

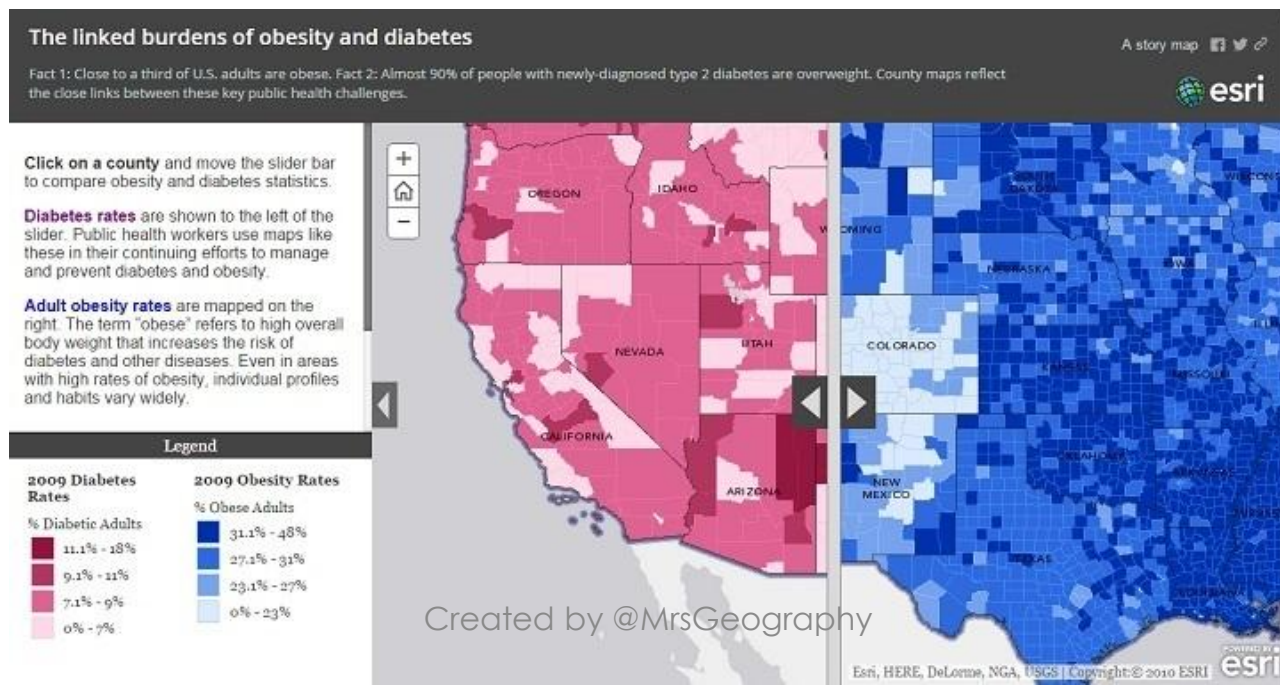
Eighty geography fieldwork techniques

A range of primary and secondary techniques for both human and physical fieldwork. You will be **spoilt** for choice!

1. ArcGIS Online story maps

ArcGIS Online is a GIS platform allowing students to create, view, interrogate and display a range of data.

Story maps allow students to combine interactive maps (created in ArcGIS Online) with content, i.e. photographs, to illustrate information in regards to a particular location.



2. Digimaps for schools

EDINA's Digimap for Schools is a great tool for any key stage, with a huge range of historical, local, regional and road style atlas maps which are regularly updated.

With a range of additional features allowing students to customise maps with measuring tools, shapes, text and photographs. It is effectively a simple way to embed GISc into your teaching practise.



The screenshot shows the website for Digimap for Schools. At the top, there is a green header with the text "Digimap for Schools" in a stylized font, a "GOLD Geographical Association" award logo, and the "EDINA © The University of Edinburgh" logo. Below the header, on the left, is a "Menu" section with a dark background and white text, listing: "» Login «", "About Digimap for Schools", "FAQs", "Technical Requirements", "Subscribe", "Free Trial", and "Terms Of Use". To the right of the menu is a "Contact for staff" link with an envelope icon. Below the menu is a "Related links" section with a green background and white text, listing: "Ordnance Survey MapZone", "JISC Collections", "Ordnance Survey Website", and "EDINA Digimap (for HE & FE)". The main content area on the right has a light blue background and contains the text: "Digimap for schools has been awarded the GOLD Certificate for the best overall resource in the [Geographical Association's 2011 Publishers' Awards](#)". Below this text is a paragraph: "Digimap for Schools is an online service providing up to date Ordnance Survey maps. You can use these maps in the classroom, for homework or for school projects. There are many maps each at different scales. You will need your school login details to get started." At the bottom of the main content area is a large illustration of a cityscape with a "login >" button overlaid on it.

3. Google Earth

Google Earth allows students to view locations at a range of scales, through satellite imagery.

In addition Google Earth's time-lapse feature also allows students to view how our planet has changed over time using satellite images.

KEY TIP: Google Earth could also be used to show wave approach showing the predominant wave direction.



4. Google maps

Students can easily view a range of locations with a number of viewing features from street view, road maps and satellite earth view. It can also plot fieldwork routes which students could then screen print and annotate at a later date.

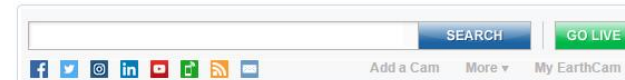


Google maps street view is also a great platform for virtual **fieldwork if you are having difficulty organising fieldwork.**

5. Webcam

Using websites such as earthcam.com, allow students to use a range of webcams to observe the landscape and identify a range of evidence such as weather, people or even time zones.

KEY TIP: Complete pedestrian counts, environmental quality surveys as each stream is live!



LIVE Webcam Network

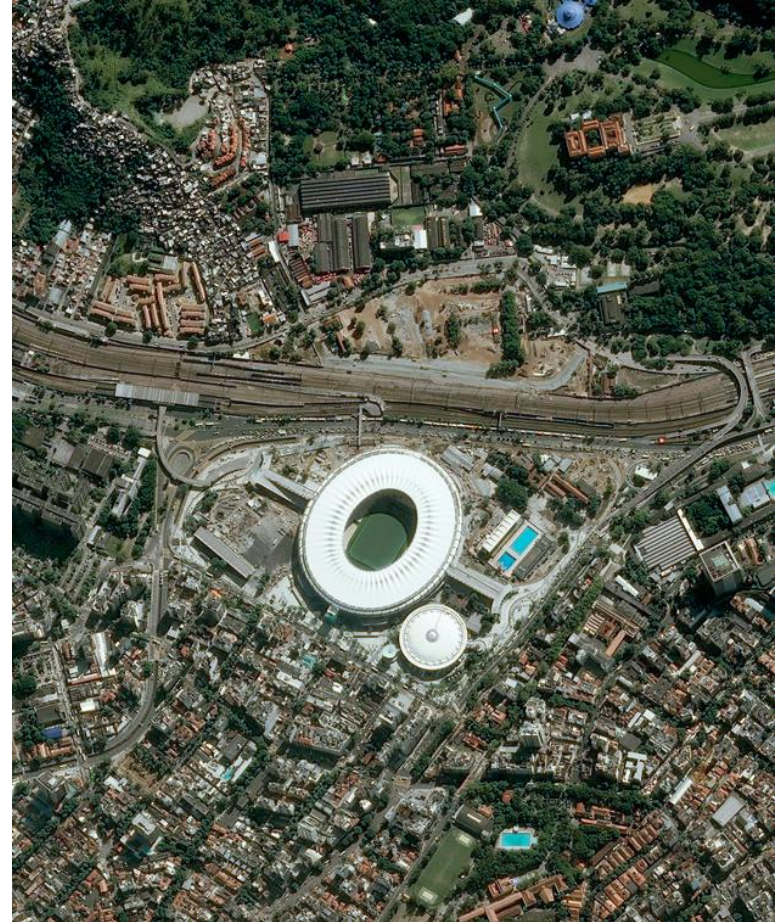


6. Satellite images OR 7. Aerial photographs

These can be easily accessed on Google maps and Google Earth.

Satellite images can be easily compared to OS maps, alternatively they can be annotated.

KEY TIP: They can also be used to show wave approach indicating the predominant wave direction.



8. Photographs OR 9. Images

Similar to sketches, photographs and/or images can show main features of a view or location.

They can then be used to examine human and physical features of a scene and how these are interrelated.



10. Sketches

A sketch can be used to show an image and/or photograph, viewpoint or landscape.

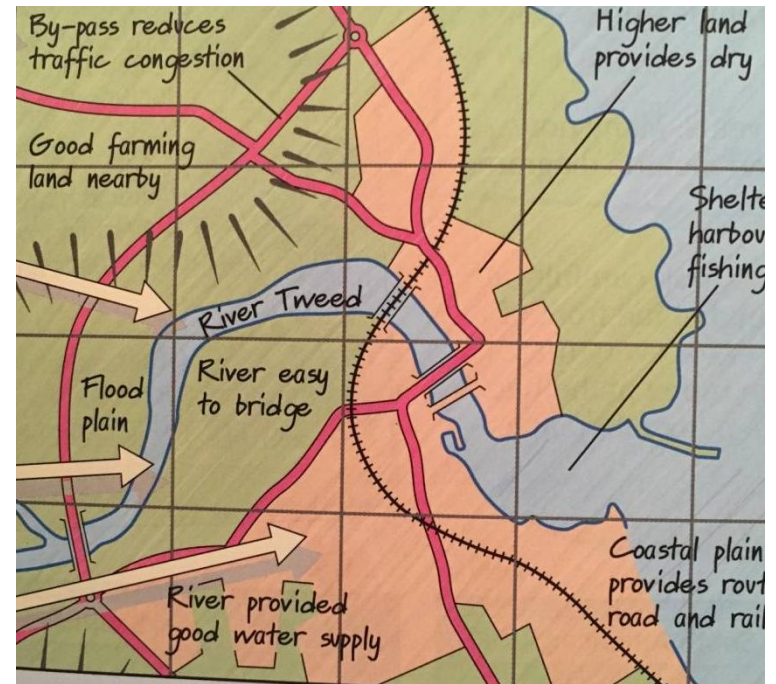
Sketches can then be annotated to show key characteristics and features.



11. Sketch maps

Similar to sketches, students can use sketch maps to show the main features of a location, or as a base map to display other data such as images or graphs.

For example a sketch map can illustrate existing coastal defences and assessing the effectiveness.



12. Census data

Students could use census data before and/or after conducting fieldwork.

If completed before it could allow students to familiarise themselves with each location's key characteristics, i.e. population, crime, employment.

Alternatively, census data could be used to support primary findings collected during a fieldtrip.



13. Websites

<http://www.neighbourhood.statistics.gov.uk/dissemination/>

<https://www.police.uk/>

<http://www.nationalparks.gov.uk/>

<https://www.visitengland.com/>

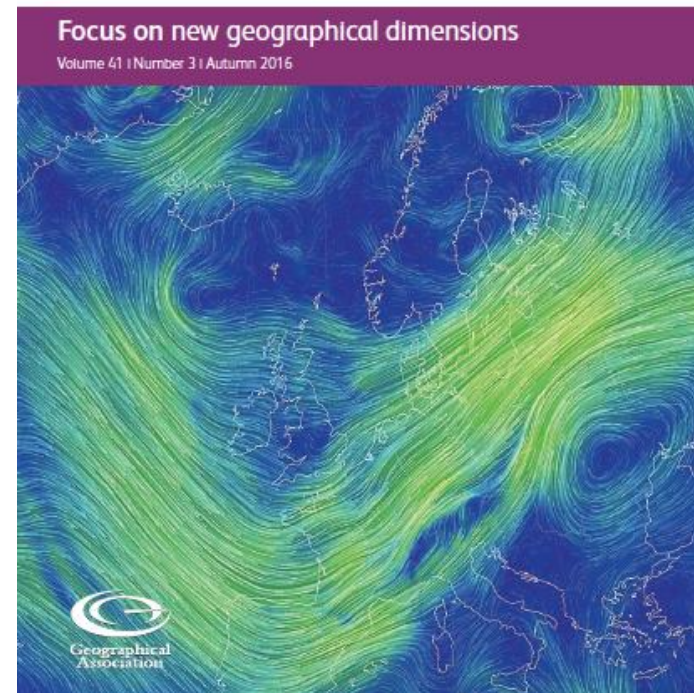
<http://www.rightmove.co.uk/>

Also refer to **census data**

14. Textbooks, journal articles etc.

A great source of secondary information or even new theories and concepts.

Teaching Geography



15. Environmental Quality Survey OR Bi-polar analysis

A method used to assess the quality of a location. It can be used to compare different locations against the same factors.

The survey allows you to choose pairs of opposite characteristics, e.g. no litter and litter, and associate these with a scale score such as +2 to -2.

	- 2	-1	0	+ 1	+ 2	
Unpleasant environment						Pleasant environment
Very noisy						Little noise
Very congested with traffic						No congestion, free flowing
A lot of litter						No litter
Poor signage						Plenty of clear signage
Very little green space						A lot of green space
Crowded						Not crowded
Unsafe						Safe

16. Traffic count

A strategy used to count traffic in a given location, usually for 5 minutes.

This can then be repeated at various locations, in the morning and afternoon for comparison.

Location 1:	Count 1 (Tally) Time:	Count 2 (Tally) Time:
Car		
Bus / coach		
Motorbike		
Bicycle		
HGC (e.g. vans and lorries)		

17. Land use mapping

This can be used to find out what each building or open space is used for.

Using a map of your chosen location, students can use a key to categorise the different services and colour code and/or pattern their map.



Key

		Example	Service tally
F/D	Food and drink	Pub Café Fish and chip shop	
WS	Water activities / sports	Boat hire Lake cruise	
GS	Gift shops	Selling souvenirs and gifts	
C/F	Clothing / footwear		
E	Entertainment	Cinema	
O	Other	Supermarkets Post office	

18. Land use transect

Using a map, draw a line through a built up area and record the land use on either side.

By drawing a number of transects from a given location in various directions, a clear picture of the pattern of growth is revealed.*

*Similar to land use maps OR
rice pots



19. Rice pot survey

When constructing maps of urban land use a code allows students to quickly note the main types of land use. Then they can use colour and/or shading for your final map.

This example classification is called RICE POTS, originating from the general code letters. There are 2 codes for each land use. The first is a general code letter, the second describes it in more detail.

R	residential F flat T terraced house S semi detached house B bungalow D detached house	P	public buildings E education & libraries H hospital C church P police W welfare
I	industrial L light manufacturing H heavy manufacturing C chemical works B building works E extraction (mined)	O	open space F farmland P park C cemetery U unused land D derelict building S sports field
C	commercial F food shop P personal services D department stores Y furniture and carpets V vacant or under construction G garage M market S specialist shop O office	T	transport B bus station T taxi C car park S sea port
E	entertainment H hotel S sports centre T theatre and cinema B bar R restaurant and cafe/soda	S	services F financial B business M medical H housing (real estate)

** Use X as a second letter for activities you are unsure about.*

20. Resident Quality Survey

A method used to assess the quality of the location for its residents. It can be used to compare different locations against the same factors such as property size, gardens and privacy.

The survey allows you to choose pairs of opposite characteristics and associate these with a scale score, for example from +2 to -2.*

*Similar to Environmental Quality Survey

RESIDENTIAL QUALITY SURVEY

Location: Con. street

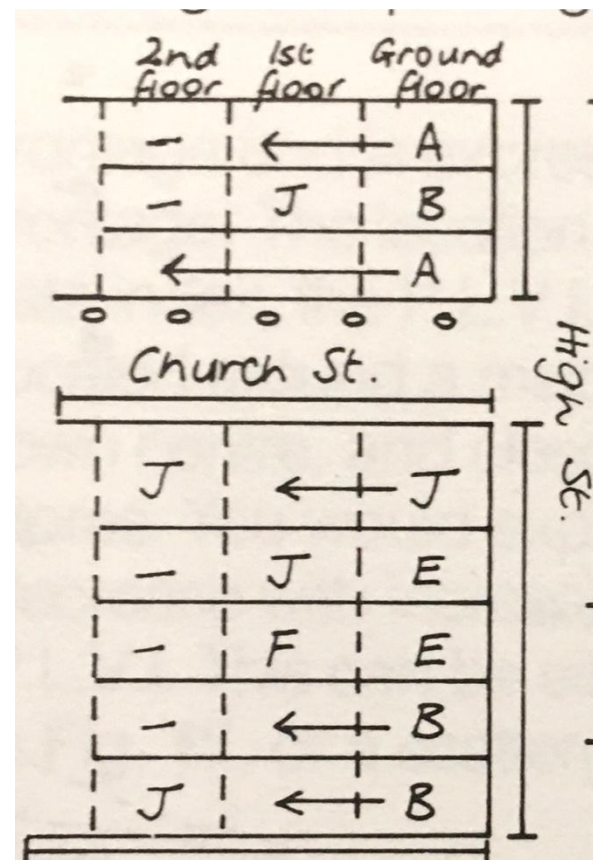
STRENGTHS:	10	8	6	4	2	0	-2	-4	-6	-8	-10	WEAKNESSES:
Large properties		3	4	1			2					Small properties
Large gardens						7	1	2				No gardens
Well tended gardens						12	7					Gardens in poor condition
Privacy									12	7		No privacy
Safe environment									12	7		Unsafe environment
Properties good repair			7									Properties in poor repair
Quiet environment						2						Noisy environment
Litter		3	11	4					12	7	3	Lots of litter
Little traffic									6			Lots of traffic
Close to public transport				4					12	7		No parking available
Shops		12	7									Poor access public transport
Schools		3	4	11								Not near shops
Leisure facilities			5	7	2	11						Not near schools
Countryside			3	4	12							Not near leisure
							1	2	4	3		Not near countryside

1 -8 2 -16 3 12 4 10

21. Building height

As buildings in town centres are usually taller, decreasing the further you travel outside of the CBD.

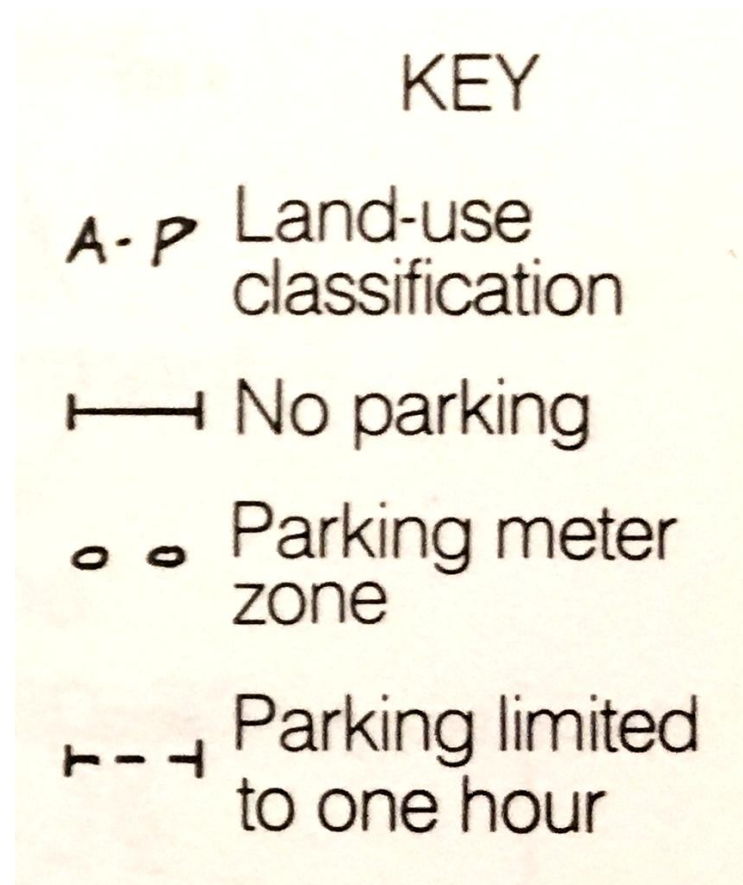
Students could count the number of storeys in each building and record it on a base map.



22. Parking restrictions

As parking restrictions influence shopping patterns, these can be greatest in the CBD or out-of-town shopping centres.

Students need to mark the restrictions on the base map, using a classification such as no parking, parking meters, parking limited to one hour etc.



23. Shop quality

A shopping street survey can be used to measure an area's importance and variety. Therefore showing the vast array of facilities and shops the area has for shoppers.

It could be used to examine if the quality/variety of shopping locations increases or decreases towards a particular location.

Shopping quality		Score (on a scale of 1 to 5)
A	Type of shop	1 = dominated by department/variety stores, or shops selling 'comparison' goods 5 = wide variety of shop types, convenience goods dominant
B	Other land-use groups	1 = mainly shops 2 = shops and banks/building societies 4 = mainly offices 5 = very few shops – dominated by houses/industry
C	Retail organisations	1 = national chain stores dominant 3 = mixed – some national and independent 5 = small, independent shop units
D	Quality of goods	1 = good quality and/or high price goods 5 = low quality and/or low price goods

24. Street appearance

A street appearance survey can be used to measure the areas attractiveness.

Therefore showing how attractive and well-kept the area is for people.

It could be used to examine if the quality of streets fluctuates or not between locations, or in a single location. *

*Similar to an Environmental Quality Survey

Street appearance		Score (on a scale of 1 to 5)
E	Safety for pedestrians crossing street	1 = very safe 3 = busy street with pelican crossing 5 = high risk – busy street with no crossing
F	Shopping crowds	1 = very busy – large numbers of shoppers 5 = very quiet – few shoppers
G	Street cleanliness	1 = very clean – no litter 5 = very dirty – serious litter problem
H	Exterior appearance of shops	1 = well-maintained property/attractive window display 5 = poorly-maintained/very drab
I	Traffic/pedestrian segregation	1 = pedestrianised street/precinct 2 = buses only route 3 = open to all traffic – no parking 4 = open to all traffic – limited parking 5 = main traffic route – no parking restrictions
J	Vacant premises	1 = all premises occupied 5 = many vacant premises/cleared sites

25. Quality/Decay Index OR Building quality

Variations in residential or industrial areas can be shown using a building quality survey.

It can be used to compare different residential or industrial locations against the same factors.

...range, then called an index of decay

	None	Little	Some	Much
Deterioration of walls	0	1	3	5
Paint peeling	0	1	2	3
Displaced roof material	0	1	5	9
Broken glass in windows	0	1	3	7
Broken gutters, etc.	0	1	3	7
Structural damage, e.g. settling cracks	0	3	6	11
Rotting timber	0	2	4	8
Sagging roof	0	2	6	10

Either in the field if time, or on return to the centre

For every street examined, add together the awarded points, then subtract your total from 60.

The following general points can be made from your result:

Score	Physical condition of buildings
50 – 60	Good/excellent
40 – 49	Satisfactory
30 – 39	Generally unsatisfactory. May be bad in specific points
20 – 29	Action needed in very near future to improve structure
Below 20	Need to demolish or rebuild

26. Shoppers perception survey

This survey is used to determine shoppers' awareness of the layout of a particular location (i.e. CBD).

Simply select 10 shops and/or offices in a given location and mark their location on a map. Number each position on a different map and ask a sample of shoppers to match the list of shop names to the site numbers, recording the answers on a sheet.

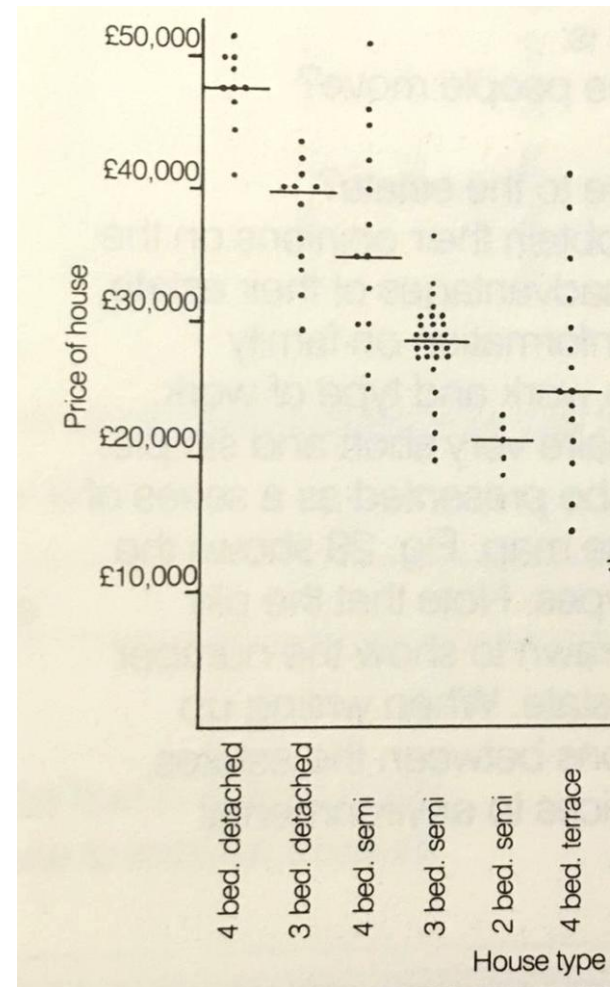
The aim is to examine whether shoppers' awareness is a good indication of accessibility and land use.

Site number	Shop/office name	Percentage correct answers	Distance from P.L.V.I.
1	Boyces Hardware	57%	143 m
2	Barclays Bank	63%	95 m
3	Job Centre	73%	95 m
4	Eastwoods Furniture	37%	158 m
5	Boots Chemist	97%	0 m
6	Tesco	97%	48 m
7	John Collier - Menswear	67%	32 m
8	Oddies - Confectioners	77%	32 m
9	Financial Affairs	13%	143 m
10	Grace's Ladieswear	0%	333 m

27. House price survey

Using local estate agents, websites, newspapers or property guides students can collect information regarding house prices within a given location.

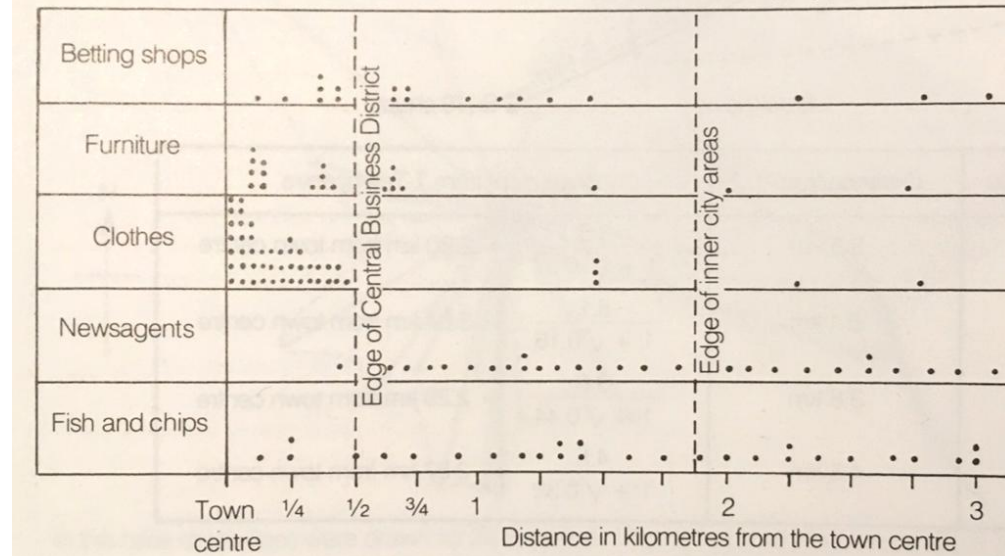
This information could then be correlated to show house prices against house type, as well as other factors if required.



28. Shop type distribution

By mapping the distribution of certain shop types, i.e. newsagents, furniture.

Using the scale on the map, measure the distribution/distance from a central location. Students can then examine if the pattern is regular, clustered or randomly.



29. Shopping hierarchy

This technique is best when visiting a number of locations within a given area. First students need to map the locations of shopping areas, from retail to supermarkets.

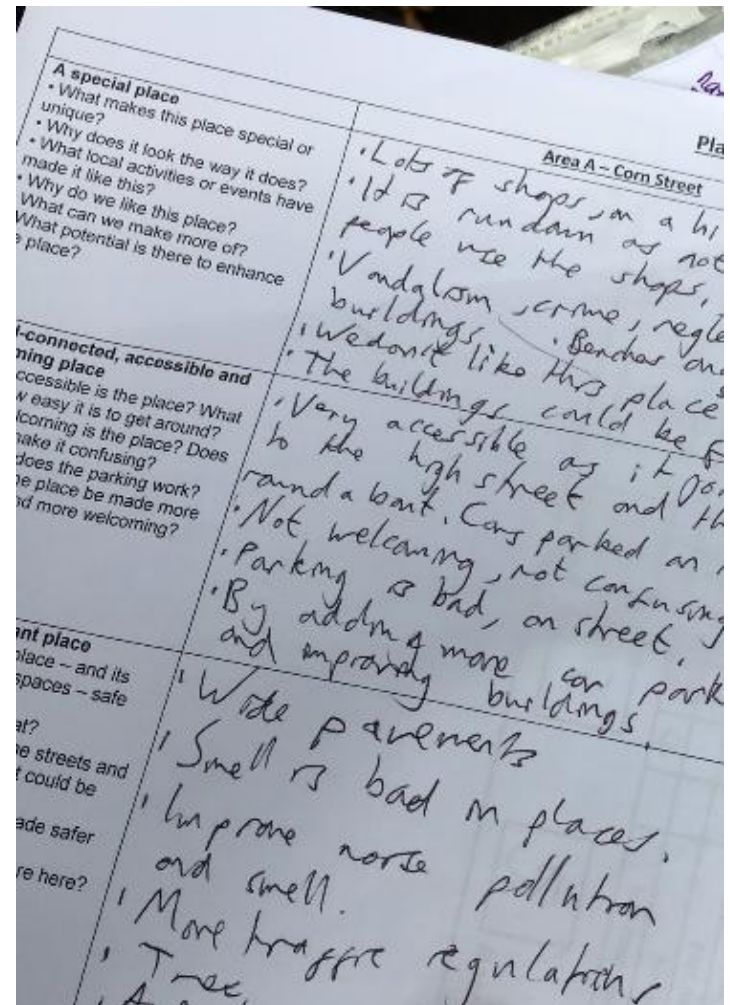
When visiting each of the shopping areas assess its position in the shopping hierarchy, referring to the number and type of shops available.

Shopping centre	Newsagent	Butcher	Food shop		Chemist	Hairdresser	Greengrocer		Bank	Travel agent	Supermarket		Clothes	Furniture	Shoes	Other shops	(x) Total shops	(y) Total centrality values (shopping centre)	(x + y) Centrality Index
Town centre	###	###	###			###			###				###	###	###	49	127	856.2	983.2
Stobhill	/	//			/	/	/				/					10	20	101.1	121.1
Loansdean	/		/													3	5	14.7	19.7
Kirkhill	/	/	//		/	/	/									4	11	67.2	78.2
Bargate	/	/	/													5	8	23	31
North Road	//	/			/	/	/		/	/	/					24	36	138.6	174.6
Centrality value	100/11	100/12	100/18		100/7	100/10	100/7		100/6	100/5	100/5		100/13	100/9	100/9				
(shop type)	9.1	8.3	5.6		14.3	10	14.3		16.7	20	20		7.7	11.1	11.1				

30. Characteristics of a place

Students observe and summarise human and physical features with an area.

This could be linked to a list decided before hand, or used to compare two locations.



31. Clone town vs. Home town

This survey is used to determine whether your town is a Clone Town, similar to dozens of others around the country or a genuine Home Town that is distinctive and recognisable as a unique place.

At your chosen location, record the amount of independently owned shops (50 points) versus chain store (5 points). Add up the scores and divide by the number of shops in total.

TYPE OF SHOP		Independently owned
1	Food retailer (butcher, baker, supermarket, etc.)	
2	Newsagents/tobacconists	
3	Stationery/books	
4	Department and catalogue stores	
5	Restaurant/takeaway/fast food/coffee shop	
6	Pub/bar	
7	Off licence	
8	Professional (insurance, accountancy, legal, etc.)	
9	Estate agents	
10	Health care shop/pharmacy	
11	Household items (furniture, kitchen, etc.)	
12	Clothing retailer (shoes, accessories, etc.)	
13	Cinema/theatre	
14	Electronic/IT (TVs, phones, computers, etc.)	
15	Butcher/food supplier/etc.	

CLONE TOWN RATING											
5	10	15	20	25	30	35	40	45	50	55	60
Clone Town					Border Town			Home Town			

32. Questionnaire

These are particularly useful when wanting to collect information from the public. A set of questions with either multiple answers or open ended.

These questions can be used to show a range of information, as long as they are devised carefully.

	1	2	3	4	5
Where have you travelled from?					
What was your method of transport to get here?					
What is the reason for your visit?					
What type of accommodation are you staying in or are you a local resident?					
On a scale of 1-5, how would you rate the overall quality of Bowness as a tourist destination?					
1 = poor and 5 = excellent	Created by @MrsGeography				

33. Interviews OR 34. Focus groups

Students come up with a set of open ended questions, to ask a small number of respondents either individually or as a group.

The questions can be used to show a range of information and students have the opportunity to modify their set of questions throughout the interview, as long as they are focused on the information they require for their research.

35. Pedestrian count

This indicates how busy a location is at particular points. This strategy is used to count people in a given location, usually for 5 minutes.

This can then be repeated at various locations, in the morning and afternoon for comparison.* The more counts that are done the easier it is to map results.

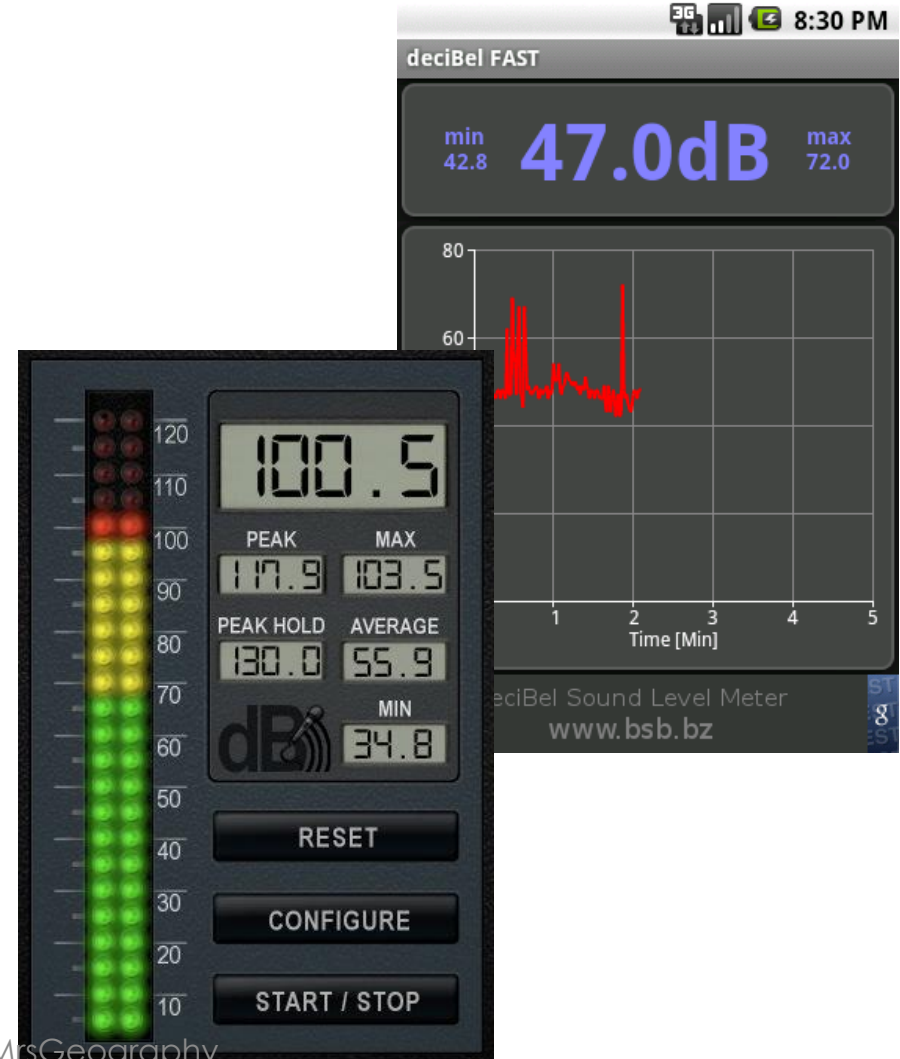
*Similar to a traffic count.



36. Noise pollution

This sound level meter is a tool that uses a smart phone's microphone to measure Sound Pressure Level (SPL).

Students can then use their phones to measure noise levels in various locations.



37. Air quality

A range of apps have been developed to provide air quality information and raise awareness for poor air quality.

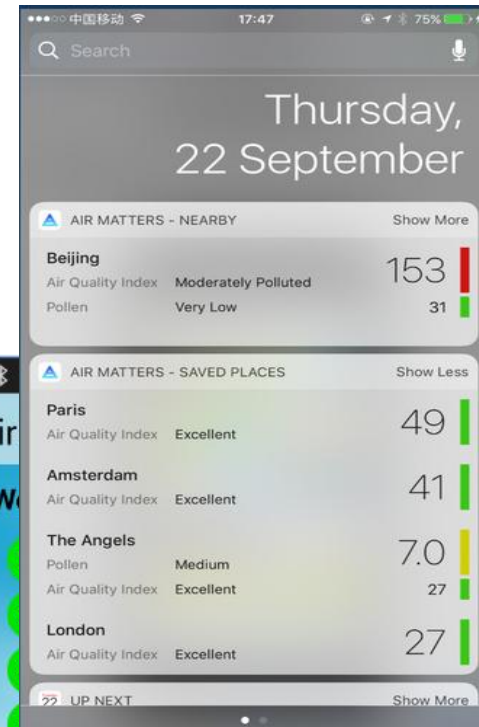
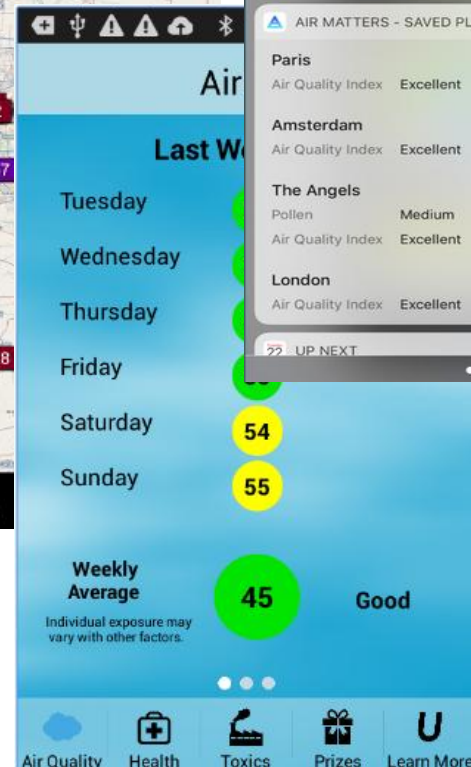
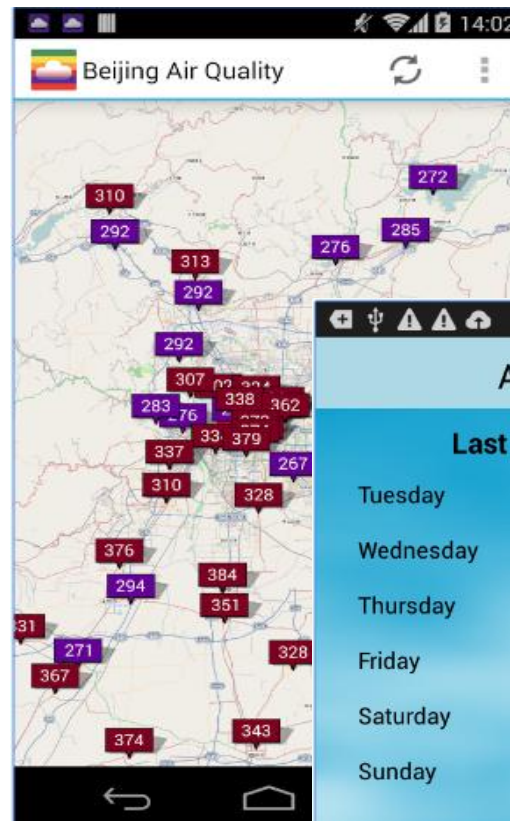
Some examples are:

Air Matters: Global Air Quality & Pollen Data

Air Quality: Real time AQI

The London Air

AirForU



38. Tally

Tallies can be used to show a quantity of a feature or object, for example litter, management strategies etc.

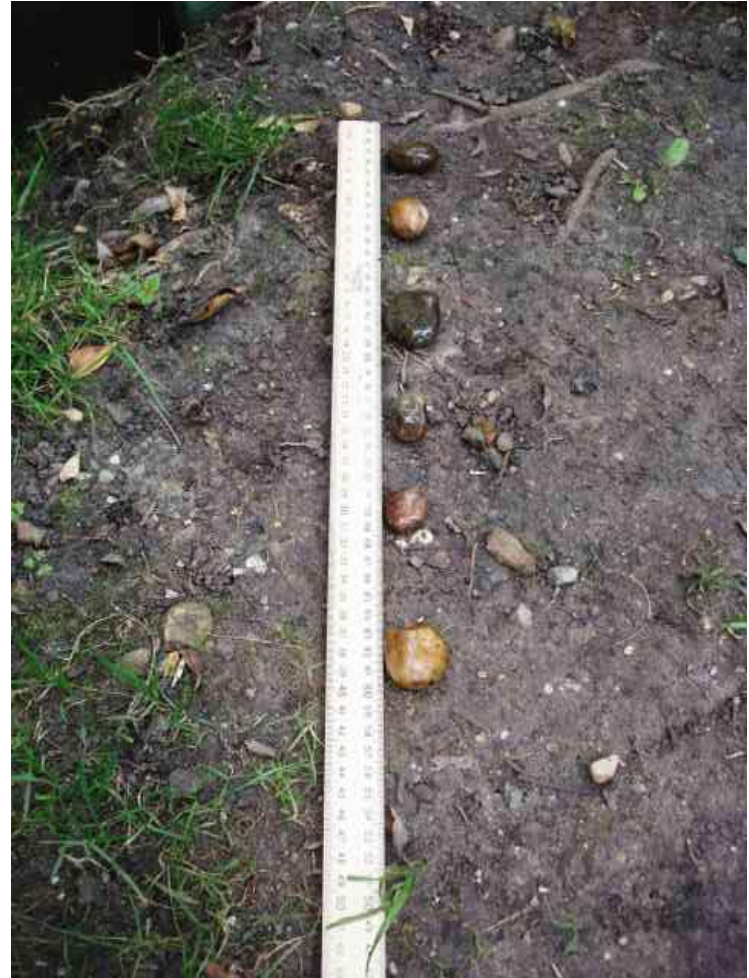
This strategy is then useful to show the total amount of a feature such as problems of tourism.

1		6	
2		7	
3		8	
4		9	
5	 	10	

39. Sediment analysis

Ideal for rivers, glaciers and coasts fieldwork, this technique examines features sediment i.e. size, shape, angularity.

This method can also be used to compare changes in sediment size, in order to understand past physical processes occurring.



40. Precipitation

A range gauge can be used to collect and measure the amount of precipitation which falls, in a given location for a certain time frame.



41. Air pressure











A barometer can be used to measure air pressure, for students to understand whether the weather conditions are due to high or low pressure.



42. Cloud cover

Using the Okta scale, decide the amount of cloud cover in the sky.

The amount of cloud cover at a location can affect temperature readings as well as light readings.

	0 Oktas (no cloud)		5 Oktas
	1 Oktas		6 Oktas
	2 Oktas		7 Oktas
	3 Oktas		8 Oktas (no blue sky)
	4 Oktas		Sky obscured

43. Cloud type

Using a cloud type chart, students can decide the types of clouds in the sky.

Types of clouds can give us clues as to how the weather could change i.e. rain, thunder.



44. Wind direction

A wind sock, bubbles or wind vane can be used to show the direction the wind is travelling.

1 Place a marker at your start location.



2 Blow some bubbles then pick one to follow.



3 Chase your chosen bubble, without getting in its way, until it pops or floats somewhere you cannot follow.



5 Repeat steps 2 to 4 ten times if possible.

Start point of first bubble

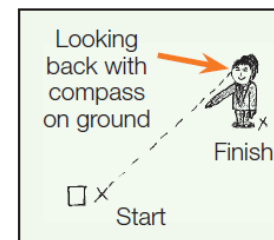
End point of first bubble

6 Wherever you end up, look back at where you have come from.



Start point of first bubble

7 Now use your compass to work out the direction back to the starting point (see page 4 of the Workbook for help on how to use a compass).










This will give you the average wind direction, because wind direction refers to where the wind is blowing from.

45. Wind speed

Anemometers can be used to show wind speed, which could indicate processes such as wind erosion.

This can also be used to estimate the effects of the wind speed using the Beaufort scale below.

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
				Whole trees in motion; resistance felt in walking against the wind.
				Twigs and small branches broken off trees.
				Slight structural damage occurs; slate blown from roofs.
				Seldom experienced on land; trees broken; structural damage occurs.
				Very rarely experienced on land; usually with widespread damage.
				Violence and destruction.



46. Humidity

A hygrometer measures atmospheric humidity, which is now easily available as an app for any smart phone.

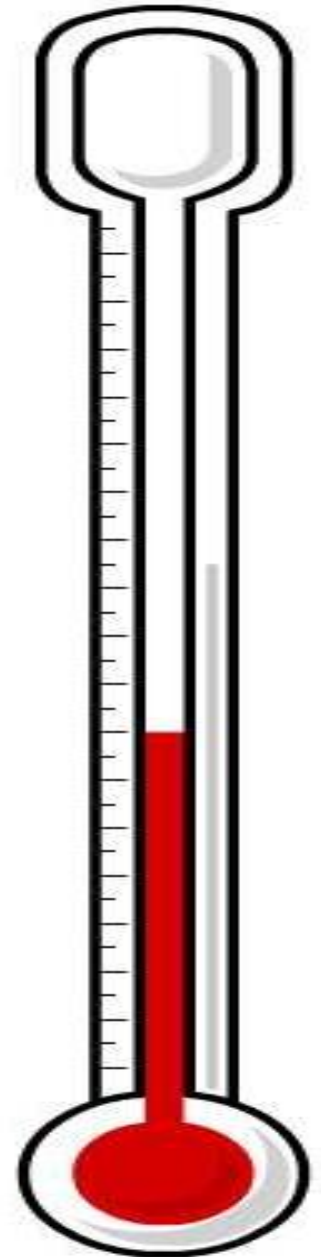
Students can then use their phones to measure the relative humidity in various locations.



47. Temperature

Thermometers can be used to show the temperature ($^{\circ}\text{C}$) of a location.

KEY TIP: Infrared thermometers take this technique one step further by allowing you to point at an object to read its temperature *i.e.* clouds.



48. Data logger

A data logger looks like a memory stick with an adjustable sampling rate, storing over approximately 8,000 data points. The data logger can be stored outside in a waterproof container to collect temperature data continuously for up to 5 days and nights.

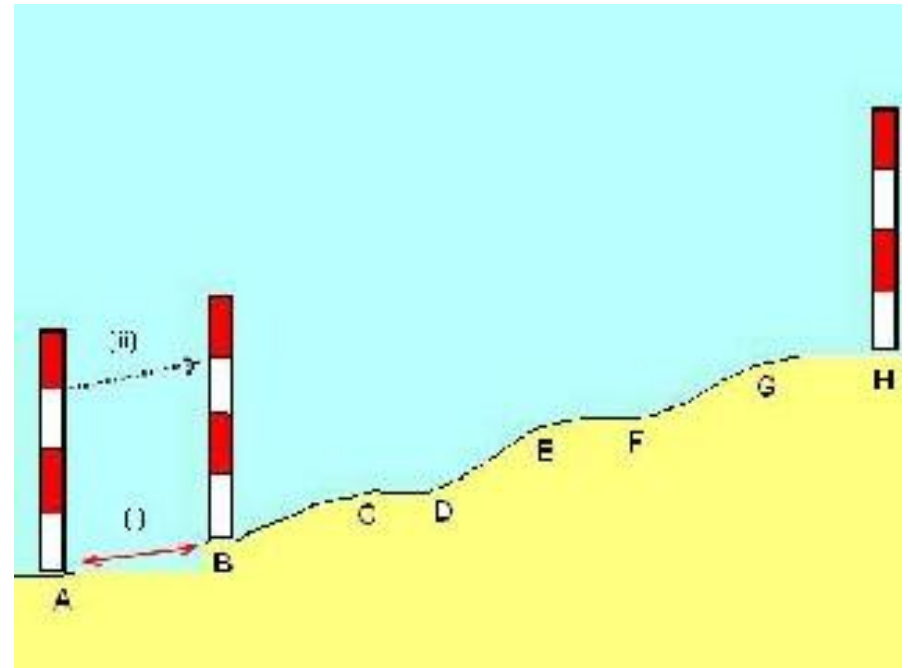
The data logger can be easily plugged into a computer in order to download the results.



49. Beach OR River profiles/transects

This strategy is used to survey the morphology of a beach, valley or river gradient, ideal to compare a variety of ecosystems such as sand dunes.

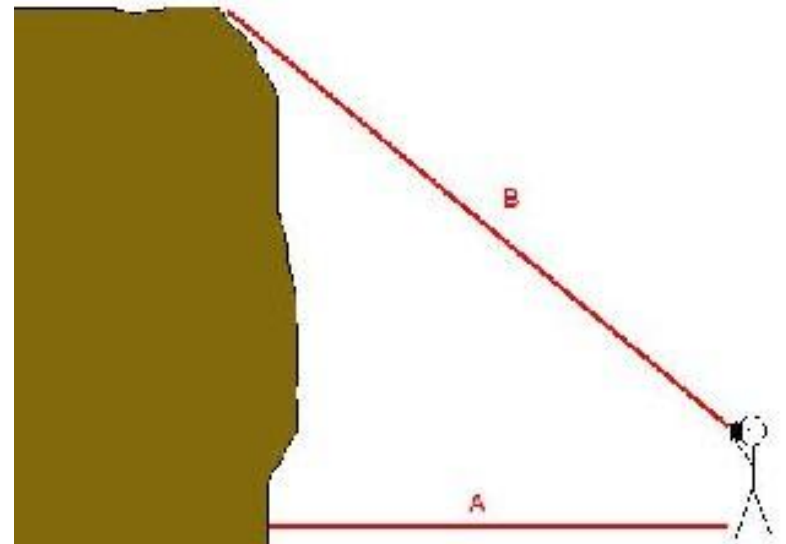
To complete this technique a clinometer and two ranging poles will allow a bearing to be produced to record the slope angle.



50. Cliff height

Using the diagram for reference, students measure the distance (A) as a starting point. Then using a clinometer aim at the top of the cliff which allows them to measure (B).

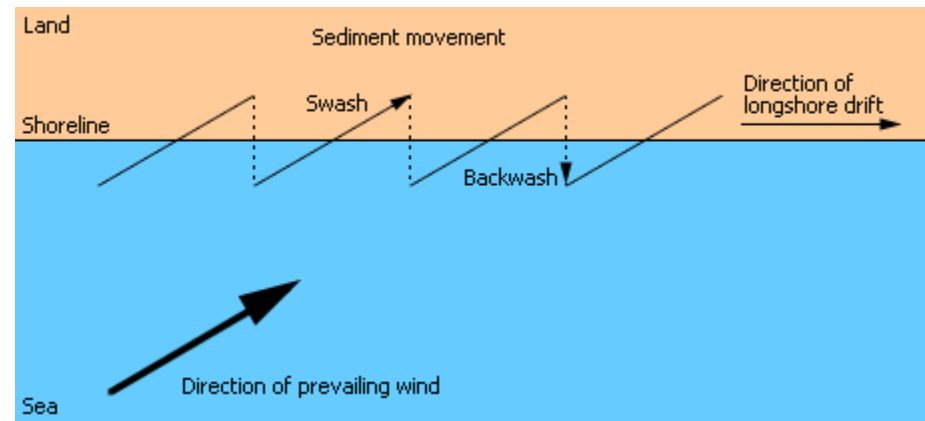
The height of the cliff can then be calculated:
Distance (A) x tan of angle (B) + height of observer



51. Measuring longshore drift

This technique allows students to observe the processes of swash and backwash, and the direction of longshore drift along the coastline.

Students need to decide a distance to measure, marking the start and end positions. They then must place a floating object in the sea at the starting point and measure the time it takes for the object to reach the end position.



52. Impact of coastal management: Groynes

Students measure the height of the sediment against each groyne (or a sample number of groynes), on both sides.

They could also mark the location of the groynes on a base map using compass directions to allow them to identify the direction the sediment is being transported.



53. Valley cross-sections: Bankfull OR Channel width

Students take a tape measure across the river from one side of the river bank to another.

NOTE: Students need to measure the full height of the river where the river bank suggests that its the maximum water capacity.



54. Valley cross-sections: Valley width

Students take a tape measure across the river from one side of the river valley to another.

Note: This technique is easier in the upper course where the channel width is smaller.



55. River depth

After finding the width of the river (see *bankful width*), students can now work out the depth along the river cross section at various intervals.

Stretch your tape measure from the top of the river bank to the other, allowing measurements to be taken along a straight line. At each interval place a meter ruler or surveying pole in the water until it touches the river bed. Where the surface of the water reaches that is your measurement.

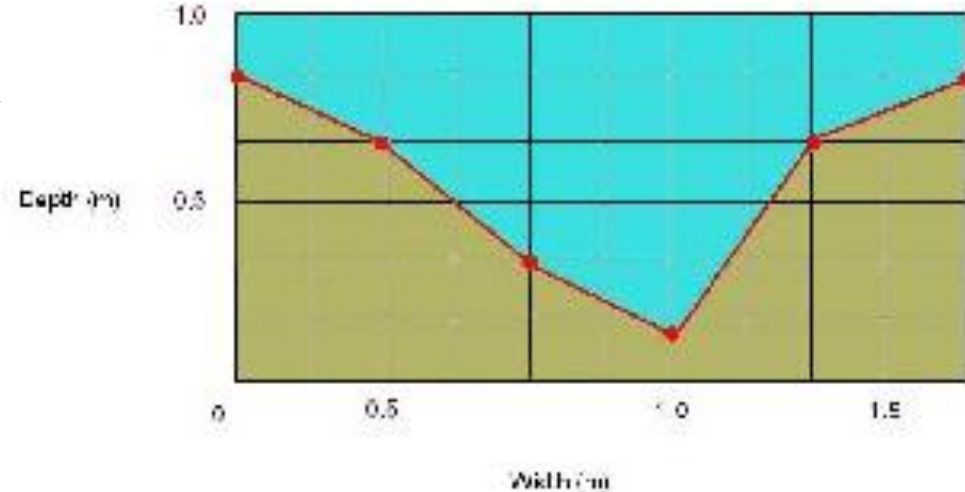
KEY TIP: This would allow a cross sectional diagram to be drawn.



56. Wetted perimeter*

**The part of the channel in contact with water.*

A tape measure, chain or rope should be stretched from one side of the river bank to the other, directly over the water and any rocks or stones.



This allows students to then use this to work out the hydraulic radius, to show channel efficiency.

57. River velocity

This can be completed in a number of ways:

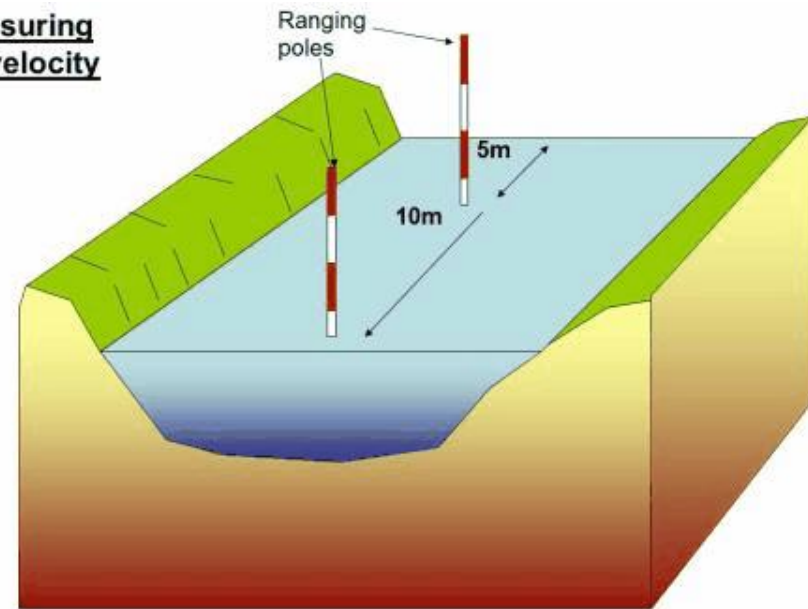
1. **Flow vanes and/or flow meters** can be placed in the water to give a reading of velocity.

This technique is particularly useful when wanting to take readings at different widths and depths across a river channel.

2. **Floating object i.e. tennis ball**

Students need to decide a distance to measure, marking the start and end positions. They then must place a floating object in the river at the starting point and measure the time it takes for the object to reach the end position.

Measuring the velocity



58. Light intensity

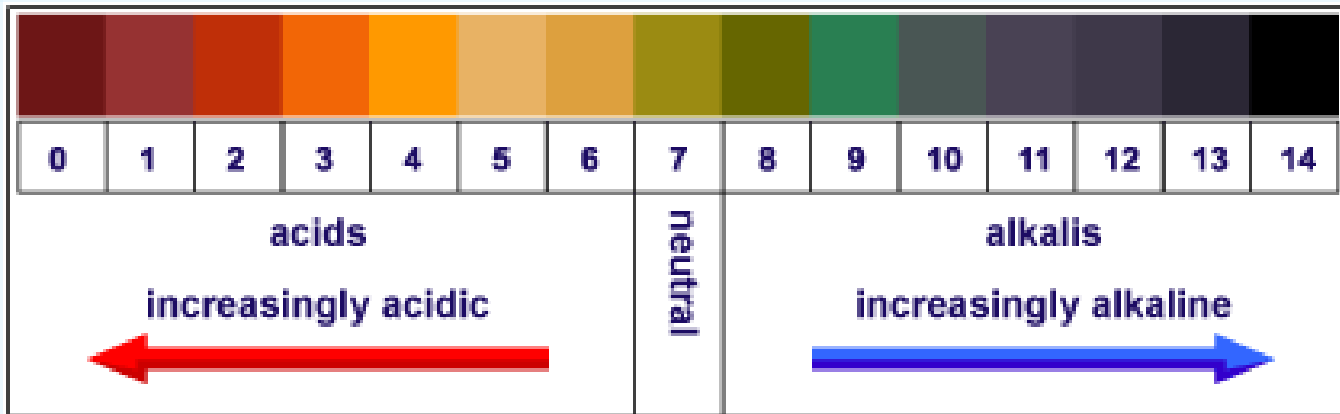
A light meter can measure the light intensity between two distances (points) or when pointed in the direction of the maximum light intensity i.e. The sun.



59. pH levels

The pH of soil, rainwater, and water in rivers and ponds, can be measured using a pH probe and meter.

On the other hand, a sample could be collected in order to test with litmus paper.



60. Invertebrate sampling

Using either pitfall traps (typically used overnight), sweep nets, kick sampling or beating sheets invertebrates can be examined and identified using an identification key or handout which includes images and/or descriptions.



61. Species abundance

A quadrat can be used to survey animals and plants present in a square metre, which is placed on the ground. Students can then record any present within the quadrat, using an identification key or handout which includes images and/or descriptions.

KEY TIP: Students can compare the percentage of species along a transect at various intervals i.e. sand dunes.

The ACFOR scale can be used to indicate abundance:

A = ABUNDANT (greater than/equal to 30%)

C = COMMON (20 to 29%)

F = FREQUENT (10 to 19%)

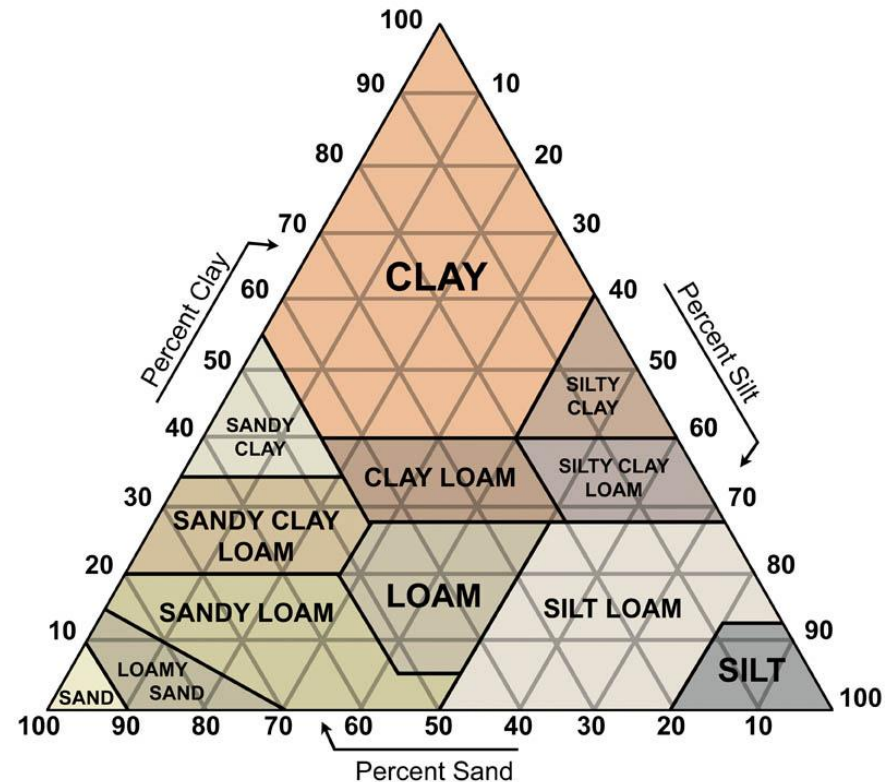
O = OCCASIONAL (five to nine per cent)

R = RARE (one to four per cent)

62. Soil type: texture and colour

Students can collect a small soil sample to identify key characteristics and soil type. This could be assisted by using an identification key or handout which includes images and/or descriptions.

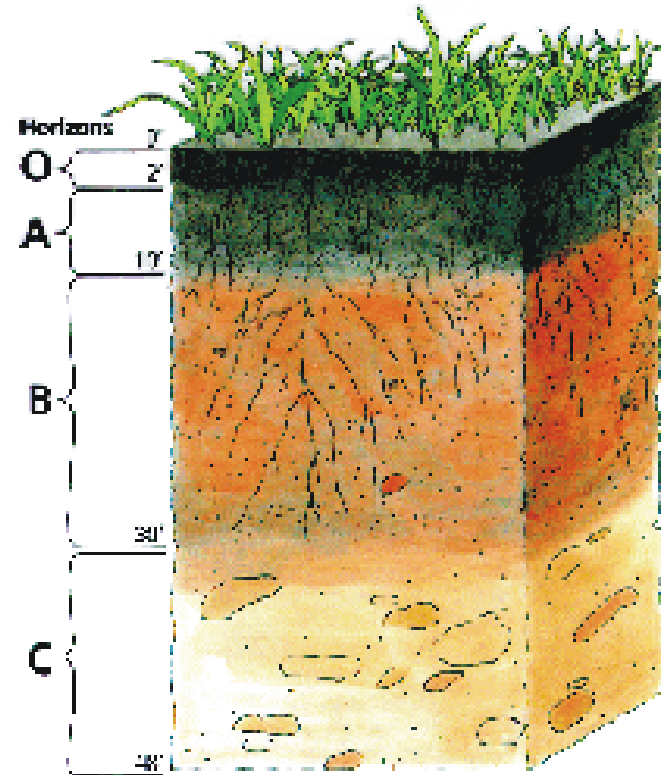
KEY TIP: This would also allow students to estimate the organic content within the soil based on the soil type.



63. Soil OR Sand analysis: Soil profiles

Using a bore hole strategy, a section of the soil can be extracted to determine the different soil layers (horizons).

This could be assisted by using an identification key or handout which includes images and/or descriptions. Therefore students could create written descriptions of each layer i.e. texture, pH, colour, depth etc.



64. Soil OR Sand analysis: Moisture content

Students could take a soil/sand sample to measure the weight of the sediment before and after being dried out. In order to determine the moisture content within the sediment.

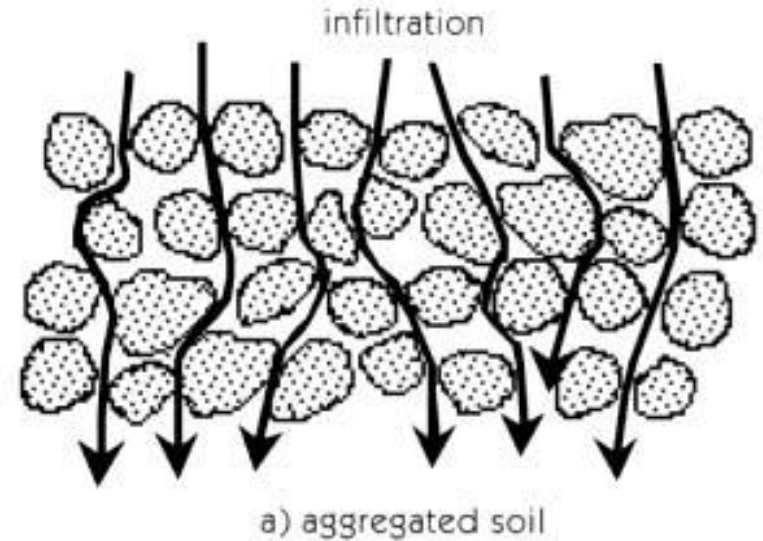


65. Soil OR Sand analysis: Infiltration rates

When water is poured onto the ground infiltration can be measured. This can be completed in a number of ways:

1. An **infiltrometer** secured into the ground will measure the rate at which water infiltrates.
2. Using a drain pipe, push it into the ground level. Fill the pipe with water to the top, time how long it takes for the water to infiltrate into the ground.

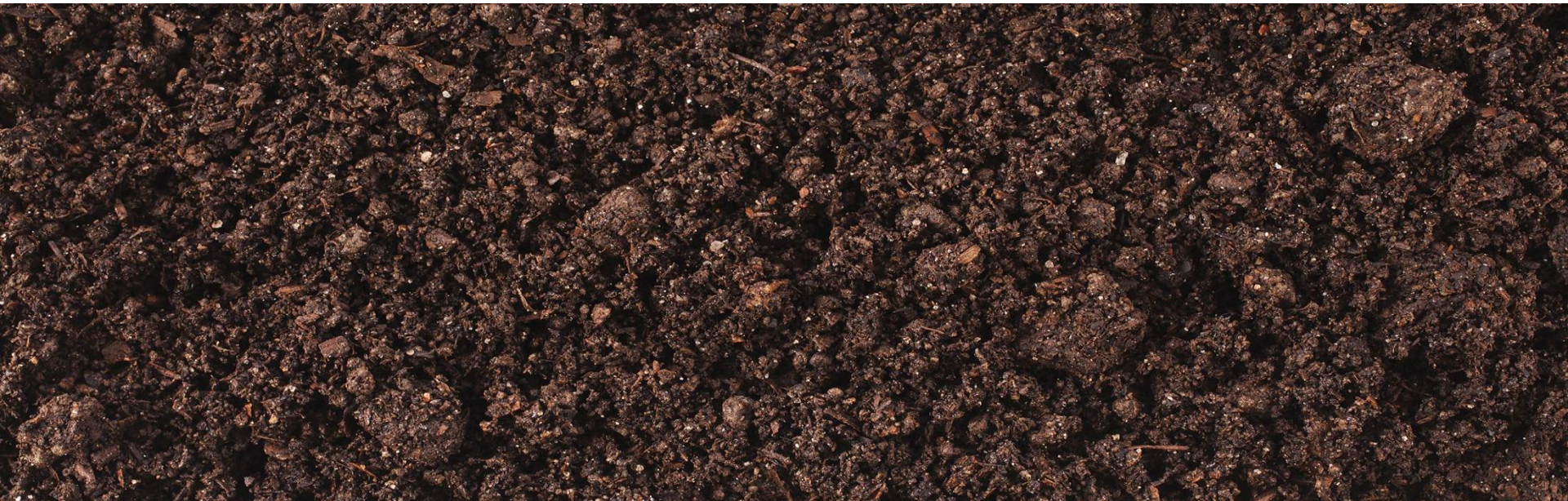
<https://www.youtube.com/watch?v=YsEYs3YfkKE>



Other sediment analysis

66. Soil pH – See pH levels

67. Soil temperature – See temperature



68. Water quality

Hatch kits can be used to investigate nitrates and phosphates in a water sample collected.

Dissolved oxygen can be measured using a digital meter.

Other water analysis:

69. Water pH – See pH

70. Water temperature –
See temperature



71. Water turbidity*

*This is used to determine levels of light able to penetrate the water.

Water turbidity can be measured one of two ways;

1. Secchi disc

Place a circular disc below the surface of the water and time how long it takes to disappear from sight.

2. Turbidity meter/sensor



72. Salinity: Sediment and soil

Soil and water salinity can be measured using a conductivity meter.

Alternatively a refractometer or hydrometer can also measure the salinity in liquids.

<https://www.youtube.com/watch?v=wzhwTnkKWzs>



73. Air-borne particles

Using double sided cello tape, students place the tape on objects in a given area i.e. tree, post etc. Students need to make sure that the outer layer of the tape exposes the sticky surface.

After being left for a while, remove the tape and examine it under a microscope to examine particles which have been collected.



74. Coastal landform analysis

Using tape measures and clinometers students can measure the width and height of caves, arches, stacks, wave cut platforms.

See cliff profiles



Wave analysis

75. Wave type

Students observe waves travelling towards the coast to determine the type of wave (*constructive or destructive*).

76. Wave height and length

Students could measure wave height and wave length onto the shore with meter sticks or ranging poles, if safe enough.

77. Wave frequency

Students could time the intervals between waves to determine frequency.



78. Striation mapping

Students place compasses on each striation etched into the landscape. Then using a base map students can plot the direction of movement to map the glacial movement.



79. Geological features

Using an identification key or handout which includes images and/or descriptions, students could investigate rock types, structure, resistance and presence of bedding planes and faults

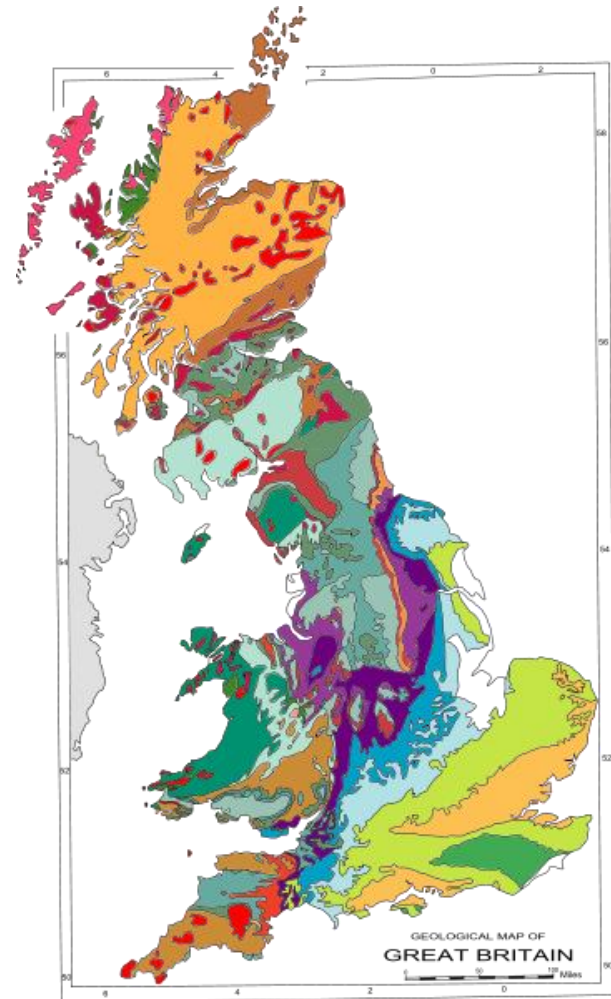


80. Geological maps

Students can use these maps as a resource when visiting a number of locations, human or physical.

These can be compared with satellite images, land use, sketches, landforms etc.

<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>



Other useful websites

<http://www.geography-site.co.uk/pages/skills.html>

<https://www.geography-fieldwork.org/>

<http://geography.org.uk/resources/fieldwork/>

Local learning

<http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/Local+learning/Fieldwork+in+the+local+area/Fieldwork+in+the+local+area.htm>

Fieldwork topics and themes

<http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/Fieldwork+topics+and+themes/Fieldwork+topics+and+themes.htm>

Fieldwork safety

<http://www.rgs.org/OurWork/Schools/Fieldwork+and+local+learning/Fieldwork+safety/Fieldwork+safety.htm>