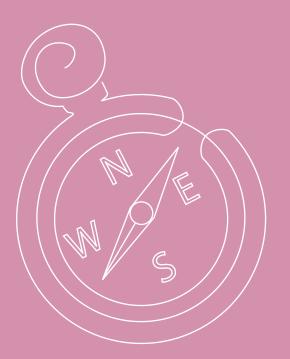
# Social, Political and Environmental Education: Geography

Guidelines for Teachers of Students with

## MILD

General Learning Disabilities





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## Introduction

These guidelines are designed to support the geography teacher within the context of a whole school plan for students with special educational needs.

### Social, Political and Environmental Education

These guidelines are intended to support teachers of students with mild general learning disabilities to assess Junior Certificate geography as part of the social, political and environmental area of experience. In this area students

learn about the physical, social and cultural forces, which have shaped the world in which they live and discover how they will themselves, contribute to shaping the lives of future generations.

This area of experience includes Geography, History and Civic Social and Political Education (CSPE).

This section is designed to support the geography teacher within the context of a whole school plan for students with special educational needs.

Similar materials have been prepared for teachers working with students accessing the *Primary School Curriculum*. Continuity and progression are important features of the educational experience of all students, and for students with special educational needs they are particularly important. Therefore, all the exemplars here include a reference to opportunities for prior learning in the *Primary School Curriculum*.

In Approaches and Methodologies individual differences are emphasised and potential areas of difficulty and implications for learning are outlined and linked with suggestions for teaching strategies for classroom use.

The exemplars in these guidelines draw on the Junior Certificate syllabus for geography. The exemplars have been prepared to show how students with mild general learning disabilities can access the curriculum through differentiated approaches and methodologies. It is hoped that these exemplars will facilitate teachers in providing further access to this curricular area. They are not intended to cover all of the course or any part of the course in its entirety. A strong emphasis is placed on using active approaches to learning and real-life experiences that relate to the students' environment and prior learning. A range of assessment strategies is identified in order to ensure that students can receive meaningful feedback, and thus enhance their learning.

## **Approaches and methodologies**

Students with mild general learning disabilities will benefit particularly if the teacher is aware of their individual talents, strengths and needs before embarking on a new activity.

## Individual differences in talents, strengths and needs

If learning activities are to be made meaningful, relevant, and achievable for all students then the teacher will have to find ways to respond to students' diversity by using differentiating approaches and methodologies. This can be achieved by

- ensuring that objectives are realistic for the students
- ensuring that the learning task is compatible with prior learning
- providing opportunities for interacting and working with other students in small groups
- spending more time on tasks
- organising the learning task into small stages
- ensuring that language used is pitched at the student's level of understanding and does not hinder his/her understanding of the activity
- using task analysis to outline the steps to be learned/completed in any given task
- posing key questions to guide students through the stages/processes and to assist in self-direction and correction
- using graphic symbols as reminders to assist in understanding the sequence/steps in any given task/problem
- modelling task analysis by talking through the steps of a task as it is being done
- having short and varied tasks
- creating a learning environment by the use of concrete and (where possible) everyday materials, and by displaying word lists and laminated charts with pictures.

#### **Teaching strategies**

When planning for teaching and learning in the area of geography a variety of teaching strategies need to be considered. These will respond to the particular challenges faced by students with mild general learning disabilities.

When the teacher is designing, planning, and structuring a programme, potential areas of difficulty may emerge for these students as they engage with classroom experiences and methodologies. It is important to remember that not all students with mild general learning difficulties face all of these challenges. Neither is it an exhaustive list. The following suggests some strategies to meet some areas of potential difficulty.

A Potential area of difficulty	Implications for learning
Poor self-esteem and a fear of failure	A sense of helplessness where the student constantly seeks help or refuses to proceed with even the simplest of tasks. (Students may get trapped into thinking <i>'I can't do this subject'</i> .)
+ Possible strategies	

It is important for such students to experience success as often as possible.

- Realistic and achievable targets should be set.
- Tasks should be relevant to the students' day-to-day experience and have a clear purpose.
- The classroom culture should assume that mistakes are an integral part of the learning process.

A Potential area of difficulty	Implications for learning	
Spatial awarenessStudents may have some difficulties with graphs, mapping, direction.		
+ Possible strategies		
<ul> <li>Measuring concrete objects, for example a school bag, the classroom, a desk, a corridor.</li> <li>Offering a variety of maps/plans to help students recognise the variety and types of maps relevant to their lives (street, road, tourist, school, weather, Ordnance Survey, regional maps).</li> </ul>		

- Offering semi-prepared sketches of geographical features for students to complete.
- Using map games and grid puzzles prior to introduction of mapping, direction, and latitude and longitude.
- Using concrete materials such as sand trays, modelling clay, slides, video clips, and relevant CD-ROMs to demonstrate geographical features.

A Potential area of difficulty	Implications for learning	
Application of previously learned knowledge to other areas of the curriculum	Students find it difficult to connect how the skill acquired in one subject, is similar to a skill in another setting. (For example, measuring 'area' in geography is the same skill used in measuring 'area' in mathematics).	
+ Possible strategies		
<ul> <li>Evaluate prior learning by using a pre-test, in order to find out what students know.</li> <li>Review and recap learning regularly.</li> <li>Discuss what has already been done in class. (For example, <i>'Last week we measured our classroom, now we will measure the school yard'</i>.)</li> <li>Help students make connections about skills and concepts between one subject area and another. (Weather instruments in science are the same in geography; measuring and calculating skills in mathematics are similar in geography.</li> <li>Reinforce cross-curricular work with other teachers. (For example <i>'measuring the classroom'</i> mathematics with geography.)</li> </ul>		

A Potential area of difficulty	Implications for learning
Language, problems with listening	Students have difficulty with the language and concepts of the subject, and find it difficult to follow complex sentences and instructions.
+ Possible strategies	

## Teach the language of the subject actively by displaying key terms/concepts on wall charts in the classroom, and using flash cards showing terms and definitions.

- Use a tape recorder to improve listening and language skills. (For example, record a student asking the question *'What is population?'* and another student replying *'Population is the number of people in a place, country, etc.'*). Tape work can be used to assess student learning, to engage students in active listening, and to support students in finding the answer on wall charts or in their keyword dictionary.
- Target certain geography words, terms, and concepts for a day, week, month.
- Display large scale diagrams/photos of features encountered during learning and refer to these regularly.

▲ Potential area of difficulty	= Implications for learning
Signs and symbols	Students find it difficult to understand the use of symbols in mapping.

#### + Possible strategies

- Ask students to describe to you how they intend to begin the exercise, and what the symbols mean.
- Connect symbols with everyday life (thermometer/temperature, clouds/rain).
- Use appropriate codes for symbols (blue/rivers, green/low land, historical site/written in red, historical battle/ crossed swords).
- Prompt students, for example 'What does a red triangle always mean in geography?' (youth hostel), 'What does a cross mean?' (church).
- Encourage students to keep a symbol and keyword dictionary.

A Potential area of difficulty	Implications for learning
Visual sequencing	Students have difficulties copying work from the board, where to start the work in their copies, sequencing of material is problematic.

#### + Possible strategies

- When writing on the board use a print style rather than cursive script.
- Use cues in worksheets, for example 'Start here'.
- Remind students regularly about the conventions of print (left-to-right, top-to-bottom, front-to-back).
- Remind students about key stages in the work. ('This is the front', 'This is the end', 'Begin here').
- Indicate to the students the precise place in their copies where they should commence the work.

A Potential area of difficulty	Implications for learning	
Short attention span, lack of concentration and application	Students rush the task, are easily distracted, or give up easily. They have difficulty with mapping details, gathering and interpreting data, representing reality in diagrammatic form.	
+ Possible strategies		
<ul> <li>Design short easily accomplished tasks and offer a reward to the students for staying on task.</li> <li>Have sketch maps and diagrams semi-prepared for students to complete.</li> </ul>		

- Gradually build up students' skills in sketching and in representing reality in diagrammatic form.
- Encourage students to work in pairs and small groups.
- Use cloze exercises, worksheets, experiments and simple research projects to help improve students' application.
- Encourage students to maintain a portfolio of work, and to record skills and achievements on the completion of tasks.
- Observe and note students' strengths and preferred learning styles in order to facilitate the planning of future work.
- Vary teaching methodologies to keep students motivated and on task.

A Potential area of difficulty	= Implications for learning
Understanding broad concepts, themes, and issues	Students may find concepts difficult to understand, for example environmental issues, tourism and migration.
+ Possible strategies	

- Use group discussion to help students to listen to and work with others. This is a useful approach when introducing a theme or concept.
- Use a combination of stories, case studies, cartoons/photographs, and pictorial images of events and activities.
- Involve students in participatory and experiential learning through working in pairs or groups.
- Involve students in small scale action research to help them become aware of broader issues such as census taking or environmental awareness.
- Create a supportive environment for students through the use of co-operative learning techniques.
- Use cross-curricular learning approaches, for example linking with mathematics, art, and English.

## **Exemplars**

Teachers using the exemplars are encouraged to choose the learning outcomes, supporting activities, and assessment strategies that best suit the needs of their students.

#### **Introduction to exemplars**

The exemplars in these guidelines are presented as examples to show how certain strategies mentioned in the previous section can be used in teaching a selection of topics from the geography syllabus. They are not intended to cover all of the course or any part of the course in its entirety. Teachers using the exemplars are encouraged to choose the learning outcomes, supporting activities, and assessment strategies that best suit the needs of their students. Some students may achieve the first one or two learning outcomes while others may achieve the full range of outcomes. In the majority of the exemplar tables the first suggested outcome is linked to the first supporting activity and to the first assessment strategy, and so on.

#### Structure of the exemplars

Each of the exemplars is preceded by a summary, which outlines the relevant sections of the *Primary School Curriculum*, the *Junior Certificate* (ordinary level) and the *Junior Certificate School Programme* (JCSP). It also highlights some of the potential areas of difficulties that students with mild general learning disabilities experience at junior cycle and some strategies are suggested. In addition, a time scale and a list of resources are provided. The suggested outcomes, supporting activities, and assessment strategies for a lesson/series of lessons are also included.

## Exemplars

No.	Syllabus Topic	Exemplar Title	Page
1.	Geography—Population	Counting on you	12
2.	Geography—Tertiary economic activities	Wish you were here	21
3.	Geography—Population	People on the move	28
4.	Geography—Map interpretation and skills	Our many, many maps	34
5.	Geography—Map interpretation and skills	My county matters	44
6.	Geography—The restless atmosphere	How is the weather?	46

**Syllabus topic:** Population 1

#### Counting on you

Primary (5th and 6th classes)	Junior Certificate (Ordinary level)	Junior Certificate Schools Programme
Geography	Population, settlement patterns	Population, settlement and
Strand:	and urbanisation	development
Human environments		

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take up to eight class periods.

#### Potential areas of difficulty

- ightarrow Vocabulary/language, for example geographical terms such as census, distance, population
- ightarrow Short attention span and poor listening skills
- ightarrow Transferring learning to real-life situations (population census)
- ightarrow Spatial awareness (recording information, transferring data, interpreting results)

#### Strategies used in this exemplar

- Historical narrative and storytelling as stimuli
- Skilled questioning
- Producing simple charts
- Conducting a population census of family/class/school
- Relating school activities to real-life situations in students' lives (filling in the official census form)
- Cross-curricular work (creative writing, drama, recording, interpreting charts, diagrams, timelines in English, mathematics, history, and religion)

#### **Resources/notes**

- Website for population information from Central Statistics Office-http://www.cso.ie
- Official Census 2006 form (available from website)
- Students Corner on the CSO website (very user friendly and can be adapted for the students' needs.)
- General information—e-mail: information@cso.ie
- Bible story about the Nativity (Luke 2: 1–7)
- A range of Christmas stories, poems and songs
- *Eye Witness History of the World* (This CD- ROM relates to in twelve different time periods. It is a multi-media package that brings students back in time and helps deal with time sequence.)
- Count Me In Scotland Scottish Schools Census Project (Census 2001) by Learning and Teaching Scotland 2001

#### Suggested outcomes

As a result of engaging in these activities students should be enabled to

- conduct a simple population survey
- understand and give a simple explanation of population terms, such as census, census form, official census day, Central Statistics Office (CSO)
- identify three reasons why a census is necessary
- complete population worksheets
- engage in peer work and group
   work
- locate the website http://www.cso.ie and examine the *Students Corner* for further information.

#### Supporting activities

## Activity 1: The vital statistics of the Simpsons

• Students conduct a population census for the *Simpson family*.

#### Activity 2: The matching game

 This helps students to match key terms about the census with explanations provided on flash cards.

#### Activity 3a: Storytelling

 A famous census in history is read by the teacher. Students offer their views as to how conducting a census has changed today.

## Activity 3b: Key questions technique

• This is used to help students understand the need for a census.

#### Activity 4: My census chart

- Students conduct a population census for the members of the class, the year group, and their family.
- The census form is used for various class activities as demonstrated in *Census and population activities*.

#### Assessment strategies

- The teacher observes students
- completing the population chart
- recording the answers and checking each others responses
- designing a poster to display the results
- explaining to a friend in the class what they have learned from the chart.
- The teacher observes whether students can give three reasons for conducting a population census and explain their answers to their classmates.
- Students are provided with the flash cards to sort and to match terms and explanations, and the teacher observes if students can complete the task accurately.
- The teacher observes whether students can conduct a simple population family chart, draw a family tree, and illustrate this.
- The teacher observes whether students can display population results in poster format using charts, drawings, pictures, and photographs.

### **Census and population activities**

### **Activity 1**

#### The Simpsons' census

The purpose of this activity is to give students the opportunity to learn about and to understand the population census. Prior to undertaking *Activity 1* the students are informed that the census takes place every five years, and it is explained that on a particular night (the last Sunday in April) every person in the country is counted.

Students undertake a simple population census for the *Simpson family* to help them understand the concept of a population census. This activity uses a cartoon family who are well known to students and are easily recognised. Students complete the mini-census in groups of two/three. One student acts as the recorder for the group. The answers are fed back to the class at the end of the session. The teacher clarifies and guides students through to the correct answers. As a follow up exercise, the students might do a similar exercise for a television family, or the family of a pop star, a sports person, or a politician.

The teacher introduces the next stage of the session by asking the following questions:

- 'What is the total population of this class/school?'
- "Why do we need a census?"
- "How can we get this information?"
- "Who collects the information?"
- "Where is this information?"

Students are moving from their own experiences and are helped to find the reasons for a census at class, family, school and national level.

Question	Answer
Where do the Simpsons live?	
How many people are in the Simpson family?	
How many children are in the family?	
What are their names?	
Where does Homer work?	
What colour is Marge's hair?	
What musical instrument does Lisa play?	
Who is Bart's best friend?	
What does Maggie love?	

## **Activity 2**

#### Matching game

The purpose of this exercise is to help students learn and identify key terms relating to the census and population. It also helps students develop the language and vocabulary associated with the area of population. Cards are produced with the various terms and explanations about population and the census. The keywords include **Population**, **Resident**, **Census**, **Census** form, **Central Statistics Office**, **CSO**, **Official census night**.

It is suggested that the cards are laminated so they can be used again for class activities, revision activities, and for display purposes. This game can take place with the student working alone, or a pair of students together, or with the student and the teacher.

- 1. The cards are cut out and mixed up on a table and the correct terms are matched with the correct definitions.
- 2. This can be extended if the cards are rearranged and students, working in pairs, are challenged to match the cards correctly and assess if each has made the correct choice.
- 3. One student can also match cards incorrectly and the other student is challenged to spot the error.

Definitions	Explanations
Population	the number of people in a place, a country, a school
Census	the official count of people (population)
Census form	the form on which all the information is recorded
Central Statistics Office (CSO)	where the records of the census are kept
Official census night	takes place once every five years
Recent census	23rd April 2006 (last Sunday in April)

### **Activity 3(a)**

Storytelling



The use of story is a good introduction to the topic of population and the census. The biblical story of Mary and Joseph travelling to Bethlehem to participate in the Roman census is recounted for students. The account by Saint Luke is a suitable version. As part of a cross-curricular approach the events can be dramatised in English as well as researched in religion and in history. Supporting activities in geography and history classes such as the location of countries and use of timelines help students to relate to this event.

The class may set the actions in either present or past times. The student is enabled to listen to, to discuss, to retell, and to record the events of the past.

## **Activity 3(b)**

#### Key questions technique

With skilled questions the teacher can elicit previous knowledge about the census from students. In introducing population/census, students are asked to estimate the class population, the population of nearby classrooms, and the population of the whole school.

#### Sample questions to encourage discussion session

Group and class discussion takes place as a result of the questions. Some questions may be assigned as tasks for the students to do at home or to gather information from teachers and adults in the school.

The use of the internet, the website http://www.cso.ie, and e-mail information@cso.ie can enable students to find out more about the census. There is a *Students' Corner* that has a good deal of information available and is very user-friendly for students.

1.	How many people in this class (class population)?	9.	Find out when the last census was taken and when the next will be taken.
2.	How many people in the nearby classes (population of three nearby classes)?	10.	Where do we get information about the census?
3.	How many people in the school (student population)?	11.	How is the information gathered?
4.	How many people work in this school (school population)?	12.	Who gathers this information?
5.	How do we organise a school census (official counting of people)?	13.	What do we do with this data and information?
6.	Why do we need a school census at all?	14.	What are the kinds of questions asked on the census form?
7.	How many people live in our town, our village, our community?	15.	Are there new questions in the latest census form?
8.	What is a nationwide (national) census and why it is needed?		

#### My census chart

The sample census form at www.cso.ie/census/census\_2006\_form.htm provides excellent questions for students to answer. Some are offered below, but the teacher might like to use the data in a different way depending on the ability and motivation of students. Care and sensitivity is recommended when gathering and discussing data about families and relations.

In the official census form age groups are used to group various members of a family. Students become aware of the various age groups as they work through the task of grouping classmates first and then their families. This phased approach may help some students, who have the ability to apply these skills in undertaking a census of the population of their street.

#### Students

- conduct a mini-census at home
- complete the census chart
- display results in a trend graph/bar chart (see Exemplar 6)
- discuss what observations they can make about their charts
- interview or tell the life story of one of your older relatives
- add the place and area of birth to the chart when they become more proficient in the use of these kinds of charts.

Age group	Number of people in my class	Number of people in my home	My census night
0–4 years			
5–9 years			
10–14 years			
15–19 years			
20–24 years			
Over 25 years			

There are other questions from the census that students might like to engage with, such as type of transport, distance of journeys, time spent travelling. Once students have 'tried out' these questions in class, the skills can be transferred to carrying out simple surveys at home. Members of the students' families may help in the construction and completion of charts and devise suitable activities based on the census form.

Cross-curricular links help support and reinforce the teaching and learning, for example

- geography for the location of countries of emigrants, maps, flags, football teams, location of sporting events, transport and traffic issues
- the historical development of census through time, for example new questions introduced in the 2006 census
- mathematics for calculations, graph design, and data collection
- English for constructing further questionnaires
- home economics for learning to cook dishes from different countries.

#### Journeys

#### Distance

Students are asked introductory questions about the term 'distance'. 'What is the distance from the blackboard to the door?' 'What is the distance from the classroom to the school office?' Once students are familiar with the concept of distance they complete the charts below with the help of family/friends at home.

'What distance is your journey from home to school or college or work, and how long does it usually take?'

Write in the distance to the nearest kilometre/mile and the journey time in minutes.

Find out the distance/ time	Home to school	Home to work	Home to college
Kms/miles			
Minutes			

#### Time

'What time do you usually leave home to go to work, school, or college?'

Fill in the chart below for yourself, or a friend, or a member of your family.

Time	My time	Friend/family member
Before 7.00		
7.00–7.30		
7.31-8.00		
8.01-8.30		
8.31–9.00		
9.01–9.30		
After 9.30		

#### Mode of transport

'How do you usually travel to work, school, or college?'

Fill in the chart below for yourself and one other member of your family.

Walk	Motor cycle or scooter
Bicycle	Driving a car
Bus, minibus, coach	Passenger in a car
Train or DART	Lorry or van
Other means	Work mainly at home or from home

#### Syllabus topic: Tertiary economic activities

Wish you were here

Primary	Junior Certificate	Junior Certificate
(5th and 6th classes)	(Ordinary level)	Schools Programme
<b>Geography</b> Strands: Natural environments Human environments	Tourism	Geography Industry

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take up to eight class periods.

#### Potential areas of difficulty

- ightarrow Applying previously learned knowledge
- ightarrow Vocabulary/language (geographical terms such as tourist, tourism)
- ightarrow Transferring learning to real-life situations (planning and costing a holiday for a variety of people
- ightarrow Spatial awareness (recording information, accessing ICT tools and websites, the distance of tourist areas from Ireland, the location of these places)
- ightarrow Understanding concepts (tourist areas, the variety of regions abroad, locations)

#### Strategies used in this exemplar

- Use students' previous experience about tourism, holidays, imaginary holidays
- Relate to students' experience of past holidays and the planning of future holidays
- Create real or imaginary holidays and journeys
- Use websites that appeal to students for bus, train, air and boat journeys
- Use cross-curricular approaches in art, mathematics, business studies

#### **Resources/notes**

- Maps, photographs, and holiday brochures from travel companies, consulates, and embassies
- Videos of holiday and travel programmes such as Wish you were here
- The National Geographic channel
- The CD-ROM Where in the World is Carmen Sandiego offers students opportunities to travel to thirty destinations worldwide
- Television holiday programmes can be accessed at http://www.lreland.com
- · Some of the following websites are also relevant and easily accessible
  - http://ireland.travel.ie and http://www.bordfailte.ie
  - http://www.irlgov.ie/tourism-sport
  - http://www.ireland.com/dublin/visitor/about/holidays.htm
  - http://www.lastminute.com
  - http://www.irelandhotels.com

#### Suggested outcomes

As a result of engaging in these activities students should be enabled to

- understand the reasons why people go on holidays
- understand concepts of holidays, tourist, tourists, tourism, tourist industry
- identify one tourist area visited and undertake research
- state reasons why it is a tourist area
- be aware of various types of holidays
- undertake a small projectfavourite/ideal holiday
- improve ICT skills.

#### Supporting activities

- Students do Activity 1: Guess where I went on my holidays
  - The class undertakes a simple survey about holiday destinations of class members.
  - Students identify reasons why particular areas are chosen by tourists.
- Students engage in Activity
  2: Find a suitable holiday for these tourists

This will entail:

- planning a holiday
- costing a holiday
- researching holiday activities.
- Activity 3: Use the visitor guide This will help to improve students' ICT skills.
  - The teacher shows a video of Wish you were here or another travel programme to explore various types of holidays, and students have opportunities to comment on the material in the holiday programme.
  - Students tell/write a story of 'My most magical holiday', 'The country I would visit if I won the Lotto'.
  - Students participate in atlas and map work to promote interest in regional geography.

#### Assessment strategies

- Students can explain to the teacher/class three reasons why people go on holidays.
- Students display results of class holiday survey as a wall chart.
- Students complete worksheeton the visitor guide in *Activity 3*.
- Working in pairs students design a collage of a favourite tourist area from brochures and leaflets. They give reasons why it is popular with tourists.
- Students can locate the place of a magical holiday (on an atlas/ globe) for a friend in the class.
- Students can give an account of *My most magical holiday* to the class.
- Students can comment on a video, giving their likes and dislikes about the places shown.
- Students can role-play a *'Holiday from hell'*. Roles can include a travel agent, a news reporter, a travel representative, and an irate tourist.
- The teacher observes students, working in pairs to compose a letter of complaint about the holiday to the newspaper. (ICT skills can also be assessed here.)

#### **Activity 1**

Guess where I went on my holidays



The teacher will initiate some preliminary work with students about holidays. This might take the form of a discussion and questions about 'My dream holiday'.

#### Resources

Some stimulus material is needed such as postcards, photographs, holiday brochures, leaflets, posters, magazines, and video clips. Other promotional material may be sourced from travel agencies, embassies, consulates, and relevant websites. The newspapers are a good source for ideas about holidays. Advertisements for holidays at home and abroad can be accessed in the tourist sections of the newspapers.

A video of a holiday programme may be used to promote interest and to offer students ideas about their dream holiday.

Websites such as http://www.lastminute.com and http://www.irelandhotels.com are useful to enable students to find suitable holiday packages.

#### Rules of the game

- Students are divided into small group of two or three.
- The questions written on cards are given to students to find the answers.
- Yes/no answers only are required.
- One student is asked questions by another team member.
- Each member of the group has a chance to play the game.
- When students have guessed the correct answer they then have to ask for information about the holiday (for example, food, clothes, weather, travel, currency and customs).
- Students report back to the rest of the class about the different places mentioned.

Guess where I went on my holidays.

Sample questions	Information about the place
Was the country Ireland?	
Was the country in Europe?	
Was it a city or a country (rural) place?	
Was it hot or cold?	
Did you travel by train, car, boat, plane?	
What is the language of this country? Is it?	
What is the currency? Is it?	

#### Holidays and the use of ICT



#### Introduction

The study of tourism as a tertiary industry is an essential part of geography syllabus and one that can be interesting as well as relevant for students with mild general learning disabilities. There are a number of websites that are useful in helping students to learn about the tourist industry.

- http://www.ireland.com is the *Irish Times* website that will engage students in a range of tourist activities.
- http://www.ireland.travel.ie is an interactive route planner and is useful for planning tourist journeys from one destination to the next.
- http://www.bordfailte.ie is specific to the work of the tourist board and a range of tourist activities.
- http://www.irlgov.ie/tourism-sport relates to the specific Government Department that has responsibility for tourism and sport.

In this exemplar the *Visitor guide for holidays* is used from the website http://www.ireland.com/dublin/visitor/about/ holidays.htm.

A number of questions suitable for students can be devised. The students are challenged to use the above sites and find suitable accommodation for a range of people. They have fifteen minutes to complete this task, and €350.00 to spend.

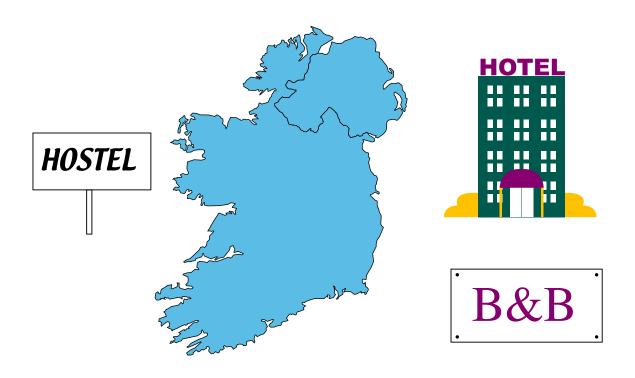
### **Activity 2**

#### Find a suitable holiday for these tourists

- A family of four wish to visit the Aran Islands for the weekend.
- Five students want to go youth hostelling to Kerry for 5 days.
- An American couple wish to stay in a large city for the weekend.
- Find your ideal holiday location for your family and give three reasons for your choice.
- Three friends wish to enjoy a golfing holiday. Look up your atlas to locate (find) this place when you have chosen the holiday.

Where appropriate the teacher may develop the theme of holidays by using

- train timetables to plan a trip (integrating mathematics where possible)
- road maps to measure the distance from school to holiday destinations
- names of towns passed on the route to identify tourist sites to visit
- hotels, B & Bs, youth hostels on the journey.



## **Activity 3**

#### Use the Visitor guide

A number of questions can be devised to enable students to find out more about Ireland and the various tourist areas. It is useful for the students to imagine they are tourists. More able students can navigate the *Irish Times* website http://www.ireland.com/travel/holidayinireland/to search for tourist type information. Students are enabled to develop information handling skills. Activities such as the following can be used.

1.	From the information sheet find out about the climate of Ireland.
2.	A well-known supermarket is advertised on this page. What is it?
3.	Go to the <i>Entertainment</i> section (the children's) link and write a short note about the activities tourists might like to do with their children.
4.	Find an event that teenagers would enjoy during the weekend.
5.	There are a number of sections about Ireland on the right-hand side of the <i>Visitor guide</i> , choose two and write about them in your own words.
6.	True or false activity.

True/false section in the Visitor guide: answer these questions		True/false
a)	Ireland's population is 3.8 million people.	
b)	The Gaeltacht is where Irish/Gaelic is mainly spoken.	
c)	Ireland is an industrial country with very little agriculture (farming).	
d)	The Atlantic Ocean is on the east coast of Ireland.	
e)	There are three major political parties in Ireland.	

Syllabus topic:	Geography—Population
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#### People on the move

Primary (5th and 6th classes)	Junior Certificate (Ordinary level)	Junior Certificate Schools Programme
Geography	Population, settlement patterns	Population, settlement and
Strand: Human environments	and urbanisation	development

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take from six to eight class periods.

#### Potential areas of difficulty

- ightarrow Vocabulary language (geographical terms such as emigration, migration)
- ightarrow Transferring learning to real-life situations (planning and costing a holiday for a variety of people)
- ightarrow Spatial awareness (understanding chronology and historical sequence)
- ightarrow Understanding concepts (for example, population movement)

#### Strategies used in this exemplar

- Group discussion activity drawing on the personal experiences of students
- Encouraging co-operation and teamwork through group work
- Supporting students in designing, implementing, and analysing questionnaires
- Developing interviewing techniques and information handling skills
- Taping responses and using a video camera help develop students' skills

#### **Cross-curricular links**

The Famine is particularly appropriate in the context of this exemplar. Students are helped to develop a sense of sequence, an essential requirement for the acquisition of a historical perspective. In listening to, telling, and retelling stories about the Famine, links between geography and history become very clear.

#### **Resources/notes**

- *Under the Hawthorn Tree* by Marita Conlon-McKenna illustrates graphically the connections between population movements and the Famine
- A resource pack available from Ulster American Folk Park, Omagh explores Irish emigration
- Emigration is portrayed powerfully through art and music
- *The Famine 1845–51, Facsimile Documents* (Public records Office of Ireland/National Archives) provides information about the Famine and the movement of population
- The *Students' Corner* of the Census 2002 official form on the website of the Central Statistics Office is very user-friendly. It can accessed at http://www.cso.ie
- The website of the Equality Authority has a lot of information about issues relating to equality, race, gender and discrimination. It can be accessed at http://www.equality.ie
- Combat Poverty Agency has information about poverty in Ireland. Its website can be accessed at http://www.cpa.ie

#### Suggested outcomes

As a result of these activities students should be enabled to

- explain the terms migration, emigration, and immigration
- understand why migration, emigration, and immigration take place
- understand some push/pull factors relating to the movement of population
- improve skills in locational geography
- undertake a simple questionnaire
- gather, record, and present simple data.

#### Supporting activities

#### Activity 1: Group discussion

• This is initiated by the teacher to introduce the idea of population movement.

#### Activity 2: Know our terms

• Students play a game in pairs to test each other's memory.

#### Activity 3: Where are they now?

- Through shared experiences students identify what countries friends, family members, and relatives are living in.
- Ireland as a multicultural society can be explored to discover where the majority of our emigrants originate from.
   Students locate these countries in their atlases or find them on the globe. Use the CD-ROM recommended to help students locate these areas.
- Students identify the main countries to which Irish people emigrate or have emigrated to in the past. Use the resources mentioned from the Ulster Folk Park and the Central Statistics Office.

#### Assessment strategies

- The teacher observes students writing a short paragraph on migration and giving a short oral presentation on the subject.
- The teacher observes
   whether students can design and implement a simple
   questionnaire to obtain
   information about emigration.
- The teacher observes students taping a conversation with a relative/friend/teacher who has lived in another country for a short period of time and playing it for the class.
- The teacher observes whether students can draw/write creatively about the life of an emigrant. The ability to use drama, story, pictures, letter-writing and poetry can be useful indicators.
- The teacher observes whether students can identify push/pull factors that influence migration.
- The teacher observes whether students can speak about the problems refugees face in a new country.
- The teacher observes whether students can produce a simple wall chart demonstrating population trends during the famine.

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### **Activity 1**

Group discussion and migration



The teacher uses a simple group discussion to introduce migration. Through skilled questioning, shared experiences about the current situation are elicited from students. The responses are written on a board/flip chart and are discussed.

The student is encouraged to understand the nature of push/pull factors associated with migration. These factors include:

- economic/business motives
- the desire for a better quality of life
- education and travel purposes
- the influence of war, famine, and natural disasters.

Each group will produce a definition, use a photograph to illustrate and provide a comment on migration.

	Migration is	
(	DEFINITION	
	PHOTOGRAPH	
$\backslash$	COMMENT	
	<	

## **Activity 2**

#### Know our terms

A range of coloured cards and markers are provided for each student. Students make flash cards for the various terms and definitions arising from the discussion. Drawings/photographs/cartoons are used to illustrate the flash cards as appropriate.

Migration is ...
Emigration is ...
Immigration is ...

Students examine the cards and test each other about the terms. Cards are mixed up on a table and the students try to match the correct term with appropriate explanations.

Larger displays of these terms and explanations are placed in visible positions around the classroom and may include photographs, newspaper articles, magazine cuttings, and posters. These visual cues are concrete examples of the terms and will reinforce the definitions and explanations for students.

A number of agencies provide material regarding population, migration, and the movement of people. These include

- National Committee for Development Education, http://www.ncde.ie
- Reception and Integration Agency (RIA) at http://www.irlgov.ie/justice
- Equality Authority at http://www.equality.ie
- Combat Poverty Agency at http://www.cpa.ie
- Concern at http://www.concern.ie.

The resource pack, *The Famine 1845–51, Facsimile Documents* (Public Records Office of Ireland/National Archives) provides useful information on the background to the famine and the movement of population.

### **Activity 3**

Using questionnaires to obtain information



#### Where are they now?

The teacher supports students in designing a simple questionnaire to research this topic. Members of the students' world, such as friends, families, teachers who have had the experience of emigration can assist the student in answering the questionnaire.

Question	Answer
What country did they move to and why?	
How long did they spend in that country?	
How did they travel there?	
What was the country like?	
Were any positive and/or negative experiences encountered?	

Note: Other questions might focus on movement within Ireland.

#### **Extension activities**

- The globe and atlas can be used to locate places to which people have emigrated or from which people have emigrated.
- The census form is useful in identifying different categories (immigrants, migrants, nationals, non-nationals).
- Newspapers articles can provide information about migration and the reasons why people move to another country.
- Migrants/emigrants can be invited to the classroom to speak to students. A question and answer type session can offer students another perspective.
- The Great Famine is a suitable topic for exploring the reasons why so many Irish people left Ireland. This can be contrasted with modern population movement.

Syllabus topic: Map interpretation and skills

Our many, many maps

Primary	Junior Certificate	Junior Certificate
(5th and 6th classes)	(Ordinary level)	Schools Programme
<b>Geography</b> Strand: A sense of place and space	<b>Section 3</b> Map drawing Map Interpretation	Map skills: Interpret Ordnance Survey maps and photographs

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take up to eight class periods.

#### Potential areas of difficulty

- ightarrow Signs and symbols (understanding maps, charts, diagrams)
- ightarrow Vocabulary/language (geographical terms, such as scale, plan, legend)
- ightarrow Transfer to real-life situations (measuring objects and rooms)
- ightarrow Spatial awareness (problems with scale and various types of maps)

#### Strategies used in this exemplar

- Help students to understand symbols and mapping
- Students share experiences about holidays taken by friends and family members
- Introduce and develop field work skills, such as observation, sketching, measuring, estimating, shading, recording
- Provide a range of maps (geographical and historical from the past and the present)
- Offer map games to generate motivation and interest

#### **Resources/notes**

- Ordnance Survey maps, (1: 50,000) Discovery series
- Automobile Association (AA) books and maps of Ireland
- Old maps such as Hibernia and Ptolemy's map of the world (found in history books)
- The range of maps mentioned in Activity
- Video clips of the weather forecast
- Materials, pictures from home decoration magazines, furniture catalogues, paint charts
- The Dublin Corporation website for the traffic flow around the city is at http://www. dublincorp.ie
- CD-ROMs for historical and geographical skills in mapping are available commercially
- Useful websites include
  - http://cache.tfl.gov.uk/tfl/pdfdocs/colourmap.pdf for maps of the London Underground
  - http://www.iarnrodeireann.ie/your journey/
  - http://www.buseireann.ie/site/your journey/

Suggested outcomes	Supporting activities	Assessment strategies
<ul> <li>As a result of engaging in these activities students should be enabled to</li> <li>identify people who use maps</li> <li>develop an awareness of various types of map</li> <li>identify the differences between old and new maps</li> <li>improve mapping skills in <ul> <li>location</li> <li>sketching</li> <li>measurement</li> </ul> </li> <li>draw an area to scale (classroom, bedroom, school yard)</li> <li>develop co-operative and group work skills.</li> </ul>	<ul> <li>The teacher initiates discussion and small group work around the topic: <i>Why do we need</i> <i>maps? Activity 1</i>.</li> <li>Why we need maps is explained in <i>Activity 4</i>.</li> <li>Students draw plans of <i>My</i> <i>bedroom, My school yard, My</i> <i>street. Activity 3</i>.</li> <li>Students draw their favourite map, design an old map, or produce a treasure hunt map. <i>Activity 4</i>.</li> <li>Students sketch a simple map of my street, my way to school.</li> <li>Students use the map of their school to <ul> <li>tour the school</li> <li>find our classroom</li> <li>find other key rooms we use.</li> </ul> </li> <li>As students become more familiar with maps, greater use can be made of the maps available in their everyday lives, for example bus routes, city maps, tourist maps, museum maps.</li> </ul>	<ul> <li>Students write or give an oral account of why people need maps.</li> <li>Students answer questions about old/new maps and complete <i>Activity 4: My favourite map.</i></li> <li>Students list and describe some differences between old and new maps.</li> <li>Students work in pairs to map and sketch the classroom.</li> <li>The teacher observes whether students can recognise simple scales. (The desk is smaller than the teacher's desk; the windows are the same size.)</li> <li>Students sketch their bedroom, school yard, route to school.</li> <li>The teacher observes whether students can participate and work in small groups.</li> </ul>

#### **Small group work**

Prior to beginning discussion work or group activities a number of rules can be decided upon. Ideally, the teacher and students draw up the rules together. The students learn cooperative work through discussion activities and group work. For students with mild general learning disabilities it is best to keep the rules simple and easy to understand. Some suggestions are listed below, but teachers and students may include different rules that are relevant to their situation.

#### Rules

- 1. Co-operate with each other.
- 2. Involve everyone in the group.
- 3. Listen to each person's suggestion.
- 4. Do not interrupt.
- 5. Always make your point so that you cannot complain later.
- 6. Don't think you will get your own way all the time.
- 7. Ask questions if you do not understand.

#### Advantages of small group work

Small group learning provides students with a safe and secure environment and encourages them to

- feel more confident
- speak and discuss their work
- develop at their own pace
- become actively involved in information gathering
- develop peer relationships
- e develop a greater understanding of their work and independence.

Throughout the school year groups can differ, according to the various learning tasks or depending on the outcomes of the previous work. The introduction of a variety of groupings will give students experience of working with different people, will build confidence, and will improve their motivation to learn.

### **Activity 1**

#### Why do we need maps?

Mapping is an essential geographical skill for all students. It involves spatial, locational, and geographical information in plans, maps, models, and other forms of graphical presentation. The teacher can introduce mapping in various ways. The teacher initiates a discussion about the need for maps in our lives. Students are given work cards with the names of groups of people, such as **Tourist**, **Motorist**, **Taxi driver**, **Courier**, **Postal worker**, **Pilot**, **Delivery people**. Cues such as pictures and photographs are photocopied and are used to stimulate student interest. Students are invited to write on the enclosed cards why a particular person needs and uses maps regularly in the course of their work.

Peer work is a useful teaching methodology in this exercise. Students working in pairs have the opportunity to improve both writing and oral skills. Co-operative work fosters the growth of self-esteem and encourages the development of the students' strengths and learning styles.

Students record answers on each card as to why these people need maps. Feedback is given to the small groups and then to the full class.

Further activities, such as mapping the area near their homes, can be planned for more able students, as follows:

- Students map the street where they live, using core/essential mapping skills, such as symbols, appropriate colour, legend/key.
- The number of homes, paths, gardens, names of streets/areas, local school, shops, churches, local historical sites, and local geographical sites are included.
- Students map their journey to school.
- Formal elements of mapping work include
  - sketching
  - using symbols
  - an annotated format
  - appropriate colours (green/low land, blue/lake rivers, red/roads)
  - the legend/key in the bottom right-hand corner of map
  - the geographical title at the top of map
  - scale where appropriate.

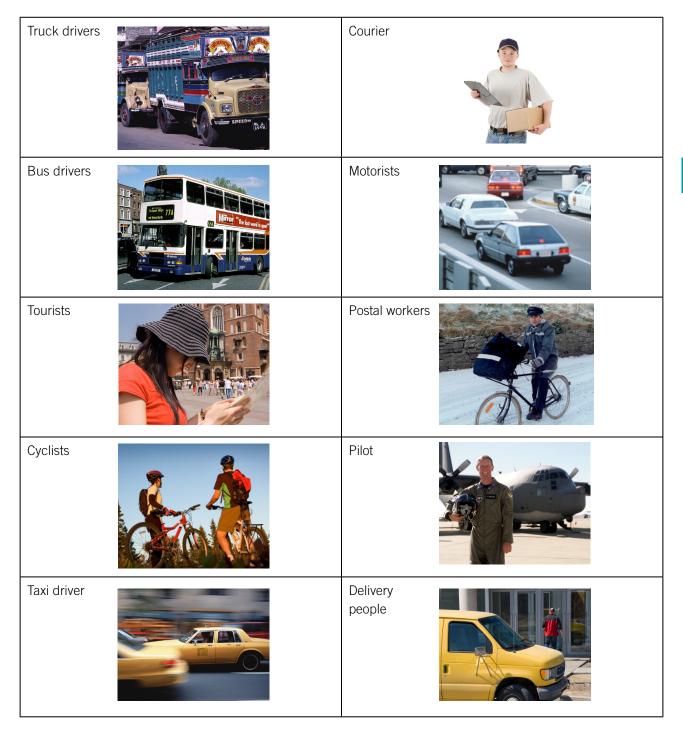
# **Activity 2**

#### Who needs maps?

#### Sample work cards

The teacher prepares a worksheet as indicated below and each student is given one. The cards are cut out and students identify why the various people need maps in the course of their work. For example, truck drivers need maps to find their way from the ferry port to the factory.

Students work in pairs and write the reasons on the cards. Students give oral feedback about their responses to the rest of the class.



This exercise can be developed further with students playing a *Matching game* similar to the game in *Exemplar 1* on population, as follows:

- 1) The cards are cut out and mixed up on a table and students match the map user with the correct answer.
- 2) This can be extended with students working in pairs. Cards are rearranged and they are challenged to match the cards correctly and assess if each has made the correct choice.
- 3) One person can also match cards incorrectly and the other student is challenged to spot the error. (See *Exemplar 1: Population counting on you, Activity 2, Matching game.*)

# **Activity 3**

A plan of my bedroom



#### Stage 1

Students are divided into pairs and given a copy of the plan of the classroom.

They are asked to identify appropriate symbols and to draw them in on the plan. They use the key/legend too. A colour code is also required on the plan. A large scale plan is drawn by the teacher and the students, and displayed in a prominent position in the classroom.

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#### Stage 2

Students are assigned a homework task of sketching a simple plan of their bedroom. They are given a copy of the plan below and are asked to complete it with the help of a family member at home.

A plan of my bedroom	Key/legend

Locate on your map the following and use a colour code: bed(s) window(s) door, wardrobe(s), other furniture in my room.

#### Stage 3

Students are provided with a range of materials such as magazines, photographs, brochures, paint charts, and catalogues to design and plan *My ideal bedroom*. Students can present their work to the class individually in a poster format.

Teachers of art and design, mathematics, wood and materials technology, and home economics may support a cross-curricular approach to this activity.

#### Stage 4

Note: The following suggested sketching exercises (depending on students' abilities), can be used

- my house, including my garden, footpaths, flower beds, fences
- my street, including my road, some houses in my street, post-boxes, shores, telegraph poles, lamps, and other landmarks.

The elements of location, scale, measurement, and grid references are introduced gradually to students (usually four figure grid references).

It is useful to explore areas where mapping, numbering, and sketching are taking place in other areas of the curriculum. For example, cross-curricular work with students' teachers in the mathematics department on area, scale, and measurement can be most helpful.

### **Activity 4**

#### Our many, many maps

A range of geographical and historical maps of different sizes, scales, and local types are introduced to the students. This is to give them the opportunity to see the various types of maps and to comment on their favourite ones.

It is useful to have

- old and new OS maps
- Big book maps
- bus and train maps
- new southern cross routes
- road maps of Ireland
- weather maps
- forest maps
- maps of shopping centres
- a school plan
- street maps
- aerial photographs.

Maps are introduced to students and they examine them informally. They can choose one map that they like and give a reason for their choice.

#### Design an old map

Students can be engaged very readily in discussions about old maps. Good resources available as stimuli—old maps by *Ptolmey, Hibernia*, a middle ages view of Europe.

Students are challenged to design

- their own personal map
- a treasure island type of map
- a page from their own *Book of Kells*.

Many devices can be used to make maps appear old. These include materials such as teabags to stain the paper to give the appearance of an old worn map, and the use of plants, berries, bark, and leaves for colour.

My favourite map	Old map	New map
What I like about this map		

Syllabus topic: Map interpretation and skills

My county matters

Primary (5th and 6th classes)	Junior Certificate (Ordinary level)	Junior Certificate Schools Programme			
Geography	Section 3	Map skills: interpret Ordnance			
Strands:	Map drawing	Survey maps and photographs			
A sense of place	Map interpretation				
A sense of space					

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take up to five class periods.

#### Potential areas of difficulty

- ightarrow Signs and symbols (understanding maps, counties)
- ightarrow Vocabulary/language (geographical terms, such as scale, plan, shape, area)
- ightarrow Transferring learning to real-life situations (location of their county in relation to other counties)
- ightarrow Spatial awareness (problems with scale, size of a county)

#### Strategies used in this exemplar

- Using the find and locate exercises on the Irish-produced CD-ROM Irish Geography Series
- Using concrete examples of the jigsaws help students to explore shapes of their county and neighbouring counties
- Sketching and tracing counties on card, cardboard, and wood to offer concrete experience of tactile materials to students. (This can be developed in woodcraft subjects using fretsaws, etc.)
- Measuring the area, the length, and the breadth of the county, making cross-curricular links with mathematics
- Sourcing data from the internet about the student's county

#### **Resources/notes**

- Commercially made wooden jigsaws of the counties of Ireland
- Ordnance Survey Maps (1: 50,000): Discovery series
- Automobile Association (AA) map of Ireland
- The following websites are useful
  - http://www.bordfailte.ie helps students find out about the tourist potential of their county
  - http://www.ireland.travel.ie is an interactive planner and is useful for planning journeys
  - http://www.automobileassociation.ie offers specific help with regard to road transport
  - www.mapflow.com helps students living in Dublin to identify their own home and area.
- The CD-ROM *Irish Geography Series* by Discovery uses the computer to learn about counties, rivers, and mountains in the student's county

#### Suggested outcomes

As a result of these activities students should be enabled to

- locate, identify, and sketch the county
- recognise the name and shape of their county
- find out more about their county
- identify some nearby counties
- measure the area and size of their county.

#### Supporting activities

- Students use maps and resources to become more familiar with their county.
- Students locate their own county on a map of Ireland.
- Students use a variety of materials to make various shapes of their county (for example paper, card, clay, wood)
- Students sketch other counties and make comparisons with the scale, size, and location of their own county.
- Students complete the jigsaw map of Ireland.
- Students search for information about their county on the internet, using the resources mentioned.
- Students find out more about the geography and history of the county, using the CD–ROM mentioned in *Resources/notes*. This can be followed up by examining the website http://www.mapflow.com to enable students to identify their own home and local area.

#### Assessment strategies

- The teacher observes whether students can locate (point out) their county on the map of Ireland, using resources mentioned in *Resources/notes*.
- The teacher observes students using the CD-ROM to locate their county.
- The teacher observes students writing a paragraph on *My county*.
- The teacher observes whether students can sketch an outline of their county, name the nearest county to their county, and identify their county from a map of Ireland.
- The teacher observes whether students can recognise and understand scale in a simple way (for example, *Is your county bigger or smaller than the one beside it?*). They can locate the largest county or the smallest county from the wooden jigsaw.
- The teacher observes whether students can complete a wooden jigsaw puzzle of Ireland.

Syllabus topic: The restless atmosphere

#### How is the weather?

Primary (5th and 6th classes)	Junior Certificate (Ordinary level)	Junior Certificate Schools Programme
<b>Geography</b> Strand: Natural environments	The human habitat—processes and change The restless atmosphere: The heat	The environment: Climate
	engine	

**Time scale:** The full range of learning and assessment activities presented in this exemplar may take from eight to ten class periods.

#### Potential areas of difficulty

- ightarrow Signs and symbols (associated with weather forecasting, weather maps)
- ightarrow Vocabulary/language (climate, forecast, weather instruments)
- ightarrow Short-term memory (record keeping, interpreting charts, mathematical figures)
- ightarrow Transferring learning to real-life situations
- ightarrow Spatial awareness (understanding and interpreting weather charts and relating them to everyday life)

#### Strategies used in this exemplar

- Using the students' personal experiences about the influence of weather in our lives
- Observing local weather conditions over a period of time
- Gathering weather data from various sources, such as newspaper, radio, video, television
- Recording the data and displaying it in a visual and organised way
- Practical experience of using weather instruments and equipment
- Visits to a weather station to help give students a national perspective on the influence of weather
- Using a variety of cross-curricular links, for example measurement/mathematics, heat and temperature/ science, accurate weather reporting/English

#### **Resources/notes**

- A number of weather instruments, such as thermometers and rain gauges, the school weather station or a local weather station
- Daily weather reports (national and international) in the newspapers
- Tapes of RTE radio weather reports, the daily 12.50 shipping report
- Television weather forecasts
- CD-ROMs such as Weather and Meteorology by Zig Zag Multimedia teaches students about the weather and offer an extra dimension where text is read aloud and students are helped with reading and listening skills
- The Irish Times website at http://www.ireland.com gives weather conditions and forecasts

#### Suggested outcomes

As a result of engaging in these activities students should be enabled to

- become more familiar with weather instruments and handling them
- recognise, describe, and draw two weather instruments (for example a thermometer and a rain gauge)
- measure rainfall and temperature and display the appropriate charts
- record measurements (temperature and rainfall) on a daily and weekly basis
- observe weather phenomena (clouds, rainfall, temperature, wind direction)
- note the changing weather signs and make simple weather forecasts
- become aware of local and national weather trends
- use a computing package to illustrate graphs, charts of the weather.

#### Supporting activities

#### Activity 1: Our school thermometer •

 Students observe and draw the instrument accurately and complete the chart.

#### Activity 2: Observing our weather

 This entails a whole class approach to improving observation skills and making weather forecasts.

# Activity 3: Our weekly weather chart

• This is a development from the previous activity.

#### Activity 4: Read the graphs

- This can incorporate a crosscurricular approach with the support of the mathematics, art, and ICT teachers.
- This exemplar supports geographical investigating skills such as:
  - observing
  - predicting
  - estimating
  - measuring
  - analysing.

#### Assessment strategies

- The teacher observes whether students can describe and draw weather instruments and recognise the differences between them. (Thermometer, rain gauge, barometer etc.)
- The teacher observes students completing the worksheets outlined in *Activity 1* and writing a paragraph about both instruments.
- The teacher observes whether students can
  - make simple observations about the weather
  - record these on tape
  - contrast them with the national weather forecast
  - describe similarities and/or differences to the class.
- The teacher observes students working in pairs, as they undertake simple accurate forecasting by completing *Activities 2 and 3* and stating the results to each other.
- The teacher observes whether students can draw a trend chart to illustrate temperature and bar chart for rainfall using ICT tools, and give a simple interpretation of the data/figures.
- The teacher observes whether students can identify people whose daily lives depend on weather.

### **Activity 1**

#### Our school thermometer

The teacher demonstrates how to use the school thermometer. Several small thermometers are provided for students. One thermometer between two students is ideal. The different parts of the thermometer are shown to students as follows

- glass tube
- mercury/alcohol
- °C (degrees Celsius)
- mm scale
- minus and plus figures.

The teacher differentiates for each individual student and recognises that some students will be able to do all activities and some will not.

Therometer	My thermometer	Students are requested to
	Draw a picture of a thermometer here.	<ul> <li>Draw a thermometer.</li> <li>Label the diagram.</li> <li>Colour in the appropriate areas.</li> <li>Insert the temperature figures 0°C, 10°C, 20°C, 30°C.</li> <li>Calculate the mean (average) daily temperatures, using the school thermometer.</li> </ul>

In approaching this exemplar there are opportunities for the teacher to work in a cross-curricular way with science, mathematics, and English teachers.

The ability to measure, collect, record, and evaluate information are key skills. Students need to practice these skills regularly and link with activities in other school departments, such as science and mathematics, to reinforce learning.

#### **Extension activities**

Some students may be able to learn about more complex weather instruments. These include

- maximum and minimum thermometers
- wet and dry bulb thermometers
- barometers.

Students are encouraged to make weather forecasts and to analyse future happenings in the weather.

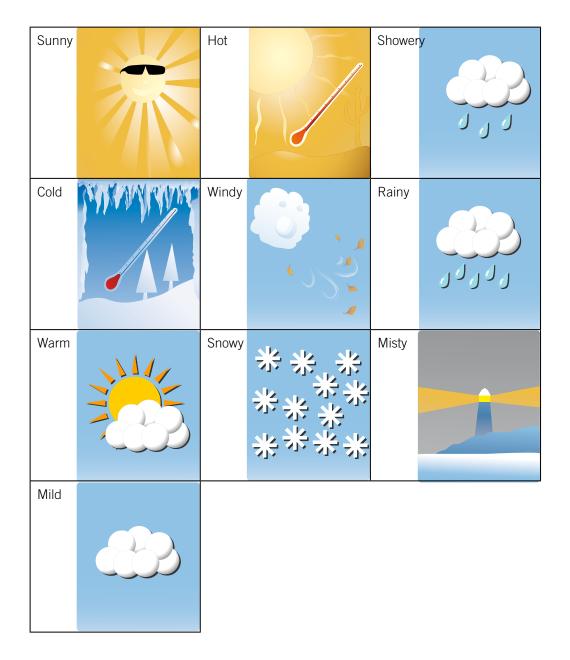
There may be an opportunity to visit a meteorological weather station and to interview a weather forecast presenter about his/her job.

### **Activity 2**

#### Observing our weather

Students are encouraged to observe the weather conditions outside the classroom. They decide which of the appropriate box or boxes represent the particular day's weather and answer questions. The questions become progressively more challenging from a) to f). The teacher will need to differentiate what is appropriate for individual students.

- a) What can you observe about today's weather?
- b) Draw a picture in a box that you think represents today's weather.
- c) Find out today's weather report from the newspaper, radio, television, internet.
- d) Give a short summary of today's weather in the correct box.
- e) What is the wind speed, degrees Celsius, millimetres of rainfall, sunshine burn factor, pollen count for today?
- f) Can you predict the weather forecast for tomorrow?



# **Activity 3**

Our weekly weather chart



A weather chart is given to each student.

Monday	Tuesday	Wednesday		
Temperature	Temperature	Temperature		
Rainfall	Rainfall	Rainfall		
Thursday	Friday	Mean (average) weekly temperature		
Temperature	Temperature	Mean (average) temperature		
Rainfall	Rainfall	Mean (average) rainfall		
Date	<u>.</u>			

Depending on their ability students are asked to undertake the following activities:

- examine the thermometer and rain gauge each day
- note and record measurements in folders
- display the temperature and rainfall figures on a wall chart each day
- calculate mean (average) weekly temperature and rainfall figures at the end of the week.

Some students may be able to compare their figures with the national daily figures for temperature and rainfall in newspapers and on the world wide web.

A simple weather forecast can be made for the fourth day and checked the following day. A wall chart can be filled in for each day.

### **Activity 4**

Read the graph

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall in mm	10	15	17	10	8	2	2	6	12	18	20	22

The bar graph in the picture shows a record of the rainfall from January to December in millimetres (mm).

Study the graph and answer the following questions.

- Some students may have the ability to use the school rain gauge. It can be set it up in a suitable location and they can record readings over a short period of time.
- Students can learn to observe and identify various cloud types, such as cirrus, cumulus, stratus. Art and science can give cross-curricular support.

Ques	tion	Answer
1.	Which month has the highest rainfall?	
2.	Which month has the lowest rainfall?	
3.	Find the annual range in rainfall.	
4.	Find the total annual rainfall.	
5.	Which is the rainy season and which is the dry season?	
6.	Where would you find this climate?	

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Degrees Celcius	2	4	8	11	12	16	20	19	12	11	7	4

The trend graph in the picture shows a record of the temperature in degrees Celsius (°C) from January to December.

Study the graph and answer the following questions.

Ques	tion	Answer
1.	Which month has the highest temperature?	
2.	Which month has the lowest temperature?	
3.	Find the annual range in temperature.	
4.	Find the mean (average) temperature.	
5.	Which is the hot season and which is the cold season?	
6.	Where would you find this climate?	
7.	Find out from the newspapers what the temperature is today.	
8.	Check the weather forecast on TV. Is it accurate?	