Knowledge organiser for human fieldwork

Hypothesis: The Quality of Housing increases as distance from the city centre increase.

What theory underpins the enquiry? What are appropriate sources of primary and secondary evidence including location? What are the potential risks of carrying out the fieldwork and how can they be avoided?	The Burgess Zone Model and Hoyt Sector model represent how land use develops in HICs. Key Ideas: • Cities have grown over a long period of time. • The central area is the oldest part and is the most accessible part. • The inner city area is where traditional heavy industry developed and associated housing for factory workers. • As you move away from the CBD and the inner city housing quality improves. Using this theory the human fieldwork aim is to compare 2 areas in Sheffield, one in **the inner city (Robey Street)** and one in the **rural urban fringe (Totley Hall Croft)**. These two sites have been chosen because they allow us to collect comparative data from an inner city and rural urban fringe. **Potential Risks and how we can mitigate them:** • Traffic (Accidents) – Use designated crossing points/ensure you are not wearing headphones/look both ways when crossing the road. • Risk from/to public – Walk in smaller groups and pairs/do not block pavement/do not enter private property/be kind and courteous to members of the public.
Selection of appropriate data. How did you collect your data? What sampling measures did you use? Description and justification of data collection methods.	**Primary Data Collection:** • Environmental Quality Survey at Totley Hall Croft – to collect data to compare the quality of housing at each site. *Each house in the sample was scored between +2 and -2 based on building quality/traffic/open space and general.* • Field Sketches – to collect data on type of house and housing quality. *Each house was drawn to show the visual quality of the house from the roadside.* **Secondary Data Collection:** • Environmental Quality Survey at Robey Street using Google Maps – to collect data to compare the quality of housing. *Each house in the sample was scored between +2 and -2 based on building quality/traffic/open space and general.* • House Prices using Zoopla – to collect data on price variations across the two areas. *Internet research was completed to collect the estimated sale value of each house at each site.* **Sampling Strategy –** Using systematic sampling surveying every 5th property at both sites.
What presentation methods did you use and why? Description and explanation of presentation methods.	**Radial Graph** for Environmental Quality Comparison. *Using the average scores for building quality/traffic/open space and general for both sites a radial graph was plotted. The radial graph allowed us to the environmental quality survey variables in a way that appears less cluttered and allows us to make comparisons more quickly.* **Bar Graph** for Average House Price Comparison. *Using the average house price scores for both sites and plotting this data in a bar graph allows us to compare in a very simple visual form.*
Description, analysis and explanation of your results. Are there links between data sets? What statistical techniques did you use? Can you identify anomalies?	**Environmental Quality Survey:** The radial graph showed that the average score for buildings/traffic/open space and general was lower in Robey Street than in Totley Hall Croft. For example total environmental quality scored 27/34 in Totley Hall Croft compared to -1.3/34 in Robey Street. **House Price:** Bar Graph shows that average house price is more expensive in Totley Hall Croft than Robey Street. In Totley Hall Croft the average house price was £966,000 compared to £106,000 in Robey Street. **Links between data:** Totley Hall Croft had a higher average environmental quality score due to bigger house size, better environmental quality and access to services leading to a higher average house prices. **Anomalies:** Anomalies could be seen in data where students had scored too high or low on the EQS. **Statistical Tests:** Calculating mean average house price and mean EQS
What evidence based conclusions did you come to in relation to the original aims of the enquiry?	Evidence suggest that there is housing inequalities exist in Sheffield with housing quality increasing with distance from the city centre. We can conclude this because: • Totley Hall Croft was seen to have a higher EQS score, with the most expensive housing. This was the result of the larger than average detached housing, wide roads with plenty of greenery and trees. • Robey Street scored a lower EQS score due to the small houses, small gardens, litter and narrow roads in the area.
Identification of problems of data collection method. Identification of limitations of data collected. Suggestions of other data that could have been useful. Extent to which conclusions were reliable.	**Problems with data collection:** • For Robey Street the fieldwork was conducted digitally using secondary data, this could be outdated as it relies on images from google maps. Although convenient, digital fieldwork using secondary data means that we do not know how accurate the snapshot of each house/local area as it may not be up to date. • Environmental Quality Surveys are extremely useful to allow comparison between areas however they are subjective as each person has a different perspective on what is considered 'good' or 'bad'. This would have created anomalies in the results and made them less valid. • Sample size was relatively small with 6 houses on each street. **What we could have done instead:** • Increased sample size to include a larger area. • Try to standardised EQS scores by creating a benchmark on what would constitute what score before leaving the classroom.

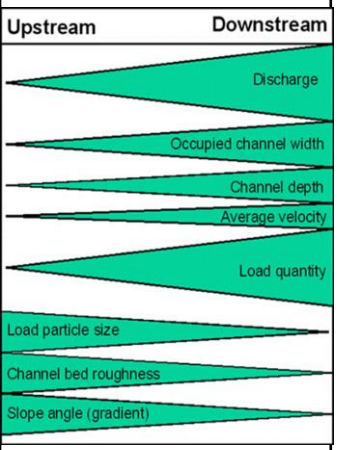
Knowledge Organiser for Physical Fieldwork

Hypothesis: The width and depth of the River Porter increases as you go downstream.

What theory underpins the enquiry?

What are appropriate sources of primary and secondary evidence including location?

What are the potential risks of carrying out the fieldwork and how can they be avoided?



Bradshaw Model is a theoretical diagram/ model, used to show and describe the characteristics of the river and from its source regions in its upper course with increasing distance downstream towards its mouth. This demonstrates how a natural river should behave.

Key Ideas:

- The river will widen and deepen as it goes downstream.
- **If the triangle increases in size it means that variable increases the further you go down the stream** e.g. the amount of water (discharge) in the stream increases as you move down the stream
- The model includes **gradient, channel bed roughness, load, velocity, depth, width and discharge**.

Using this theory the physical fieldwork aim is to compare the 3 sites along the upper course of the River Porter. The River Porter was chosen due to its easy accessibility from school, the footpath that follows the river made it accessible, the river discharge sufficient to see change but not too deep/fast to render it dangerous. Changes in the course of the river were noticeable within walkable distance.

Potential Risks and how we can mitigate them:

- Traffic (Accidents) – Use designated crossing points/ensure you are not wearing headphones/look both ways when crossing the road.
- Risk from/to public – Walk in smaller groups and pairs/do not block pavement/do not enter private property/be kind and courteous to members of the public.
- Slips trips and falls- Take care when walking along the footpath and look out for tree roots. Take care when entering the river, only do so where it is safe, when a member of staff has given the Ok.
- Infection from dirty water – no entering the river unless wearing water shoes/sliders. No entering the water with open wounds on feet to avoid getting an infection.

Selection of appropriate data.
How did you collect your data?
What sampling measures did you use?
Description and justification of data collection methods.

Primary Data Collection:

Physical Data Collection

Measuring the river width (occupied river width)

First with a 30 meter measuring tape, measure a suitable width of the river, from waters edge to waters edge. This is the occupied channel width (where the water comes to) is recorded. This figure was then divided by 10, and 11 measurements of depth were taken + recorded at equal intervals, including one measurement taken at 0cm- this is systematic sampling. The tape measure was held taught and all measurements were taken from the left hand side , downstream of the measuring tape, as it moved slightly with the flow of the water. All of this was done to reduce bias.

The above was done at 3 sites equal distance from each other along the upper course of the River Porter.

Human Data collection:

Survey of human interventions- at each site, any observations of human interference were noted down.

Sampling Strategy

Using systematic sampling, recording 11 depth readings in mm/cm at all 3 sites.

What presentation methods did you use and why?
Description and explanation of presentation methods.

Located cross sections

Using the data collected at each site, the width was used as the 'X' axis, the depth the 'Y', the data was plotted to show the river depth and width at the 3 sites, then the graphs were cut out and stuck onto the map at the correct locations. This method allows us to plot the data in 3 visually clear and simple graphs that were easily comparable

Description, analysis and explanation of your results.
Are there links between data sets?
What statistical techniques did you use?
Can you identify anomalies?
How has human action affected the physical landscape?

River Width and Depth

The cross profile maps/ located cross sections at the 3 locations showed that the river did widen and deepen from site 1 to site 3. However, due to human interference at site 3 the river was wider at site 2. This is due to the River Porter having the banks re enforced to prevent erosion at site 3 which is Endcliffe Park.

Links between data:

River depth and width increased the further we were from the source of the river.

Anomalies/ Human interaction with landscape: Due to human interference the second site was far wider than the third as the banks of the river at site three had been reinforced to prevent the river from migrating through the park.

Statistical Tests: Calculating mean river depth at the 3 sites. Calculating the cross sectional area, (mean depth of river X mean width of river = cross sectional area

What evidence based conclusions did you come to in relation to the original aims of the enquiry?

Evidence suggests that the river does get wider and deeper as it flows from the source. However human interference has lead to a change in the expected results. We can conclude this because:

- Site 1 was shallower and deeper than sites 2 and 3.
- Site 3 was narrower than site 2 due to the river banks having been reinforced to prevent the river at site 3 meandering/migrating through the park.

Identification of problems of data collection method.
Identification of limitations of data collected.
Suggestions of other data that could have been useful.
Extent to which conclusions were reliable.

Problems with the data collection:

- The meter rulers that we used to measure the river depth were too big and didn't give clear readings- down to the MM.
- Sample size was limited to 3 sites due to time restrictions.
- Tape measure not held taught, causing mixed results.

What we could have done instead:

- Use a 30cm ruler instead of a meter stick as it would be clearer to read.
- Sample more sites along the river at equal distance apart.
- Hold the tape measure taught- ensure students know the importance of this.