

Appendix 4: Geographical skills

Throughout their course of study, students are required to develop a range of geographical skills, including quantitative skills. These skills may be assessed across any of the examined papers. The full list of geographical skills is given below.

Some geographical skills may only be assessed in specific topics. Examples of how these skills could be used within particular topics are signposted in the detailed content and listed in the 'Integrated skills' sections after each topic.

General skills

Atlas and map skills

- Recognise and describe distributions and patterns of both human and physical features at a range of scales, using a variety of maps and atlases.
- Draw, label, annotate, understand and interpret sketch maps.
- Recognise and describe patterns of vegetation, land use and communications infrastructure, as well as other patterns of human and physical landscapes.
- Describe and identify the site, situation and shape of settlements.

Graphical skills

- Label, annotate and interpret different diagrams, maps, graphs, sketches and photographs.
- Use and interpret aerial, oblique, ground and satellite photographs from a range of different landscapes.
- Use maps in association with photographs and sketches and understand links to directions.

Data and information research skills

- Use online census sources to obtain population and local geodemographic information.

Investigative skills

- Identify questions or issues for investigation, develop a hypothesis and/or key questions.
- Consider appropriate sampling procedures (systematic versus random versus stratified) and sample size.
- Consider health and safety and undertake risk assessment.
- Select data collection methods and equipment to ensure accuracy and reliability, and develop recording sheets for measurements and observations.
- Use ICT to manage, collate, process and present information, with use of hand-drawn graphical skills to present information in a suitable way.
- Write descriptively, analytically and critically about findings.
- Develop extended written arguments, drawing well-evidenced and informed conclusions about geographical questions and issues.

Quantitative skills

Cartographic skills

- Use and understand gradient, contour and spot height on isoline maps, e.g. OS maps, weather charts, ocean bathymetric charts.
- Interpret cross sections and transects.
- Use and understand coordinates, scale and distance.
- Describe and interpret geospatial data presented in a GIS framework, e.g. analysis of flood hazard using the interactive maps on an environmental agency website.

Graphical skills

- Select and construct appropriate graphs and charts to present data, using appropriate scales and including bar charts, pie charts, pictograms, line charts and histograms with equal class intervals.
- Interpret and extract information from different types of graphs and charts, including any of the above and others relevant to the topic, e.g. triangular graphs, radial graphs, wind rose diagrams, proportional symbols.
- Interpret population pyramids, choropleth maps and flow line maps.

Numerical skills

- Demonstrate an understanding of number, area and scale, and the quantitative relationships between units.
- Design fieldwork data collection sheets and collect data with an understanding of accuracy, sample size and procedures, control groups and reliability.
- Understand and correctly use proportion and ratio, magnitude and frequency, e.g. 1 : 200 flood, and logarithmic scales such as the Richter scale, in orders of magnitude.
- Draw informed conclusions from numerical data.

Statistical skills

- Use appropriate measures of central tendency, spread and cumulative frequency (median, mean, range, quartiles and interquartile range, mode and modal class).
- Calculate percentage increase or decrease and understand the use of percentiles.
- Describe relationships in bivariate data, e.g. sketch trend lines through scatter plots, draw estimated lines of best fit, make predictions, interpolate and extrapolate trends.
- Identify weaknesses in selective statistical presentation of data.