



GEO.SK6 Fieldwork Enquiry: Planning, Sampling and Data Collection

AQA 8035 • Calculators not allowed • about 40 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** In the context of planning a physical geography fieldwork enquiry on a small upland river, define the fieldwork term 'hypothesis'.

(Total for Question 1 is 1 mark)

- 2** For a human geography pedestrian study in a town centre, state what is meant by the variable 'dependent variable'.

(Total for Question 2 is 1 mark)

- 3** When designing primary data collection for either a river or urban study, state one example of an ethical consideration the field team should address.

(Total for Question 3 is 1 mark)

- 4** In planning fieldwork, state one purpose of writing a risk assessment before visiting a river or town centre study site.

(Total for Question 4 is 1 mark)

- 5 Suggest an appropriate method for collecting data on river channel width at several locations along a small upland river, and name the equipment you would use for the measurement.

(Total for Question 5 is 3 marks)

- 6 Suggest an appropriate method, with equipment, for measuring surface water velocity at a fixed point in the river as part of a physical enquiry.

(Total for Question 6 is 3 marks)

- 7 Suggest an appropriate method for collecting pedestrian footfall data along a town centre street during a one-hour period, and state one piece of simple equipment to use.

(Total for Question 7 is 2 marks)

- 8 Suggest an appropriate method for collecting data on shoppers opinions about the town centre, and name one ethical consideration for this method.

(Total for Question 8 is 2 marks)

- 9 Justify the choice of a systematic sampling strategy for measuring channel width and velocity at regular intervals downstream along the upland river.

(Total for Question 9 is 3 marks)

- 10** Justify the choice of stratified sampling for conducting shopper questionnaires across a town centre with three clear zones: high street, covered market and edge-of-centre car park.

(Total for Question 10 is 3 marks)

- 11** Justify the use of random sampling for selecting households to interview in a residential area near the town centre when measuring travel to work patterns.

(Total for Question 11 is 3 marks)

- 12** Identify one suitable secondary data source for a river channel study and state how it could help the enquiry.

(Total for Question 12 is 1 mark)

- 13** Identify one suitable secondary data source for an urban pedestrian study and state how it could help in planning the fieldwork.

(Total for Question 13 is 1 mark)

- 14** Identify one risk specific to conducting measurements on a river bank during fieldwork and explain how this risk could be reduced in your risk assessment.

(Total for Question 14 is 3 marks)

15 Identify one risk specific to carrying out questionnaires or counts in a busy town centre and explain how it could be reduced.

(Total for Question 15 is 2 marks)

Mark scheme · GEO.SK6 Fieldwork Enquiry: Planning, Sampling and Data Collection

Question 1

- **B1** a testable statement predicting the outcome of the enquiry, linking variables, oe
- **Answer: A hypothesis is a testable statement predicting the outcome of the enquiry, linking variables.**

Question 2

- **B1** the variable that is measured or observed in the enquiry because it depends on another variable, oe
- **Answer: The dependent variable is the variable that is measured or observed in the enquiry because it depends on another variable.**

Question 3

- **B1** e.g. obtaining informed consent from survey respondents, oe
- **Answer: Obtaining informed consent from survey respondents.**

Question 4

- **B1** to identify hazards and plan how to reduce them so people are kept safe, oe
- **Answer: To identify hazards and plan how to reduce them so people are kept safe.**

Question 5

- **B1** measure the width directly at transects across the channel, oe
- **B1** equipment named, e.g. tape measure or range pole and measuring tape, oe
- **B1** repeat at several evenly spaced locations downstream to compare, oe
- **Answer: Measure the channel width directly at transects across the channel using a tape measure or range pole and measuring tape, repeating at several evenly spaced locations downstream to allow comparison.**

Question 6

- **B1** use a float method, timing how long a floating object takes to travel a set distance on the surface, oe
- **B1** equipment named, e.g. stopwatch and measured tape or measured poles to mark the distance, oe
- **B1** repeat several runs and calculate average velocity to improve accuracy, oe
- **Answer: Use the float method: time how long a floating object takes to travel a measured distance using a stopwatch and marked poles or tape; repeat several runs and calculate the average velocity.**

Question 7

- **B1** use tally counts at fixed counting points to record number of pedestrians passing per time interval, oe
- **B1** equipment named, e.g. clipboard and tally sheet or clicker counter, oe
- **Answer: Use tally counts at fixed counting points to record the number of pedestrians passing per time interval, using a clipboard and tally sheet or a clicker counter.**

Question 8

- **B1** use a short structured questionnaire or interview with pre-set questions, oe
- **B1** ethical consideration named, e.g. obtain informed consent and assure anonymity, oe
- **Answer: Use a short structured questionnaire or brief interview with pre-set questions; obtain informed consent and assure respondents that their answers will be anonymous.**

Question 9

- **B1** systematic sampling ensures measurements are taken at regular, evenly spaced intervals so patterns along the river can be identified, oe
- **B1** it is simple to implement in the field and reduces bias compared with handpicked sites, oe
- **B1** regular intervals make it easier to compare upstream and downstream changes and to graph results, oe
- **Answer: Systematic sampling gives regular, evenly spaced measurements so patterns downstream can be identified; it is simple to implement and reduces bias from handpicking sites, and it makes comparison and graphing of upstream to downstream change straightforward.**

Question 10

- **B1** stratified sampling ensures each distinct zone is represented so differences between zones can be compared, oe
- **B1** it increases representativeness if shopper behaviour differs by zone, oe
- **B1** sample sizes can be allocated by zone size or importance to give reliable comparisons, oe
- **Answer: Stratified sampling ensures each distinct zone is represented so differences between the high street, covered market and car park can be compared; it increases representativeness where behaviour differs by zone and allows sample sizes to be allocated by zone for reliable comparison.**

Question 11

- **B1** random sampling reduces selection bias because every household has an equal chance of selection, oe
- **B1** it is appropriate when there is no obvious stratification and the aim is to generalise to the area, oe
- **B1** random selection can be combined with a sampling frame or random number method to be reproducible, oe
- **Answer: Random sampling reduces selection bias because every household has an equal chance of selection; it is suitable when no obvious stratification exists and the aim is to generalise, and it can be made reproducible using a sampling frame or random numbers.**

Question 12

- **B1** e.g. Ordnance Survey maps, to give accurate channel position, gradient and historical planform for planning transects, oe
- **Answer: Ordnance Survey maps, which give accurate channel position, gradient and historical planform useful for planning transects and locating sampling points.**

Question 13

- **B1** e.g. local council footfall or retail data, to indicate peak times and key shopping streets for targeting counts, oe
- **Answer: Local council footfall or retail data, which indicate peak times and key shopping streets to help decide where and when to carry out pedestrian counts.**

Question 14

- **B1** identify risk, e.g. slipping into fast-flowing water from a wet, uneven bank, oe
- **B1** primary control, e.g. require wearing buoyancy aids or lifejackets and suitable footwear, oe
- **B1** secondary control, e.g. work in pairs with a safety briefing and keep a safe distance from the water edge, oe
- **Answer: Risk: slipping into fast-flowing water from a wet, uneven bank. Reduce by requiring buoyancy aids or lifejackets and suitable non-slip footwear, and working in pairs with a safety briefing and keeping a safe distance from the water edge.**

Question 15

- **B1** identify risk, e.g. risk of road traffic or crowding causing trips or collisions, oe
- **B1** control, e.g. carry out counts on pavements away from the road, wear high-visibility clothing and choose quieter times or use marshals, oe
- **Answer: Risk: road traffic or crowding causing trips or collisions. Reduce by carrying out counts on pavements away from the road, wearing high-visibility clothing and choosing quieter times or using marshals to manage the area.**