

Urban sustainability and biodiversity – fieldwork ideas

Introduction

This fieldwork booklet has been designed with the location of South Kensington in mind. However, the resources can be easily adapted to fit within a local area.

The aim of the fieldwork is to answer the question: *How sustainable and biodiverse is South Kensington?* It has been created so that pupils can investigate one or several elements of biodiversity and sustainability and then draw conclusions on their findings.

Within each theme, there are suggested fieldwork techniques along with explanations of how they could be used in the field.

The booklet (and accompanying Scheme of Work) has been written for teachers with GCSE level pupils in mind. However, it can easily be adapted for Key Stage 3 (11–14-year-olds) or A Level fieldwork. Each theme has a sub-question so that pupils can create a hypothesis thinking specifically about their area of study. If they are covering more than one theme, then the overarching question could be used.

The fieldwork supports the broad GCSE curriculum such as locational knowledge, maps, fieldwork and geographical skills, place: processes and change, human geography: processes and change.

NOTE: to use some of the resources available in this booklet, your school will need to sign up to a free ArcGIS account. If you do not already have an account, sign up for one [here](#).

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Sense of place (optional)

To gain a sense of place, using techniques such as [soundscapes](#) will help pupils think about their surroundings before they start their fieldwork. This is a good activity to do at different points in the day.

Sustainable transport

Question: *Does South Kensington support sustainable transport?*

1. Using Survey123 to identify the types of transport within South Kensington.

An example of a survey can be found [here](#). Go to different sites within the area being investigated. Use Survey123 to locate where the data is being collected. Count the number of different vehicles which pass pay for a given amount of time.

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2. Using Survey123 to map cycle routes in the area being investigated.

An example of a survey can be found [here](#). Go to different sites within the area being investigated. Use Survey123 to locate cycle lane routes. Upload images of the lanes. Identify the type of cycle lane.

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Urban green space

Question: *What is the quality of urban green spaces in South Kensington?*

1. Environmental quality survey.

Assess the quality of different aspects of the environment at different sites within the area being investigated. Use a scale which can show a scale of different categories. An example of an environmental quality survey can be found [here](#). This document can be edited to meet the categories needed for the area being investigated.

2. Temperature levels

Assess the impact green areas are having on the local microclimate and reducing the heat island effect by analysing the temperature in green, semi-green and non-green sites. The Royal Meteorological Society has information about urban heat islands [here](#) if more research is needed. Use a digital thermometer to take readings of temperature at each site to see if the green spaces are having an effect on the temperature.

3. Biodiversity

Use a quadrat to identify the number of species within each green space. Using the ACFOR scale could be a method to use to show variants across different green spaces in the area. To find out more about how to use the ACFOR scale, click [here](#). Alternatively, using an application such as [Habitat Mapper](#) can be used to track and map species.

Sustainable buildings

Question: *How environmentally sustainable are the buildings in South Kensington?*

1. Fieldsketch / annotated images

Sketch or take photos of different buildings in the area being investigated. Create several categories which will help determine how environmentally sustainable they are on a sliding scale i.e. colour of building, building material used, amount of green space / greening of buildings, solar panels etc. Annotate the image with observations on how environmentally sustainable they are then using the total from the scale, give the building a score. If needed, use this [link](#) to help understand how to use sketches or photos effectively.

2. Stakeholder sustainable practices (secondary research)

Use the internet to research and review the sustainability practices the main stakeholders are conducting. Some examples of the main stakeholders can be found on the [StoryMap](#).

Waste & recycling

Question: *Is waste managed effectively in South Kensington?*

1. Bin map and litter count

Use an application such as [MapMaker](#) or create a [Survey123](#) to locate the bins in the area and add their waste type. Images of each bin could be uploaded onto the application as evidence. Conduct a litter count in specific sites to see how effective waste is managed in the area being investigated.

2. Mood mapping

Mood mapping can be used to help gauge how the environment makes you feel about a place. Use it at different sites near and not near areas which have waste management present to assess how it affects the mood of the place. To find out more about how mood mapping works, click on this [link](#).

Air quality

Question: *How good is the air quality in South Kensington?*

1. Application research (secondary data collection)

You could conduct some preliminary and / or post work on the area being investigated by using various weather and air quality applications such as Plume, AirVisual, or phone weather apps - look for the air quality index (AQI). This could be used to track the air quality over a period of time.

2. Wet wipe test

Take a pack of biodegradable wet wipes and use them to assess the amount of dust particles which have stuck to buildings. Create a scale to look at coverage of the amount of particles picked up on the wipes. They can be stored and analysed back in the classroom or in the field. Make sure they are thrown away in the correct bin.



Economic sustainability (secondary research)

Question: *How economically sustainable is South Kensington?*

1. Average house price and rent survey

Use housing sites such as Zoopla, Rightmove etc to find out the average house prices and/or rent for the area being investigated. Compare this with the average income for the area using census data or sites such as [Crystal Roof](#). This can be further investigated by comparing the same data from the area local to the school.

2. Stakeholder employment

Use job search sites such as indeed, LinkedIn etc to gather data on the types of jobs as well as the average wages advertised at some of the key stakeholders in the area being investigated. This could be developed further by analysing the level of qualifications required for the job.