



An Phríomh-Oifig Staidrimh
Central Statistics Office

Bringing the Census to schools

Second Year Course



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Introduction

Objectives

- Build on the skills already acquired in First Year Geography
- Introduce students to SAPMAP – a world of Census information at your fingertips
- Allow students to take demographic data and use it with confidence
- Make the Second Year population course even more dynamic and vibrant

These areas of the Second Year course can be made more understandable and more enjoyable by using SAPMAP:

1. Factors that influence population
2. Population Pyramids
3. Case Study: The West of Ireland vs. Dublin
4. Migration

This course aims to examine each of these areas individually and incorporate C.S.O. and SAPMAP data into the each area.

Factors that Influence the Population

Class 1

You will need

- Access to a data projector and white board
- A physical map of Ireland

Bring up the interactive SAPMAP in front of the students.

Step 1

For the first 5 minutes of the class, allow the student the freedom to navigate around the CSO webpage. You will be amazed what they will find.

Step 2

Ask all the students to return to the homepage. In the ‘search’ area, ask the students to type in SAPMAP. This should then allow them to open the ‘SAPMAP user guide’. Allow the students 5 minutes to navigate around this area.

Step 3

Direct the students to ‘Census 2011 Small Area Population Statistics (SAPS)’. They will see ‘Option 1 Interactive Mapping Tool (SAPMAP)’.

A map of Ireland should appear in front of each student. Allow the students 5 minutes to navigate around the map.

Why not take a tour down the East Coast of Ireland and examine some of the counties en route?

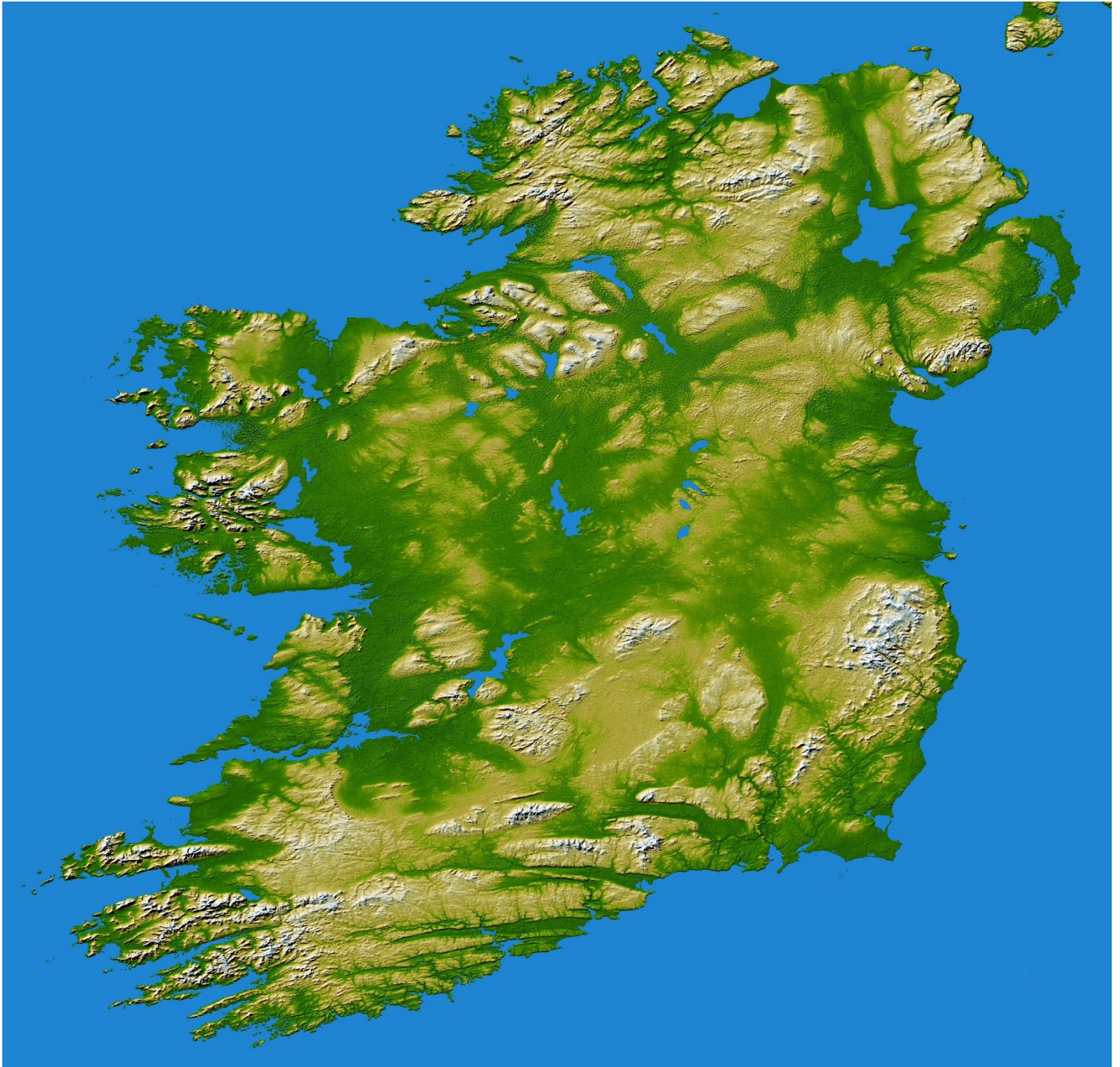
You can do this by simply clicking on the counties icon on the boundary Layers. By right clicking the mouse on your chosen counties, you should access the population of that county.

Now take a tour of the Western region. Again, investigate the populations here. The county that my students find most intriguing is Co. Leitrim. With a population of 31,768, it always triggers a debate, especially when compared to some of the areas in Dublin, such as Swords, with a population of 36,924.

Now is a good time to ask your students, how can a suburb of Dublin have more people than an entire county?

You may want to draw their attention to the physical map of Ireland to highlight the topographical challenges faced by the West of Ireland. In the past I have shown the students rainfall maps and soil maps also. They usually see the direct correlation between the C.S.O. data, these maps, and National population distribution and density.

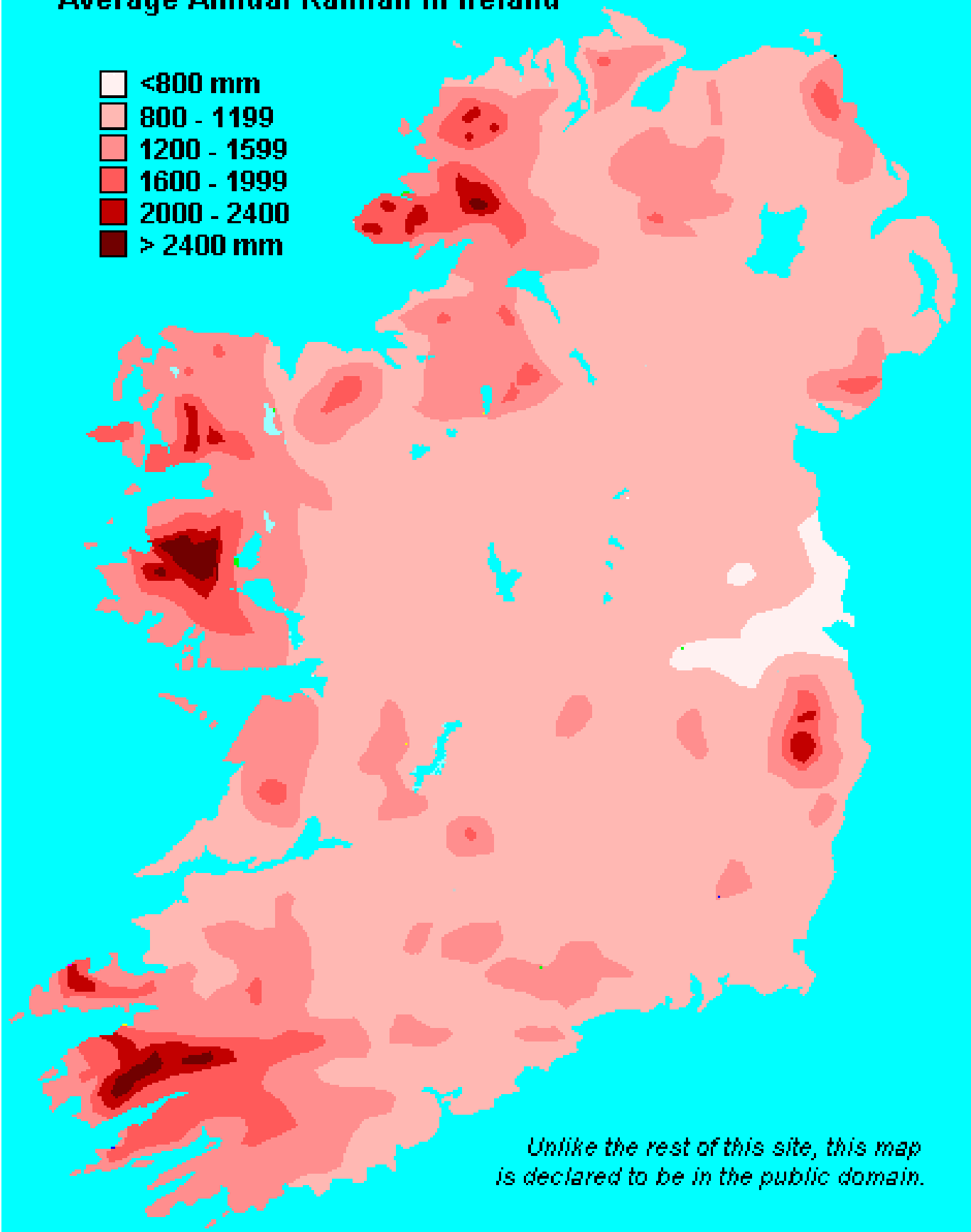
Physical Map of Ireland



Rainfall Map of Ireland

Average Annual Rainfall in Ireland

-  <800 mm
-  800 - 1199
-  1200 - 1599
-  1600 - 1999
-  2000 - 2400
-  > 2400 mm



*Unlike the rest of this site, this map
is declared to be in the public domain.*

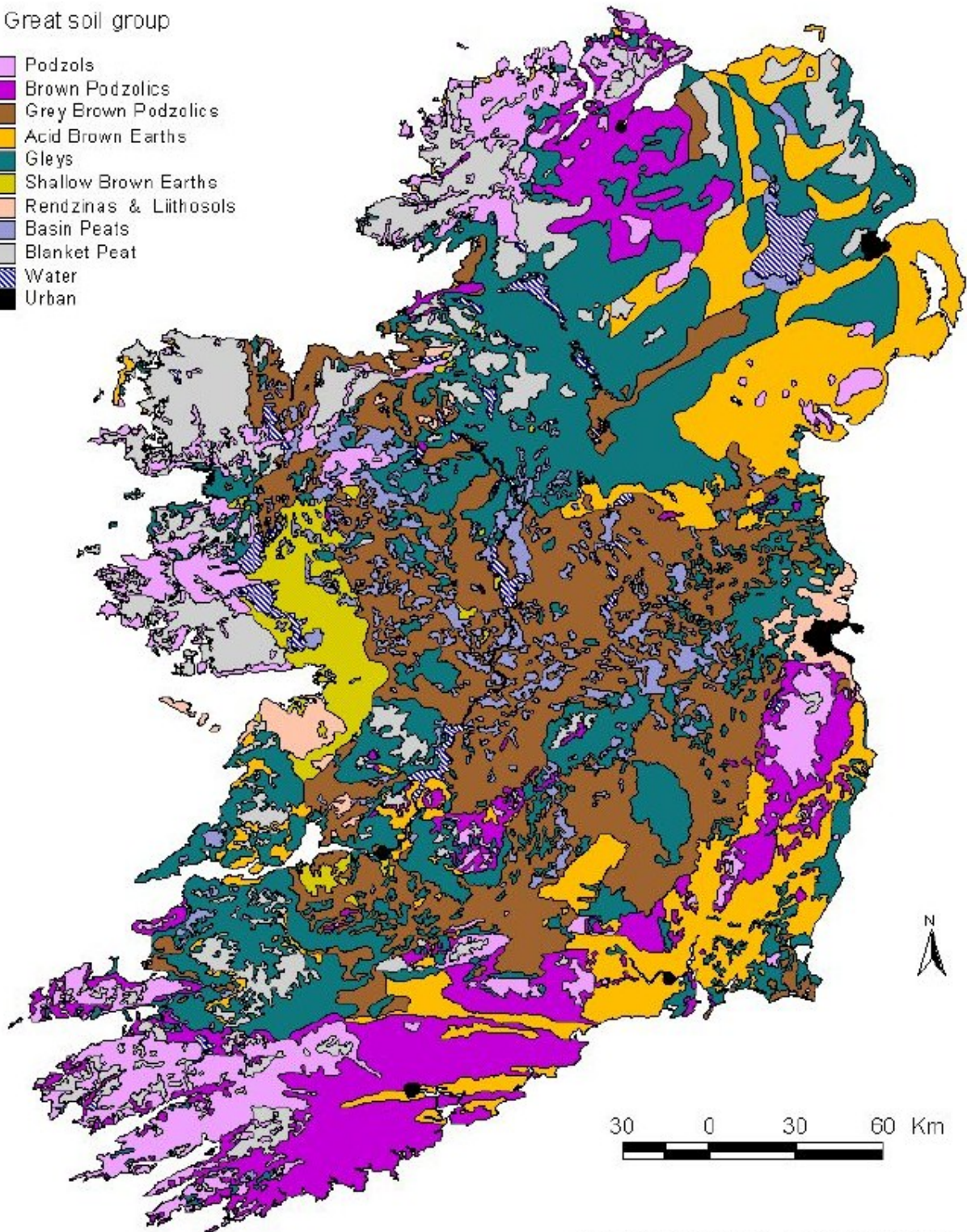
Soil Map of Ireland

Ireland : Great Soil Groups

(Categorised from the General Soils Map 1980)

Great soil group

- Podzols
- Brown Podzolics
- Grey Brown Podzolics
- Acid Brown Earths
- Gleys
- Shallow Brown Earths
- Rendzinas & Lithosols
- Basin Peats
- Blanket Peat
- Water
- Urban



GIS Dr. BSCouter & EJ McDonald
(C) TEAGASC JOHNSTOWN CASTLE 2001

Ref. MJ Gardiner et al, National Soil Survey 1980
N.I. Soils S. McConaghy & V. McAllister

To reinforce the idea that climate, soil type and topography have a direct correlation with population distribution, ask your students to volunteer a small area population on the Western seaboard. I allowed one of my students to come up to the board and pick an area out. For example he/she may choose the Aran Island of Inishmaan, which will show a population of 845 in 2011.

Now, take a quick trip over to the east coast. An inspection of any small area in the Dublin region will show results not too dissimilar to what we find on this large island. What we are looking at with Small Area Populations in Dublin are effectively housing estates. Hopefully, this should stimulate some discussion among your students.

Classroom Idea

As you scroll across the country, leave the interactive map on 'Small Area Populations'. The division lines in the West of Ireland will be clearly visible, however as you approach the sprawling city of Dublin, you will notice the map becomes a sea of blue! The students usually have a small 'eureka' moment.

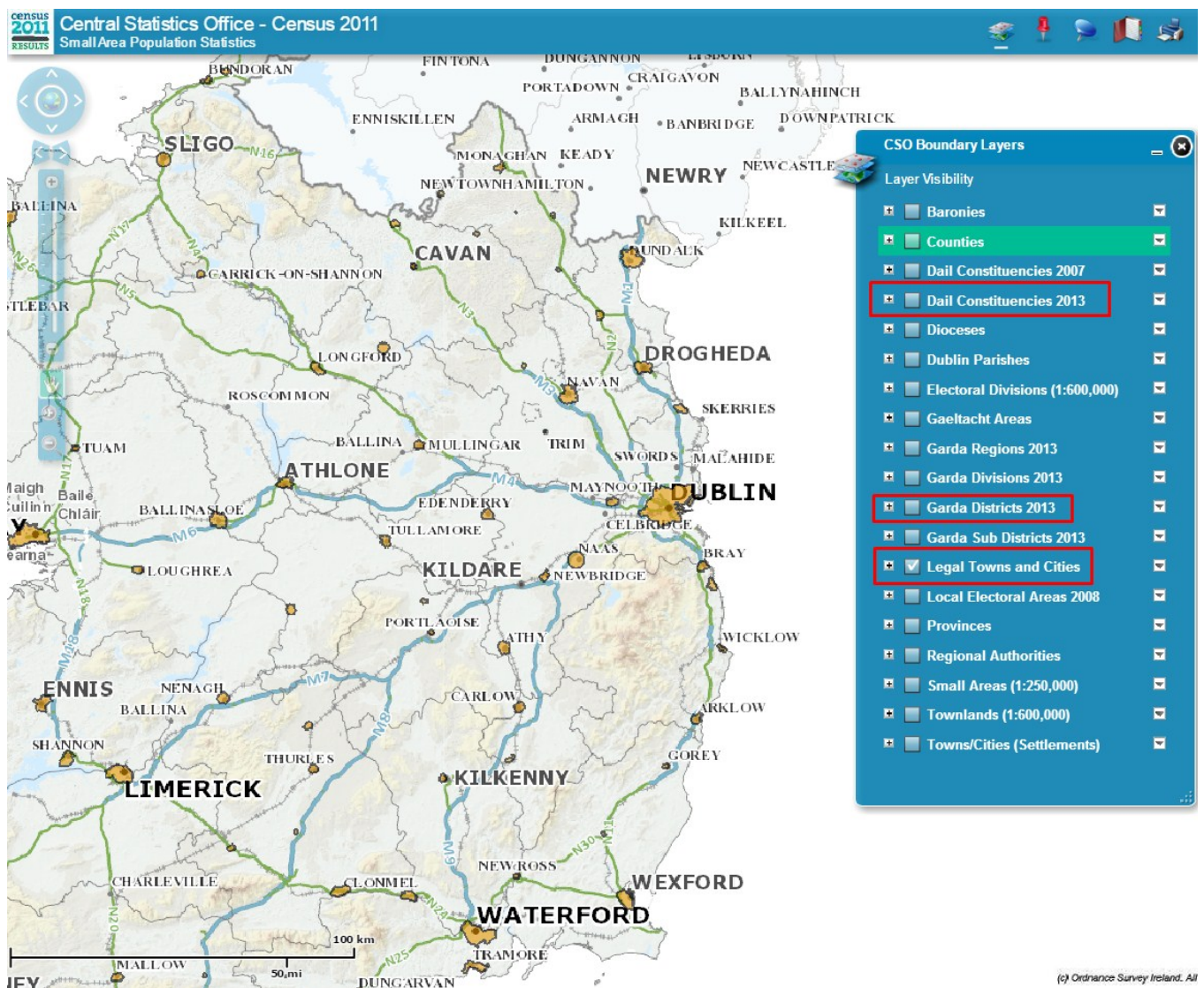
Class 2

You will need

- Data projector
- Whiteboard & markers

In this class we want to look at the magnetism of the Greater Dublin Area, and some of the repellents of the western region.

This will simply be done by showing the students certain layers on the SAPMAP to highlight the gap in services and administrative powers that exists in the country. Perhaps allow for a discussion between each layer that is highlighted.



The following layers will aid your efforts to highlight the above:

- Dáil Constituencies 2013
- Garda Districts 2013
- Legal towns and Cities

It becomes evident that there are marked differences in the distribution of Dáil Constituencies, Garda Districts and Legal towns and cities.

Naturally, these administrative and public services divisions are directly related to where the population resides. However, can these divisions be re-examined in order to tackle the lopsided population distribution that we experience in Ireland?

I find this is good time to introduce the following topics:

- The primacy of Dublin
- Decentralisation

Classroom Idea: Debate time!

Ask the class...

If relocating to rural Ireland would appeal to them

OR

If relocating to urban Ireland appeal to them?

Split the class in 2 – for and against. Allow 3 minutes to prepare for a debate. Each group nominates a speaker to introduce the group's argument.

Then allow the floor to open. Mark the students on the board based on the relevancy and weight of the arguments they make. I am always amazed by the way students engage in debates and how much they learn from them.

Population Pyramids

Class 1

You will need

- Data projector
- Whiteboard & markers

Now, we want to gain some enjoyment with graphing data. A key component of the Population Studies course is the ability to understand population pyramids. Also, students are expected to be able to decipher graphs in geography. They usually have very little difficulty with this as they have been well tutored in maths class, however, population data can be a little more complex, especially when encountered on a population pyramid.

Step 1

Open up the interactive SAPMAP in front of the class

Click on Small Area Populations on the toolbar

Now select an area of study from one of these populations, perhaps an area near your school?

Step 2

You will be presented with a vast array of data, including Sex, Age and Marital Status, Housing, Education and Occupation. Before you scroll down to one of these data sets, click on the Excel Icon underneath 'Options'.

Step 3

Highlight the figures you wish to graph. This is done by holding down the left click button on your mouse and dragging a box around the figures.

On the toolbar at the top of the screen, click on 'insert'. You will now be presented with a series of charts. Select a chart you like and you will be presented with your highlighted information in a diagrammatic format.

Step 4

From your chart, present the students with a series of questions based on the data that you have just presented.

Homework Idea

Give the students a series of SAPMAP charts with questions



Class 2

You will need

- Access to a computer room
- A data projector

Step 1

Guide the students to a set of data on the Excel Spreadsheet. Now allow them to graph the information.

Step 2

Allow 10 minutes for the students to navigate their way around this feature. They may want to examine the area they live in. They may also have an interest in a particular part of the country, perhaps where their parents are from or where they holiday to.

Case Study – Dublin vs The West of Ireland

This is a fascinating examination of stark differences in the population distribution density in The West of Ireland and in the Dublin and the Greater Dublin Area.

It is often hard for students in the city to fully understand and appreciate how sparsely populated the West of Ireland is. On the other hand, it is often hard for students from isolated regions to understand how densely populated parts of Dublin is.

I always find a good way to really get this across to the students is to integrate Google Maps into your study. This acts as a ‘crutch’ when you are trying to bring Census data into the classroom.

Class 1

You will need

- A data projector and whiteboard
- Access to Google Maps
- A map showing population density and distribution across the country

Step 1

Let's start by looking at the map showing population distribution and density across the country.

Your students may need to be reminded of the definitions for population density and distribution.

Class 2

You will need:

- A data projector and whiteboard
- Markers

In this class we simply want to highlight the differences in population differences around the country using SAPMAP.

Step 1

Open up the SAPMAP in front of the students.

Step 2

Let's take look at the county of Louth. We can see it has a population of 122,897. Now let's examine county Wexford. It has a population of 145,320. At this stage, draw the student's attention to the size of these counties. Interestingly, Dublin is the second smallest county in Ireland. This may be worth discussing.

Step 3

Let's analyse the county of Longford. We can see it has a population of 39,000.

Now let's take a look at county Clare. It has a population of 117,196. At this stage, draw the student's attention to the size of these counties.

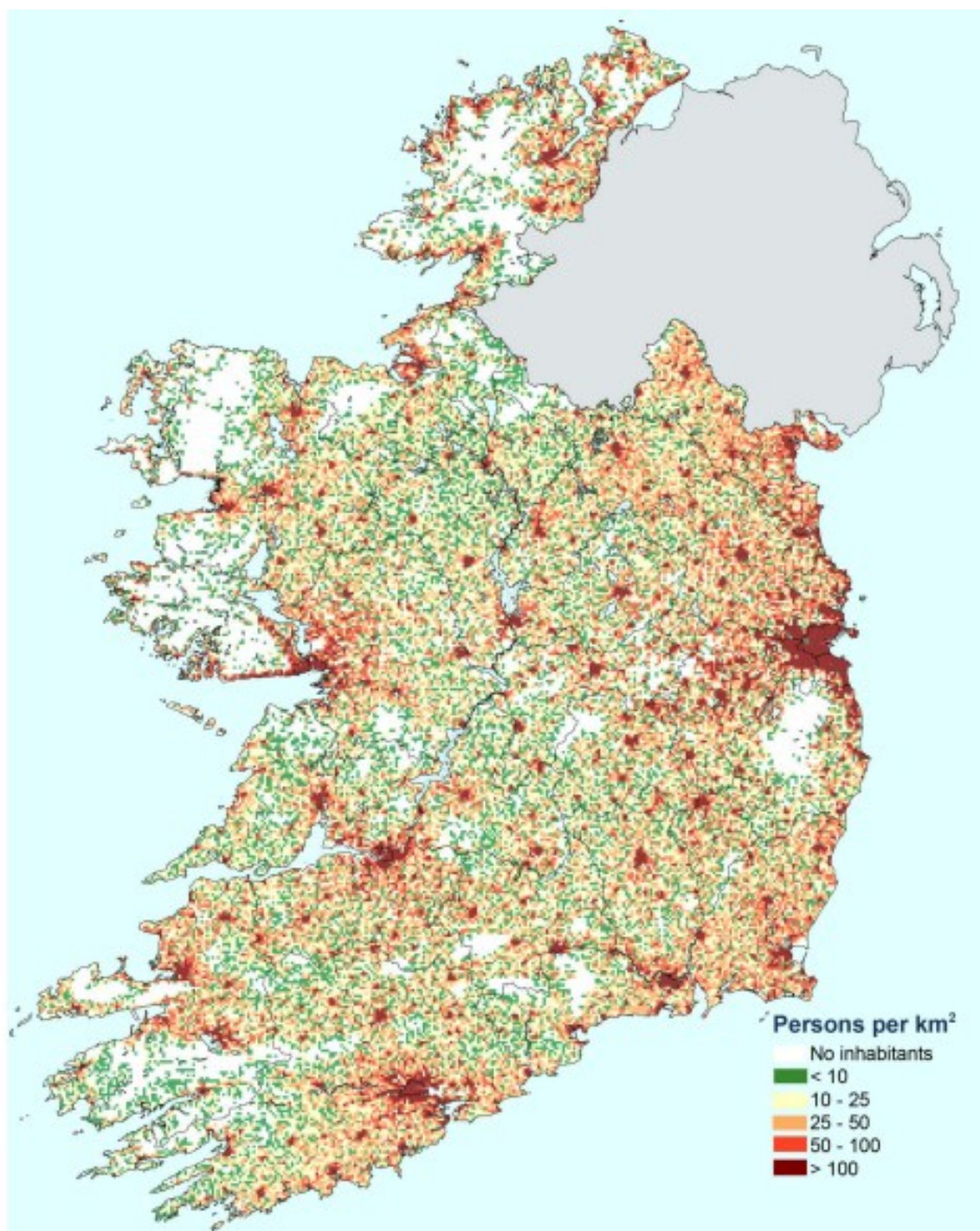
Step 4

It is clearly evident that these spatially smaller counties have larger populations. Allow a discussion to ensue on this. Why do these counties have more people?

Step 5

Now, we want to relate this back to Dublin. By navigating around SAPMAP, we should be able to look at small areas that have very large populations in relation to their size. Again, it is very useful to use Google Maps here to highlight the message that you are trying to get across.

Population per square km 2011



Migration

This is a fascinating element of demographics to teach. Our country has undergone a seismic change in our non-national make-up in recent decades. C.S.O. and SAPMAP data will allow you to highlight these fascinating changes, and give is a window into understanding future trends in our country.

This is also a great opportunity to for non-national students in your class to understand their place in Irish society. Many strands of the second year population course can be woven into this area, such as push and pull factors, barriers to migration, and Irish population trends over the past 150 years.

Before we look at classes to weave C.S.O. data into your coursework, I highly recommend reading the CSO profile of migration and diversity which can be found here:

<http://www.cso.ie/en/media/csoie/census/documents/census2011profile6/Profile,6,Migration,and,Diversity,entire,doc.pdf>

This incredible piece of research gives us an insight into our cultural make-up in 2011.

Class 1

You will need

- A data projector and whiteboard
- A teacher's protractor and compass

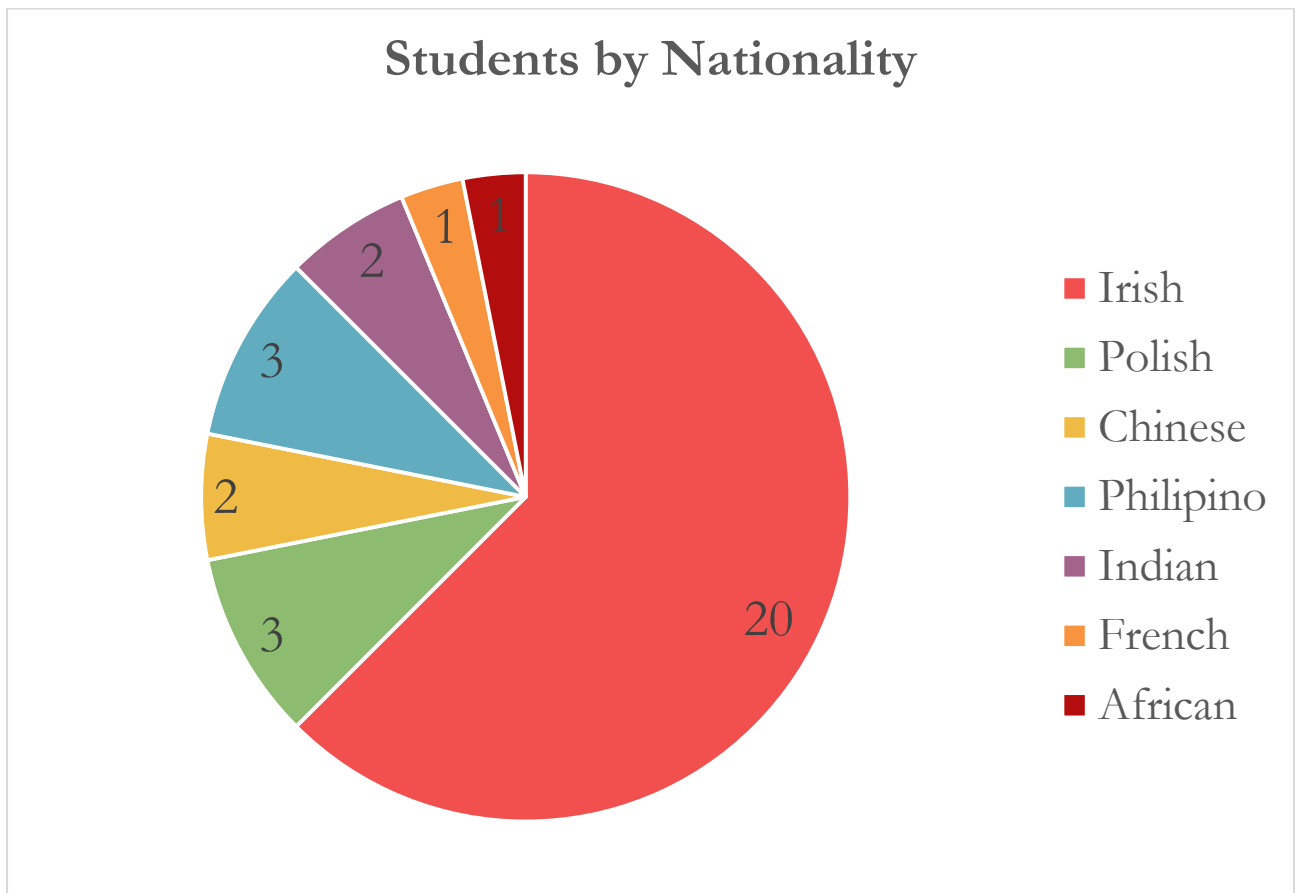
Step 1

Open the SAPMAP in front of the students.

Step 2

Before we get our teeth into the data, let us draft a pie chart showing the different nationalities in our class. I find a simple show of hands works best.

Here are the results from my class:

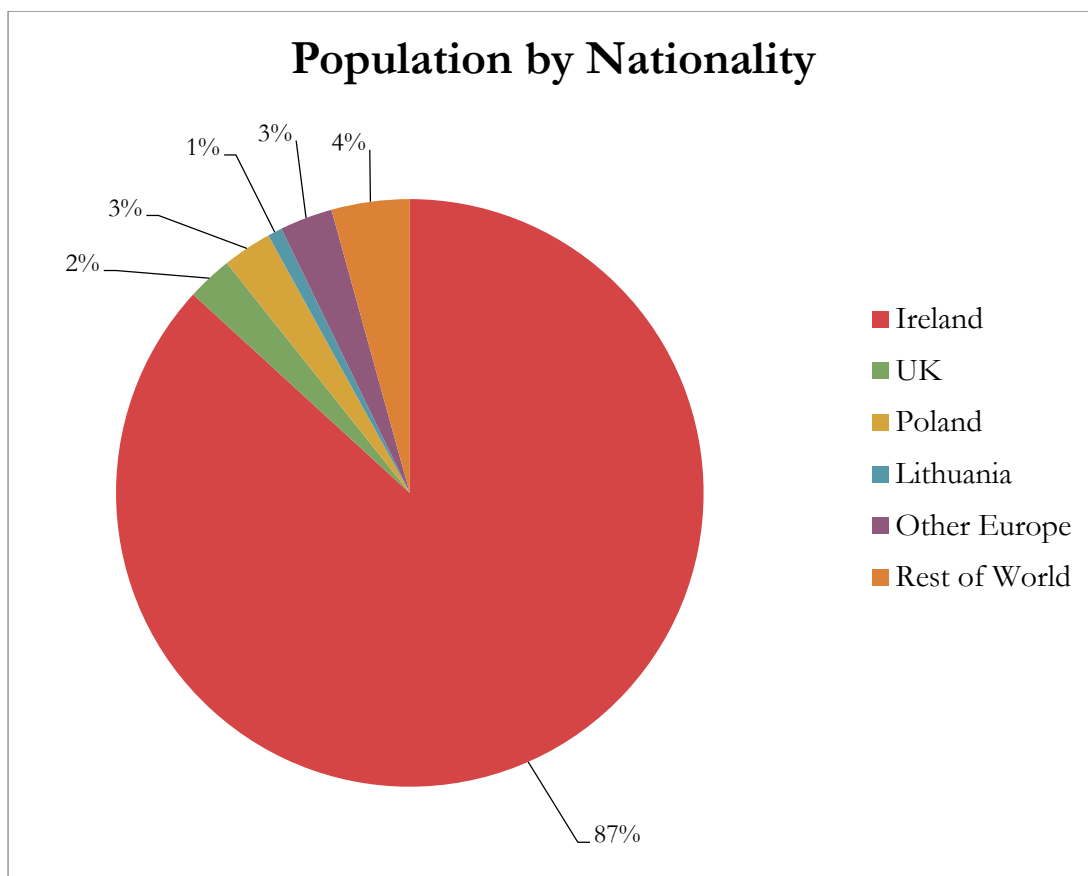


Step 3

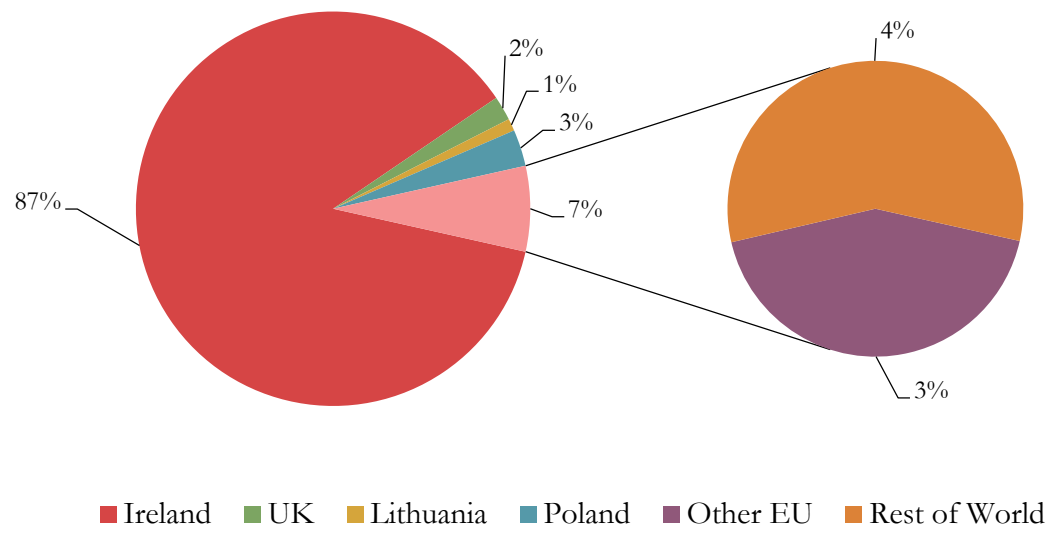
Now, let us expand the on this pie chart. Let us examine where your student's parents hail from. Again, a show of hands can be very efficient when gathering the information that you need, or pass a sheet around the class if you want to keep the survey reasonably confidential.

Construct the pie-chart next to the pie-chart of nationalities on the board. Now allow for a discussion on the data that is front of the students.

Here are some example charts:



Population by Nationality % breakdown



Step 4 – Homework

Present each student with a set of data examining the ethnic and cultural make-up of your county in Ireland. This can be found on the SAPMAP. Simply highlight Counties on the toolbar and right click. This will give you the option of accessing the information that you need e.g. Cork.

If you open the Excel spreadsheet you can scroll down to the following data:

Usually resident population by ethnic or cultural background

White Irish	98,460
White Irish Traveller	789
Other White	10,943
Black or Black Irish	1,104
Asian or Asian Irish	2,623
Other	1,170
Not stated	2,132
Total	117,221

1. Graph the following data in a diagrammatic form.
2. Write a paragraph on the data set regarding the ethnic and cultural mix in Cork City in 2011.

Class 2

You will need

- A data projector and whiteboard

Step 1

Collect/correct the students' homework and allow for a discussion on their results.

Step 2

Now let's use Cork City as our focus for the class. Cork City's cultural and ethnic mix should help in our quest to understand migration in Ireland.

Open up the Excel data set for Cork City. Highlight the following to the students:

- 1) Location
- 2) Brief History
- 3) Present Population (119,230)
- 4) Pull Factors of Cork City
- 5) Cork City's relationship with the surrounding hinterland

Step 3

Let us examine those that are usually resident in Cork City.

Usually resident population by place of birth and nationality

Location	Birthplace	Nationality
Ireland	98,352	100,901
UK	4,974	1,894
Poland	3,531	3,648
Lithuania	499	518
Other EU 27	4,307	4,235
Rest of World	5,558	4,316
Not stated	0	1,709
Total	117,221	117,221

What stands out amongst this Data?

Step 4

Now, let's look at speakers of foreign languages, and what this tells us about the cultural and ethnic make-up of Cork City.

Speakers of foreign languages by language spoken

Polish	3,564
French	1,884
Lithuanian	425
Other	8,044

Step 5

Now, let's look at the religious make-up of Cork City:

Population by religion

Catholic	98,411
Other stated religion	7,938
No religion	10,360
Not stated	2,521
Total	119,230

Step 6 – Homework

This data tells us a lot about migration in Cork City.

Write a paragraph on migration in Cork City.

In your answer, use the following terms:

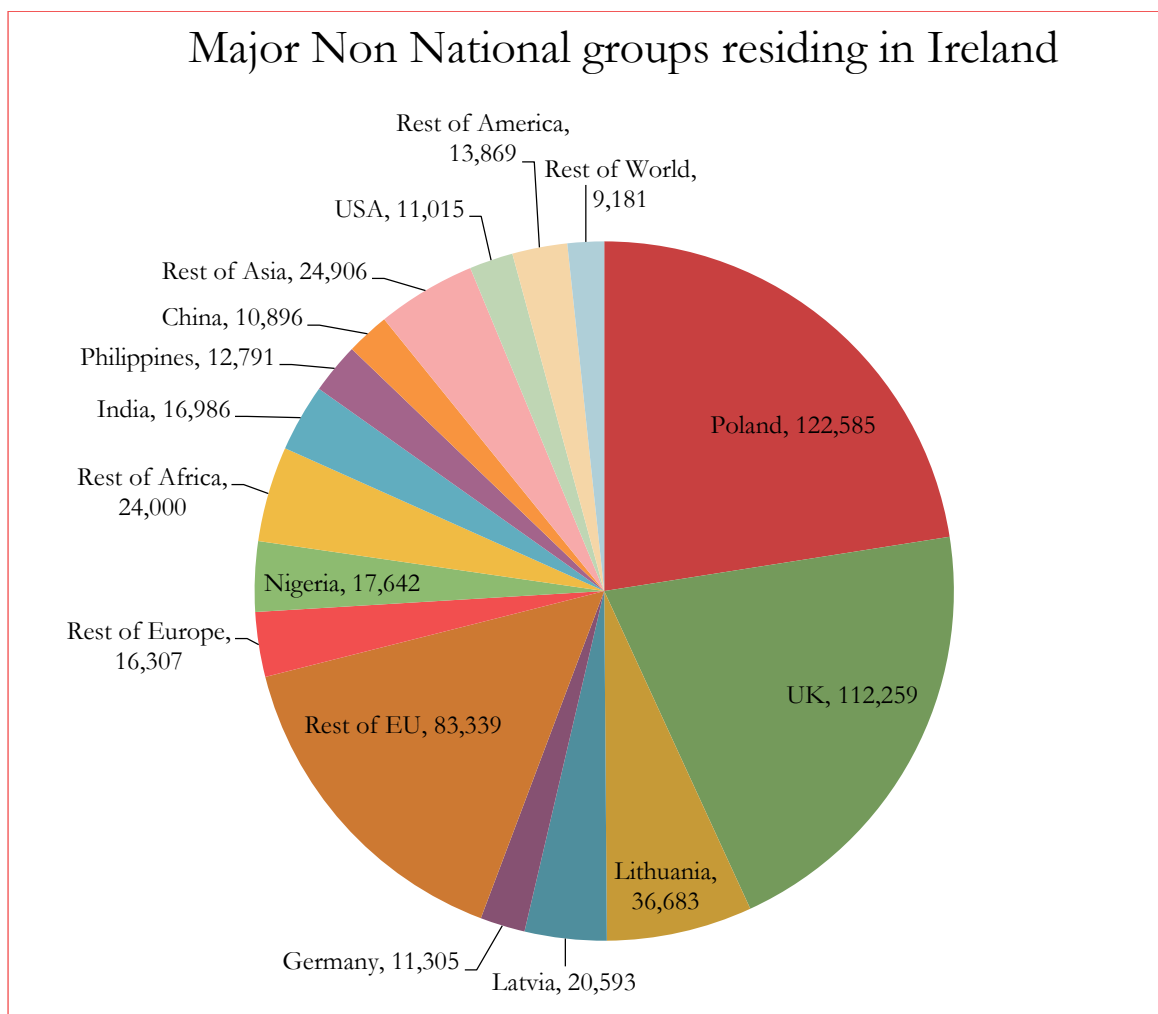
- Push factors
- Pull factors
- Challenges facing Cork City with regard to integration

Class 3

You will need

- A data projector and whiteboard
- Copies of the following data from 2011:
 - Population Usually Resident
 - Present in the State by Religion and Nationality (see “Appendix A”)

Now, the students should have a good feel for migration in this city. This city has acted as a microcosm for the country as a whole. Let us expand outwards from Cork City, and look at the country as a whole.



Step 1

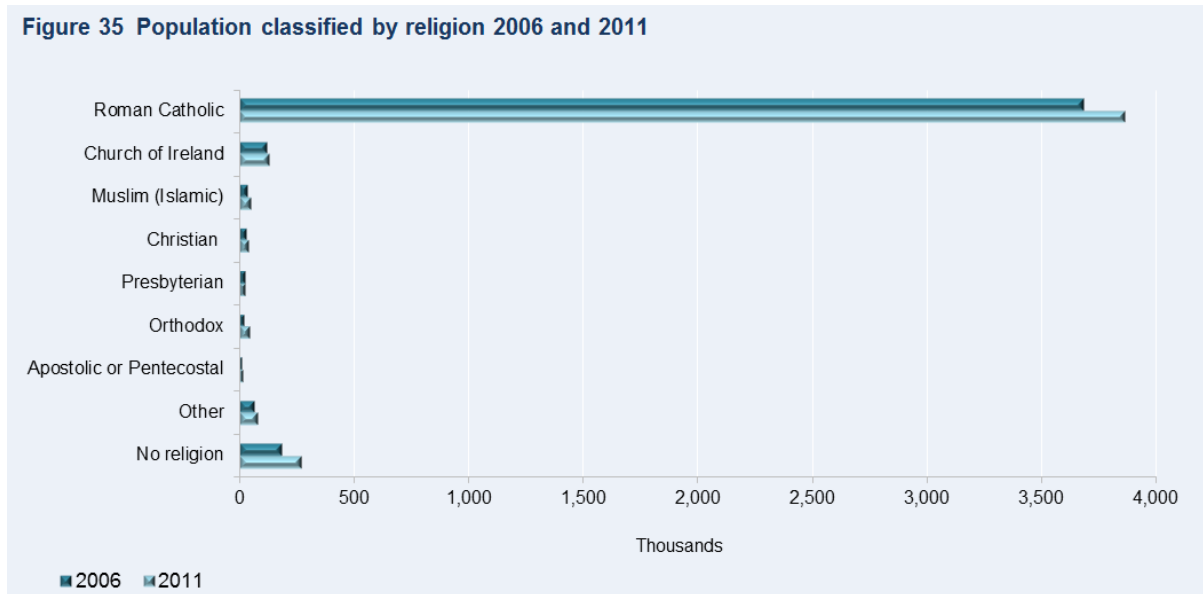
Take a look at the data on religion for the country as a whole:

Table W Population by religious grouping 2006 and 2011			
Religion	2006	2011	Percentage change 2006-2011
	<i>Thousands</i>		<i>%</i>
Roman Catholic	3,681.4	3,861.3	4.9
Church of Ireland	121.2	129.0	6.4
Muslim (Islamic)	32.6	49.2	51.2
Christian	29.2	41.2	40.9
Presbyterian	23.6	24.6	4.5
Orthodox	20.8	45.2	117.4
Apostolic or Pentecostal	8.1	14.0	73.0
Other	66.3	81.0	22.0
No religion	186.3	269.8	44.8
Not stated	70.3	72.9	3.7
Total	4,239.8	4,588.2	8.2

Allow the students 2 – 3 minutes to digest this information.
Allow for comments/questions.

Step 2

Graph this data for the students on the whiteboard. This will help their graph interpretation skills and their skills in understanding migration into Ireland.



Step 3 – Homework

Analyse the data that you have been presented with today:

Q1 What is the most practiced religion in Ireland?

Q2 What is the smallest religious group in Ireland?

Q3 What are the 4 largest nationalities represented in the data?

Q4 State 4 reasons why these cultural and ethnic groups have come to Ireland.

Q5 What trends do you see developing in the future?

What do you think Ireland's cultural and ethnic mix will look like in 2050 and 2100?

Appendix A

Table 24 Persons usually resident and present in the State on census night, classified by nationality and age group

Nationality	Total	Age group				
		0 - 14 years	15 - 24 years	25 - 44 years	45 - 64 years	65 years and over
Total Irish	3,927,143	877,898	491,177	1,119,980	936,439	501,649
Irish	3,871,238	858,005	483,607	1,106,107	925,679	497,840
Irish-American	14,699	4,491	2,523	3,201	3,012	1,472
Irish-English	13,543	2,560	1,897	3,662	3,751	1,873
Irish-European	9,937	5,927	1,097	2,087	653	173
Irish-Other	17,726	6,915	2,053	4,923	3,344	491
Non-Irish	544,357	78,569	68,187	296,404	82,052	19,145
EU	386,764	53,469	45,189	206,417	64,824	16,865
Austria	720	84	98	396	121	21
Belgium	1,071	114	103	542	250	62
Bulgaria	1,759	184	201	1,092	267	15
Cyprus	83	10	12	42	14	5
Czech Republic	5,451	587	702	3,629	510	23
Denmark	801	73	113	414	159	42
Estonia	2,560	369	355	1,490	329	17
Finland	868	70	109	563	112	14
France	9,749	778	1,660	6,047	1,128	136
Germany	11,305	1,074	1,243	5,576	2,580	832
Greece	516	33	35	357	76	15
Hungary	8,034	979	786	5,608	639	22
Italy	7,656	569	615	5,277	966	229
Latvia	20,593	3,660	3,330	10,804	2,703	96
Lithuania	36,683	6,424	5,565	20,338	4,227	129
Luxembourg	35	2	5	19	7	2
Malta	180	22	16	86	43	13
Netherlands	4,313	496	372	1,718	1,335	392
Poland	122,585	22,204	12,357	78,742	9,063	219
Portugal	2,739	331	274	1,769	334	31
Romania	17,304	2,450	2,849	10,539	1,390	76
Slovakia	10,801	1,136	1,434	7,361	843	27
Slovenia	192	23	20	124	22	3
Spain	6,794	532	756	4,924	492	90
Sweden	1,713	127	313	992	231	50
UK	112,259	11,138	11,866	37,968	36,983	14,304
Rest of Europe	16,307	2,110	2,005	9,783	2,189	220
Russia	3,896	617	508	2,099	638	34
Ukraine	3,343	385	312	2,190	449	7
Other	9,068	1,108	1,185	5,494	1,102	179
Africa	41,642	7,542	6,313	23,407	4,138	242
Nigeria	17,642	3,752	2,415	9,701	1,734	40
South Africa	4,872	664	705	2,608	799	96
Mauritius	2,844	232	583	1,851	173	5
Other	16,284	2,894	2,610	9,247	1,432	101
Asia	65,579	10,406	8,961	39,992	5,833	387
India	16,986	3,922	1,018	11,087	917	42
Philippines	12,791	2,421	1,180	6,993	2,158	39
China	10,896	580	2,258	7,401	593	64
Pakistan	6,847	1,087	907	4,259	547	47
Malaysia	3,295	338	812	1,867	256	22
Other	14,764	2,058	2,786	8,385	1,362	173
America	24,884	3,638	4,655	12,002	3,549	1,040
USA	11,015	2,416	1,675	3,715	2,369	840
Brazil	8,704	709	2,113	5,371	476	35
Canada	2,384	200	458	1,168	429	129
Other	2,781	313	409	1,748	275	36
Australia	2,849	373	311	1,576	499	90
New Zealand	1,384	163	94	882	220	35
Other nationalities	4,098	630	571	1,974	691	232
Multi nationality	840	238	88	371	109	34
No nationality	1,487	809	110	363	154	51
Not stated	52,294	16,716	5,997	13,228	8,487	7,866
Total	4,525,281	973,992	565,471	1,429,975	1,027,132	528,711