Geographical Skills

The following is a list of Geographical Skills required for this specification, with an equal weighting of **quantitative** and **qualitative** skills. All the skills need to be addressed but not all will apply to fieldwork. Fieldwork should contribute to learners building a holistic and balanced understanding of quantitative and qualitative skills related to fieldwork and the six-stage enquiry process.

Quantitative skills to collect data through numerical measurements.	**Ref. No.**
1. Cartographical information:	
• longitude and latitude	1.1
• map coordinates including grid references and area references	1.2
• distance and area	1.3
• direction	1.4
• scale	1.5
2. Number and statistical calculations:	
• sampling, including random, stratified, systematic and the ability to identify sources of error in data, measurement errors and misuse of data	2.1
• totals	2.2
• percentages	2.3
• fractions, proportions and ratios	2.4
• data sets (small to large) including crowd-sourced and big data (characterised by volume, velocity and variety)	2.5
• frequencies	2.6
• densities	2.7
• scales of measurement	2.8
• measures of central tendency (mean, median, mode)	2.9
• measures of dispersion (range, standard deviation, inter-quartile range)	2.10
• measurements of concentration, including location quotient	2.11
• ratios including dependency ratio and Gini-coefficient	2.12
• indices including ecological footprint, HDI	2.13
• measures of correlation, including a scatter plot, lines of best fit and Spearman Rank	2.14
• inferential statistics, including Chi-square	2.15
3. Cartographic and graphical material:	
• isoline and isopleth maps	3.1
• choropleth maps	3.2
• dot maps	3.3
• flow diagrams and maps	3.4
• proportional symbols	3.5
• graphs, including scatter, line, bar, triangular, logarithmic, bipolar	3.6
• pie charts	3.7
• population pyramids	3.8
• cross-sections and long profiles	3.9
• rose / star / radial diagrams	3.10
• kite diagrams	3.11
• Lorenz curve	3.12
4. Digital and geo-located data:	
• geospatial technologies including aerial photographs, digital images, satellite images, geographic information systems (GIS), global positioning systems (GPS), databases	4.1
Qualitative skills to collect data through non-numerical techniques	
5. Cartographical information for:	
• landscape system identification	5.1
• land-use identification	5.2
• risk assessment	5.3
6. Cartographic and graphical material:	
• mental maps	6.1
• GOAD plans	6.2
• Ordnance Survey maps (1:25 000 and 1:50 000)	6.3
7. Digital and geo-located data:	
• geospatial technologies including aerial photographs, digital images, satellite images, geographic information systems (GIS), global positioning systems (GPS), databases	7.1
• field sketches	7.2
8. Textual and visual sources:	
• interview material including coding	8.1
• images	8.2
• factual text	8.3
• discursive / creative material	8.4
• oral histories	8.5