Lesson Three

Theme
Census Statistics

Objectives
That the child will be enabled to:
- become familiar with the geography of Ireland
- understand the processes involved in data collection
- read and interpret maps / graphs
- examine and discuss Census Statistics
- decide how census data can be used

Key Messages
- Census data is of great value and provides us with knowledge to help us plan for the future.
- It is important to have knowledge of the country we live in and to familiarise ourselves with the facts and figures provided by the census.
- The census provides the knowledge with which we can build our future

You will need:
- Map of Ireland
- Copy of 'Census Cycle' on overhead or per student

Follow-Up Activities
- How well do you know your province?
- Census 1996 - Population
- Technokids
- Census Cubes

Integration/Linkage
- **Maths**: Data Representation and Interpretation
- **English**: Oral Language / Language Development
- **Geography**: Ireland – provinces, counties, population

Teacher's Notes

Talk and Discussion

- Revise the key learning points from Lessons One and Two.
- Ask the children to tell you what they know about the country/county that they live in.
- Show the children a map of Ireland and focus on the political / physical features of the country – provinces, counties... Give the children an opportunity to talk about the province they live in. – number of counties, coastal and inland counties, largest / smallest counties, principal towns, physical features, famous landmarks…
- The activity sheet ' How well do you know your province?' can be used before or after this discussion.

- Elicit from the children the data that is collected in each county to assist the government in planning for the future – population of province / counties / towns, age of population, those in primary / second-level / third-level education, occupations, population working in agriculture, population of Irish speakers, means of travel to work …
- Discuss how this data can be used in planning for the future – requirements for motorways, parks, utilities; education requirements, consumer needs…
- Familiarize the children with the processes involved in collecting data. Explain that this process is cyclical in nature – census forms are delivered, forms are completed, census enumerators collect forms and answer any queries respondents may have, forms are scanned and data is collated and represented in graphical form, data is analysed, plans are made for the future of the country based on this data, cycle starts again.
- The 'Census Cycle' diagram could be printed on an overhead transparency. Alternatively, as each step of the cycle is discussed, it could be drawn on a chart or on the blackboard.
- Distribute the 'Census 1996 – Population' activity sheet. Discuss the population statistics of each county with the children.
- Note how these statistics are presented in graphical form on the activity sheet.
- Allow the children to work individually or in pairs/groups on the interpretation tasks.
- When these tasks are completed, follow up with whole class discussion and give the children the opportunity to provide individual/group feedback.
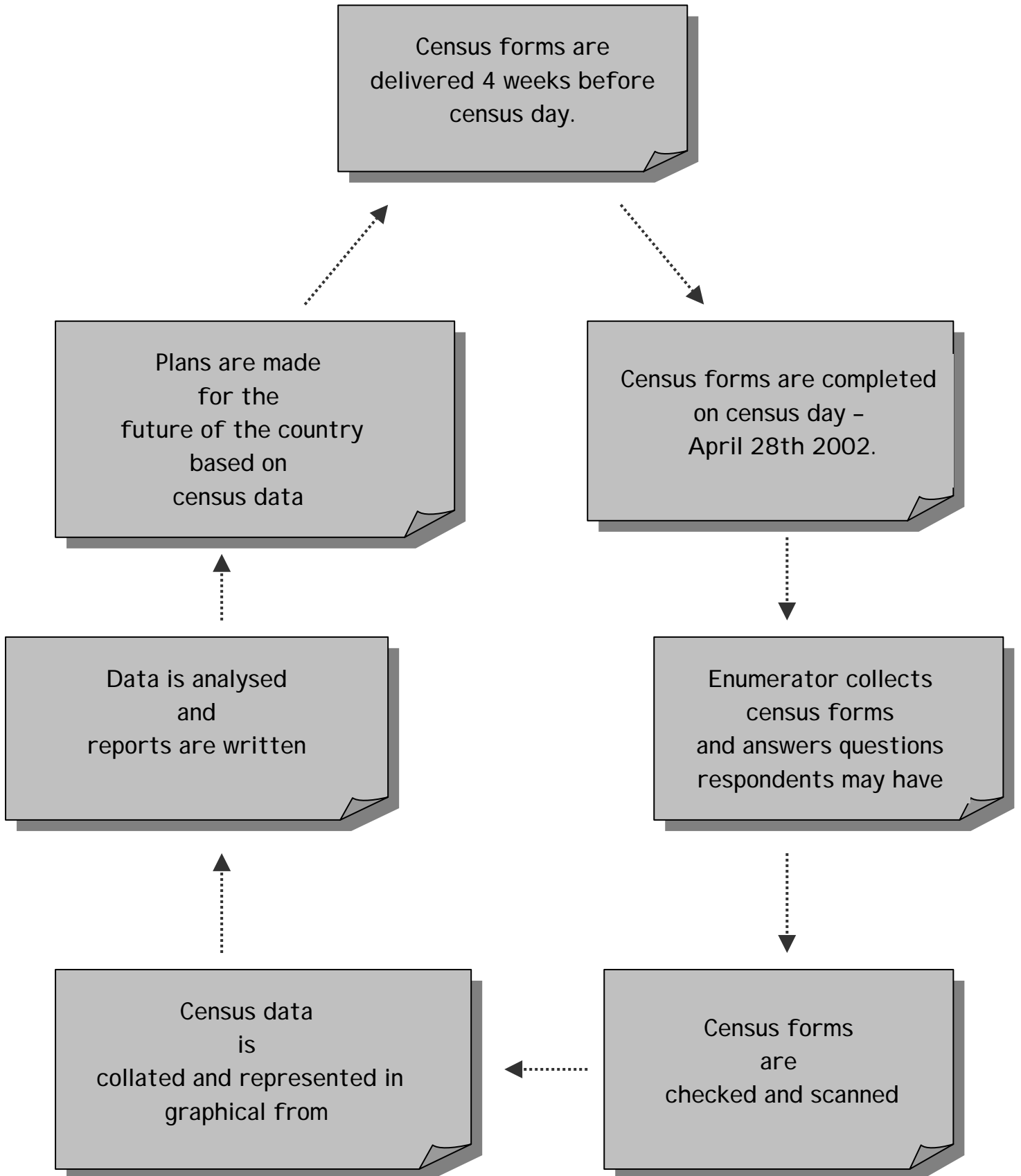
Suggested Follow-up activities

- A new question on the Census 2002 form relates to ownership of a computer and access to the Internet. The children could become involved in either a classroom or school survey by collecting similar data.
- Distribute the recording sheet 'Technokids' to the children and ask them to decide on the questions they will need to ask in order to get the information they need e.g. Do you have a PC at home? D o you have access to the Internet? Have you ever sent an email?
- The children either collect data from their classmates or could visit other classrooms to collect the data – asking only the eldest member of each family so as not to have duplicate answers. This would require the co-operation of other class teachers.
- When the data has been collected, the children could then analyse their data using the Data Analysis sheet.
- Another useful activity, which integrates with the Shape and Space strand of the Mathematics curriculum, is 'Census Cubes'. This sheet could be distributed to the children. They have the task of deciding how many cubes are used to make each letter of

the word Census. The next problem the children have to solve is to find the volume and the surface area of each letter.
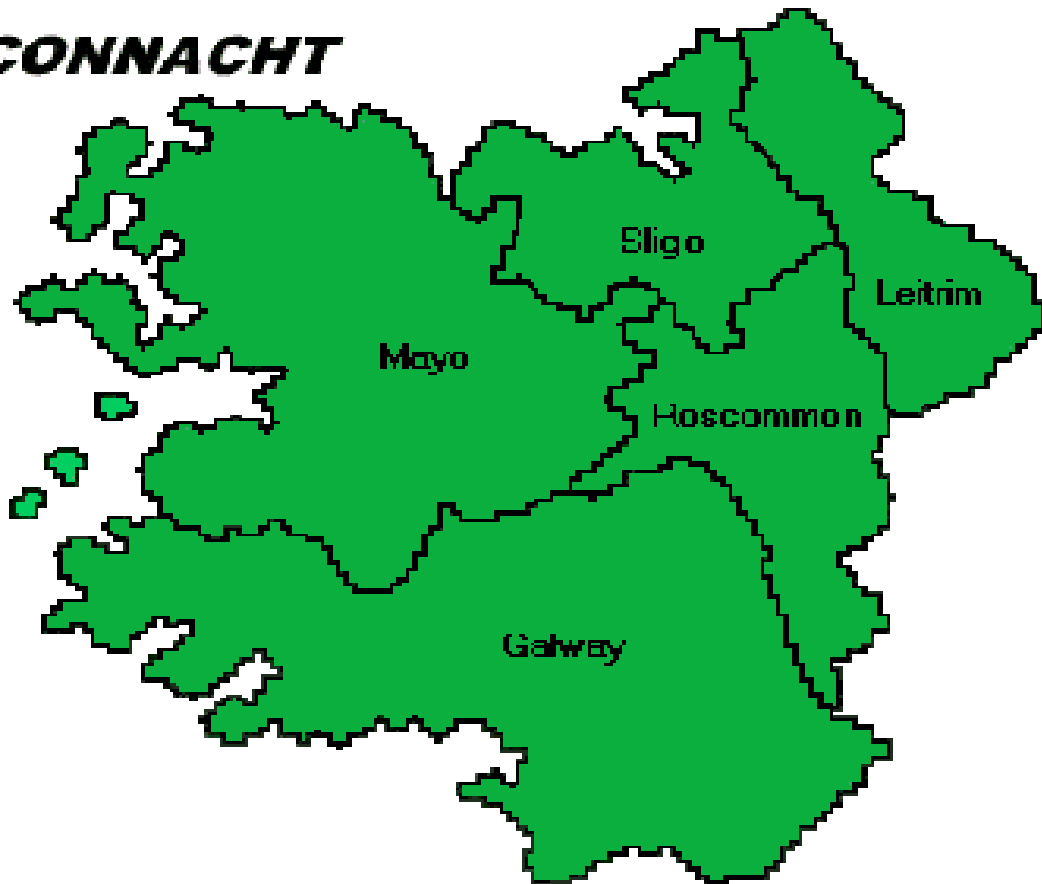
- They also have to draw the plan of one letter as seen from above, from the front and from the side.
- If more practice is needed, the word 'April' could then be investigated by the children.

The Census Cycle

Census forms are
delivered 4 weeks before
census day.

Plans are made
for the
future of the country
based on
census data

Census forms are completed
on census day –
April 28th 2002.

Data is analysed
and
reports are written

Enumerator collects
census forms
and answers questions
respondents may have

Census data
is
collated and represented in
graphical from

Census forms
are
checked and scanned

How well do you know your province?

CONNACHT

Sligo

Leitrim

Mayo

Roscommon

Galway

How many counties in the Republic of Ireland?

How many counties in Connacht?

Write the counties of Connacht as a fraction of the number of counties in the Republic.

List the counties in alphabetical order.

Which is the largest county?
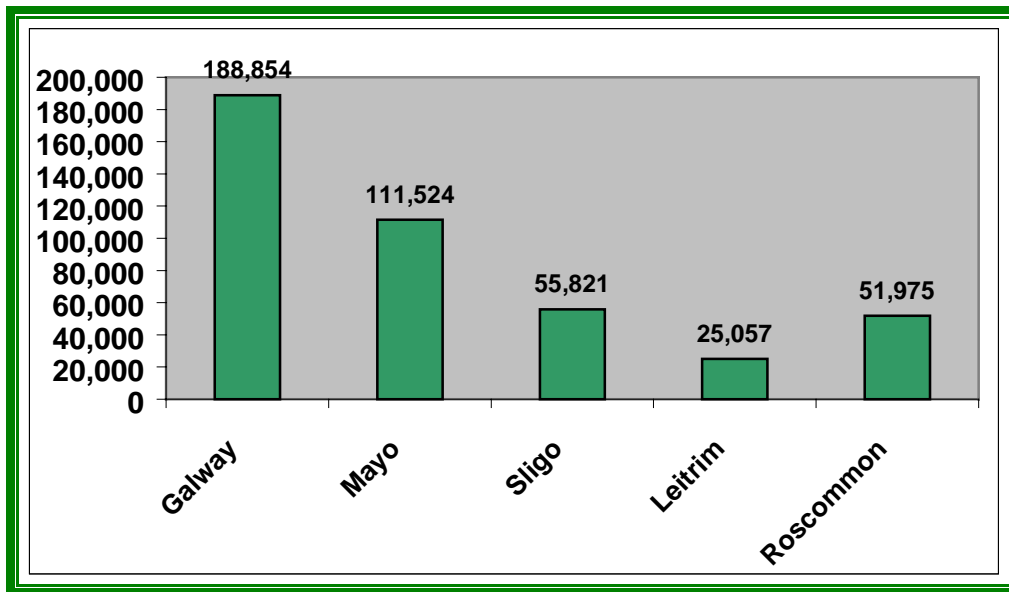
Can you name the main town / city in each county?

Name the adjoining counties to:
*   Sligo -
*   Leitrim -
*   Roscommon –
*   Galway -

Which counties are on Ireland's coastline?

Census 1996 - Population

County	Population
Galway	188,854
Mayo	111,524
Sligo	55,821
Leitrim	25,057
Roscommon	51,975

* What graph type is shown above?

* What data is shown on the horizontal axis?

* What data is shown on the vertical axis?

* By how much are numbers increasing at each point on the vertical axis?

* Can you list the next 3 numbers in the sequence?

* Which county had the highest population?

* Which county had the lowest population?

* Put the counties in order according to size of population starting with the lowest.

* What was the entire population of Connacht in 1996?

* List 5 reasons why the population may be higher in one county than in another.

* Can you predict the population trend for Census 2002?

* How can knowledge of population statistics help to plan for our future?

How well do you know your province?

MUNSTER

How many counties in the Republic of Ireland?

How many counties in Munster?

Write the counties of Munster as a fraction of the number of counties in the Republic.

List the counties in alphabetical order.

Which is the largest county?

Can you name the main town / city in each county?
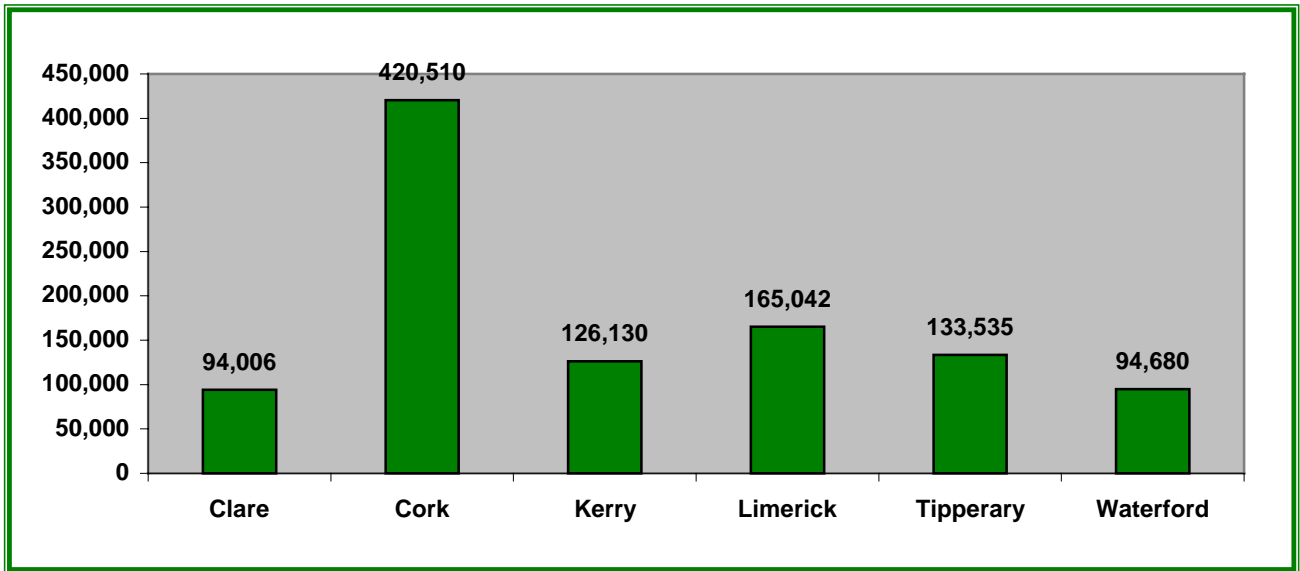
Name the adjoining counties to:
* Clare -
* Tipperary -
* Waterford –

Which counties are on Ireland's coastline?

Census 1996 - Population

MUNSTER

County	Population
Clare	94,006
Cork	420,510
Kerry	126,130
Limerick	165,042
Tipperary	133,535
Waterford	94,680

* What data is shown on the horizontal axis?

* What data is shown on the vertical axis?

* By how much are numbers increasing at each point on the vertical axis?

* Can you list the next 3 numbers in the sequence?

* Which county had the highest population?

* Which county had the lowest population?

* Put the counties in order according to size of population starting with the lowest.

* What was the entire population of Munster in 1996?

* List 5 reasons why the population may be higher in one county than in another.

* Can you predict the population trend for Census 2002?

* How can knowledge of population statistics help to plan for our future?

How well do you know your province?

LEINSTER

How many counties in the Republic of Ireland?

How many counties in Leinster?

Write the counties of Leinster as a fraction of the number of counties in the Republic.

List the counties in alphabetical order.

Which is the largest county?

Can you name the main town / city in each county?
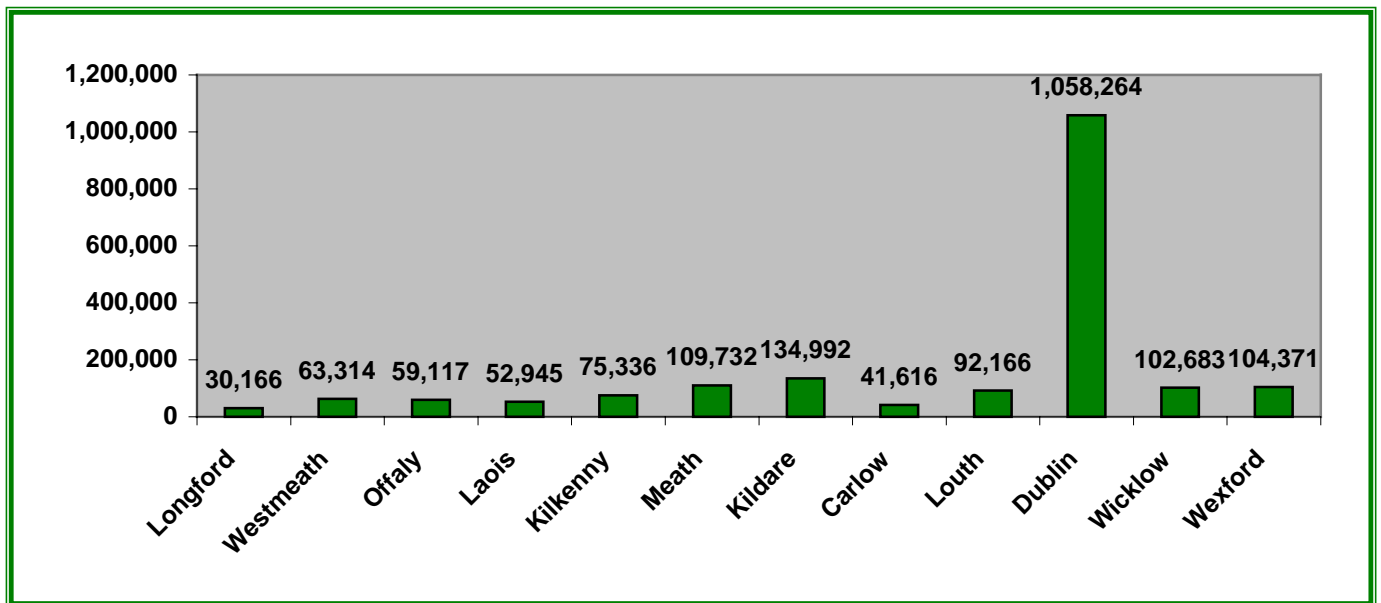
Name the adjoining counties to:
* Longford -
* Westmeath -
* Kilkenny –

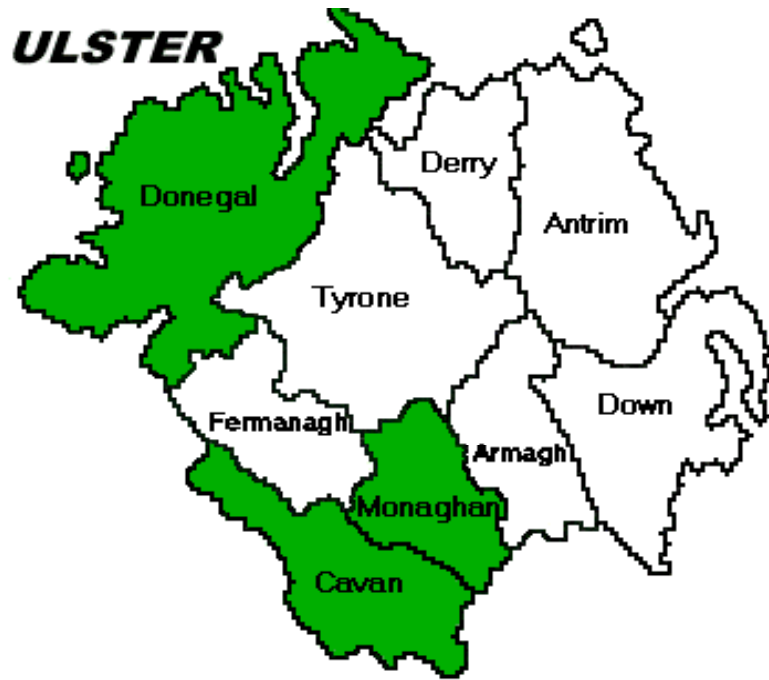Which counties are on Ireland's coastline?

Census 1996 - Population

County	Population
Longford	30,166
Westmeath	63,314
Offaly	59,117
Laois	52,945
Kilkenny	75,336
Meath	109,732

County	Population
Kildare	134,992
Carlow	41,616
Louth	92,166
Dublin	1,058,264
Wicklow	102,683
Wexford	104,371

* What graph type is shown above?

* What data is shown on the horizontal axis?

* What data is shown on the vertical axis?

* By how much are numbers increasing at each point on the vertical axis?

* Can you list the next 3 numbers in the sequence?

* Which county had the highest population?

* Which county had the lowest population?

* Put the counties in order according to size of population starting with the lowest.

* What was the entire population of Leinster in 1996?

* List 5 reasons why the population may be higher in one county than in another.

* Can you predict the population trend for Census 2002?

* How can knowledge of population statistics help to plan for our future?

How well do you know your province?

ULSTER

Donegal

Derry

Antrim

Tyrone

Fermanagh

Down

Armagh

Monaghan

Cavan

Why are only 3 counties in the above map shaded?

How many counties in the Republic of Ireland?

How many counties in Ulster (part) ?

Write the counties of Ulster (part) as a fraction of the number of counties in the rest of Republic.

List the counties in alphabetical order.

Which is the largest county?

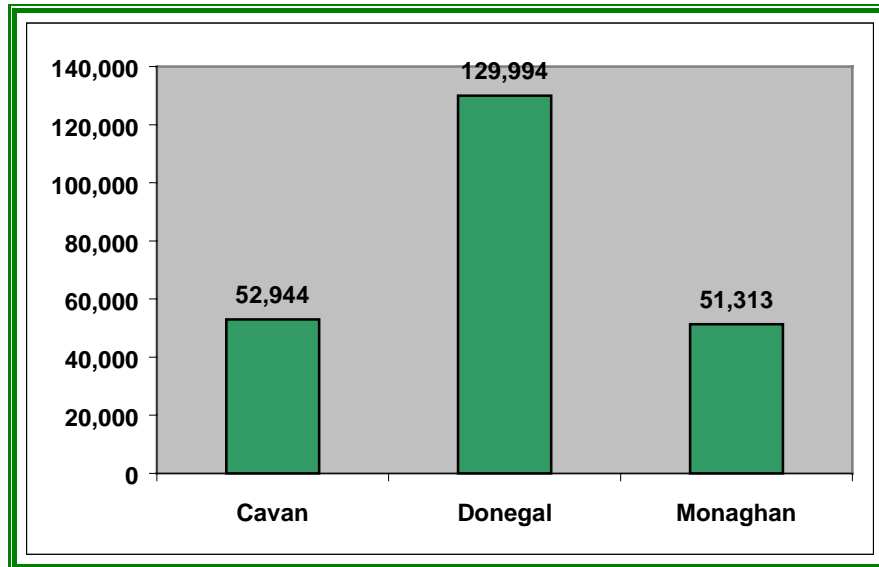Can you name the main town / city in each county?

Name the adjoining counties to:
∗   Cavan -
∗   Monaghan -
∗   Donegal –

Which counties are on Ireland's coastline?

Census 1996 - Population

County	Population
Cavan	52,944
Donegal	129,994
Monaghan	51,313

ULSTER

Bar chart showing:
- Cavan: 52,944
- Donegal: 129,994
- Monaghan: 51,313

Vertical axis: 0 to 140,000 in increments of 20,000

* What graph type is shown above?

* What data is shown on the horizontal axis?

* What data is shown on the vertical axis?

* By how much are numbers increasing at each point on the vertical axis?

* Can you list the next 3 numbers in the sequence?

* Which county had the highest population?

* Which county had the lowest population?

* Put the counties in order according to size of population starting with the lowest.

* What was the entire population of Ulster (part) in 1996?

* List 5 reasons why the population may be higher in one county than in another.

* Can you predict the population trend for Census 2002?

Technokids

Name	Own a PC	Access to Internet	Sent an email	Use daily (at home)	Use only weekly (at home)	Don't use
Name **Total**						

Data Analysis

* How many children own a PC?   _____

* Write this result as a fraction of the whole class? _____

* What percentage is this?   _____

* How many children have access to the Internet?   _____

* Write this as a fraction of those who own a PC? ____

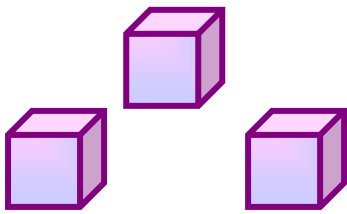* What percentage is this?   _____

Examine these results carefully.

<u>Of the group who own a PC:</u>

* Do more than half have access to the Internet?   Yes / No

* Do less than one quarter have access to the Internet? Yes /   No

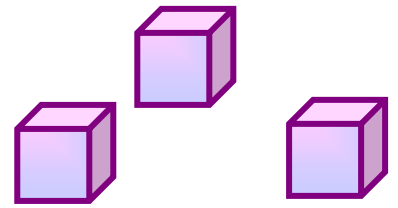* Do more than three quarters have access to the Internet? Yes / No

Discuss these questions with your teacher and your classmates.

* What is email?

* What are the advantages of using email?

* Are there any disadvantages to the use of email?

* Have you ever sent an email? _____

* How many children in your class have sent an email? _____

* How many children in your class use their home computer on a daily basis? _____

* Express this as a fraction of the whole class. _____

* How many children in your class use their home computer on a weekly basis? _____

* Express this result as a fraction of the whole class. _____
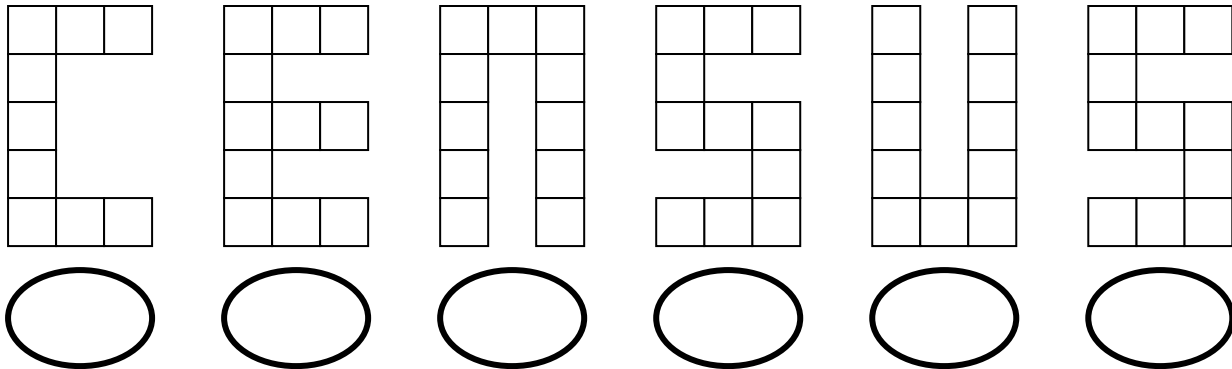
Census Cubes

*A group of children used interlocking cubes to make the word **Census**.*

Can you figure out how many cubes were used to make each letter?
This number is its volume.

The number of faces that can be seen and counted from the outside of each letter is its surface area.
Look at the letter C. How many faces can you see? _____
Use interlocking cubes if you need help.
The answer is 29.

See if you can work out the surface area of the following letters:

> E :
>
> N :
>
> S :
>
> U :

What is the total volume of the word 'Census'?
What is the total surface area of the word 'Census'?

Brain Strain

How many more cubes would you need to make each letter a cuboid?

> C :
>
> E :
>
> N :
>
> S :
>
> U :

Draw and Construct

Look at the letter E.
Draw what you would see:
* if you looked down on the letter
* looked from the side
* looked from the back

Use interlocking cubes to construct the census month April.
Can you find the volume / surface area of each letter?