

## Census and the City Teachers' Notes

This activity is designed to help learners understand how to:

- collect accurate secondary data;
- plot a time series graph and predict results;
- calculate percentages;
- recognise rounding errors;
- interpret percentages and bar charts;
- report accurately on findings.

Timing: One lesson.

**Warning:** There are two extension questions (listed below) that will need access to a library or to the internet and so the suggestion is either remove them or set as homework. To find the missing data may not be possible or take a long time so perhaps put a time limit on this.

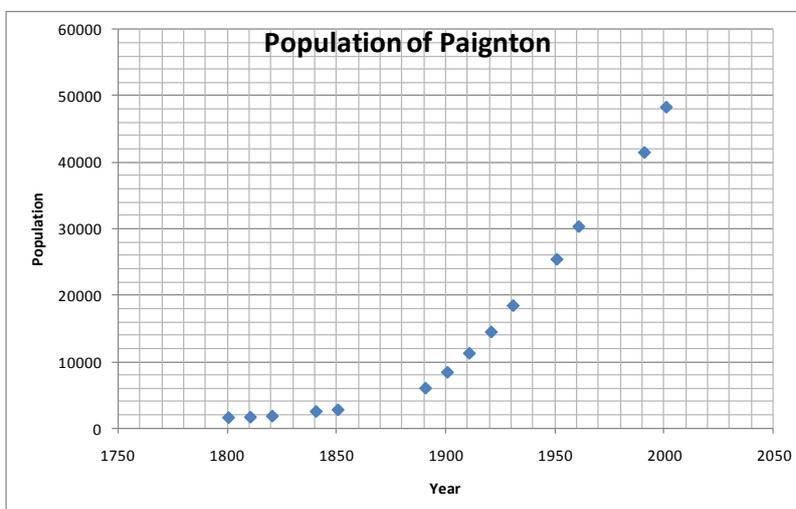
Extension questions: Task One 'Find out the original meaning of the word 'census' and Task Two 'There are some gaps in the data eg 1831, 1861, 1871 etc. This is because of the difficulty in finding the data. If you can find the missing data please email these to [admin@censusatschool.org.uk](mailto:admin@censusatschool.org.uk) and we will add these to this worksheet'.

All the other tasks can be completed on the worksheet.

The learners could work in pairs to promote discussion.

**Task One** asks learners to interpret data from the Domesday Book. There are 133 people counted in the Domesday Book. These are likely to be men so if you multiply 133 by what you consider to be the average size of a family in those days a prediction for the size of the population of Paignton in 1086 is between 400 and 500.

**Task Two** asks learners to plot a time series graph and to predict a population from this. Prediction should be between 52 and 53 thousand.



**Task Three** gives the real data for the age distribution for Torbay and asks learners to calculate three percentages.

**Answers:** the percentage of people in Torbay in age group 70-79 is 10%, for age group 80-89 the percentage is 6% and for the age group 90 and over the percentage is 1%.

Learners are then asked to interpret this data when plotted in a comparison bar chart.

The two columns of percentages do not add up to 100% due to rounding errors.

### **Possible answers**

Three observations about the age distribution for Torbay could be:

Lower percentages compared to England for age groups 10-49.

Higher percentages compared to England for age groups 50 and over.

Particularly low for age group 20-29.

Possible reasons:

No university in Torbay. Young people have to move away to study or to find a job. Torbay is a retirement area. No heavy industry as Torbay is a holiday area.

How this affects town planning:

- More residential homes.
- Areas of holiday accommodation that cannot be residential.
- Only light industrial parks.

**Task Four** gives similar data as for Task Three and again asks for interpretation.

### **Possible answers**

Three observations about age distribution for Oxford could be:

- Higher percentages compared to England for age groups 10-29.
- Lower percentages compared to England for age groups 30 and over.
- Particularly high population for age group 20-29.

Possible reasons:

- National census was taken in March during university term, high number of students in Oxford.
- There may be a different picture in August.
- There is the BMW factory at Cowley (manufactures the Mini).
- Oxford is a busy city and may be people move away from the hustle and bustle of a city as they get older.

How this affects town planning:

- University buildings,
- Student accommodation,
- Housing for people who work at Cowley.
- Spread of the shopping centre to accommodate the influx of students.