Component	Key idea	Detailed Content	Core Knowledge & Understanding	Keywords	Related topics	Icons
Investigation physical environments - changes along a river channel	**1 Formulating enquiry questions** **Understanding of the kinds of question capable of being investigated through fieldwork and an understanding of the geographical enquiry processes appropriate to investigate these**	*An enquiry question should relate to a geographical theory and/or example*	A key question or hypothesis follows on from the enquiry to be tested. For example: **How does the quality of the urban environment vary along a transect through Stratford, East Village and Carpenters Estate?** A key question that follows on from this could be: **Does environmental quality improve with increasing distance from the CBD?** A hypothesis could be: **Environmental quality improves with distance from the CBD**	Transect Urban Environmental quality		
	2 Fieldwork methods and techniques **Understanding of the range of techniques and methods used in fieldwork, including observation and different kinds of measurement**	*Fieldwork data collection must include at least:one quantitative fieldwork method to measure the land use function*	**Quantitative methods -** record data that can be measured as numbers e.g. e.g. land use mapping **Housing prices:** record data for rented and owned properties **Transport:** map and record the number of different transport links and their destinations **People count:** record the number of people that pass a particular point **Noise levels**: record the average noise levels in your chosen area **Employment opportunities**: record the type of employment available at the local Job Centre **Traffic count**: record the quantity of vehicles, cycles, public transport that passes a particular point to discern air quality I**ndex of Multiple Deprivation**: records data using the 7 categories of the IMD at Lower Super Output Area scale	Quantitative Employment Index of Multiple Deprivation Lower Super Output Area (LSOA)		
		Fieldwork data collection must include at least: one qualitative fieldwork method to record the quality of the environment	**Qualitative methods** - record descriptive data e.g. constructing a **field sketch** Built environments can be recorded using annotated field sketches or annotated photographs. These can be used to look at a view of the whole landscape from a given point, or in detail at given features. **Observations** - labelling of features correctly **Describe** - clear labelling and feature descriptions **Explain** - label features, describe features and begin to explain features uses (annotate) **Sketch** - all of the above is met with visual sketch of features, and use of title, orientation and scale **Link** - labels, descriptions, explanations, and now linking to wider landscape with processes and further examples **Environmental quality survey** - rank various environmental qualities using a **bi-polar scale**, examples include: Housing quality Accessibility Open spaces Energy use Shopping facilities and types Crime risk Safety Sustainability Quality of infrastructure Education access **Observable inequalities** **Residents perception survey** - open-ended and closed questions to judge residents' perception of your urban area	Qualitative Environemntal quality survey Bi-polar scale Sustainability Infrastructure Residents Perception survey		

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Investigation physical environments - changes along a river channel	**2 Fieldwork methods and techniques** **Understanding of the range of techniques and methods used in fieldwork, including observation and different kinds of measurement**	*Secondary data is data that somebody else has already collected*	**Census data** from the Office for National Statistics and Multiple Deprivation Index One other **secondary source**	Secondary data Census	Topic 4	
		Sampling methods	**Random sampling** - selecting a site to measure, at random. Random sampling is unbiased as places are not specifically selected **Systematic sampling** - collecting data in an ordered or regular way, eg every 5 metres **Stratified sampling** - dividing sampling into groups, eg three sites from a particular starting point in your urban area. It is possible to combine stratified sampling with random and systematic sampling	Random Systematic Stratified		
	3 Data presentation methods **Processing and presenting fieldwork data in various ways including maps, GIS, graphs and diagrams (hand drawn and computer-generated)**	*Data presentations should be suitable and appropriate for the data being presented*	**GIS** can be a useful way of presenting your data. Located proportional symbols show changes in discharge with progression downstream **Land use transect** - annotated map across your urban area to show a variety of data **Pie charts** - useful for presenting % of data collected e.g. jog types **Field sketches** - annotated to show characteristics of an urban area etc. **Histogram** - to show changes in people count or traffic over time **Located maps** - to show site location, relief/topography of area and land use **Photographs** - annotated photos to show characteristics, infrastructure etc. **Radar graphs** - useful to show residents' perceptions using closed questions **Word clouds** - useful to show residents' perceptions using open-ended questions	GIS Land use transect Pie Chart Field sketch Histogram Radar graphs Word Clouds Mean Median Mode Range		
	4 Data Analysis **Analysing and explaining data collected in the field using knowledge of relevant geographical case studies and theories**	*Data analysis should be specific to **your** fieldwork enquiry, **your** location and **your** data*	**General questions describing your results:** Describe the pattern shown on the graph/map/table/results Pick out any changes over distance or location (spatial changes) Use the data as evidence: calculate the mean median or mode to describe the distribution of the data. Use maximum and minimum data to describe the range of data. Describe the scale and direction of flows Using statistical tests describe the relationship between sets of data. Is the correlation positive or negative? Are there any anomalies in the data? **General questions explaining your results:** What reasons can you give to explain the results? How do the results fit in with your enquiry question? How do the data sets link together? Can you use one set of data to explain another? Can you explain why there are anomalies?	Analysis Describe Explain		
	5 Conclusion **Drawing evidenced conclusions and summaries from fieldwork transcripts and data**	*Conclusions should 'answer' **your** fieldwork enquiry questions using **your** data presentation and **your** data analysis*	**General questions reaching a conclusion:** Can you prove or disprove your hypothesis? Describe any statistical evidence for your conclusions. How do your results fit in with other case studies or theories? What conclusion can you reach about your Enquiry questions?	Conclusion		

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Investigation physical environments - changes along a river channel	**6 Evaluation** **Reflecting critically on fieldwork data, methods used, conclusions drawn and knowledge gained**	*Evaluations should include reflections on the whole process of* ***your*** *fieldwork enquiry*	**General questions to evaluate your enquiry:** What data collection methods were reliable? What data collection methods were accurate? If your fieldwork methods were not accurate or reliable, what could you do to improve them? If the data from your fieldwork methods were not able to prove or disprove your hypothesis, why was this? Was your hypothesis inappropriate? Is your analysis of your data vaild? How effective was your data presentation techniques in assisting your data analysis? If you were to complete another investigation in Stratford what would you do the same and what would you do differently? Why?	Evaluation Justify		