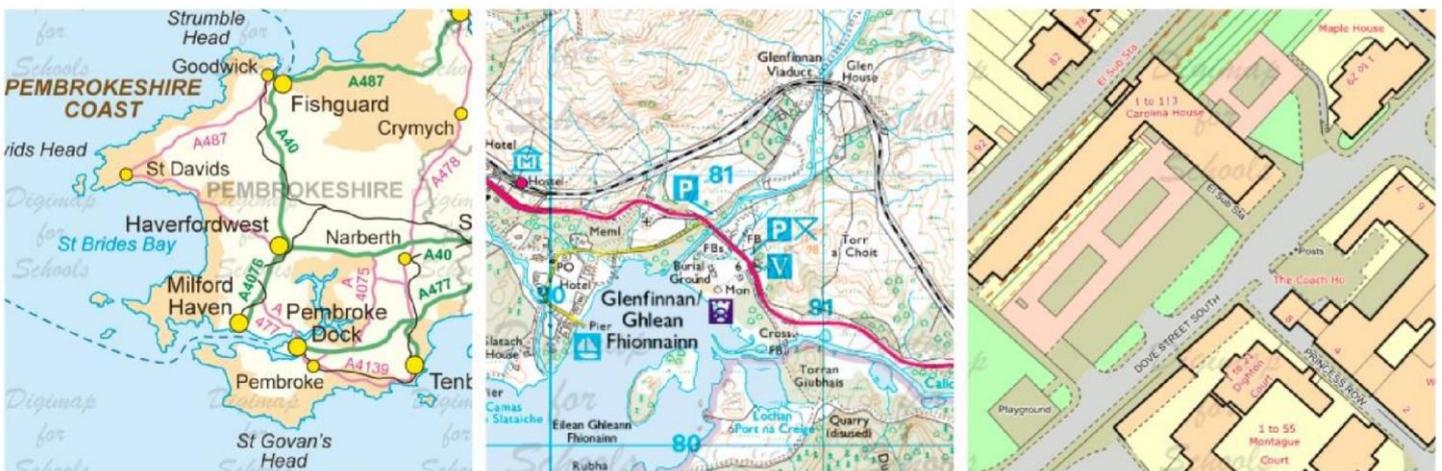# Digimap for Schools

Introducing GIS

Slimming down the cost of obesity

Identifying number of takeaway restaurants in
the locality

Alan Parkinson

Geography teaching resource

Secondary

This is one of a series of teaching resources for use with Digimap for Schools. For more details about this service, visit http://digimapforschools.edina.ac.uk

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Digimap for Schools Geography Resources

Title: **Introducing GIS – cutting back on the cost of Obesity**

Level	Context	Location
Secondary GCSE	Identifying number of takeaway restaurants in the locality	Locality

Introduction

This activity is based on real-world example of how using Ordnance Survey has helped tackle obesity in Birmingham schools.

Obesity is a huge problem in Birmingham, costing the city's NHS £330 million a year. Almost a quarter of Year 6 children in the city were officially obese in 2014, with statistics directly linking the proximity of takeaways near school sites to the problem. Ordnance Survey data used within a GIS gave Birmingham's Public Health team the data to tackle the problem head on.

Schools were plotted in close proximity to fast food takeaways e.g. fish and chip shops, pizza, kebab or Chinese restaurants and takeaways and burger shops. Those within 400 metres (5 minute walk) of a school were identified and collaborative action taken to disadvantage use of takeaways by children.

This challenge will require the collection of information about all takeaways in your chosen area. This can be done as a classroom-based research task, using internet sources but is also a good fieldwork activity.

Data collection can be carried out by:

- Providing students with paper map prints to mark up their findings

Web links

Further Ordnance Survey case studies can be found at:
http://www.ordnancesurvey.co.uk/businessand-government/case-studies/index.html

Photographs of each OS grid square which may help to identify businesses can be accessed for free from the Geograph website at: www.geograph.org.uk

Play the ONS game here to see how well you know your home area:
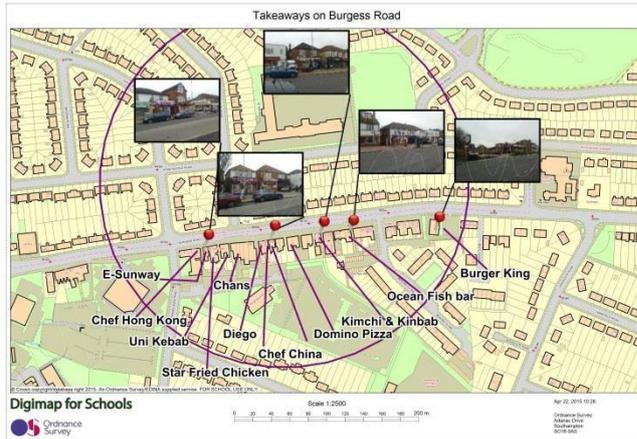http://www.neighbourhood.statistics.gov.uk/HTMLDocs/dvc147/index.html

Digimap for Schools

Title – Cutting obesity

In this activity you will choose a school, youth club or leisure facility on which to focus on. A sample activity is shown here.


After centring the map over your chosen location, create a printout for the classroom or (ideally) field research to investigate takeaways in the vicinity of your chosen location. It would be ideal to use one of the zoom levels at the top of the zoom bar by the + mark (shown above) for your map. Work out which zoom level produces the best coverage for your chosen location.

In your research phase record the name of each takeaway that you identify. Mark the location of each on the map extract accurately and take a digital photograph of the business if one cannot be sourced from elsewhere.

Open Digimap for schools at your chosen location. In the example above the area of interest was 400 metres around the chosen site. Choose a suitable area of interest and put a circle around your chosen

site, using the buffer tool. .

Use the point facility and choose a suitable radius e.g. 200 metres or 0.2 kms or more.
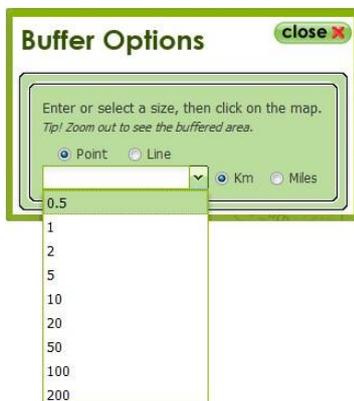
Do the takeaways fall within your buffer circle? If not amend as required.

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Now add your photographs by using the add photo option. Amend the location of the pin using the move feature button if required until it is located appropriately.

Now add the names of the takeaways at suitable locations, thinking about the final layout of the map. Use the place label to do this making sure that the text size is appropriate. Draw an arrow between the text and the location of the takeaway on the map, to link the label with the geographical location. Use the draw line tool to create the arrow.

Save the map, and print if required.

Extension

As an extension to this exercise create a spreadsheet of relevant information such as the example found here and in the accompanying PowerPoint.
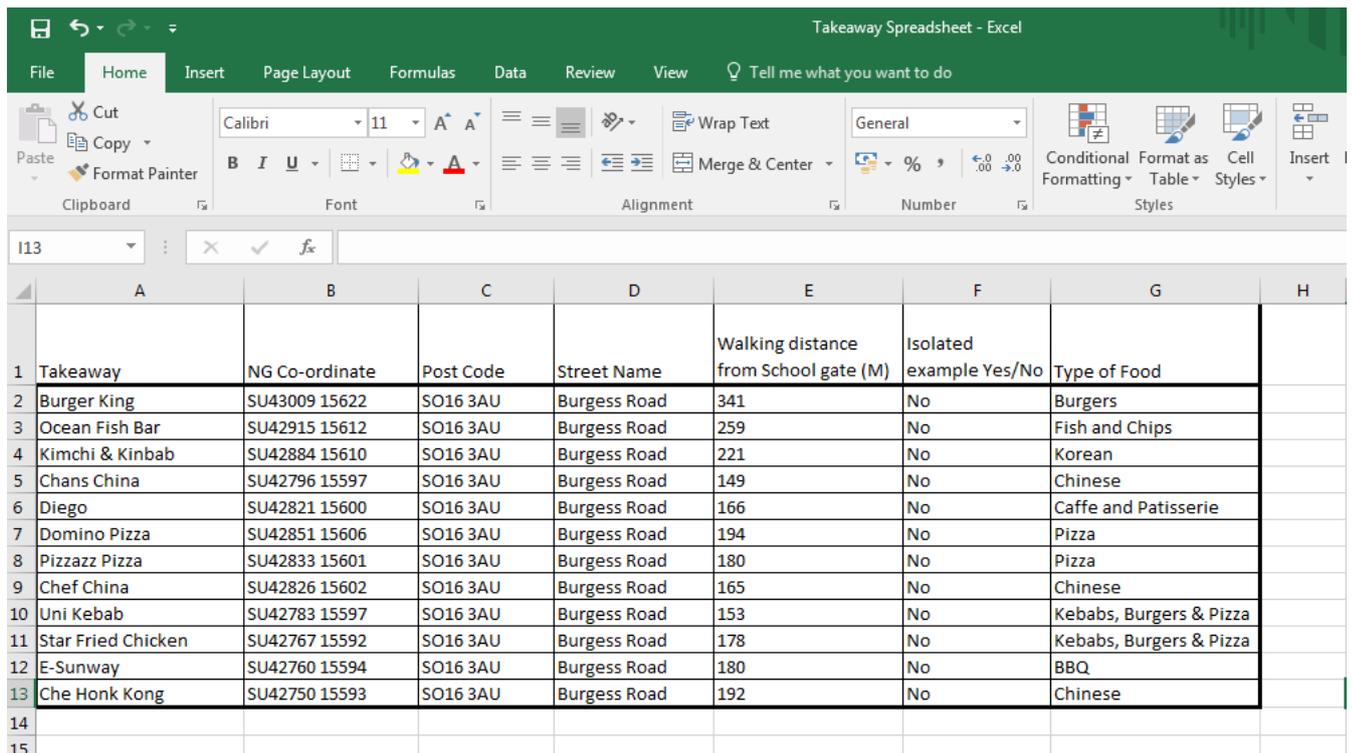
	A	B	C	D	E	F	G	H
1	Takeaway	NG Co-ordinate	Post Code	Street Name	Walking distance from School gate (M)	Isolated example Yes/No	Type of Food	
2	Burger King	SU43009 15622	SO16 3AU	Burgess Road	341	No	Burgers	
3	Ocean Fish Bar	SU42915 15612	SO16 3AU	Burgess Road	259	No	Fish and Chips	
4	Kimchi & Kinbab	SU42884 15610	SO16 3AU	Burgess Road	221	No	Korean	
5	Chans China	SU42796 15597	SO16 3AU	Burgess Road	149	No	Chinese	
6	Diego	SU42821 15600	SO16 3AU	Burgess Road	166	No	Caffe and Patisserie	
7	Domino Pizza	SU42851 15606	SO16 3AU	Burgess Road	194	No	Pizza	
8	Pizzazz Pizza	SU42833 15601	SO16 3AU	Burgess Road	180	No	Pizza	
9	Chef China	SU42826 15602	SO16 3AU	Burgess Road	165	No	Chinese	
10	Uni Kebab	SU42783 15597	SO16 3AU	Burgess Road	153	No	Kebabs, Burgers & Pizza	
11	Star Fried Chicken	SU42767 15592	SO16 3AU	Burgess Road	178	No	Kebabs, Burgers & Pizza	
12	E-Sunway	SU42760 15594	SO16 3AU	Burgess Road	180	No	BBQ	
13	Che Honk Kong	SU42750 15593	SO16 3AU	Burgess Road	192	No	Chinese	
14								
15								

Grid reference information has been collected for each takeaway using the grid reference tool.

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The distance from the school gate to each takeaway has also been recorded. This is captured using the measure distance function within the measurement tool

Pedestrian crossing points on major roads could also be marked on the map, and recorded on the spreadsheet with suitable comments.

In the case study in Birmingham they were aiming for only 10% of outlets in the chosen area being takeaways. In the example shown, over 30% of outlets were takeaways, which was partly due to the close proximity of the local university.

Identify appropriate demographic reasons why there might be a low or high proportion of takeaways depending on the results of your analysis.

Demographic information can be obtained from the ONS website.