



# Cambridge IGCSE™

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## GEOGRAPHY

0460/43

Paper 4 Alternative to Coursework

May/June 2020

INSERT

1 hour 30 minutes

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### INFORMATION

- This insert contains additional resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



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This document has **8** pages. Blank pages are indicated.

Fig. 1.1 for Question 1

## Employee questionnaire

I am a student at Rivington School. Please answer the following questions for my IGCSE Geography fieldwork.

What type of work do you do?

☐

Research and Development

☐

Component Assembly

1. In which part of the urban area do you live?

☐

Wirral

☐

Prescot

☐

Liverpool

☐

Huyton

☐

Crosby

☐

Rainford

☐

Formby

☐

St Helens

☐

Southport

☐

Whiston

☐

West Lancashire

☐

Haydock

☐

Kirkby

2. What are the **two** main disadvantages of living in your chosen area?

1. \_\_\_\_\_

2. \_\_\_\_\_

Thank you for your help.

Fig. 1.2 for Question 1

## Part of a student's recording sheet

| Part of the urban area | Research and development employees | Assembly work employees |
|------------------------|------------------------------------|-------------------------|
| Wirral                 |                                    |                         |
| Liverpool              |                                    |                         |
| Crosby                 |                                    |                         |
| Formby                 |                                    |                         |
| Southport              |                                    |                         |
| West Lancashire        |                                    |                         |

Table 1.1 for Question 1

## Answers to Question 1 in the questionnaire:

## In which part of the urban area do you live?

| Part of the urban area | Research and development employees | Assembly work employees |
|------------------------|------------------------------------|-------------------------|
| Wirral                 | 8                                  | 3                       |
| Liverpool              | 5                                  | 23                      |
| Crosby                 | 6                                  | 4                       |
| Formby                 | <b>10</b>                          | 1                       |
| Southport              | 16                                 | 1                       |
| West Lancashire        | 7                                  | 4                       |
| Kirkby                 | <b>2</b>                           | 16                      |
| Prescot                | 7                                  | <b>15</b>               |
| Huyton                 | 3                                  | 19                      |
| Rainford               | 9                                  | 2                       |
| St Helens              | 9                                  | 7                       |
| Whiston                | 8                                  | 3                       |
| Haydock                | 10                                 | 2                       |
| Total                  | 100                                | 100                     |

Table 1.2 for Question 1

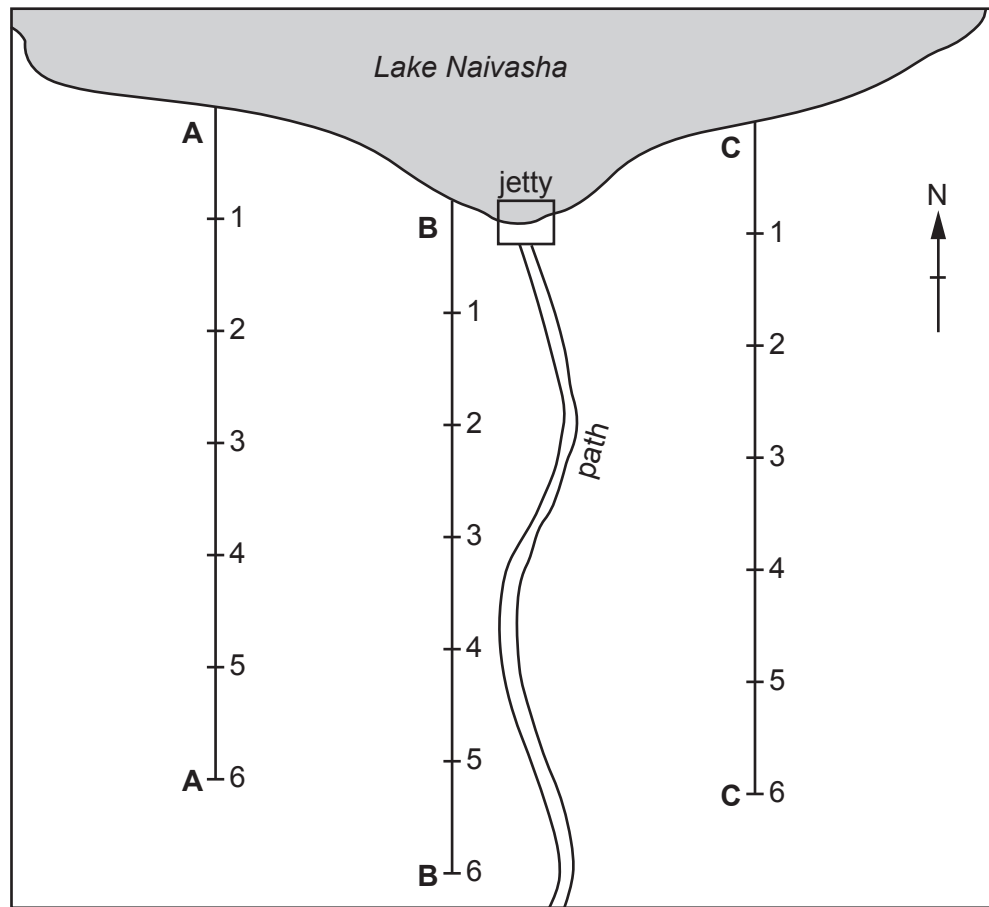
## Answers to Question 2 in the questionnaire:

What are the two main disadvantages of living in your chosen area?

| Disadvantage                                     | Research and development employees | Assembly work employees |
|--------------------------------------------------|------------------------------------|-------------------------|
| The journey to work takes a long time            | 36                                 | 2                       |
| Congested roads on the journey to work           | 32                                 | 5                       |
| Overcrowded trains on the journey to work        | 18                                 | 6                       |
| Noise from traffic and aircraft                  | 8                                  | 12                      |
| Social disorder, e.g. gangs, graffiti, vandalism | 3                                  | <b>34</b>               |
| No open spaces for recreation                    | 1                                  | <b>23</b>               |
| Poor schools                                     | 2                                  | <b>18</b>               |
| Total                                            | 100                                | 100                     |

Fig. 2.1 for Question 2

## Fieldwork sites



## Key

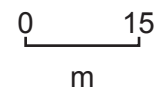
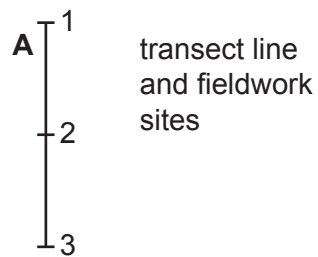


Fig. 2.2 for Question 2

## Measuring infiltration

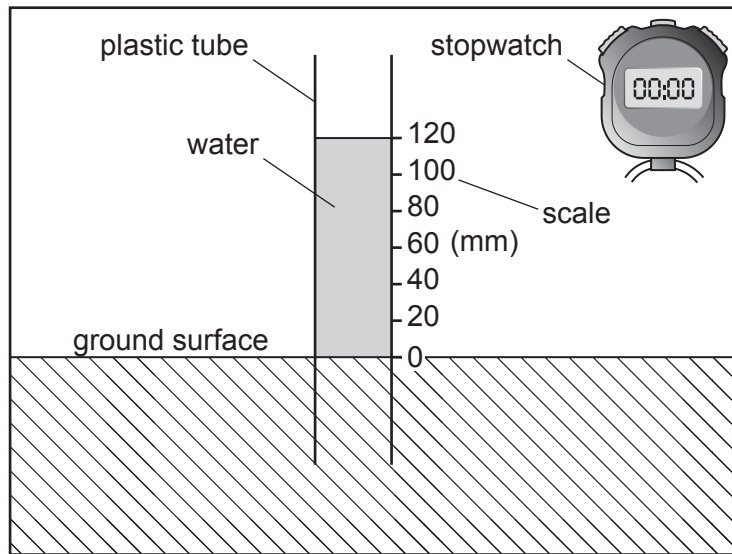


Table 2.1 for Question 2

## Results of students' measurements of water level along transect A

| Time of measurement (min) | Water level in plastic tube (mm) |        |        |        |        |        |
|---------------------------|----------------------------------|--------|--------|--------|--------|--------|
| Transect A                |                                  |        |        |        |        |        |
|                           | site 1                           | site 2 | site 3 | site 4 | site 5 | site 6 |
| 0                         | 120                              | 120    | 120    | 120    | 120    | 120    |
| 1                         | 119                              | 115    | 115    | 115    | 111    | 118    |
| 2                         | 117                              | 109    | 109    | 106    | 98     | 115    |
| 3                         | 115                              | 100    | 74     | 99     | 80     | 113    |
| 4                         | 110                              | 95     | 45     | 88     | 70     | 111    |
| 5                         | 108                              | 84     | 34     | 81     | 62     | 108    |
| 6                         | 105                              | 76     | 18     | 76     | 50     | 106    |
| 7                         | 102                              | 63     | 10     | 69     | 35     | 103    |
| 8                         | 100                              | 55     | 5      | 63     | 24     | 96     |
| 9                         | 98                               | 53     | 2      | 58     | 16     | 92     |
| 10                        | 95                               | 48     | 0      | 55     | 2      | 85     |

Table 2.2 for Question 2

## Infiltration rate at sites away from lake

| Site number | Distance from lake (m) | Infiltration rate (mm per min) |                   |                   |
|-------------|------------------------|--------------------------------|-------------------|-------------------|
|             |                        | Transect <b>A</b>              | Transect <b>B</b> | Transect <b>C</b> |
| 1           | 15                     | 2.5                            | 1.5               | 18.2              |
| 2           | 30                     | 7.2                            | 2.0               | 20.0              |
| 3           | 45                     | 12.0                           | 5.1               | 13.3              |
| 4           | 60                     | 6.5                            | 11.3              | 17.1              |
| 5           | 75                     | 11.8                           | 13.3              | 13.3              |
| 6           | 90                     | <b>3.5</b>                     | 17.1              | <b>15.0</b>       |

Table 2.3 for Question 2

## Gradient results at sites on transect C

| Site number | Slope gradient (°) | Infiltration rate (mm per min) |
|-------------|--------------------|--------------------------------|
| 1           | 7                  | 18.2                           |
| 2           | 4                  | 20.0                           |
| 3           | 2                  | 13.3                           |
| 4           | 6                  | 17.1                           |
| 5           | 10                 | 13.3                           |
| 6           | <b>9</b>           | <b>15.0</b>                    |

**Table 2.4 for Question 2**

**Vegetation at each fieldwork site**

**Transect A**

|                                | site 1      | site 2 | site 3      | site 4 | site 5      | site 6       |
|--------------------------------|-------------|--------|-------------|--------|-------------|--------------|
| Infiltration rate (mm per min) | 2.5         | 7.2    | 12.0        | 6.5    | 11.8        | 3.5          |
| Type of vegetation             | scrub grass | grass  | dense grass | grass  | dense grass | patchy grass |

**Transect B**

|                                | site 1    | site 2      | site 3 | site 4      | site 5      | site 6               |
|--------------------------------|-----------|-------------|--------|-------------|-------------|----------------------|
| Infiltration rate (mm per min) | 1.5       | 2.0         | 5.1    | 11.3        | 13.3        | 17.1                 |
| Type of vegetation             | bare soil | scrub grass | grass  | dense grass | dense grass | dense grass & bushes |

**Transect C**

|                                | site 1                      | site 2                      | site 3      | site 4      | site 5      | site 6      |
|--------------------------------|-----------------------------|-----------------------------|-------------|-------------|-------------|-------------|
| Infiltration rate (mm per min) | 18.2                        | 20.0                        | 13.3        | 17.1        | 13.3        | 15.0        |
| Type of vegetation             | dense grass & papyrus grass | dense grass & papyrus grass | dense grass | dense grass | dense grass | dense grass |

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