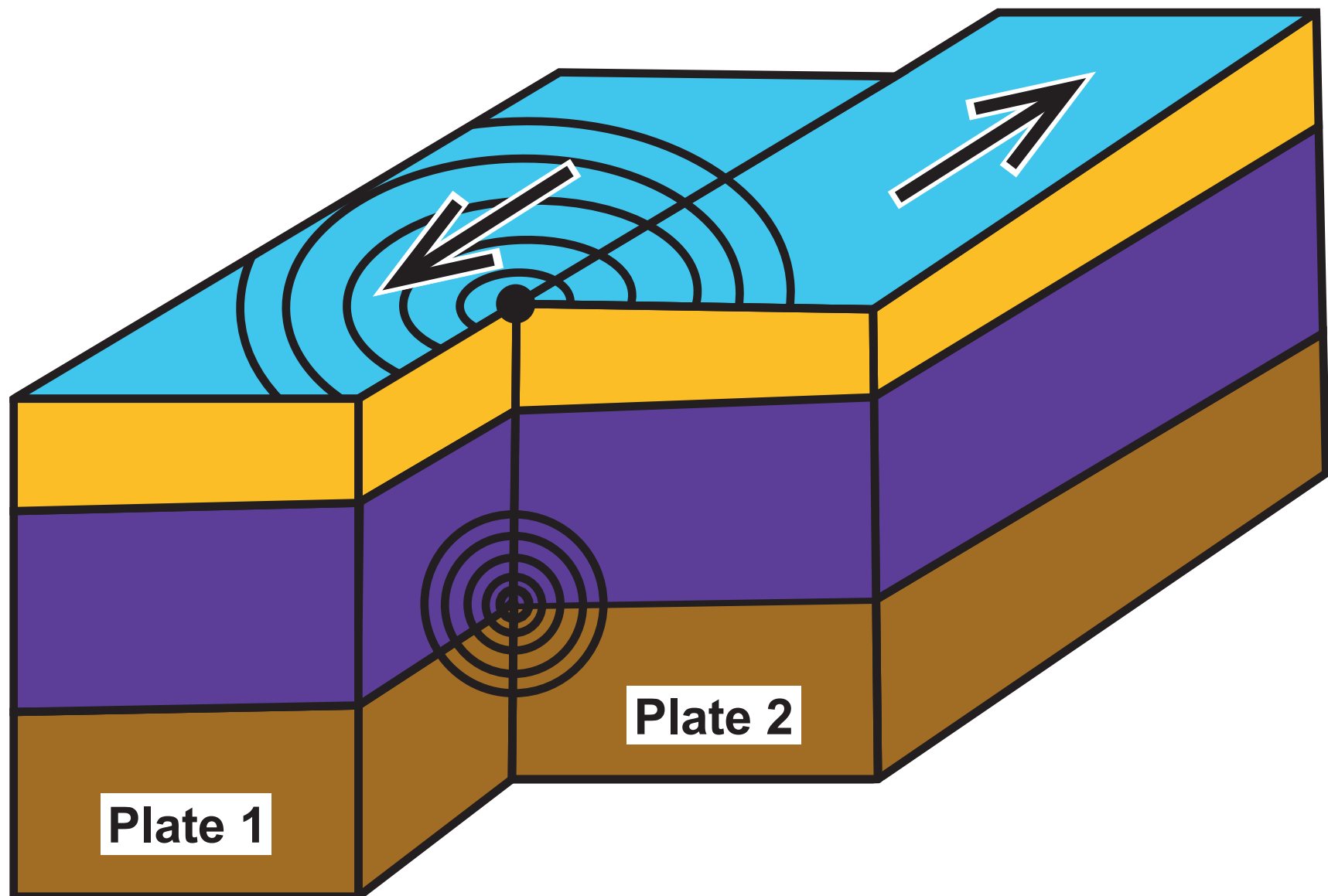
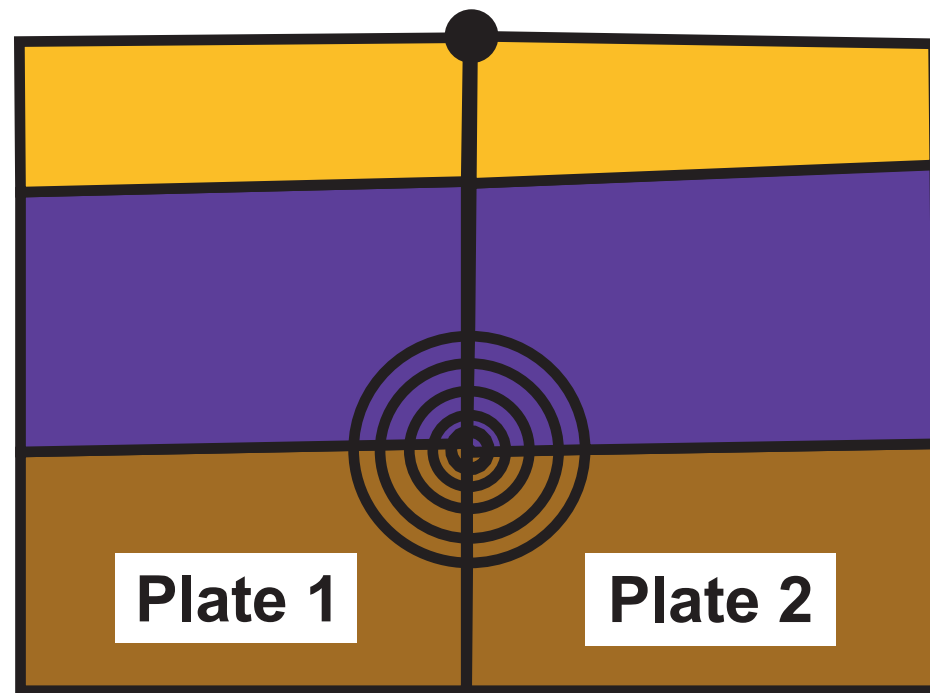


Figure 3b – Front and Top View – Colour

Diagram of a plate boundary

Front View



Top View

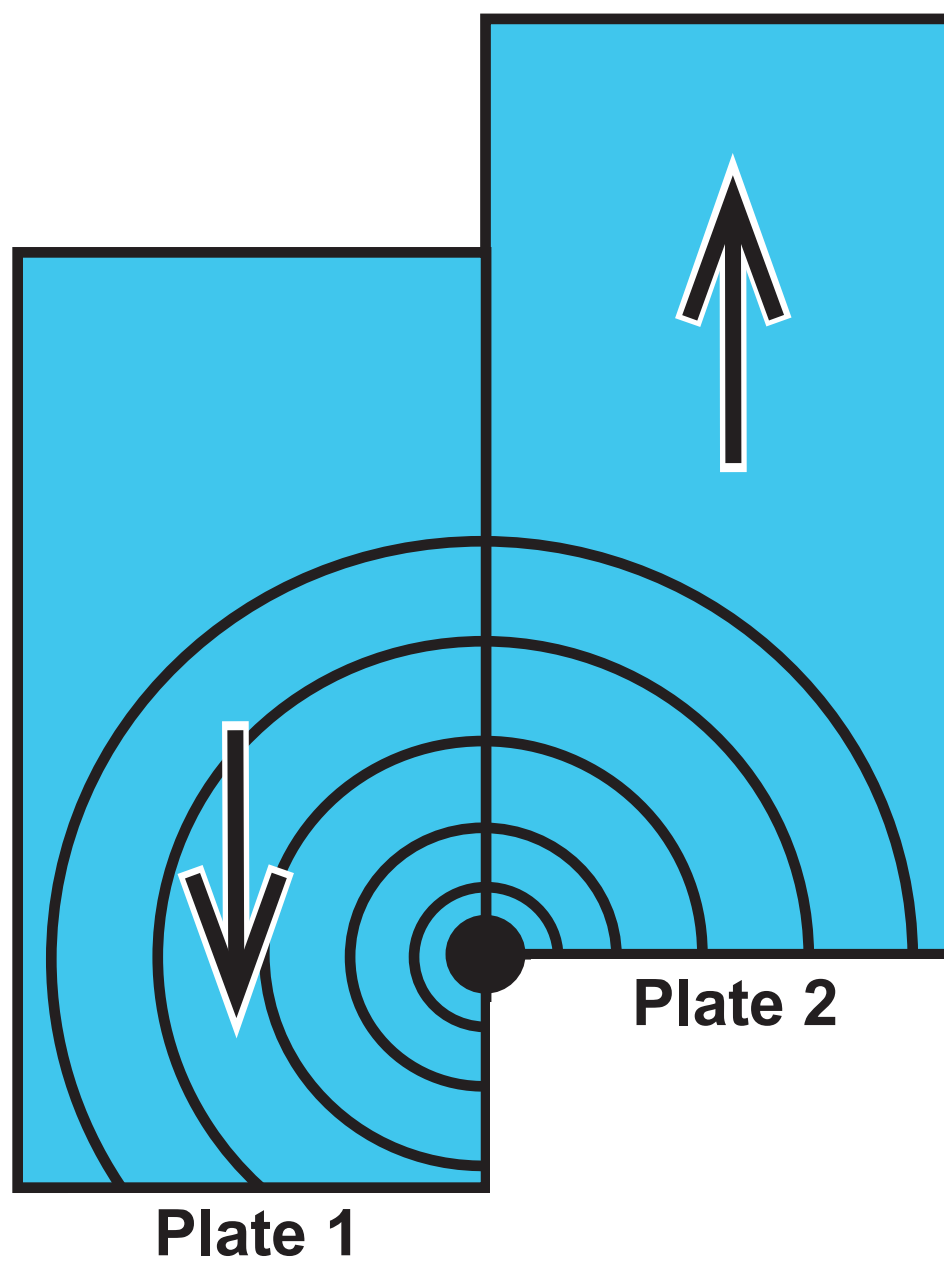


Figure 3b – Black and White

Diagram of a plate boundary

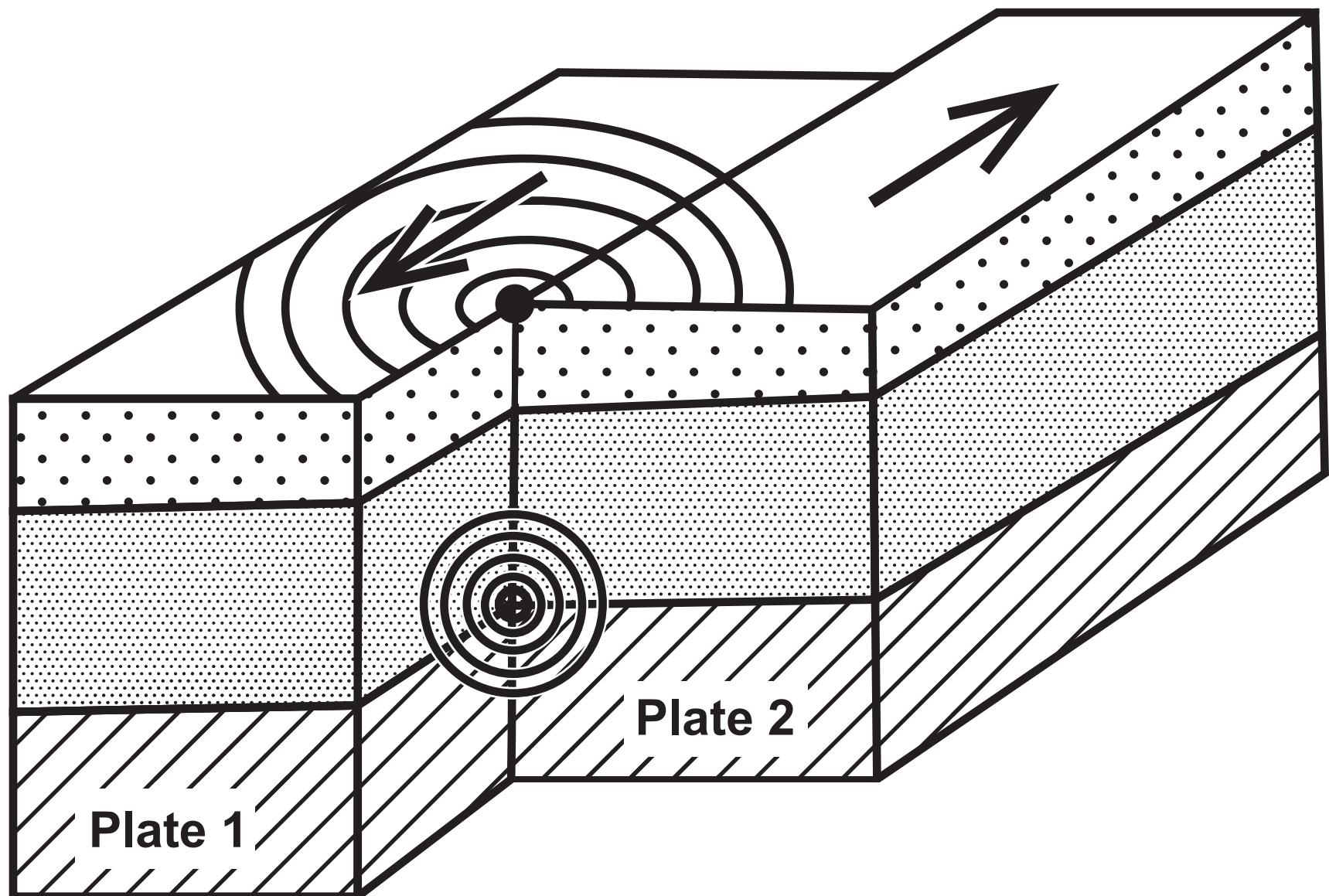
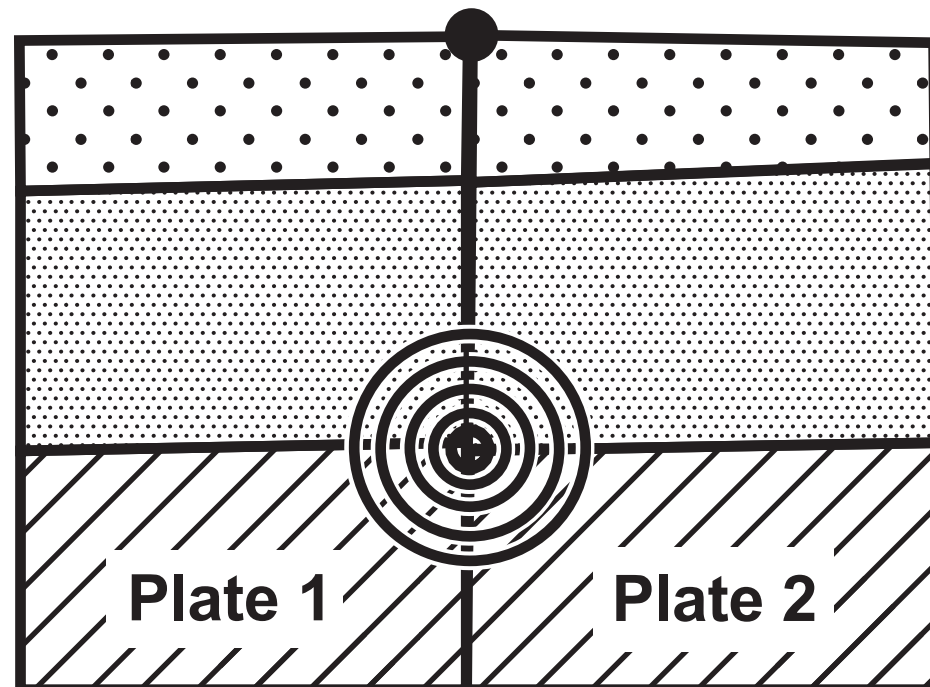


Figure 3b – Front and Top View – Black and White

Diagram of a plate boundary

Front View



Top View

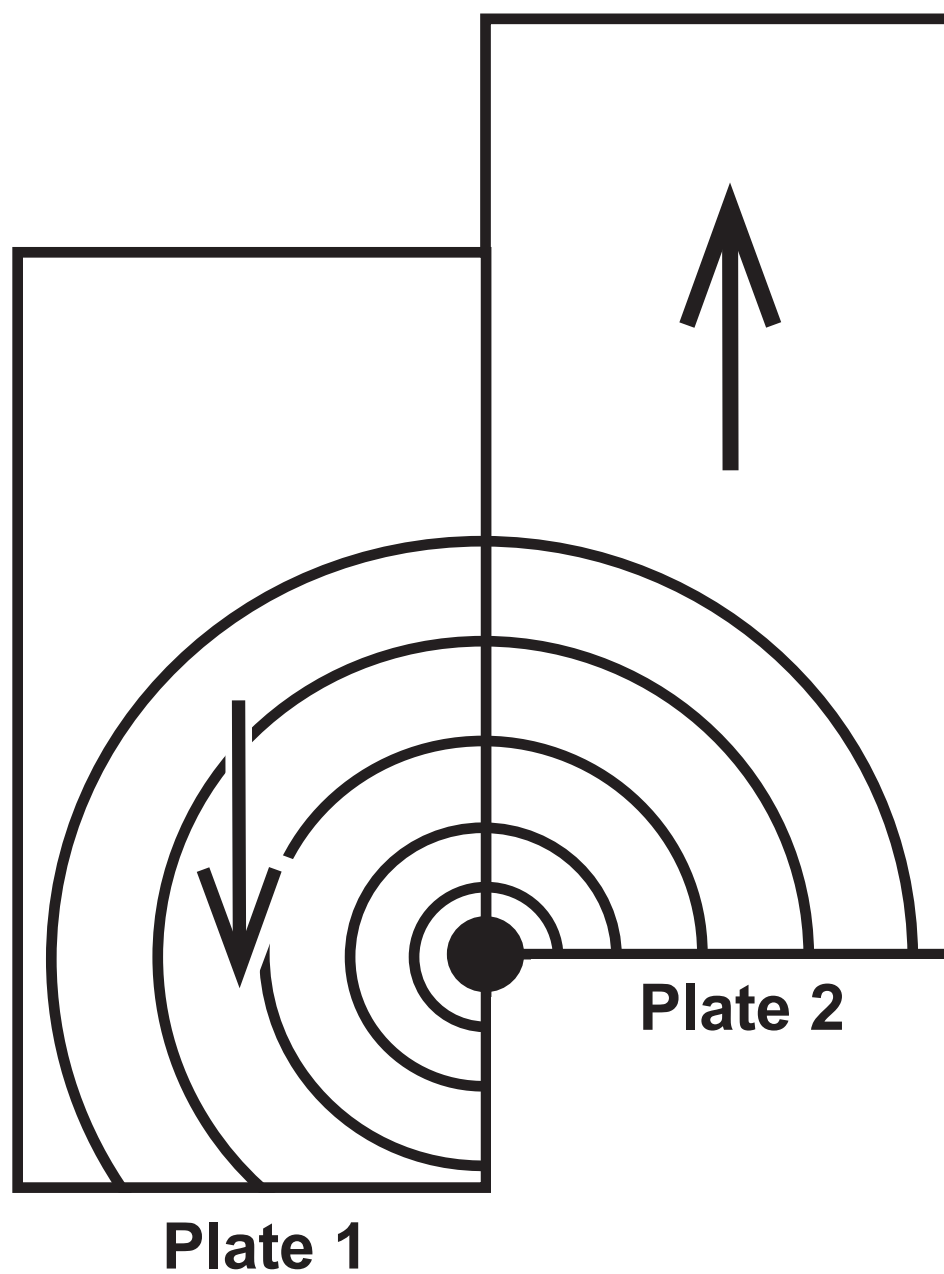


Figure 3c – Information

Details about an earthquake event in Haiti, a developing country in 2010

Population	9·95 million
Short-term Impacts	<ul style="list-style-type: none"> • 220,000 people killed • 300,000 people injured • Transport and communications disrupted, airport damaged • Shortage of aid supplies due to lack of preparation
Long-term Impacts	<ul style="list-style-type: none"> • 2 million people with poor access to food and water • 1·3 million people homeless • Outbreaks of cholera • Many businesses were destroyed particularly the clothing industry

Figure 3c – Colour

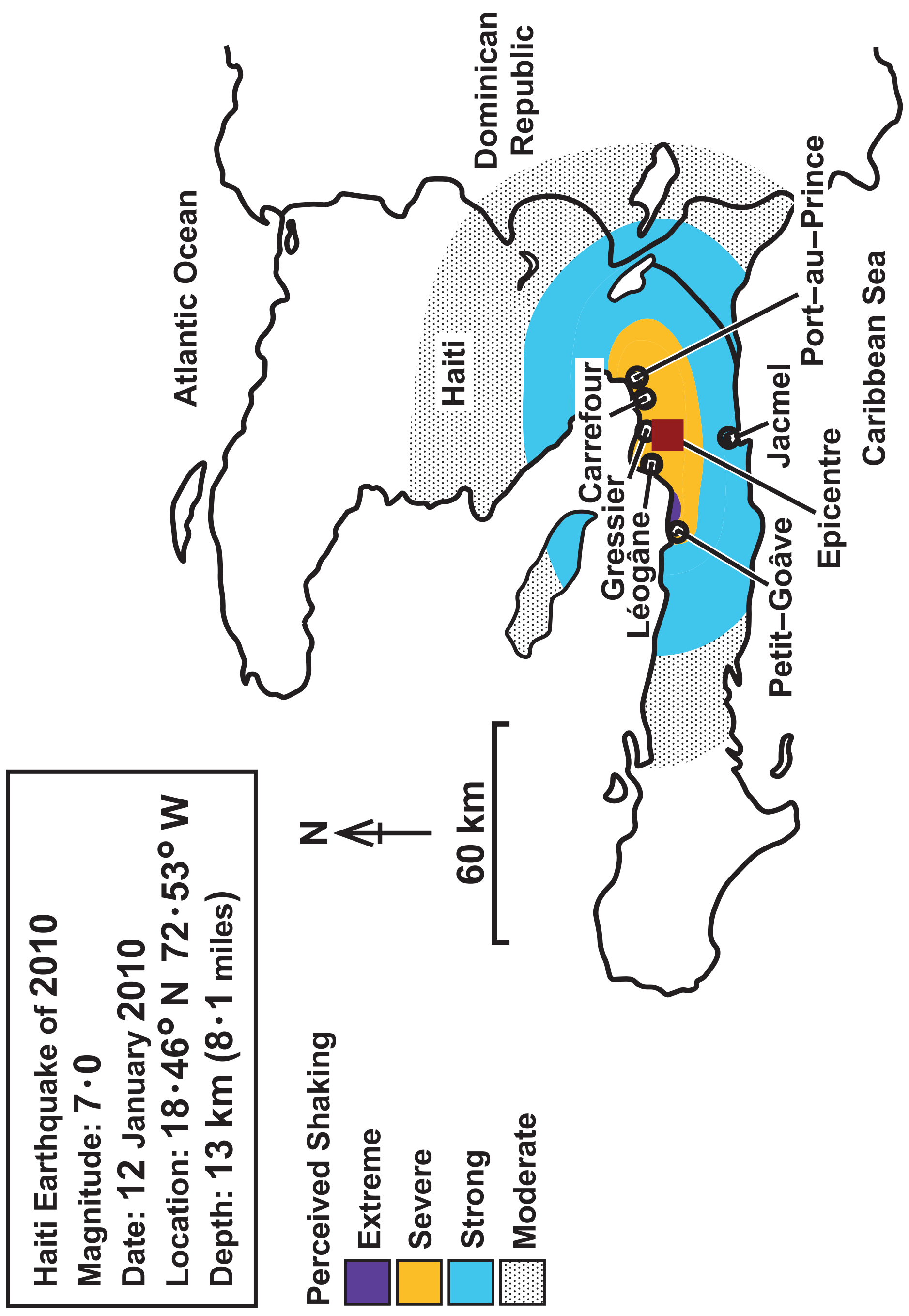


Figure 3c – Black and White

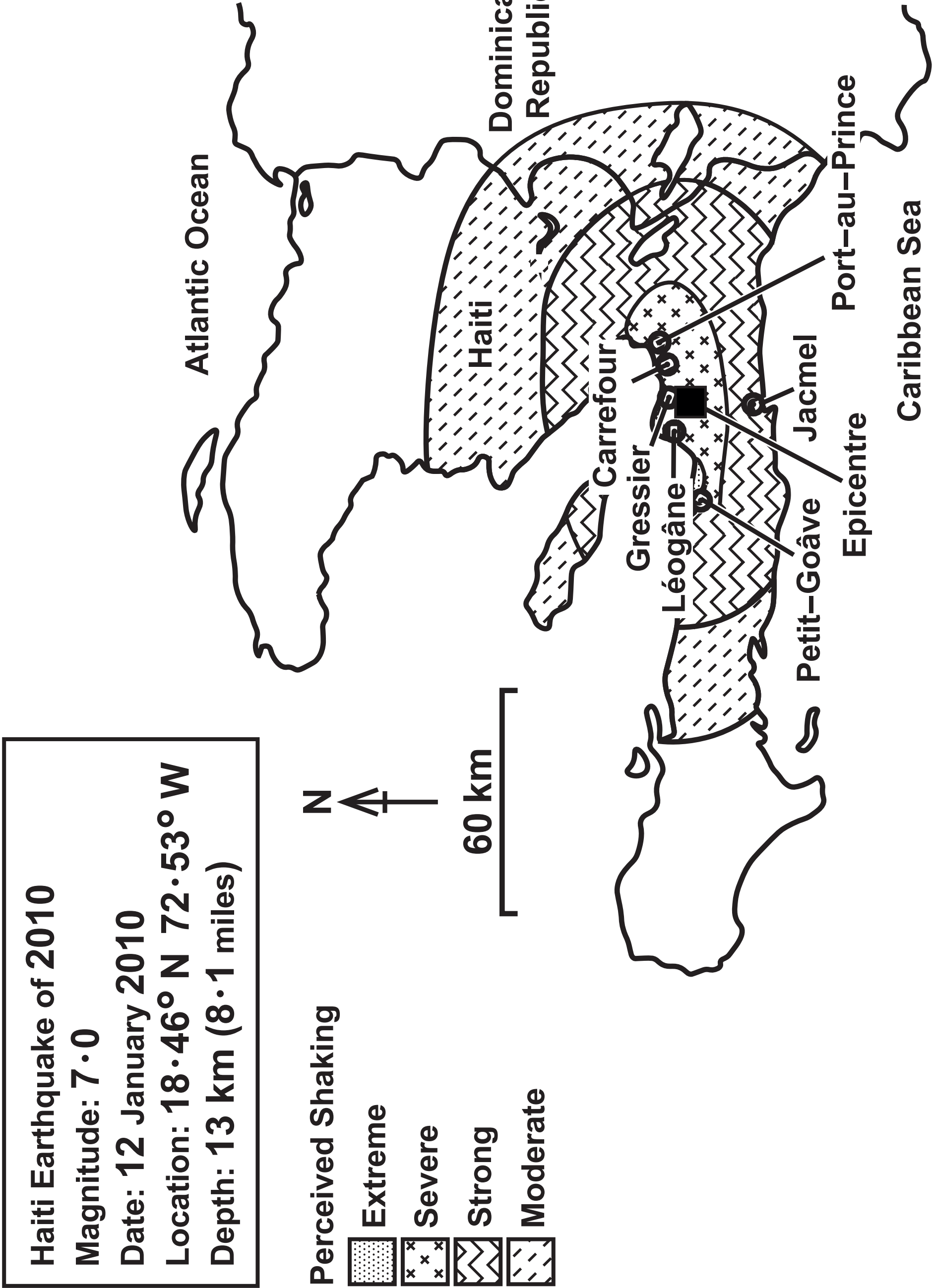


Figure 4a

Extract from data collection methods

At two different sites along a river chosen at random on a map:

- **Measure river width/depth**
- **Measure river wetted perimeter**
- **Measure river velocity**

Figure 4b

Extracts from student’s data presentation and conclusion

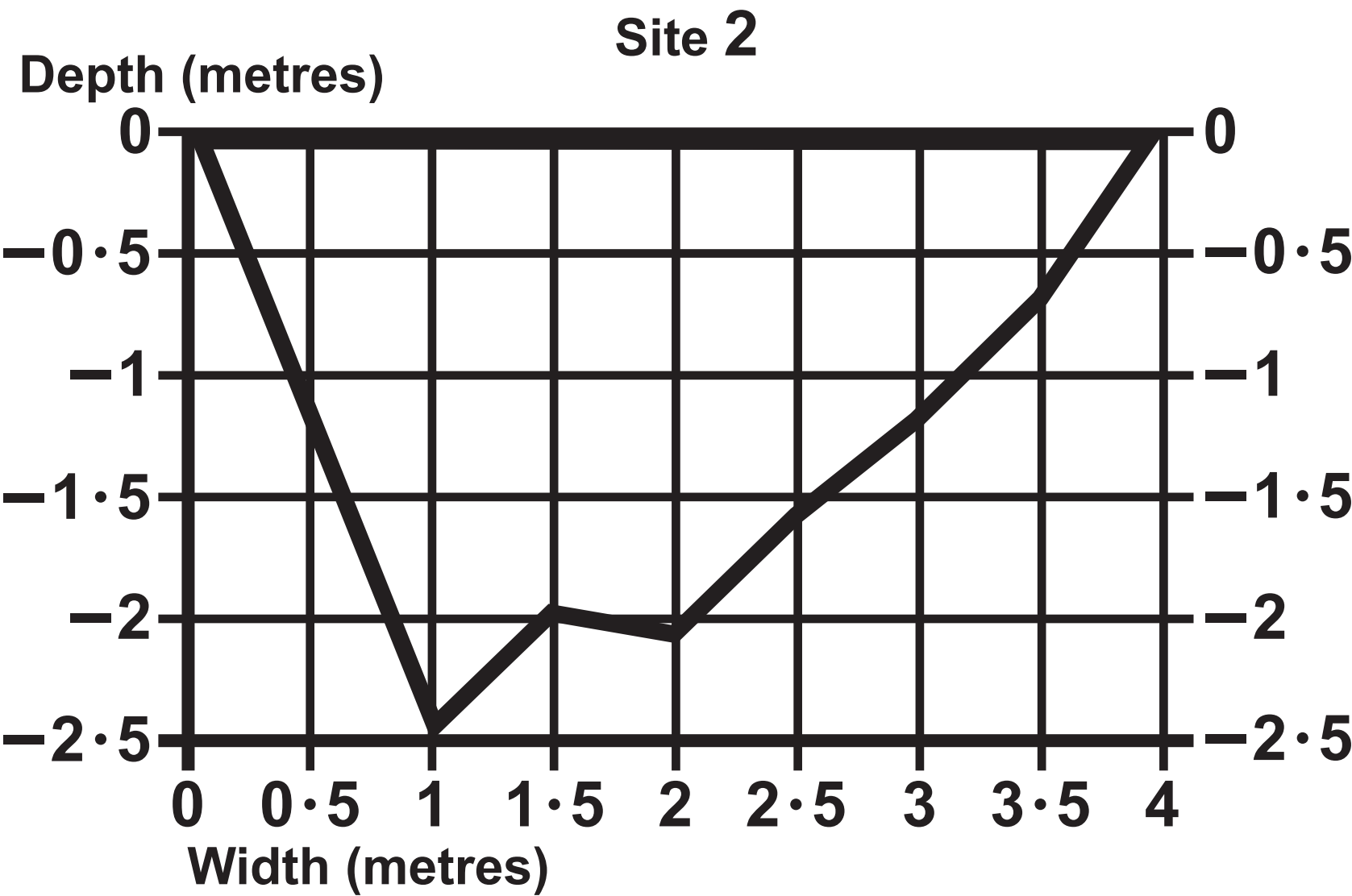
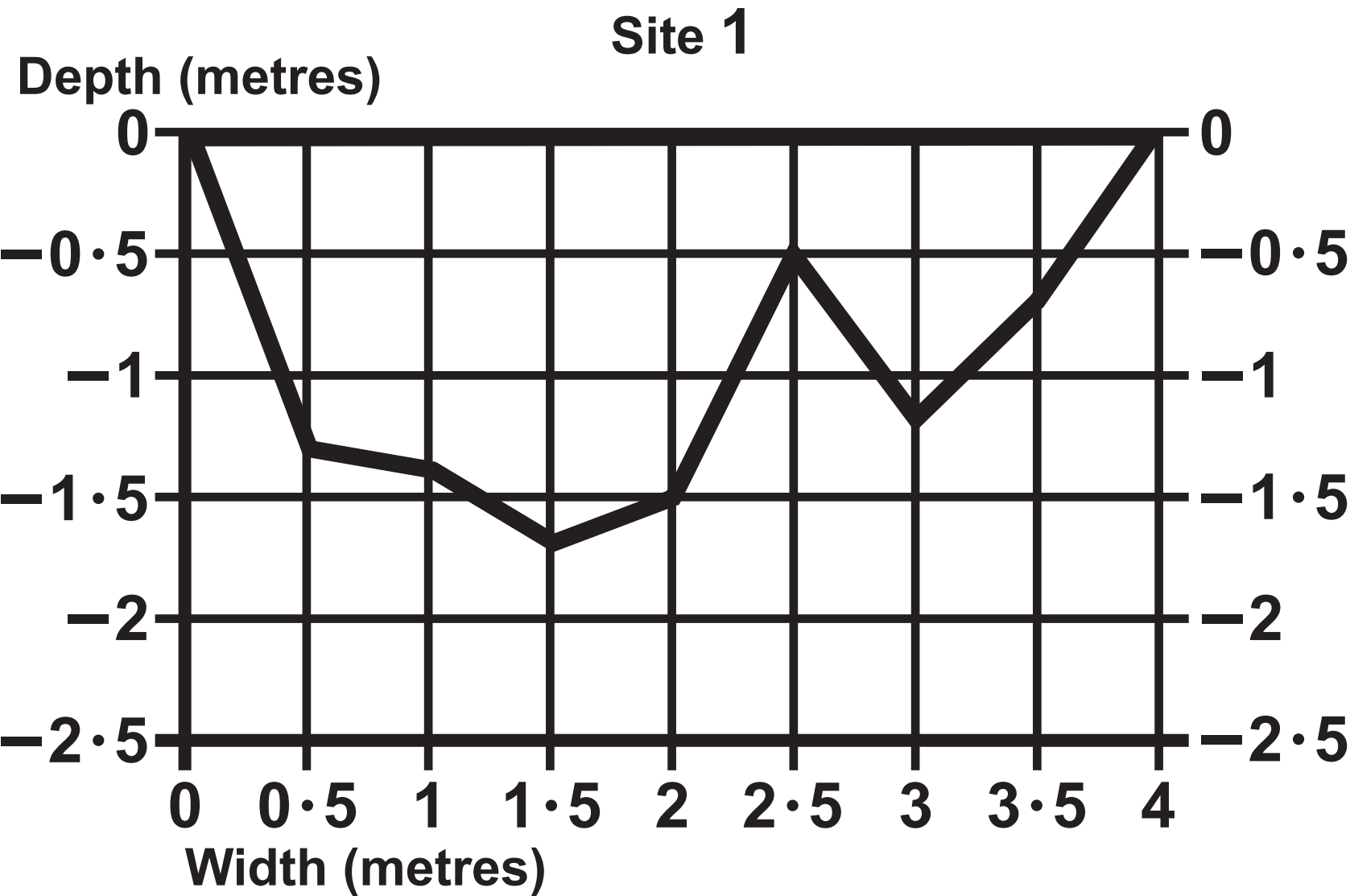


Figure 4b – Information

Extracts from student’s data presentation and conclusion

	Conclusions
1	I found that the characteristics of the river changed along the course of the river.
2	Calculating river velocity at each site allowed me to find out that river velocity is fastest in the upper course of the river.
3	There was little difference between the width of the river between the fieldwork sites.

Figure 5a

Extract from data collection methods

At two different sites along a beach chosen at random on a map:

- **Measure gradient of the beach at set distances**
- **Record sediment shape**
- **Measure sediment size**

Figure 5b

An extract from the student’s data presentation and conclusion

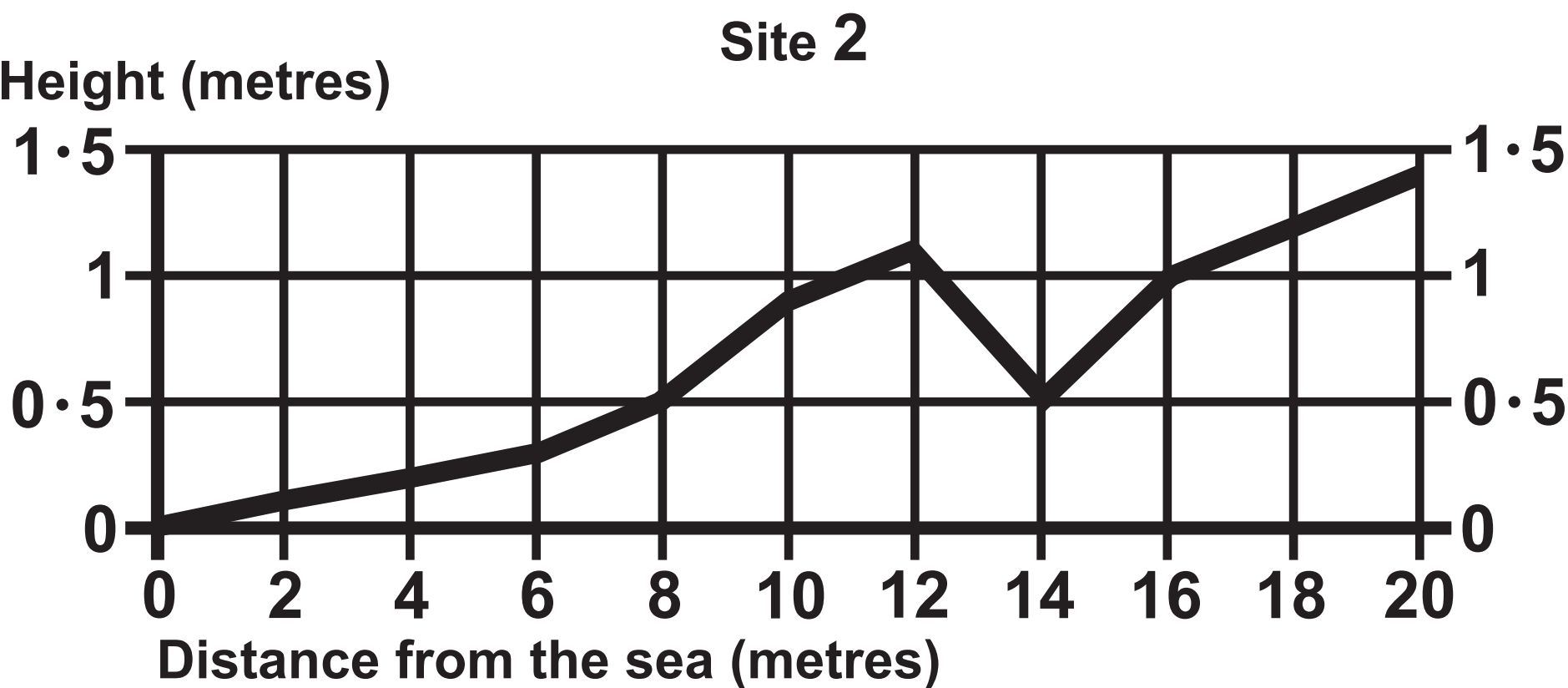
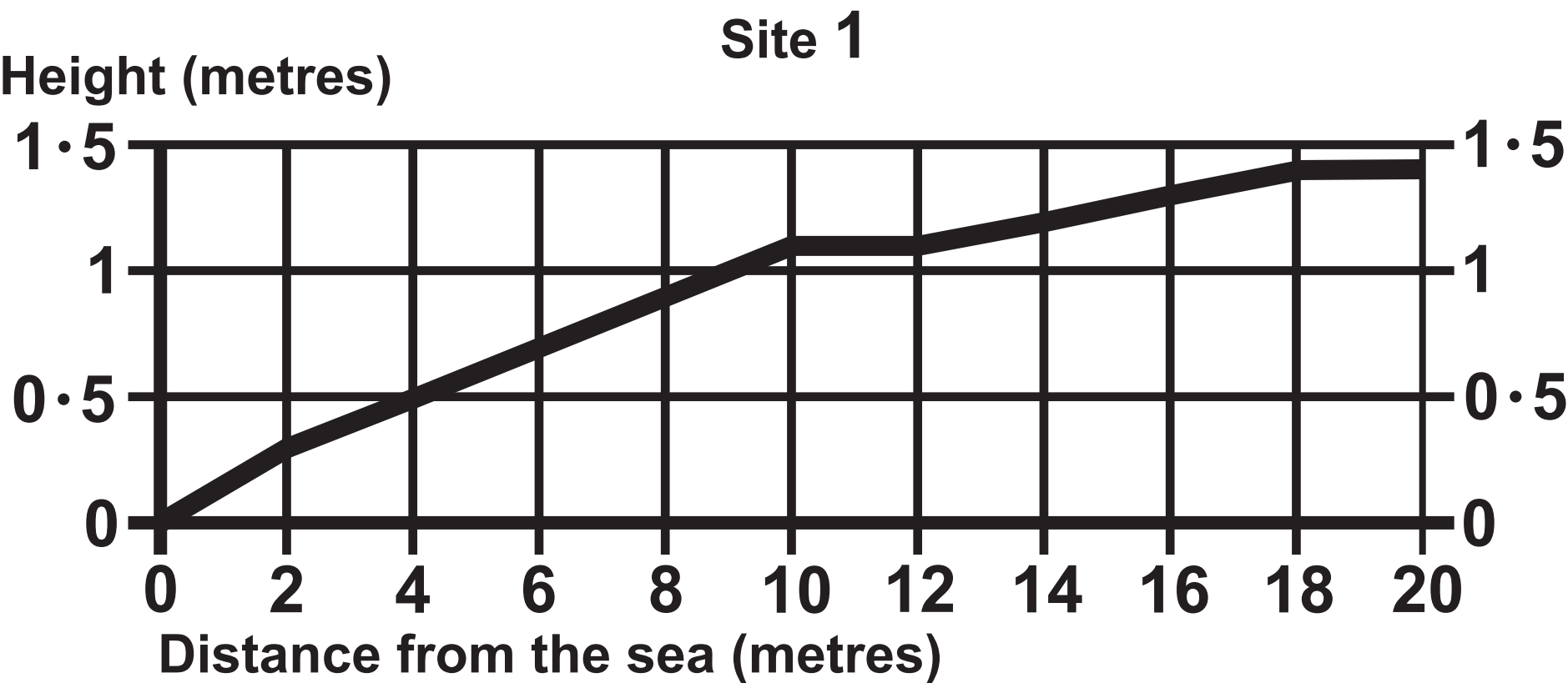


Figure 5b – Information

An extract from the student’s data presentation
and conclusion

	Conclusions
1	I found that the characteristics of the beach changed along the coastline.
2	Measuring the changes in the gradient of the beach allowed me to create a beach profile to show how characteristics changed along the coastline.
3	There was little difference between the sediment size along the stretch of the coastline.

Figure 6a

Extract from data collection methods

At two different sites chosen at random on a map, data collected for a weather diary, including:

- **temperature**
- **humidity**
- **rainfall**

Figure 6b

An extract from the student's data presentation and conclusion

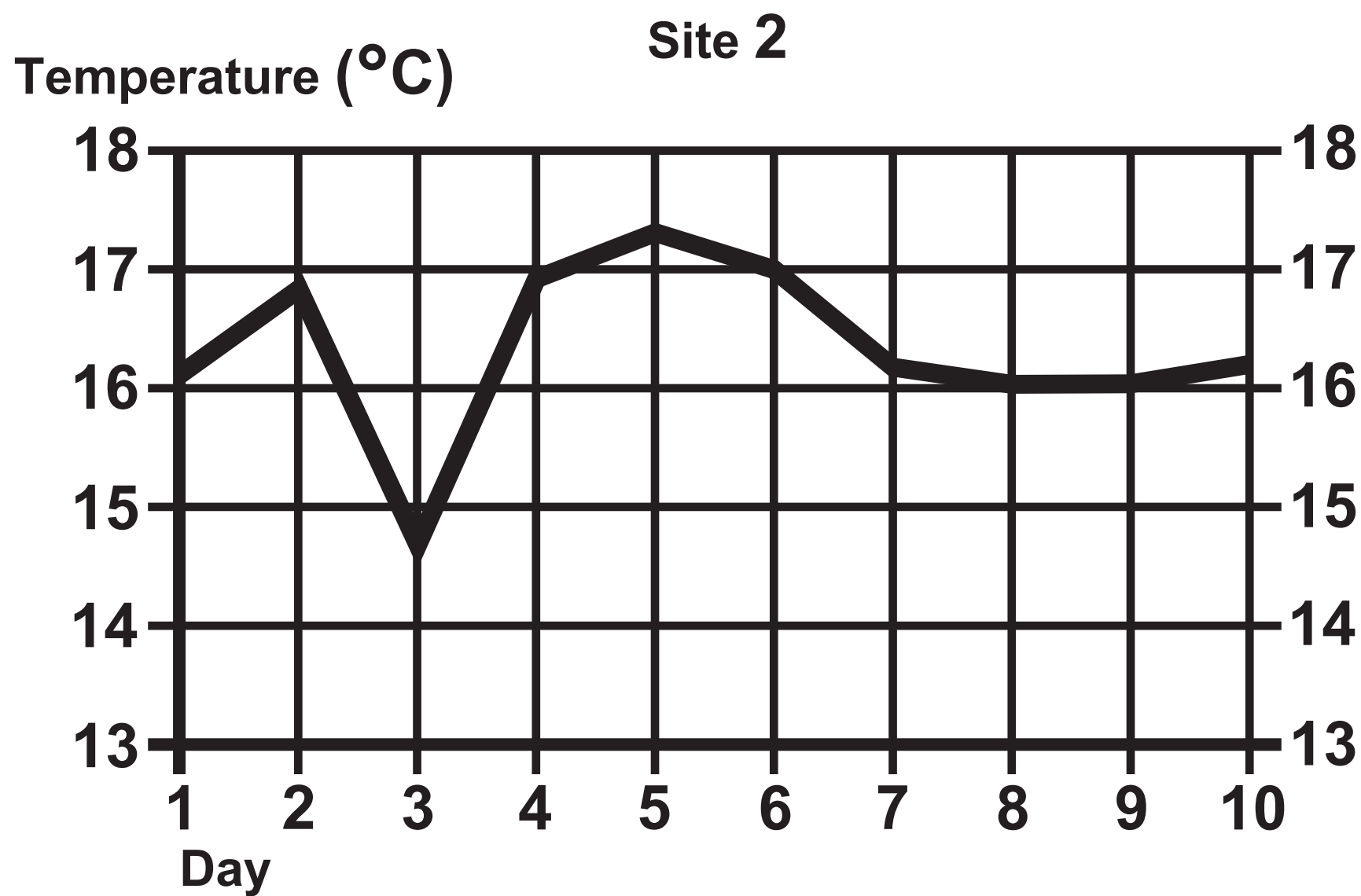
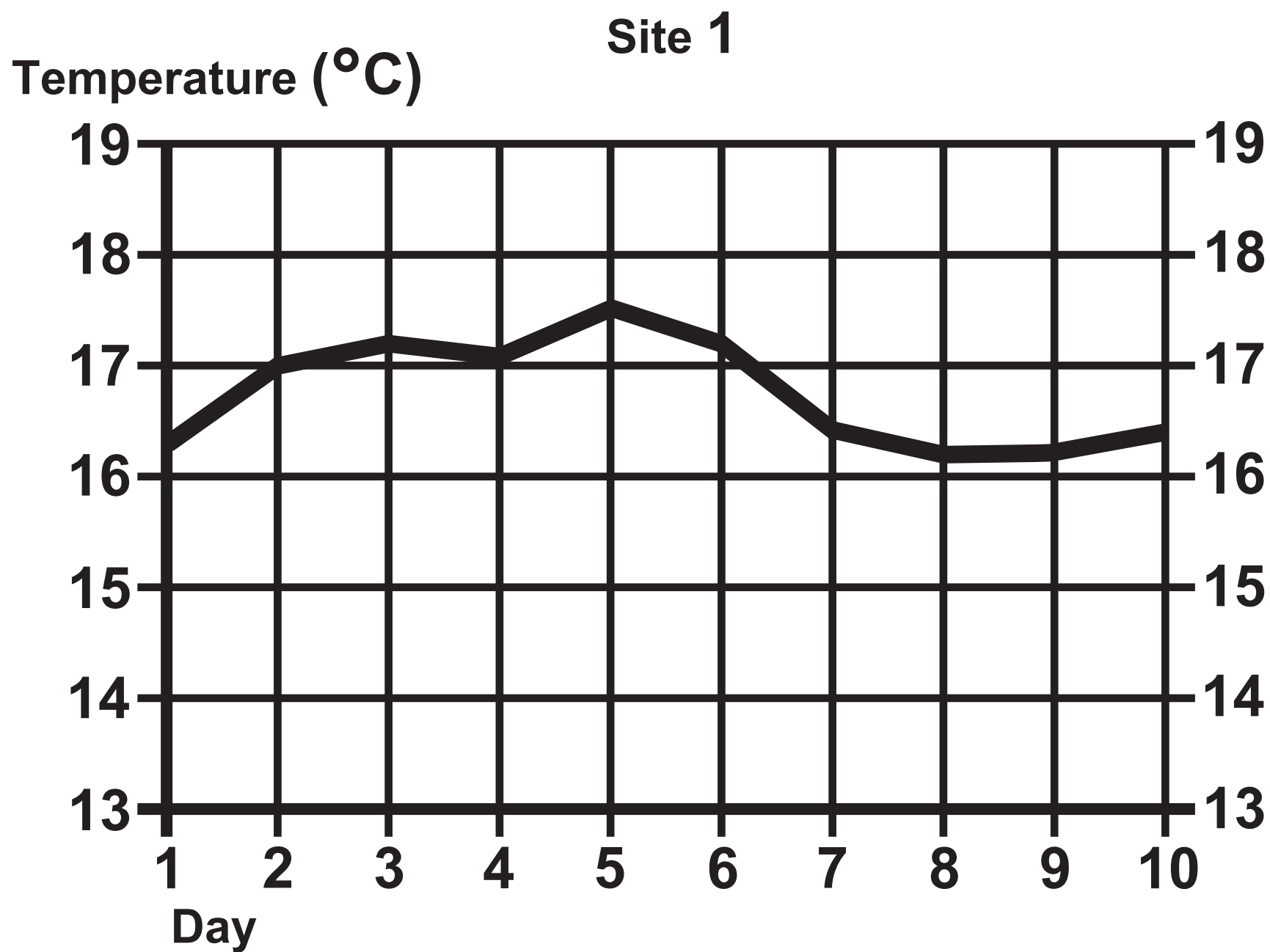


Figure 6b – Information

An extract from the student’s data presentation
and conclusion

	Conclusions
1	I found that the weather characteristics and changes in the weather were similar at both sites.
2	Changes in humidity were often linked to temperature and amount of rainfall.
3	There was little difference between the average temperatures of both sites.

Acknowledgements

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

Figure 1b (Source: © Thomas Dekiere/Shutterstock)

Figure 1c (Source: <https://www.noaa.gov/media-release/spring-outlook-historic-widespread-flooding-to-continue-through-may>)

Figure 2b (Source: © Alan Morris / Alamy Stock Photo)