



**An Phríomh-Oifig Staidrimh**  
Central Statistics Office

# Bringing the Census to schools

Transition Year Course



In preparation  
for:

**census**  
**2016** **APRIL**  
**24**  
**www.census.ie**

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## Introduction to the project

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Population studies effortlessly lends itself to this module for many reasons. As the geography course progresses the students start to explore more of the human elements of geography, as opposed to the more physical focus at Junior Cycle. The Transition Year course asks them to start thinking about people and how we behave in our environment. This area of geography ties in very closely with much of the information provided by the Central Statistics Office (C.S.O.), discussing society and space.

The TY course takes the students through the growth of the global population and aims to give the students a greater understanding of the different dynamics existing amongst people in various parts of Ireland and the world. It aims to inform students of comparisons and contrasts between regions within Ireland. This is done at local level. The objective is to teach students to be able to observe, gather and generate information on both areas and ultimately begin to decipher differences and provide explanations as to why these differences have arisen.

SAPMAP can do all this but with a much more personal approach. With such a wide range of specific and detailed information now accessible, it allows the students to research their own local area and begin to compare the statistics compiled with other small area population statistics across the country. SAPMAP allows students to gather and generate information themselves. Instead of giving the students the information, they will be informed on how to access it and put it into charts and other visuals for project work themselves.

Throughout the course of the classes the impetus should continuously be put on the student and the teacher should be acting as a facilitator to their learning. This approach is in keeping with modern teaching methodologies and the recently re-modelled Junior Certificate.

This module should take place over the course of 6 classes. The teacher has preference as to whether the 6 classes are consecutive or spaced out over the duration of a whole school term.

### **Resources needed**

- Access to a computer for each student (or 1 between 2)
- Internet access
- Microsoft Excel
- Microsoft Word
- Paper
- Working colour printer

## Lesson 1 – Recap

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### **You will need**

- Internet access
- Microsoft Excel
- Microsoft Word
- Data Projector
- Whiteboard markers

### **Objectives**

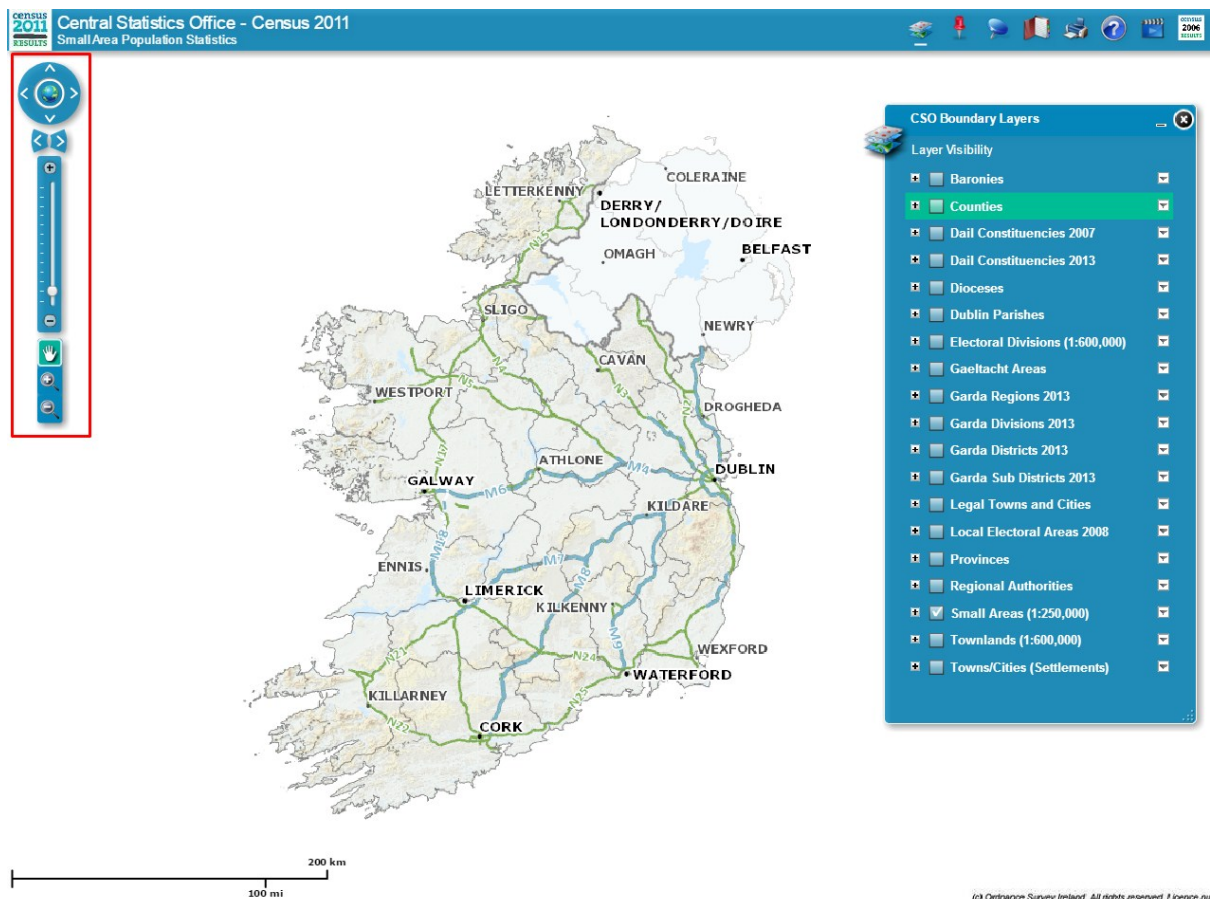
- Discuss how census data can be used
- Navigate the map using hand tools (i.e. zoom in/zoom out/drag/pull)
- Individualize different boundary layers
- Search specific addresses

The SAPMAP gives you the opportunity to discover a vast amount of information but you must know how to navigate through the maps.

## Step 1: Navigating the SAPMAP

Using the hand tools find the following cities on the map. Use the arrow function on the screen and the zoom in and out function to locate the correct cities.

1. Cork City
2. Dublin City
3. Belfast
4. Galway City





## Step 2: Layers and Boundaries

Navigate your way around the country and find the specific areas outlined below. Using the search bar, enter an address and discover the detailed information that SAPMAP offers.

Now try it yourself and find the small area population map that your house belongs to.

To begin you must first select the layer 'Small Areas 1:250,000'.



When you have completed this you should:

1. Go to the toolbar at the top of your screen and click on the blue thumbtack, this will open a search bar
2. Change the visibility layer from counties to small areas
3. Now type your area into the search bar

Complete the following tasks:

- Find the SAPMAP area of the student that is sitting beside you
- Locate the SAPMAP area of your school
- Find the SAPMAP area of a busy shopping street in Dublin City centre e.g. O'Connell St.

### Step 3

You now have the freedom to navigate around the [C.S.O. webpage](#). You will be amazed at what you can find!

Check out the [SAPMAP guide](#) if you get stuck.



## Lesson 2 – Begin your project

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### **You will need**

- Internet access
- Data Projector
- Whiteboard markers
- Microsoft Word
- Microsoft Excel

### **Objectives**

The students should be able to:

- Add/remove boundary layers
- Select and read grouped information/statistics
- Process the information they gather
- Know how to transfer information to Excel
- Have a clear idea of what their project will discuss

### **Step 1: Your Area**

This lesson will allow you to begin accessing the vast amount of information available to you and start putting it into a project. Here we encourage you to explore your own hometowns by carefully carrying out various tasks using the boundary layers that are applicable.

This will help you familiarize yourself with the website:

- Firstly find the area you live in. This can be done by using the hand tools or by pin pointing your address using the search bar.
- Now start applying the boundary layers.



## **Step 2: Layers Task**

Complete the following task:

Using the list of layers on the right of your screen, place the following filters onto the map of Ireland. (It works best if you have only one layer selected at a time.)

- Dioceses
- Gaeltacht Areas
- Provinces
- Dáil Constituencies 2013

## **Step 3: Your Project**

Now you should start thinking about your project. Over the next four classes you will have to design a project on your area. You should use the boundary layers and the statistics supplied to you by the C.S.O. to help.

Your project should contain:

- Maps of your area
- Graphs and charts representing information about your area
- Statistics you found interesting and why
- Questions to test classmates

## Lesson 3 – Microsoft Excel

### Objectives

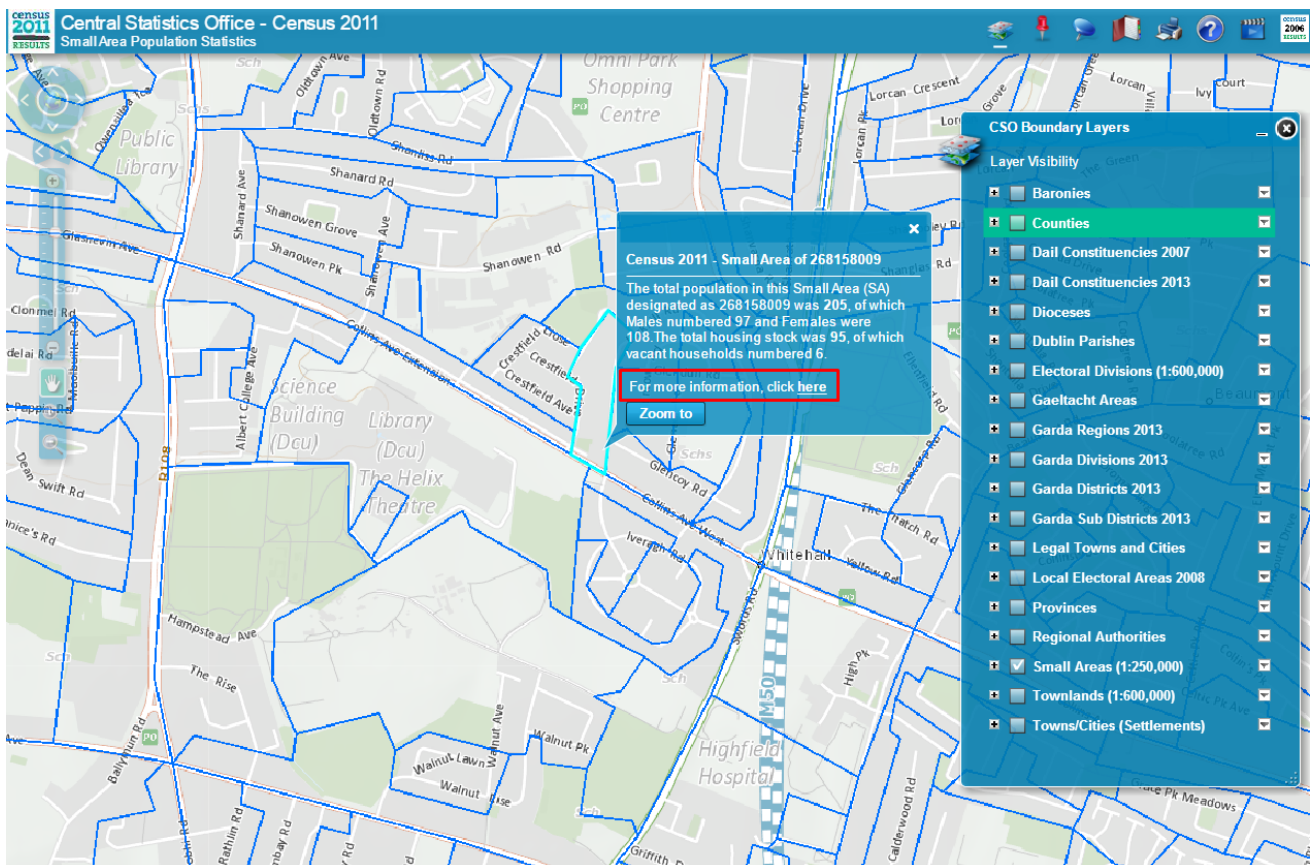
Students should be able to:

- Transfer statistics to Microsoft Excel
- Manipulate statistics to create charts for your project

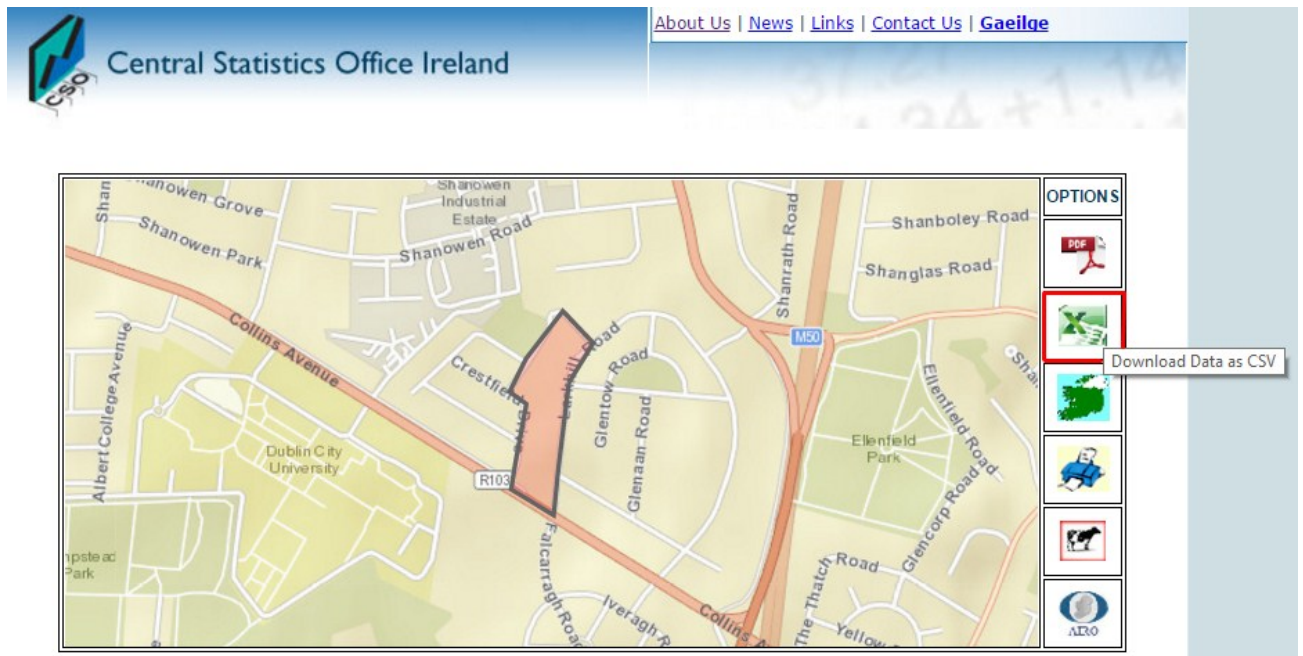
Throughout this project you will regularly use Microsoft Excel to process data and create different graphs and charts to display your information. Before you tackle the project, ensure that you are familiar with the programs.

The SAPMAP website has an easy and effective way of transferring figures from their website into Microsoft excel.

- Using the search tools find your area and click on it
- Select the 'for more information click here' option



- A map of your area will appear and on the right, one of those options will be a 'Download Data' option with an Excel image to accompany, click this option and your statistics will open in Excel.



Census2011SA268158009.csv - Microsoft Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW TEAM Sign in

Clipboard Font Alignment Number Styles Cells Editing

A1 : X ✓ fx Census 2011 Small Area 268158009 - CSO Area Code SA 268158009

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Census 2011 Small Area 268158009 - CSO Area Code SA 268158009														
2	Population aged 0-19 by sex and year of age persons aged 20+ by sex and age group														
3	Age	Male	Female	Total											
4	0	2	0	2											
5	1	1	0	1											
6	2	1	1	2											
7	3	1	0	1											
8	4	0	3	3											
9	5	1	0	1											
10	6	0	0	0											
11	7	1	1	2											
12	8	1	0	1											
13	9	2	0	2											
14	10	1	0	1											
15	11	1	2	3											
16	12	0	0	0											
17	13	1	2	3											
18	14	1	0	1											

Census2011SA268158009

READY 100%

## Charts

Now that you can access figures, let's start putting them into graphs. The project will require you to include:

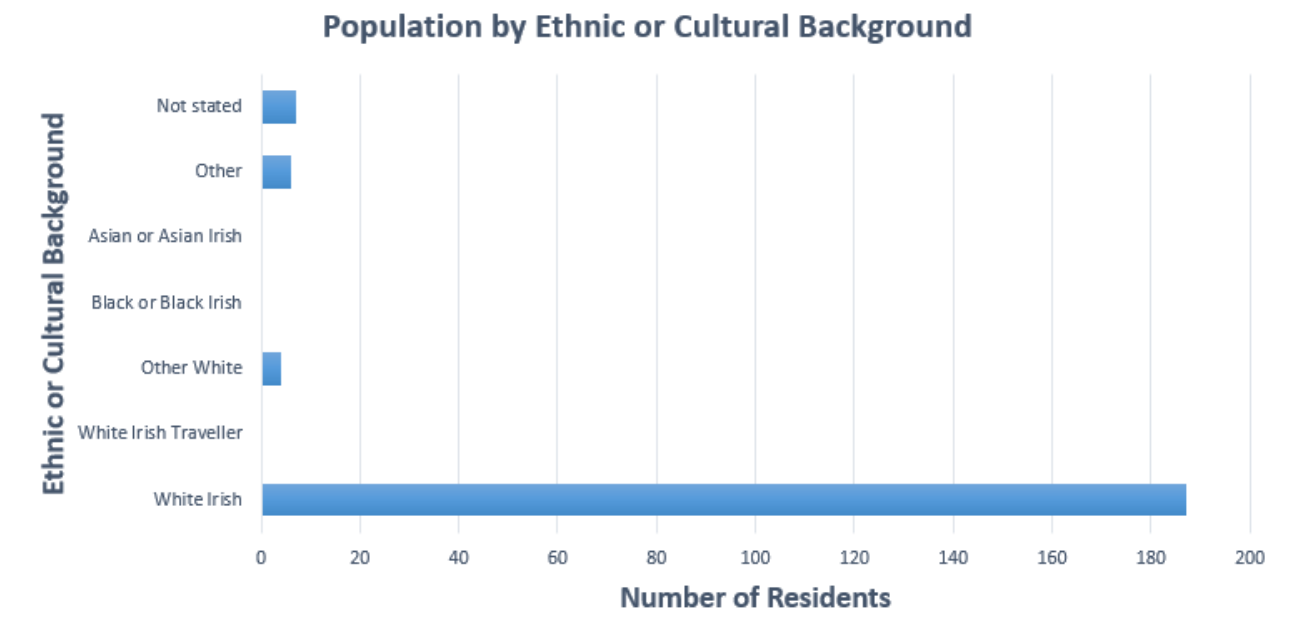
- Pie charts
- Bar charts

### Bar Charts

Bar charts can be used to display a number of figures in an organised, easy to read format.

For your project you may want to use a bar chart visual when displaying the age groups that are relevant to certain pieces of information.

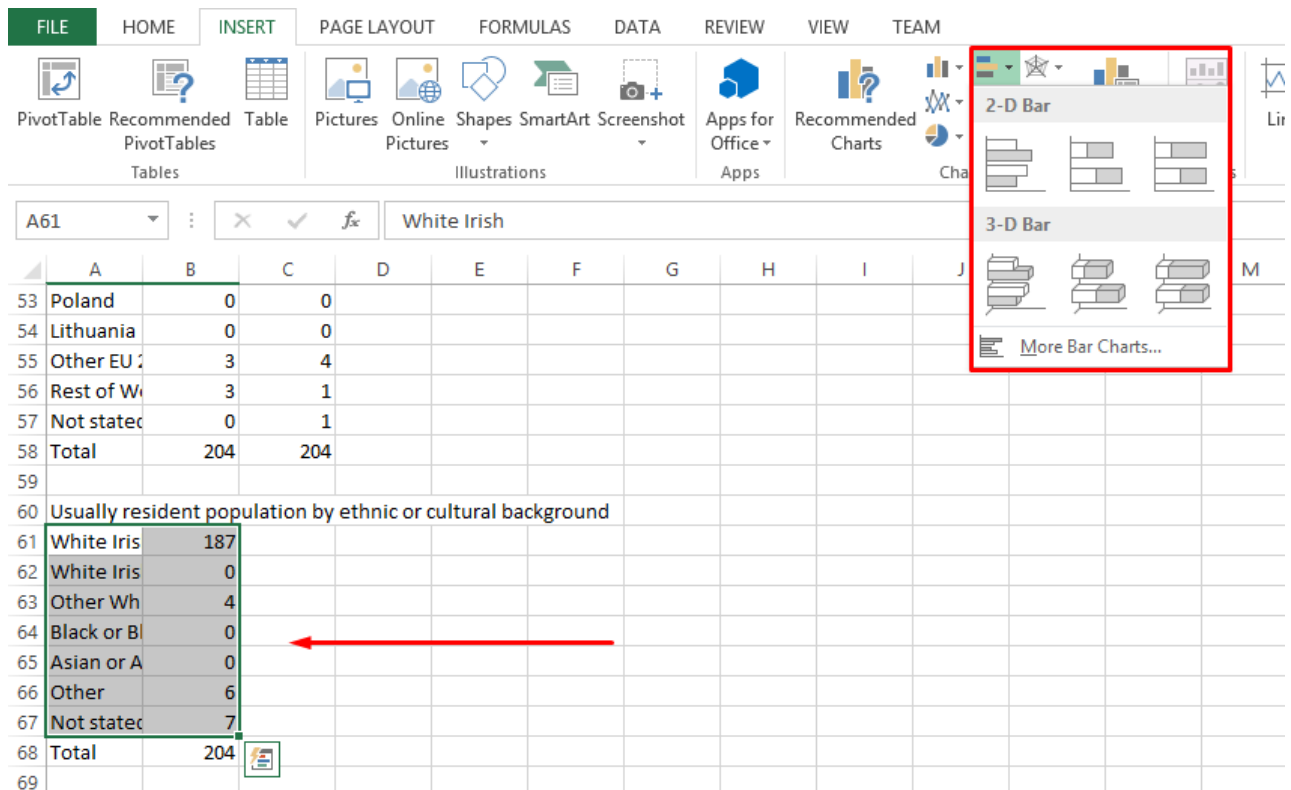
For example I have created a bar chart displaying the number of people by Ethnic or Cultural Background.





Follow these simple steps to create your own:

1. Select the figures AND titles beside the figures as seen in the image below.
2. Select insert - Chart - Bar/Column chart- and follow the process
3. This function will allow you to change your colours and add other features. You should spend a few minutes exploring the different features and looks you can have.



The screenshot shows the Microsoft Excel interface with the 'INSERT' tab selected. The 'Charts' group in the ribbon is expanded, showing '2-D Bar' and '3-D Bar' options. A red box highlights the '2-D Bar' section, and a red arrow points to the 'More Bar Charts...' link. The spreadsheet data is visible in the background.

	A	B	C	D	E	F	G	H	I	J	K	L	M
53	Poland	0	0										
54	Lithuania	0	0										
55	Other EU 2	3	4										
56	Rest of W	3	1										
57	Not stated	0	1										
58	Total	204	204										
59													
60	Usually resident population by ethnic or cultural background												
61	White Iris	187											
62	White Iris	0											
63	Other Wh	4											
64	Black or B	0											
65	Asian or A	0											
66	Other	6											
67	Not stated	7											
68	Total	204											
69													



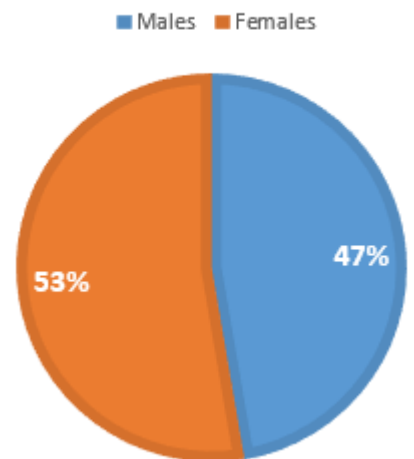
## Pie Charts

Pie charts can be used to give an effective graphic for population ratios for your project. First you should find what the population of your chosen area is.

This is simply found by selecting the total numbers of males and females in your excel information.

For example I have created a pie chart showing percentage of males and females in my area.

**POPULATION BY SEX**



Follow these simple steps and create your own:

1. Copy your figures to another spot on the sheet
2. Label each of the figures (male & female) and then select both the figures and the labels
3. Select Insert - Chart - Pie Chart - and follow the process
4. This function will allow you to change your colours and add other features

The screenshot shows the Excel interface with the 'INSERT' tab selected. The 'PIVOTCHART' task pane is open, displaying various chart options. A red box highlights the '2-D Pie' section, which includes options for 2-D Pie, 3-D Pie, and Doughnut charts. A red arrow points from the 'Total' row of the 'Population by sex and marital status' table to the 'PIVOTCHART' task pane.

Status	Males	Females
80-84	1	3
85+	2	4
Total	97	108

Population by sex and marital status

Status	Males	Females
Single	50	51
Married	39	39
Separated	2	3
Divorced	3	5
Widowed	3	10
Total	97	108

## Lesson 4 – Project Ideas

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Now that you know how to graph information let's begin thinking about how we can use this skill to teach and test our classmates, and also create an awareness of the vast amount of information available to people through SAPMAP.

This class should be primarily based around your project, but first, read through the information and discover why certain elements are essential when creating a good SAPMAP project.

You should start thinking about what information you found really interesting and begin applying it to your project. As you mention what statistics amazed you, explain why and encourage others to seek out similar information through the website.

Your project should discuss a **minimum of 4 sets of statistics** and why you found them interesting. A possible angle for you to talk about is what surprised you about that particular statistic.

Ensure you have visuals to accompany your work. These visuals will not only brighten up the whole project but they will also give you the opportunity to include questions and test your classmates. Take a look at the sample project to see what we mean.

Your project should contain at least **3 charts and 3 sets of questions** (preferably 4 questions per chart).

Ensure when you are making out your sets of questions that you retain a set of answers for checking.

Use a checklist like this one to ensure you are meeting the project requirements:

Introduction	Complete
Colour map of my area	Complete
History of my area	Complete
Stats I found interesting	Complete
3 graphics	
3 sets of questions	
Answers	
Conclusion	

Now start exploring SAPMAP and get to work on your project!

## Lesson 5 – Project Work & Completion

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You have been working hard over the last four classes figuring out how to navigate through the website and graph information and have begun to piece your project together. Use this lesson to build on your project.

Throughout the class ensure that you create bar charts or pie charts in Excel containing useful and interesting information based on your local area.

You should already have noted some interesting statistics about your area, so now you should write about them in your project.

Start to compose some questions and answers to test your classmates.

You must also think about the layout of your project, as presentation is key. Start to copy your graphics from Excel into word.

Refer to the sample project included for ideas.

## Lesson 6 - The Finished Article

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For the past 5 lessons you have been exploring SAPMAP, discovering interesting statistics, creating bar charts and pie charts to show your information and piecing it all together to create a project on your local area.

SAPMAP allows us to find out a vast quantity of quality and interesting information about the areas we live in. This information is extremely useful to our entire population but it can also help us learn about how our society works.

It is now time to educate and test your classmates on what you have discovered.

You should recap and follow the checklist that was given to you in Lesson 4 to ensure that you have met the criteria of the project.

Ensure that you are happy with the layout of the project and that it can be easily read by your classmates.

Check for any spelling mistakes

If your charts contain any colour, be sure to confirm it with your teacher that you are allowed use colour and secondly check that the printer you will use has adequate colour in store for print.

Finally print your project, swap it with classmates and test and teach each other all about the interesting statistics you have unearthed over the past 6 classes.

Enjoy and well done!