

Task One

Read the article below which comes from a magazine called "Government Computing" and then answer the following questions.

Development of Data Collection

The earliest English census was of course the *Domesday Book* of Norman times (though the Babylonian and Chinese civilisations counted their populations in antiquity). The *Domesday* survey, completed in 1086 took many years to compile. The first thorough survey of England was when William the Conqueror ordered a detailed list of all land and property. Now known as the Domesday Book, this document provides a remarkable picture of life in Britain at that time. It was 700 years before the next national census.

In 1798 Thomas Malthus; *Essay on the Principle of Population* caused a national controversy. He claimed that population growth would soon outstrip supplies of food and other resources with opponents such as William Cobbett arguing that the population was falling. (His theory was based on the observation that most village churches were disproportionately large.)

In 1800, Parliament passed an act authorising a census. The count, in March 1801, found that the population of Great Britain was 9 million. Since then, a census has taken place every 10 years apart from 1941.

The Office for National Statistics dates the era of modern censuses from 1841 when, for the first time, the head of each household was issued with a form to fill in on behalf of the household on a certain day.

Data processing technology made its appearance in 1911, when punched cards and mechanical sorting were introduced. Electronic computers arrived in 1961.

The Public Record Office (www.pro.gov.uk) makes census forms available after 100 years. The most recent forms currently available date from 1891.

The 1901 census will be opened to researchers on the web site on 2 January 2002. The Defence Evaluation and Research Agency (DERA) are currently digitising the images of forms under a PFI contract. Data from about 32 million people on 1.5 million pages will be searchable with software from Sopheon. Users will pay a fee depending on the amount.

1. When was the earliest English census? (Find out more about it at <http://www.learningcurve.gov.uk/FocusOn/Domesday/default.htm>)
2. Why did Great Britain not have a census in 1941?
3. In your own words explain the argument between Malthus and William Corbett put forward in 1798. Find out more about Malthus on <http://www.ucmp.berkeley.edu/history/malthus.html>
4. What methods will be used on the 2011 Census?
<http://www.ons.gov.uk/census/2011-census/index.html>
5. Why do we need to do a national census every 10 years?

On the *CensusAtSchool* website there are 1881 census forms for [Queen Victoria](#) and [Charles Darwin](#) with some questions and websites to explore. Also there is a worksheet asking you to devise a [Victorian](#) version of *CensusAtSchool*. These worksheets can be found in Resources/History.

Task Two

The amount of money each local authority gets to run public services, such as schools, hospitals, childcare, community care, transport and more, in their area is based on how many people the census says live in the area. How this money is spent depends on other data collected for example the number of cars in a household and the ages of the population of the area.

For this task we have data from four schools from different areas, a rural school in Cornwall, a city school in the Midlands, a city school in London and a school in a small town in West Yorkshire.

The data we have chosen are responses from questions in the *CensusAtSchool* 2010/11 questionnaire. These questions are shown below.

<p>1. Are you:</p> <p><input type="checkbox"/> female? <input type="checkbox"/> male?</p>	<p>7. What is your favourite UK football team ?</p> <p>Team name</p>
<p>9. a) Recall how many soft drinks you had in the last two days. How many were:</p> <p>from cans?</p> <p>from plastic bottles?.....</p>	<p>b) How many of these drink containers did you recycle?</p> <p>from cans?</p> <p>from plastic bottles?.....</p>
<p>12. How many cars belong to people in your household?</p> <p>..... cars</p>	<p>19. How do you usually travel to school?(Select one answer)</p> <p><input type="checkbox"/>Walk <input type="checkbox"/>Bus</p> <p><input type="checkbox"/>Car <input type="checkbox"/>Cycle</p> <p><input type="checkbox"/>Train/Tube/Tram/Metro</p> <p><input type="checkbox"/>Other (please specify).....</p>
<p>20. How long does it usually take you to travel to school?</p> <p>.....minutes</p>	

Using the data from these four schools from tables on the following pages or from the Excel spreadsheet named TownandCountry.xls explore any differences between the four schools and report your findings.

In your report follow the Problem Solving Approach:

- Plan**
- Collect**
- Process**
- Discuss**

Clearly state the problem or question.

Collect suitable data.

Process the data ie graphs, charts, measures of location (averages) and spread.

Report your findings

CensusAtSchool 2010/11 Data for a school in Cornwall – rural area

Number	Gender	Favourite Football Team	Number of Recycled Cans	Number of Recycled Bottles	Number of Cars in Household	Method of Travelling to School	Time it takes to Travel to School(mins)
1	M	none	0	0	2	Car	15
2	F	Aston Villa	2	3	2	Walk	20
3	M	Manchester City	9	5	5	Bus	35
4	F	none	0	2	2	Bus	25
5	F	Arsenal	0	0	1	Bus	10
6	M	Manchester United	0	0	3	Bus	20
7	F	Manchester United	0	0	0	Walk	30
8	F	Manchester United	0	0	2	Walk	30
9	M	Plymouth Argyle	0	0	3	Bus	10
10	F	Manchester United	0	2	3	Bus	8
11	M	Arsenal	0	5	1	Walk	20
12	F	Cardiff City	0	1	2	Walk	5
13	F	Plymouth Argyle	0	0	2	Bus	30
14	F	Manchester United	0	4	1	Bus	30
15	F	none	0	2	1	Walk	15
16	F	Millwall	0	0	2	Bus	25
17	M	Chelsea	15	3	6	Car	10
18	F	Manchester United	0	3	2	Car	5
19	M	West Ham United	1	5	1	Walk	20
20	F	Chelsea	0	1	1	Bus	20
21	F	none	1	3	2	Walk	20
22	F	Liverpool	0	0	2	Car	15
23	F	Manchester United	0	5	2	Walk	15
24	F	Liverpool	0	1	1	Bus	25
25	M	none	3	5	2	Cycle	10
26	M	Omagh United	0	0	1	Car	15
27	F	none	0	1	3	Walk	25
28	M	Dundee United	1	2	4	Bus	45
29	F	Manchester United	0	1	2	Bus	24
30	F	Manchester United	0	0	2	Bus	20

CensusAtSchool 2010/11 Data for a school in London - city

Number	Gender	Favourite Football Team	Number of Recycled Cans	Number of Recycled Bottles	Number of Cars in Household	Method of Travelling to School	Time it takes to Travel to School(mins)
1	M	Arsenal	0	0	1	Bus	20
2	M	Chelsea	0	1	2	Walk	10
3	F	Chelsea	0	0	2	Bus	10
4	M	Millwall	2	0	4	Bus	30
5	F	Chelsea	2	1	1	Bus	45
6	M	Chelsea	0	1	1	Bus	25
7	F	Manchester United	2	2	2	Bus	30
8	M	Arsenal	0	2	1	Bus	15
9	M	Tottenham Hotspur	0	0	1	Bus	25
10	M	Chelsea	5	12	3	Car	20
11	F	Arsenal	6	7	2	Bus	35
12	M	Arsenal	3	2	1	Bus	25
13	M	Chelsea	0	5	3	Car	15
14	F	Coleraine	0	0	2	Walk	50
15	F	Liverpool	1	2	1	Bus	40
16	M	Arsenal	1	8	1	Bus	35
17	M	Chelsea	0	3	1	Walk	20
18	F	Chelsea	0	0	2	Bus	60
19	M	Arsenal	0	1	2	Bus	13
20	M	Chelsea	0	3	1	Walk	15
21	F	Arsenal	0	0	3	Bus	20
22	F	Manchester United	0	5	2	Bus	40
23	F	Crystal Palace	0	1	2	Bus	5
24	F	Arsenal	0	0	2	Car	20
25	F	Portsmouth	0	0	1	Walk	18
26	M	Chelsea	3	2	3	Bus	40
27	M	Manchester United	0	0	1	Walk	15
28	F	none	2	0	1	Bus	3
29	M	Manchester United	0	0	1	Bus	25
30	F	Manchester United	6	3	2	Bus	30
31	M	Liverpool	2	0	1	Bus	25
32	M	Manchester United	2	0	1	Car	25
33	M	Arsenal	0	0	1	Bus	15
34	F	Manchester United	1	2	1	Car	20
35	M	Chelsea	1	2	5	Bus	25
36	M	Arsenal	0	0	2	Bus	15
37	F	Arsenal	0	0	2	Bus	15
38	F	Millwall	0	0	2	Bus	25
39	F	Chelsea	0	0	1	Bus	15
40	M	Chelsea	0	1	1	Car	10
41	M	Manchester United	5	5	6	Bus	20
42	F	Chelsea	0	0	2	Bus	35
43	M	Chelsea	0	0	2	Bus	15
44	M	Chelsea	0	0	1	Walk	16
45	F	Chelsea	0	0	2	Walk	15
46	F	Arsenal	7	6	4	Bus	20
47		Crystal Palace	0	18	1	Bus	7
48	M	Manchester United	0	0	1	Walk	20
49	F	Arsenal	1	1	1	Car	7
50	M	Crystal Palace	0	0	1	Bus	17
51	M	none	0	1	1	Bus	60
52	M	Chelsea	0	0	1	Walk	10

CensusAtSchool 2010/11 Data for a school in Birmingham - city

Number	Gender	Favourite Football Team	Number of Recycled Cans	Number of Recycled Bottles	Number of Cars in Household	Method of Travelling to School	Time it takes to Travel to School(mins)
1	M	Aston Villa	0	3	2	Car	5
2	F	Aston Villa	0	1	2	Walk	5
3	F	none	0	2	2	Car	5
4	F	Aston Villa	0	0	3	Walk	7
5	M	Cambridge United	0	0	2	Walk	8
6	M	Aston Villa	1	0	1	Bus	10
7	F	Aston Villa	0	0	1	Bus	10
8	F	Aston Villa	1	0	4	Bus	10
9	M	Aston Villa	12	12	1	Bus	10
10	F	Aston Villa	0	0	2	Walk	10
11	F	Birmingham City	0	0	1	Car	10
12	F	Birmingham City	2	5	2	Car	10
13	M	Birmingham City	0	0	1	Bus	10
14	M	Birmingham City	1	0	2	Car	10
15	F	Birmingham City	0	4	2	Walk	10
16	M	Chelsea	10	20	10	Bus	10
17	M	Liverpool	2	5	1	Walk	10
18	M	Manchester United	5	0	2	Walk	10
19	F	none	0	9	2	Walk	10
20	F	Aston Villa	0	7	1	Walk	15
21	F	Aston Villa	0	3	2	Bus	15
22	M	Birmingham City	0	0	2	Walk	15
23	M	Chelsea	0	0	2	Car	15
24	F	Manchester United	0	0	1	Walk	15
25	F	Aston Villa	0	1	2	Bus	20
26	M	Aston Villa	2	1	2	Walk	20
27	F	Aston Villa	0	1	2	Walk	20
28	F	Aston Villa	0	2	2	Bus	20
29	F	none	2	5	2	Walk	20
30	M	Aston Villa	3	1	2	Walk	30
31	M	Aston Villa	0	1	1	Walk	30
32	M	Aston Villa	2	2	2	Bus	30
33	F	Aston Villa	0	1	2	Bus	30
34	F	Aston Villa	0	0	2	Walk	30
35	F	Birmingham City	0	2	2	Walk	30
36	F	Aston Villa	0	0	2	Walk	35
37	M	Aston Villa	2	11	3	Walk	40
38	M	Aston Villa	0	1	2	Walk	40
39	F	none	0	0	2	Car	45

CensusAtSchool 2010/11 Data for a school in West Yorkshire – town

Number	Gender	Favourite Football Team	Number of Recycled Cans	Number of Recycled Bottles	Number of Cars in Household	Method of Travelling to School	Time it takes to Travel to School(mins)
1	M	Coventry City	0	4	2	Walk	30
2	F	none	0	4	2	Walk	25
3	M	Manchester United	0	0	4	Car	5
4	F	Blackpool	0	12	2	Walk	15
5	F	none	0	2	1	Walk	6
6	F	Manchester United	0	0	1	Walk	30
7	F	Manchester United	1	4	1	Bus	30
8	F	Manchester City	0	4	3	Walk	5
9	M	Manchester United	11	2	0	Walk	10
10	F	none	0	0	2	Bus	40
11	F	Manchester United	0	0	2	Bus	25
12	M	Newcastle United	0	2	3	Bus	25
13	F	Chelsea	3	4	1	Bus	20
14	M	Manchester United	4	2	3	Walk	10
15	F	Manchester United	0	0	1	Walk	10
16	F	none	0	4	3	Bus	45
17	F	Manchester United	0	0	2	Walk	5
18	M	Sheffield Wednesday	0	10	2	Walk	25
19	F	Manchester United	0	2	2	Bus	20
20	M	Manchester United	0	1	1	Walk	5
21	M	none	0	1	3	Bus	10
22	F	Newcastle United	0	1	1	Bus	30
23	M	Hartlepool United	2	4	1	Walk	10
24	M	none	0	5	1	Walk	20
25	M	Manchester United	0	6	0	Bus	10
26	F	none	0	0	2	Walk	30
27	M	Liverpool	2	5	1	Walk	15
28	F	Manchester United	0	1	2	Bus	35
29	F	Leicester City	0	2	2	Walk	10
30	M	Manchester United	2	4	1	Walk	10
31	M	Rangers	0	0	1	Walk	10
32	F	none	0	0	2	Bus	40
33	F	Newcastle United	2	5	1	Walk	20
34	F	Middlesbrough	0	1	1	Bus	30
35	F	Liverpool	0	2	2	Walk	20
36	M	Middlesbrough	4	8	2	Bus	8
37	M	Manchester United	0	2	2	Walk	15
38	M	Manchester United	1	0	2	Walk	30
39	F	Arsenal	0	0	0	Walk	20
40	F	Manchester United	3	2	0	Cycle	10
41	M	Liverpool	11	3	3	Walk	15
42	M	Middlesbrough	5	5	0	Walk	20
43	F	Liverpool	5	6	8	Walk	30
44	M	Sunderland	0	9	2	Walk	25