



Primary School
Curriculum

Curaclam na
Bunscoile

Geography

Social, Environmental
and Scientific Education

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Geography

**Social, Environmental
and Scientific Education**

Curriculum

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Introduction

Social, environmental and scientific education

Social, environmental and scientific education (SESE) provides opportunities for the child to explore, investigate and develop an understanding of the natural, human, social and cultural dimensions of local and wider environments; to learn and practise a wide range of skills; and to acquire open, critical and responsible attitudes. SESE enables the child to live as an informed and caring member of local and wider communities.

SESE takes place within, and contributes to, many areas of the curriculum. It thus contributes significantly to many aspects of the child's development. Within this curriculum, SESE is presented under three subject headings: history, geography and science. Each of these areas has a distinctive role to play in enabling the child to explore and understand the natural, human, social and cultural environments in which he/she lives.

The SESE curriculum

Understanding the term 'environment'

An agreed definition of the term 'environment' is fundamental to an understanding of the nature of social, environmental and scientific education. The word 'environment' is used in this curriculum to denote the surroundings or external conditions with which an individual (human or other living organism) or community interacts.

Environments may be categorised in two broad groupings. *Natural environments* are formed largely through the interaction of the Earth's physical features and processes, its flora and fauna. A tropical rainforest, a peatland or a rocky seashore may be examples of natural environments.

In Ireland, human activity over thousands of years has shaped and changed the landscape considerably. Environments which have been modified in this way are termed *human environments*. Areas which have been altered by the presence of people, farming activities, the extraction of resources, the provision of roads and other communication links and the construction of buildings are all examples of human environments.

Some human environments, such as urban areas, are predominantly the constructions of people and are termed *built environments*. Other human environments result from social and cultural activities and are entirely human creations. As people live and work together, social patterns, relationships, systems and institutions are evolved, while human experience, knowledge, values and beliefs are expressed, developed and

perpetuated through a range of cultural activities. Patterns of human behaviour, the social institutions developed by people and the political and economic systems which they utilise are aspects of *social environments*; artistic, religious, ethnic, scientific, technological and recreational activities are aspects of *cultural environments*.

Exploration and investigation

A key characteristic of learning within SESE is the involvement of the child in active exploration and investigation of all of these environments.

In geographical education, children explore and learn about features in natural and human environments, especially those in the immediate locality. They investigate the processes which create, sustain or change physical features, and the interactions of people with each other and their environments in the locality and wider contexts.

Science education enhances children's knowledge and understanding of themselves and the world in which they live. It involves children in the active construction of their own understanding. This understanding changes in response to the children's broadening experiences. A scientific approach to investigations fosters the development of important skills, concepts and knowledge through which children can observe, question, investigate, understand and think logically about living things and their environments, materials, forces, everyday events and problems. The knowledge and skills acquired may be applied in designing and making activities in which children perceive a need to create or modify elements of their environments.

Historical education enables children to investigate and examine critically significant events in their own immediate past, the past of their families and local communities and the histories of people in Ireland and other parts of the world. History develops an understanding of the actions, beliefs and motivations of people in the past and is fundamental to an informed appreciation of contemporary society and environments.

Values, attitudes and responsibilities

SESE is also concerned with the cultivation of important values and attitudes. It fosters an appreciation of the interrelationships of all living things and their environments and encourages children to become active agents in the conservation of environments for future generations. Through their investigations, children develop informed, critical and scientific perspectives which acknowledge the importance of founding judgements upon a respect for facts, accuracy and reason. SESE seeks to generate an appreciation of cultural and historical inheritance and cultivates an atmosphere of equality and opportunity where gender, cultural diversity, minorities and special needs are respected and valued. Prejudice and discrimination are challenged while respect and mutual understanding are promoted.

Integration

Throughout the primary school years, the environments of the child, particularly those of a local nature, provide ideal contexts and a compelling impetus for the integration of learning. The subject headings *history*, *geography* and *science* are used to aid presentation of the curriculum, and an awareness of them is an important part of the child's cultural and intellectual inheritance. Each subject offers a distinctive perspective on the world and equips children with a particular range of skills. However, the use of subject divisions must not negate the effective implementation of an integrated curriculum. The use of well-planned integrated approaches, both within SESE and between SESE and other curricular areas, will have an important part to play in the delivery of the primary curriculum at all levels. Systematically planned integrated topics can provide contexts in which knowledge and skills may be developed in a range of areas. Many elements from the history, science and geography curricula may be explored concurrently, and much of the work involved will contribute to the development of oral language, literacy, numeracy, aesthetic awareness, creative expression and communication skills.

A number of features have been incorporated in the curriculum in order to facilitate effective integration. SESE is best approached in a holistic manner with younger children as this respects the wholeness of their view of the world. Accordingly, a considerable degree of overlap and similarity has been embodied within the content suggested in the strands and

strand units of the three curricular statements for the infants and first and second classes. Further suggestions for integrated studies are included in the accompanying guidelines for teachers.

As children grow older they begin to recognise that there are different ways or modes of looking at the world and of organising human knowledge, so teaching strategies may vary to include a holistic approach, some cross-curricular integration and a subject-centred focus. Possible cross-curricular links and integrated studies are noted within the content of the curricular statements for third to sixth classes. These should be regarded as suggestions only: people and their activities, other living things, features, materials, events and processes to be found in local and wider environments provide many other opportunities for a unified approach to learning. Such an approach utilises teaching and learning time efficiently and it acknowledges that the social, emotional, attitudinal and moral development of the child is interwoven with the acquisition of knowledge and skills.

Aims

The aims of social, environmental and scientific education are

- to enable the child to acquire knowledge, skills and attitudes so as to develop an informed and critical understanding of social, environmental and scientific issues
- to reinforce and stimulate curiosity and imagination about local and wider environments
- to enable the child to play responsible roles as an individual, a family member and a member of local, regional, national, European and global communities
- to foster an understanding of, and concern for, the total interdependence of all humans, all living things and the Earth on which they live
- to foster a sense of responsibility for the long-term care of the environment and a commitment to promote the sustainable use of the Earth's resources through his/her personal lifestyle and participation in collective environmental decision-making
- to cultivate humane and responsible attitudes and an appreciation of the world in accordance with beliefs and values.

Geography: a sense of the world

Geography is the study of the Earth, its inhabitants and the inter-relationships between them in the context of place, space and environment. It is concerned with the nature, distribution and interaction of human and natural features over the Earth's surface, the processes which create, sustain or change these features, and the contribution they make to the distinctive character of places.

Geography helps children to make sense of their surroundings and the wider world. By studying their local environment and other areas, children learn about people and places and the interrelationships between them. They come to understand the natural and human processes and patterns present in these environments, and they can learn to appreciate the similarities and differences between places. Geography also provides opportunities to acquire a range of investigative, graphical and other skills.

Geography encourages children to appreciate the interdependence of individuals, groups and communities. It promotes an understanding of, and respect for, the cultures and ways of life of peoples throughout the world and it fosters an informed sense of individual and community responsibility for environmental care.

The geography curriculum

The nature of geography in the curriculum

Geographical education is concerned fundamentally with developing the child's understanding and appreciation of the world in which he/she lives. This involves the child in exploring and learning about the natural and human environments which he/she encounters while simultaneously developing an awareness of spatial patterns and using a range of investigative and communicative skills.

The geography curriculum has been designed to reflect the diversity of the subject, to encourage a balance between the acquisition of skills and knowledge, and to draw attention to the important values and attitudes with which geography is concerned.

The content of the geography curriculum

The content of the geography curriculum is presented in three strands:

- *Human environments*
- *Natural environments*
- *Environmental awareness and care.*

Human environments

For many children, the environments which are of most importance to them are those which have been wholly or largely created by human activity. Children's homes, the areas which surround them, their schools and play spaces, roads, streets, walls, fences and farmland have been shaped or created by the actions of people and their interaction with natural environments. A knowledge of these features helps the child to structure his/her experiences of the world.

Of even greater significance are the people who live and work in these environments and the events that occur in these places: the ways in which people interact with individuals and groups and how they move about, work, play and react to physical conditions. All these elements help to explain some of the features which people construct and they define the character of a place as significantly as any natural elements of the landscape.

It is a fundamental principle of the geography curriculum (and of the other curricula in SESE) that children should develop an understanding of the world through direct experience and activity. Thus the curriculum recommends that the exploration of human environments should be based firmly in the local environment of the child at all levels in the primary school, and should expand to include examples from a growing range of wider environments.

These studies should foster important aspects of the child's social and attitudinal development. By exploring the lives of people in the locality and wider contexts, children should come to value the contribution of people from a diversity of cultural, ethnic, social and religious backgrounds. Children's understanding and appreciation of their local, regional and national identity should be fostered and they should develop a sense of their European and global citizenship. Studying people's social and economic interactions can make the child aware of human interdependence, not only between people within the local

environment but between people in urban and rural areas, and between those in Ireland and beyond. In particular, the inclusion of units on development issues in the senior classes provides opportunities for children to explore how the lives and actions of people in developed and developing countries are interrelated.

Natural environments

One of the major concerns of geographers has always been to explore, describe, explain and record the natural features of the Earth. These features—the mountains, hills, lowlands and other landforms, the seas, oceans, weather systems and climate—give places their distinctive character. A knowledge of these features and how they relate to one another is an important aspect of children's growing awareness of their environment. Geographers and geographical education are also concerned with examining how these features have been formed by physical forces and processes—for example, heating, cooling, erosion, deposition, movements of the Earth's crust—and how flora and fauna interact with them.

As in the case of human environments, the curriculum provides for the exploration of natural features and processes in the local environment and the development of weather observation and recording skills at all levels in the primary school. As the children's understanding of the features and processes are developed through local examples, this knowledge may then be applied in wider contexts and the curriculum recommends that older children should become familiar with some features from regional, national, European and global contexts. Finally, the study of natural environments introduces children to the wider setting of the Earth in the solar system and space, an area of knowledge which involves very abstract concepts yet one which has an inherent fascination for adults and children alike.

Environmental awareness and care

Geography is not just concerned with understanding and explaining the nature of environments but it inevitably leads to an informed concern for these environments. A fundamental aspect of the geography curriculum (and of SESE in general) will be to awaken in the child an appreciation of the environments which he/she encounters and a sensitivity to the impact of change and human actions on the character of these environments.

An enhanced perception of environments and environmental change should lead to the development of a sense of personal and community responsibility for environments and should foster the notion of people as custodians of the Earth for future generations. The strand *Environmental awareness and care* provides opportunities for the child to develop and apply knowledge and skills so as to contribute in a meaningful way to the discussion and resolution of environmental issues. These issues will range from matters of local concern to global environmental problems and many will arise out of children's study of specific natural and human environments within the first two strands of the curriculum.

The areas of geography and science have complementary roles to play in the development of the child's environmental awareness. For this reason the strand is repeated in each of these curricula and should be developed as a major cross-curricular theme throughout the primary school years.

Skills and concepts development in the geography curriculum

As children develop knowledge and understanding of human and natural environments, they should also have opportunities to develop important geographical concepts and skills. These are delineated in a *Skills and concepts development* section at the beginning of the content for each level and will be fostered most effectively by activity in, and experience of, a range of environments.

A sense of place and space

Some of the most fundamental geographical concepts to be acquired by the child are those concerned with *A sense of place and space*. The child's *sense of place* refers to his/her understanding of, and feeling for, the essential character of different places: an understanding of how landscapes have been formed and shaped by the interaction of natural processes and human activity, and an appreciation of the distinctive contribution made by the motivations, beliefs, values and attitudes of people. A sense of place enables the child to recognise the unique identity of a place and to appreciate what it would be like to live there. The curriculum describes how the child's sense of place is first developed in the home and locality and is then extended as he/she explores a balanced range of human and natural environments in local, national and international contexts.

A sense of space refers to the child's understanding of where places are and how they are interconnected. As the child explores his/her surroundings he/she builds up a knowledge of where places and objects are located. Gradually, a concept of how and why these places and objects are related to each other is developed. In doing so, the child is acquiring locational knowledge and spatial awareness and is refining his/her mental image (or cognitive map) of the world. The curriculum outlines how, through the exploration and study of human and natural environments, the refinement of the child's cognitive map is enhanced. Mere rote memorisation of the names of physical features, towns and countries contributes little to this learning process which is concerned with the development of a very distinctive geographical skill.

Maps, globes and graphical skills

The recording, communication and interpretation of spatial information through the use of maps, plans, diagrams, photographs, models, globes and other means is a further and very distinctive skill to be developed in the geography curriculum. Understanding and using maps and other representations is dependent upon a sense of perspective, particularly an aerial perspective. The curriculum outlines a series of activities which will enhance children's awareness of perspective, and should help the child to use and understand a wide range of graphical (i.e. non-verbal, non-numerical) forms of data representation. These graphical techniques and the communication of geographical information in text will involve the use of conventional and electronic media.

Geographical investigation skills

Some of the skills used in geographical investigations are common to other areas of the curriculum, for example skills of literacy, numeracy, recording and communication. Investigations will also foster co-operative and group working skills. However, an important aspect of the work of many geographers is the application of scientific skills and knowledge to the investigation of geographical phenomena. The skills outlined in *Geographical investigation skills*, which include questioning, observing, predicting, investigating, estimating, measuring, and analysing, mirror those included in the science curriculum under the heading of *Working scientifically*. Their inclusion in the geography curriculum indicates not only that a critical, empirical approach should inform children's investigations of the environment but that significant aspects of the science curriculum can be achieved through geographical topics.

Geography and the integrated curriculum

Geography and other areas within SESE

While geography makes an important and distinctive contribution to the development of the child it also complements the growth of his/her historical and scientific learning. All three contribute to the wider social and environmental education of the child, and their complementary roles will be reflected in the organisation of learning. Throughout the primary school, and in the early years especially, much learning in geography, science and history will take place through the integrated themes or topics which teachers use to organise their work. Many of these topics will arise out of the child's need to explore and understand his/her immediate environment and local community. The curriculum and its accompanying guidelines suggest how the development of valuable geographical skills, concepts and attitudes will be achieved as these topics are explored.

Geography and other areas of the curriculum

Geography has close links with many other areas of the curriculum. The use of integration as a teaching technique is more fully described in the accompanying teacher guidelines but links with two particular curricular areas merit special attention.

The study of human environments and the communities which create them will involve the child in understanding and coming to appreciate the diversity and interdependence of people in local and other settings and will equip the child to participate fully in the life of his/her local, national, European and global communities. While the topics of the geography curriculum will provide many of the contexts within which this learning will take place, units outlining the development of the child's sense of citizenship have been delineated fully in the curriculum for social, personal and health education (SPHE) and are therefore not repeated in this geography curriculum.

The development of many geographical skills, in particular those concerned with spatial awareness, graphicacy and mapping, will be dependent upon and will complement the growth of the child's mathematical understanding.

Language and geography

Language is a pervasive influence throughout the teaching and learning process. Hence, while possible instances of integration between geography and other subjects are suggested within the curriculum statement and guidelines, examples involving language are not included. However, geographical education makes a critical contribution to the child's language development: the growth of the child's geographical understanding and the acquisition of language skills are interdependent and mutually enriching. It is largely through language that children describe and interpret their experience, organise their thinking and attempt to make sense of the world around them. Activities in the geography curriculum will engage the child in describing a wide range of human activities, environments and processes. Hypotheses will be formed and discussed, conclusions drawn, and judgements made and enunciated. All these activities provide rich opportunities for the enrichment and extension of children's language.

Literacy is also enriched by geographical education. As children explore geographical topics they will draw upon a wide range of materials and record their findings in a number of formats. Many of these, including maps, charts, books, signs in the environment, internet web pages and other computer applications will encourage the development of skills in reading and writing.

Geography also has a language of its own. The gradual introduction of geographical terms enables children to describe and discuss features in the environment more closely and the development of children's understanding of locational and directional terms is critically linked to their sense of place and spatial awareness. Therefore, the extent to which language is an integral part of the teaching and learning process should be a consistent concern in the planning and implementation of the geography curriculum.

Information and communication technologies

Geography provides many opportunities for the development and application of skills in the area of information and communication technologies and the curriculum encourages the use of ICT in the development of children's geographical concepts and skills. The teaching of many aspects of the geography programme may be enriched by the use of multimedia packages, some of which, for example, demonstrate geographical processes, present information about places and peoples or allow children to explore the possible consequences of certain actions on the environment. Electronic media such as CD-ROMs and the internet can give children access to a vast range of pictorial, film and other sources which can greatly enrich their geographical understanding. In particular, many useful maps and atlases are available on CD-ROM.

Information and communication technologies may also be used as a tool during geographical investigations and to facilitate children's presentation of their own geographical findings. The results of investigations may be analysed and presented using computer programs so that patterns and processes may be identified. Information can be exchanged with others, allowing illuminating similarities and differences to be explored, while written, aural and visual accounts may be readily created and edited. Moreover, the descriptions and accounts of places which children have created may be easily communicated both to others in the school and to a wider audience throughout Ireland and other parts of the world.

Assessment

Assessment is an integral part of teaching and learning in geography as in other areas of the curriculum. The section on assessment outlines how a range of informal and more formal assessment techniques can assist in enriching the learning experience of the child and provide useful information for pupils, parents, teachers and others.

Aims

The aims of geography are

- to develop knowledge and understanding of local, regional and wider environments and their interrelationships
- to encourage an understanding and appreciation of the variety of natural and human conditions on the Earth
- to develop empathy with people from diverse environments and an understanding of human interdependence
- to develop the ability to use a range of communicative methods, especially those concerned with the development of graphicacy (mapping and other non-verbal, non-numerical forms of data presentation)
- to encourage the development of a sense of place and spatial awareness
- to encourage the development of caring attitudes and responsible behaviour towards the environment, and involvement in the identification, discussion, resolution and avoidance of environmental problems
- to develop an understanding of appropriate geographical concepts.

Broad objectives

When due account is taken of intrinsic abilities and varying circumstances the geography curriculum should enable the child to

- develop knowledge and understanding of natural and human environments in the locality, region, Ireland, Europe and the world
- understand some of the natural, social or economic processes which create, sustain or change environments
- study the impact of environmental conditions on the lives of people in the locality and in other areas, and come to appreciate some of the ways in which humans use, modify or influence their environments
- engage in active exploration of local and other environments as an intrinsic element of learning

- acquire the ability to use and understand appropriate investigative methods in the study of natural and human features and phenomena in local and other environments
- develop a sense of place: an understanding and appreciation of the major characteristics of different places
- develop a sense of space: an understanding of how natural and human features are located and distributed in local and other environments and how and why they relate to each other
- develop an appropriate cognitive map of the local area and extend the process to wider geographical settings
- acquire an ability to understand, develop and use a growing range of plans, maps and globes
- develop an ability to acquire, analyse and communicate geographical knowledge using a wide variety of sources, including oral, written and graphical forms, models and globes, information technology and other media
- extend, refine and apply artistic, linguistic and mathematical skills
- learn that the sharing, responsible use and conservation of the Earth's natural and human resources are necessary for the continued existence of life
- develop aesthetic sensitivity to the natural and human elements of the environment and to the repercussions of human actions
- learn of and come to value the diversity of peoples, cultures and societies in Ireland and throughout the world, acquire an awareness of human interdependence and develop empathy with others
- use and value creative, innovative thinking in the exploration and/or resolution of human and environmental issues.

Infant classes

Overview

infant classes

Skills and concepts development

A sense of place and space

- A sense of place
 - A sense of space
-

Maps, globes and graphical skills

- Picturing places
-

Geographical investigation skills

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Estimating and measuring
- Analysing
- Recording and communicating

The geographical skills and concepts above will be developed as work is completed on the strands and strand units of the curriculum outlined below.

Strands

Strand units

Human environments

- Living in the local community
 - People and places in other areas
-

Natural environments

- The local natural environment
 - Weather
 - Planet Earth in space
-

Environmental awareness and care

- Caring for my locality
-

Planning

Structure

The content of the geography curriculum for infant classes is presented in two sections:

- a *skills and concepts section* which describes the geographical skills and concepts which children should develop as they encounter topics in the curriculum
- a number of *strands* which outline the topics to be included in the geography programme. The topics within each strand are referred to as *strand units*. Exemplars and suggestions are shown in italic type throughout the content sections.

The presentation of content in these two sections is intended to help teachers in planning for the development of important skills, concepts and attitudes as knowledge and understanding of geographical topics are acquired.

Skills and concepts in geography

The geographical skills and concepts outlined at this level are arranged under three headings:

- *A sense of place and space* which describes the development of the child's awareness of the distinctive characteristics of places, and his/her locational knowledge and cognitive mapping abilities in the immediate environment
- *Maps, globes and graphical skills* which describes how the child's drawings of familiar locations and the use of construction play materials may help in the development of early mapping skills
- *Geographical investigation skills* which outlines how simple scientific investigative skills may be developed through geographical work.

The strand units within the three strands below will provide the context within which most of these skills and concepts will be developed.

The strands of the geography curriculum

The strands of the curriculum present the geographical topics which children will explore through the study of

- *Human environments*, which involves the child in learning about his/her home, school and other significant places in the environment and the people who live and work there
- *Natural environments*, which is concerned with the local natural environment of the school, weather phenomena and other natural features
- *Environmental awareness and care*, which outlines how geography and science can foster the child's appreciation of environments and his/her sense of responsibility for their conservation and enhancement. This strand is common to the geography and science curricula and will be a major cross-curricular link.

The range of suggestions contained within the units of these strands provide considerable flexibility for schools and teachers in the selection of content.

A spiral approach

The curriculum is based on a spiral approach in which some geographical topics may be explored in increasing detail at a number of levels. For example, discussions and simple pictorial recording of weather phenomena in the infant classes will provide an excellent basis for more formal recording and analysis of weather patterns in subsequent classes. Planning by schools and teachers will help to ensure that children experience continuity and progression throughout the geography programme while undue repetition or significant gaps are avoided.

The local environment

Geographical activities should be based on the local environment and all pupils should have opportunities to explore and investigate the environment systematically and thoroughly. Geographical concepts and skills should be developed through explorations in the immediate environment whenever possible.

Breadth and depth in a menu curriculum

A broad and balanced curriculum will ensure that children have access to a comprehensive range of geographical ideas and concepts from a variety of environments while providing opportunities for the development of skills through practical investigations in the locality. Within the strand units, it is not expected that children should complete each objective or suggested activity; rather teachers and schools will select from the content objectives and exemplars outlined.

Linkage and integration

The content for SESE has been presented in the three curricular documents: history, geography and science. However, SESE is best approached in a holistic manner with younger children. A considerable degree of overlap exists between the strands and strand units of the content in the three curricula so as to facilitate an integrated topic or theme approach with infant classes.

It should also be noted that activities designed to develop the child's understanding of citizenship, community, human interdependence and relationships are more fully treated in the SPHE curriculum.

Within the content sections notes below strand units suggest some of the instances where linkage (i.e. integration within the geography curriculum) and integration (i.e. cross-curricular connections) might be established.

Skills and concepts development for infant classes

The geographical skills and concepts below will be developed as work is completed on the strands and strand units of the curriculum.

A sense of place and space

Through completing the strand units of the geography curriculum the child should be enabled to

A sense of place

- become aware of, explore and discuss some of the distinctive human and natural features of the locality

*myself and my family, my friends
members of the school community
people who live and work in the local community
his/her space, room, home, area around home
homes of relatives and friends
classroom, school and play spaces*

- develop some awareness of people and places in other areas

A sense of space

- refer to or use simple locational terms

beside, near, far away, next door, on my road, on my landing or floor, upstairs, downstairs

- discuss and record in simple ways journeys to and from places in the immediate environment

home, play spaces, school and classroom, shops, other locations

- refer to or use simple directions within home, classroom and school settings

give directions to another room in the school.

Maps, globes and graphical skills

Through completing the strand units of the geography curriculum the child should be enabled to

Picturing places

- refer to or use simple drawings of areas

*home and immediate surroundings
classroom, school and playground
other places and imagined areas*

- make model buildings with bricks, Lego and other play materials
- become aware of globes as models of the Earth.

Geographical investigation skills

Through completing the strand units of the geography curriculum the child should be enabled to

Questioning

- ask questions about natural and human features in the immediate environment

Who lives in this place?

What will happen if I bring snow inside?

Observing

- observe, compare and discuss natural and human features in the local environment

work and work-places of people who help us

what happens when it rains

Predicting

- guess and suggest what will happen next in a situation

suggest whether the pebbles will float or sink in water

Investigating and experimenting

- carry out simple investigations set by the teacher, make observations and collect data

Estimating and measuring

- estimate and compare distances in an informal way

the journey from home to school is longer than the journey from home to the park

Analysing

- sort and group objects according to observable features

rocks, pebbles, mud in soil sample

Recording and communicating

- describe and discuss his/her observations orally using an expanding vocabulary

- represent findings pictorially and in other media

pictures, weather charts, using information and communication technologies.

Strand: Human environments

Strand unit Living in the local community

The child should be enabled to

My family and community

- explore and discuss his/her membership of the family, school and local community
- identify and discuss the roles of people who serve the local community

postal worker, garda, shop worker, doctor, nurse, refuse worker, road worker, lorry driver, bus driver, teacher

Homes

- recognise that people live in homes
 - describe areas within the home
 - associate activities with areas within the home and outside the home
 - acquire some awareness of different types of homes in the locality
- flat, cottage, house, caravan, trailer*
- make simple drawings of home, immediate surroundings and journeys to and from home
 - begin to appreciate the need for shelter for a family

Integration

SPHE: Myself and others; Myself and the wider world

Science: Materials; Designing and making

History: Story

School

- become aware of, discuss and appreciate the people in the school community
classmates, other pupils, teachers, caretaker, secretary
- describe areas within the school
- associate activities with areas within the school and outside the school
- make simple drawings of school, immediate surroundings and journeys to and from school

People at work

- discuss the work of people in the home, at school, in the local community, in towns or countryside nearby and in wider environments
- become aware of some buildings and places where people work, especially those in the locality
home, school and immediate environs
shops, farms, offices, parks

People at play

- become aware of and discuss play spaces
at home
at school
in the locality
in other places
- suggest ways in which these places may be kept clean and safe
- make simple drawings of these places, immediate surroundings and journeys to and from these places.

Strand unit People and places in other areas

The child should be enabled to

- develop some awareness of people living in other areas

people encountered in stories, pictures, on television

- acquire some awareness of different types of homes in places outside the locality
- become aware of some links between the school or local community and people in other places

*relatives and friends living in other places
food grown by farmers in other parts of
Ireland*

places and people I visit on holiday.

Integration

SPHE: Myself and others; Myself and the wider world

History: Story

Strand: Natural environments

Strand unit The local natural environment

The child should be enabled to

- become aware of, explore and discuss some aspects of natural environments in the immediate locality of the school
hill, seashore, hedgerow, forest, bog, waste ground
- observe, discuss and investigate water in the local environment
*rainfall, puddles and streams
water, sand and stones in streams, ponds, lakes or at the seashore*
- observe, collect and investigate a variety of natural materials in the local environment
*mud, sand, pebbles, stones and rocks
group these materials according to a number of criteria (e.g. colour, texture, hardness)*
- record and communicate experiences and observations using oral language and pictures.

Integration

Science: Living things; Materials

Strand unit Weather

The child should be enabled to

- observe and discuss a variety of weather conditions using simple vocabulary
rainy days, sunny days, foggy days
- record weather observations using a weather chart or diary
- become aware of some of the effects of different weather conditions on human, animal and plant life in the local environment
- discuss the suitability of different kinds of clothes for different weather conditions
- recognise that some weather patterns are associated with seasonal change and distinguish between summer and winter.

Integration

Science: Living things—Processes of life; Energy and forces—Heat

Strand unit Planet Earth in space

The child should be enabled to

- identify and discuss the sun, the moon and stars
- recognise the difference between day and night.

Strand: Environmental awareness and care

Strand unit Caring for my locality

The child should be enabled to

- observe, discuss and appreciate the attributes of the local environment
 - beauty and diversity of plants and animals in a variety of habitats*
 - attractive elements of natural and human environments*
- appreciate that people share the environment with plant and animal life
- develop a sense of responsibility for taking care of and enhancing the environment
- identify, discuss and implement simple strategies for improving and caring for the environment

things I can do

caring for clothes, toys and other possessions
keeping home and surroundings clean and tidy
caring for living and non-living things in the locality

things we can do together

keeping classroom, school and play spaces clean, tidy and safe
disposing of litter appropriately
collecting paper, cans and other materials for recycling
caring for living and non-living things in the locality.

Linkage

Many of the objectives of this strand will be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental awareness and care is a cross-curricular strand common to the geography and science curricula.

SPHE: Myself and the wider world

PE: Outdoor and adventure activities

First
and second
classes

Overview

first and second classes

Skills and concepts development

A sense of place and space

- A sense of place
 - A sense of space
-

Maps, globes and graphical skills

- Using pictures, maps and globes
-

Geographical investigation skills

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Estimating and measuring
- Analysing
- Recording and communicating

The geographical skills and concepts above will be developed as work is completed on the strands and strand units of the curriculum outlined below.

Strands

Strand units

Human environments

- Living in the local community
 - People and places in other areas
-

Natural environments

- The local natural environment
 - Weather
 - Planet Earth in space
-

Environmental awareness and care

- Caring for my locality

Planning

Structure

The content of the geography curriculum for first and second classes is presented in two sections:

- a *skills and concepts section* which describes the geographical skills and concepts which children should develop as they encounter topics in the curriculum
- a number of *strands* which outline the topics to be included in the geography programme. The topics within each strand are referred to as *strand units*. Exemplars and suggestions are shown in italic type throughout the content sections.

The presentation of content in these two sections is intended to help teachers in planning for the development of important skills, concepts and attitudes as knowledge and understanding of geographical topics are acquired.

Skills and concepts in geography

The geographical skills and concepts outlined at this level are arranged under three headings:

- *A sense of place and space* which describes the development of the child's awareness of the distinctive characteristics of places, and his/her locational knowledge and cognitive mapping abilities in the immediate environment
- *Maps, globes and graphical skills* which describes how drawings of familiar locations and the investigation of outlines and plans may help in the development of the child's mapping skills
- *Geographical investigation skills* which outlines how simple scientific investigative skills may be developed through geographical work.

The strand units within the three strands below will provide the context within which most of these skills and concepts will be developed.

The strands of the geography curriculum

The strands of the curriculum present the geographical topics which children will explore through the study of

- *Human environments*, which involves the child in learning about homes and other significant places in the built environments of the locality and beyond and the people who live and work in these places
- *Natural environments*, which is concerned with the child's developing knowledge of local natural environments, weather and other natural features
- *Environmental awareness and care*, which outlines how geography and science can foster the child's appreciation of environments and his/her sense of responsibility for their conservation and enhancement. This strand is common to the geography and science curricula and will be a major cross-curricular link.

The range of suggestions contained within the units of these strands provide considerable flexibility for schools and teachers in the selection of content.

A spiral approach

The curriculum is based on a spiral approach in which some geographical topics may be explored in increasing detail at a number of levels. For example, activities completed in the unit 'People at work' at this level will concentrate on the lives of 'people who help us' and will provide an important introduction to the study of services and industry in subsequent years. Planning by schools and teachers will help to ensure that children experience continuity and progression throughout the geography programme while undue repetition or significant gaps are avoided.

The local environment

Geographical activities should be based on the local environment and all pupils should have opportunities to explore and investigate the environment systematically and thoroughly. Geographical concepts and skills should be developed through explorations in the immediate environment whenever possible.

Breadth and depth in a menu curriculum

A broad and balanced curriculum will ensure that children have access to a comprehensive range of geographical ideas and concepts from a variety of environments while providing opportunities for the development of skills through practical investigations in the locality. Within the strand units, it is not expected that children should complete each objective or suggested activity; rather teachers and schools will select from the content objectives and exemplars outlined.

Linkage and integration

The content for SESE has been presented in the three curricular documents: history, geography and science. However, SESE is best approached in a holistic manner with younger children. A considerable degree of overlap exists between the strands and strand units of the content in the three curricula so as to facilitate an integrated topic or theme approach with first and second classes.

It should also be noted that activities designed to develop the child's understanding of citizenship, community, human interdependence and relationships are more fully treated in the SPHE curriculum.

Within the content sections notes below strand units suggest some of the instances where linkage (i.e. integration within the geography curriculum) and integration (i.e. cross-curricular connections) might be established.

Skills and concepts development for first and second classes

The geographical skills and concepts below will be developed as work is completed on the strands and strand units of the curriculum.

A sense of place and space

Through completing the strand units of the geography curriculum the child should be enabled to

A sense of place

- explore and come to know some of the distinctive human and natural features of the locality

people living and working in the area

homes and other buildings, natural features

- develop an awareness of people and places in other areas

A sense of space

- discuss and record the relative location of familiar human and natural features in the locality

in simple language (e.g. near, in front of, at the corner)

in simple drawings, plans, maps and models

- discuss and record simply journeys to and from places in the immediate environment and beyond

home, homes of relatives and friends

play spaces, shops and other significant buildings

major urban area, sports ground, holiday locations

- give and follow simple directions to places in the immediate environment

places in the school building and playground.

Maps, globes and graphical skills

Through completing the strand units of the geography curriculum the child should be enabled to

Using pictures, maps and globes

- record areas in the immediate environment and places in stories using simple picture maps, models and other methods
 - my room, my home, its surroundings*
 - my way to school and shops*
 - imagined areas (e.g. a route in a story such as 'Little Red Riding Hood')*
- explore the outlines and plans of small everyday items
 - small objects such as pencil case or box*
 - model buildings from toy farm or train set*
- develop some awareness of maps and if possible aerial photographs of limited areas in the locality
- explore directions in the classroom using simple signpost maps
- identify land and sea on maps and globes
- use maps of Ireland and the globe to develop an awareness of other places.

Geographical investigation skills

Through completing the strand units of the geography curriculum the child should be enabled to

Questioning

- ask questions about natural and human features in the immediate environment

What animals and plants live here?

What has changed since I was last here?

Observing

- observe, compare and discuss natural and human features in the local environment

colours and textures in the built environment

different plants and animals in contrasting environments

Predicting

- suggest outcomes of an investigation, based on observations

suggest when water in river will be muddy

Investigating and experimenting

- carry out simple investigations and collect information from a variety of sources

direct observations in the environment

classroom investigations

books, information and communication technologies, other media

Estimating and measuring

- begin to use simple methods to estimate, measure and compare observations

use non-standard units of length to measure distances

use balance to compare weights of samples collected

Analysing

- sort and group people, features, events and natural phenomena
 - the people who work in shops, offices or factories*
 - living things on the seashore, on the farm or in the park*
- begin to look for and recognise patterns and relationships in the environment
 - connection between dark clouds and rainfall*
 - links between homes of people and climate*
- draw conclusions from simple investigations

Recording and communicating

- describe and discuss observations orally using an expanding vocabulary
- represent findings pictorially or using other media
 - friezes, pictograms, information and communication technologies.*

Strand: Human environments

Strand unit Living in the local community

The child should be enabled to

My family and community

- explore and discuss his/her role and that of others in the family, school and local community
- become aware of and learn to value the diversity of people who live in the local community and the contribution they make
- begin to recognise the interdependence of individuals and groups in the local community

people we rely on to bring us food and other things

ways in which we can help others in the community

- develop some awareness of people living in other areas and of the links between them and the local community

people encountered in stories, pictures, on television

Homes and shelter

- recognise that people live in a variety of homes
- describe his/her home, its location and surroundings
- record some of these features using simple drawings, plans, displays, models and sketches
- investigate materials used to construct homes and identify materials of local origin
- discuss and record simply journeys to and from homes
- develop an awareness and appreciation of different types of homes in the locality and in other areas
houses, farmhouses, cottages, apartments, flats, caravans, trailers, mobile homes, homes in shanty towns
- develop an awareness of homelessness

Integration

SPHE: Myself and the wider world

Integration

Science: Materials; Designing and making

People at work

- investigate the work of people in a range of locations in the locality
home, schools and youth clubs
shops, offices, factories, farms
garda station, hospital, health centre
hotels, restaurants, centres for visitors
- investigate the work of people involved in transport and communications
- discuss and record simply the buildings and places where people work, especially those in the locality
- discuss and record simply journeys to work-places
- become aware of the work of people in other areas who supply food and other products to us

Integration

SPHE: Myself and the wider world

People at play

- appreciate the roles of people who help at play
family and friends
dance teachers and drama teachers
park-keepers, attendants
youth leaders and sports coaches
- describe location and features of play spaces
at home, at school, in the locality and in other places
- discuss, and record simply, journeys to and from play spaces.

Integration

SPHE: Myself and the wider world

Strand unit People and places in other areas

The child should be enabled to

- become familiar with some aspects of the lives of people and especially of children in Ireland, Europe and other areas
- appreciate ways in which people in different areas depend on one another and on people living in other parts of the world.

peoples and communities

needs of people for food, shelter and clothes

school, play and work

games, songs and customs, festivals and feasts

environments in which people live

adapting to environments

use of local building materials (e.g. thatch, slate, stone in walls, road surfaces, etc.)

Integration

SPHE: Myself and the wider world

History: Story

Strand: Natural environments

Strand unit The local natural environment

The child should be enabled to

- identify, explore and discuss aspects of some major natural features in the local environment
 - aspects such as*
 - names, location, appearance, flora and fauna*
 - of features such as*
 - hill, mountain, bog, moor, river, lake, bay, beach or headland*
- observe, discuss and investigate water in the locality
 - observe and record relationship between rainfall, puddles, drains and streams*
 - investigate how water can move materials of different sizes and weights in simple experiments, in streams and at the sea*
 - learn about water and its uses*
- observe, collect and investigate a variety of natural materials in the local environment
 - collect and examine soil, mud, sand, pebbles, stones and rocks*
 - compare and contrast samples and group them into broad sets (e.g. sand, stones, plant material)*
 - investigate qualities of materials (e.g. hard or soft, colour, texture, wet or dry)*
 - recognise that soils and rocks are habitats for living things such as worms, lichens, barnacles*
- record and communicate experiences and observations using simple drawings, plans, displays, models and sketches.

Integration

Science: Living things; Materials

Strand unit Weather

The child should be enabled to

- observe and record varying weather conditions using appropriate vocabulary and simple equipment
- begin to associate cloud cover and other conditions with different types of weather
- begin to make and test simple weather predictions
- identify ways in which weather influences the lives of people
clothes, homes, games, farming and other work, travel
- observe and record the influences weather and seasonal changes have on people, animals and plants in the locality
- contrast weather in the locality with that in other areas.

Strand unit Planet Earth in space

The child should be enabled to

- recognise the sun as a source of heat and light
- identify the sun, the moon, stars, day and night
- develop familiarity with the spherical nature of the Earth.

Strand: Environmental awareness and care

Strand unit Caring for my locality

The child should be enabled to

- identify, discuss and appreciate the natural and human features of the local environment
- observe and develop an awareness of living things in a range of habitats in local and wider environments
- observe similarities and differences among plants and animals in different local habitats
- develop an awareness that air, water, soil, living and non-living things are essential to the environment
- begin to realise that people, animals and plants depend on each other
- realise that there is both an individual and a community responsibility for taking care of the environment
- identify, discuss and implement simple strategies for improving and caring for the environment
 - caring for clothes, toys and other possessions*
 - caring for living things in the locality*
 - keeping home, classroom, school and play spaces clean, tidy and safe*
- identify and help to implement simple strategies for protecting, conserving and enhancing the environment
 - planting trees and flowers*
 - developing school garden*
 - engaging in anti-litter campaigns*
- become aware of ways in which the environment can be polluted or harmed
 - litter, pollution, vandalism.*

Linkage

Many of the objectives of this strand will be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental awareness and care is a cross-curricular strand common to the geography and science curricula.

SPHE: Myself and the wider world

PE: Outdoor and adventure activities

Third
and fourth
classes

Skills and concepts development

A sense of place and space

- A sense of place
- A sense of space

Maps, globes and graphical skills

- Using pictures, maps and globes

Geographical investigation skills

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Estimating and measuring
- Analysing
- Recording and communicating

The geographical skills and concepts above will be developed as work is completed on the strands and strand units of the curriculum outlined below.

Strands

Strand units

Human environments

- People living and working in the local area
- People living and working in a contrasting part of Ireland

Explored through a selection from the sub-units

- *People and communities*
- *Natural environmental features and people*
- *Settlement: homes and other buildings*
- *People at work*
- *Transport and communications*

- People and other lands

- *An environment in another European country*
- *An environment in a non-European country*

- County, regional and national centres

Natural environments

- The local natural environment
- Land, rivers and seas of my county
- Rocks and soils
- Weather, climate and atmosphere
- Planet Earth in space

Environmental awareness and care

- Environmental awareness
- Caring for the environment

Planning

Structure

The content of the geography curriculum for third and fourth classes is presented in two sections:

- a *skills and concepts section* which describes the geographical skills and concepts which children should develop as they encounter topics in the curriculum
- a number of *strands* which outline the topics to be included in the geography programme. The topics within each strand are referred to as *strand units*. Exemplars and suggestions are shown in italic type throughout the content sections.

The presentation of content in these two sections is intended to help teachers in planning for the development of important skills, concepts and attitudes as knowledge and understanding of geographical topics are acquired.

Skills and concepts in geography

The geographical skills and concepts outlined at this level are arranged under three headings:

- *A sense of place and space* which describes the development of the child's awareness of the distinctive characteristics of places, and his/her locational knowledge and cognitive mapping abilities in the locality and wider environments
- *Maps, globes and graphical skills* which describes the development of the child's mapping skills through the use of a wide range of maps, globes and photographs and through the construction of simple plans and sketch maps
- *Geographical investigation skills* which outlines how a range of scientific investigative skills may be developed through geographical work.

The strand units within the three strands opposite will provide the context within which most of these skills and concepts will be developed.

The strands of the geography curriculum

The strands of the curriculum present the geographical topics which children will explore through the study of

- *Human environments*, which involves the child in learning about people and their interrelationships with environments. Children's understanding of how the interaction of communities, their social, cultural and economic activities, and the features of the built and natural environment give places their distinctive character will be developed through practical investigations of a range of places. These should include the locality, a contrasting part of Ireland, another European environment and a non-European environment. Activities from this strand will also help to cultivate an awareness of human interdependence and a respect for people from different social, cultural, ethnic and religious traditions
- *Natural environments*, which is concerned with the child's developing knowledge of natural environmental features in the locality and wider environments, weather phenomena and the setting of the Earth in space
- *Environmental awareness and care* which outlines how geography and science can foster the child's appreciation of environments and his/her sense of responsibility for their conservation and enhancement. This strand is common to the geography and science curricula and will be a major cross-curricular link.

The range of suggestions contained within the units of these strands provide considerable flexibility for schools and teachers in the selection of content.

A spiral approach

The curriculum is based on a spiral approach in which some geographical topics may be explored in increasing detail at a number of levels. Some aspects of the programme will be treated during third and fourth classes only, some will be taught in fifth and sixth classes only, while others could be profitably taught at both levels, with the more complex details, concepts, and methods of investigation and treatment reserved for fifth and sixth classes. Planning by schools and teachers will help to ensure that children experience continuity and progression throughout the geography programme while undue repetition or significant gaps are avoided.

The local environment

Geographical activities should be based on the local environment and all pupils should have opportunities to explore and investigate the environment systematically and thoroughly. Geographical concepts and skills should be developed through explorations in the immediate environment whenever possible, with subsequent extension to regional, national and global environments.

Breadth and depth in a menu curriculum

A broad and balanced curriculum will ensure that children have access to a comprehensive range of geographical ideas and concepts from a variety of environments, while providing opportunities for the development of skills through practical investigations in the locality. Planning in the school should ensure that work in the strands *Human environments* and/or *Environmental awareness and care* incorporates aspects of life in developed and developing countries.

Within the strand units, it is not expected that children should complete each objective or suggested activity; rather teachers and schools will select from the content objectives and exemplars outlined.

Linkage and integration

Opportunities for integrated studies within SESE and with other areas of learning should be identified in planning. Much work in the study of natural environments will utilise scientific skills and processes while the study of human environments will present opportunities for integration with units in the history curriculum. It should also be remembered that the strands and strand units of the geography curriculum are not discrete: work on a geographical topic or investigation may incorporate objectives from a number of units.

It should be noted that activities designed to develop the child's understanding of citizenship, community, human interdependence and relationships are more fully treated in the SPHE curriculum.

Within the content sections notes below strand units suggest some of the instances where linkage (i.e. integration within the geography curriculum) and integration (i.e. cross-curricular connections) might be established.

Skills and concepts development for third and fourth classes

The geographical skills and concepts below will be developed as work is completed on the strands and strand units of the curriculum.

A sense of place and space

Through completing the strand units of the geography curriculum the child should be enabled to

A sense of place

- explore and become familiar with some of the distinctive human and natural features of the locality and county
 - peoples and communities living and working in the area*
 - major natural features*
 - settlement: homes, other buildings, open spaces*
 - economic and leisure activities, work-places*
 - transport and other links between these features*
- develop some awareness of the distinctive human and natural features of some places in Ireland and other parts of the world

A sense of space

- develop an understanding of the relative location and size of major natural and human features
 - the major features of the locality and county*
 - a few major features in other parts of Ireland*
- develop some awareness of the names and relative location of some European countries
- establish and use cardinal compass points in the locality
- use maps to record routes and directions in the locality.

Maps, globes and geographical skills

Through completing the strand units of the geography curriculum the child should be enabled to

Using pictures, maps and globe

- develop some familiarity with, and engage in practical use of, maps and photographs of different scales and purposes
 - plans of a room or building*
 - maps from models and toy houses*
 - maps and aerial photographs of familiar areas*
 - maps of locality, Ireland, Europe and the world*
 - maps from CD-ROM and other electronic sources*
- develop an understanding of and use some common map features and conventions
 - a sense of aerial perspective*
 - symbols (e.g. for objects and walls, for land and water)*
 - key, index and simple grid-style reference*
 - align (or set) a map of a limited area*
- make simple maps of home, classroom, school and immediate environment
- identify major geographical features and find places on the globe.

Geographical investigation skills

Through completing the strand units of the geography curriculum the child should be enabled to

Questioning

- ask questions about natural and human features and processes in the environment and their interrelationships

What makes this place different from other places?

How does the farmer use this land?

Observing

- observe, discuss and describe natural and human features and processes in the environment and their interrelationships

shapes and sizes of natural features

colours and textures of buildings and streetscapes

Predicting

- offer suggestions (hypotheses) based on observations about the likely results of an investigation

Investigating and experimenting

- carry out simple investigations and collect information from a variety of sources

observations and experiments in the environment and classroom

photographs, books, maps, electronic and other media

Estimating and measuring

- use appropriate simple instruments and equipment to collect data

improvised rain gauge, trundle wheel, compass

- use appropriate standard units of measurement

Analysing

- sort, group and/or classify data on people, features, events and natural phenomena using a range of appropriate criteria
 - types of plants in an environment*
 - types of shops or buildings in an urban area*
- look for and recognise patterns and relationships in the environment
 - seasonal patterns in weather observations*
 - best places for growing plants in a garden*
 - water and land masses on maps*
- interpret information and offer explanations
- draw conclusions from suitable aspects of the evidence collected

Recording and communicating

- record and present findings and conclusions using a variety of methods including oral, written, pictorial, photographic, diagrammatic and graphical forms and using information and communication technologies.

Strand: Human environments

Strand units People living and working in the local area *and*

People living and working in a contrasting part of Ireland

These units will be completed using appropriate aspects of the following sub-units.

The child should be enabled to

People and communities

- learn about and come to appreciate and respect the people and communities who live and work in the locality and in a contrasting part of Ireland

*members of the school and local community
how people help each other and depend on one another
the various people and groups in the community
local clubs and other organisations
links with people in other parts of Ireland and the world*

Natural environmental features and people

- become aware of the natural features in the locality and in a contrasting part of Ireland and their relationship to the lives of people living in these places

*prominent natural features (e.g. river, hill, sea)
flora and fauna
interrelationships of natural features and the lives of people
place-names and their origins in natural features*

Linkage

Natural environments—The local natural environment
Environmental awareness and care

Integration

SPHE: Myself and the wider world

History: Local studies

Science: Living things—Plants and animals

Settlement: homes and other buildings

- explore, investigate and come to appreciate the major features of the built environment in the locality and in a contrasting part of Ireland

*his/her home, its location and surroundings
the variety of homes in the area (e.g. houses, farmhouses, cottages, flats, caravans, mobile homes, trailers)*

homelessness

other buildings and human features, their location and uses (e.g. shops, offices, other work-places, farmhouses, farmyards and fields)

*instances of conservation and change
materials used to construct homes and other buildings*

colours, patterns and textures in buildings, streetscapes, and path, road and street surfaces

*services to homes and other buildings (e.g. water supply, sewerage, heating system, electricity, cable television, telephone service)
simple plans, maps and models (e.g. interior and surrounding areas of homes and other buildings)*

Linkage

Environmental awareness and care: Environmental awareness

Integration

History: Local studies

Science: Materials; Designing and making

Visual arts: work on colour, patterns and textures in the environment will complement work in visual arts.

People at work

- explore and investigate, especially through practical studies, *a small number* of the common economic activities of people in the locality and in a contrasting part of Ireland

*Food and farming, fishing, forestry
environment and work of primary
producers, products, markets*

Industry

*work of factory, work force, raw materials
and products, markets, need for transport
and communications*

Services

*services available in the locality (e.g.
shops, health care, water, sewerage, power
supply)
work of people involved in the supply of
services*

Tourism, leisure and recreation

*local attractions and facilities (including
people, places and landscapes)
work of people involved
caring for and enhancing local attractions
and facilities*

General themes

*importance of the employment created
effect of environmental factors on these
activities (e.g. on work of farmers, on
location of tourist facilities)
effects of these activities on the
environment (e.g. traffic on roads, noise,
need for new buildings)
interdependence of people in locality,
Ireland and other countries*

Transport and communications

- become aware of forms of transport and transport routes in the locality and in a contrasting part of Ireland
- become familiar with the communication methods available
- investigate work of people involved in transport and communications.

Linkage

Environmental awareness and care: Environmental awareness

Integration

History: Local studies

Science: Materials; Designing and making

Strand unit People and other lands

The child should be enabled to

- study some aspects of the environments and lives of people in *one* location in Europe and *one* location in another part of the world
 - location of these areas*
 - peoples and communities that live there*
 - language(s)*
 - myths and stories, art and culture*
 - clothes*
 - play and pastimes*
 - features of the natural environment*
 - interrelationships of the lives of people and these features*
 - settlements: homes and other buildings*
 - common building materials and features*
 - foods and farming*
 - work and work-places*
 - similarities to and contrasts with Ireland*
- develop an awareness of the interdependence of these people and people in Ireland
- begin to develop a sense of belonging to local, county, national, European and global communities.

Integration

History: Story; Early people and ancient societies

Science: Designing and making

Strand unit County, regional and national centres

The child should be enabled to

- become familiar with the location and names of urban areas in the county, some of their important buildings, factories and other features
- develop some knowledge of the relative location of the county and neighbouring counties
- become familiar with the location and names of a few of the larger towns and cities in the region and in Ireland.

Strand: Natural environments

Strand unit The local natural environment

The child should be enabled to

- investigate and become familiar with some natural features in the local environment
aspects such as
names, locations relative to other features
shape and appearance, flora and fauna
of features such as
stream, river, hill, valley, mountain,
lowland, beach, bay, headland
- estimate distances and establish cardinal directions during the exploration of these features
- observe and explore ways in which these features have affected the lives of plants, animals and humans
influence of hill, bog or stream on transport, roads and bridges, towns and cities
the stream, mountain, beach etc. as a habitat for plants and animals
- investigate the ways in which these features have been used by humans and the changes which have occurred as a result
beach and bay used for leisure and recreation
supply, treatment and distribution of water from rivers and lakes to homes in the area.

Linkage

People living and working in the local area—Natural environmental features and people

Integration

Science: Living things; Materials

Strand unit Land, rivers and seas of my county

The child should be enabled to

- become familiar with the names and locations of some major natural features in the county
mountains, lowlands, bogs, rivers, lakes, bays, estuaries, headlands and islands
- develop some familiarity with the relationship of these features with each other and with elements of the built environment such as roads, bridges, towns and cities
sources of rivers in mountains or lakes
roads, railways and bridges over rivers
towns built near bays or rivers, mines in mountains.

Strand unit Rocks and soils

The child should be enabled to

- observe, collect and examine different soil samples in the immediate and other environments
- sort and group constituent materials in samples
rocks, pebbles, sand, plant material
- compare and contrast materials, focusing on certain criteria
colour, texture, use, strength, hardness, size and weight
- begin to explore influence of soils and rocks on animal and plant life
physical conditions, soil, water and food supply influencing range of plants and animals.

Integration

Science: Materials

Strand unit Weather, climate and atmosphere

The child should be enabled to

Weather observations

- use simple equipment to observe and record weather phenomena
simple cloud types, temperature, rainfall, wind direction
examine satellite photographs on newspaper, television or internet
- record and display simple weather observations in systematic way using graphs, charts and common meteorological symbols
- use analysis of weather recordings to begin to associate simple descriptions of clouds, amount of cloud cover, wind direction and other conditions with particular types of weather; make and test weather predictions
- compare temperatures indoors and outdoors, in shade and sunlight, on different sides of the same building, and explore reasons for differences

Weather and climate

- study weather variations during the year and their influence on plants, animals and humans
- begin to appreciate the importance of solar energy for the Earth
- develop some awareness of weather and climate patterns and their relationship with plant, animal and human life in some environments in other parts of the world
- collect and record weather lore from the locality.

Integration

Science: Energy and forces—Heat

Strand unit Planet Earth in space

The child should be enabled to

- observe, describe and record the positions of the sun when rising and setting and the changing lengths of day and night during the seasons
- investigate shadows, directions and sunlight
- understand the importance of sunlight for plants and animals
- begin to understand the influence of the sun on weather and atmospheric conditions
- become aware of the dangers of sunlight for skin and eyesight.

Strand: Environmental awareness and care

Strand unit Environmental awareness

The child should be enabled to

- identify, discuss and record aspects of local natural and human environments which are considered attractive or unattractive
 - colours, textures and shapes in rural or urban areas*
 - range of materials*
 - beauty of plant and animal life*
 - buildings, walls and other features*
 - places which people enjoy or do not like*
 - reasons for these preferences*
- identify the interrelationships of living and non-living elements of local and other environments
 - plants, animals, water, air and soil in habitats*
- develop some awareness of the types of environment which exist in Ireland and other parts of the world
 - mountains, boglands, seas, desert, forest, grassland, ice landscape, tundra*
- become aware of the Earth's renewable and non-renewable resources
- recognise how the actions of people may have an impact on environments
 - planting or felling trees, removing hedgerows, draining marshes, overgrazing of mountains, new buildings, roads, fields, dumps, bridges*
- recognise and investigate human activities which may have positive or adverse effects on local and wider environments
 - activities which produce biodegradable and non-biodegradable waste (e.g. food waste in contrast to some plastic packaging)*
 - activities which affect the quality of air or water*
 - activities which affect flora and fauna*
 - role of recycling*
- come to appreciate the need to conserve the Earth's resources.

Linkage

Many of the objectives of these units will be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental awareness and care is a cross-curricular strand common to the geography and science curricula.

Visual arts: an awareness of colour and textures in the environment will complement work in visual arts.

PE: Outdoor and adventure activities

Strand unit Caring for the environment

The child should be enabled to

- examine a number of ways in which local and other environments could be improved or enhanced
- identify and discuss a local, national or global environmental issue
- realise that there is a personal and community responsibility for taking care of and conserving environments.

an issue such as

litter in an area

an incident of pollution

need for safe cycleways near school

changes in flora or fauna

need to protect a habitat and its flora and fauna

need to conserve a natural or human environment

need for new roads or buildings

investigate the causes of the issue

appreciate the role and views of people involved

suggest and discuss possible actions or solutions and the effect of these on people and environment

participate in the resolution of the issue if possible

help in an anti-litter campaign

collect items for recycling

help to design the route of a cycleway

write letters about the issue or problem

design posters

Linkage

Many of the objectives of this unit may be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental awareness and care is a cross-curricular strand common to the geography and science curricula.

SPHE: Myself and the wider world—Developing citizenship

Visual arts: an awareness of colour and textures in the environment will complement work in visual arts.

Fifth
and sixth
classes

Planning

Structure

The content of the geography curriculum for fifth and sixth classes is presented in two sections:

- a *skills and concepts section* which describes the geographical skills and concepts which children should develop as they encounter topics in the curriculum
- a number of *strands* which outline the topics to be included in the geography programme. The topics within each strand are referred to as *strand units*. Exemplars and suggestions are shown in italic type throughout the content sections.

The presentation of content in these two sections is intended to help teachers in planning for the development of important skills, concepts and attitudes as knowledge and understanding of geographical topics is acquired.

Skills and concepts in geography

The geographical skills and concepts outlined at this level are arranged under three headings:

- *A sense of place and space* which describes the development of the child's awareness of the distinctive characteristics of places and his/her locational knowledge and cognitive mapping abilities in the locality and wider environments
- *Maps, globes and graphical skills* which describes the development of the child's mapping skills through the use of a wide range of maps, globes and photographs and the construction of simple plans, models and sketch maps
- *Geographical investigation skills* which outlines how a range of scientific investigative skills may be developed through geographical work.

The strand units within the three strands opposite will provide the context within which most of these skills and concepts will be developed.

The strands of the geography curriculum

The strands of the curriculum present the geographical topics which children will explore through the study of

- *Human environments*, which involves the child in learning about people and their interrelationships with environments. Children's understanding of how the interaction of communities, their social, cultural and economic activities, and the features of the built and natural environment give places their distinctive character will be developed through practical investigations of a range of places. These should include the locality, a contrasting part of Ireland, another European environment and a non-European environment. Activities from this strand, including studies of trade and development issues, will also help to cultivate an awareness of human interdependence and a respect for people from different social, cultural, ethnic and religious traditions
- *Natural environments*, which is concerned with the child's developing knowledge of natural environmental features in the locality and wider environments, meteorological and atmospheric phenomena and the setting of the Earth in space
- *Environmental awareness and care*, which outlines how geography and science can foster the child's appreciation of environments and his/her sense of responsibility for their conservation and enhancement. This strand is common to the geography and science curricula and will be a major cross-curricular link.

The range of suggestions contained within the units of these strands provide considerable flexibility for schools and teachers in the selection of content.

A spiral approach

The curriculum is based on a spiral approach in which some geographical topics may be explored in increasing detail at a number of levels. Some aspects of the programme will be treated during third and fourth classes only, some will be taught in fifth and sixth classes only, while others could be profitably taught at both levels, with the more complex details, concepts, and methods of investigation and treatment reserved for fifth and sixth classes. Planning by schools and teachers will help to ensure that children experience continuity and progression throughout the geography programme while undue repetition or significant gaps are avoided.

The local environment

Geographical activities should be based on the local environment and all pupils should have the opportunity to explore and investigate the environment systematically and thoroughly. Geographical concepts and skills should be developed through explorations in the immediate environment whenever possible, with subsequent extension to regional, national and global environments.

Breadth and depth in a menu curriculum

A broad and balanced curriculum will ensure that children have access to a comprehensive range of geographical ideas and concepts from a variety of environments, while providing opportunities for the development of skills through practical investigations in the locality. Planning in the school should ensure that work in the strands *Human environments* and/or *Environmental awareness and care* incorporates aspects of life in developed and developing countries.

Within the strand units, it is not expected that children should complete each objective or suggested activity; rather teachers and schools will select from the content objectives and exemplars outlined.

Linkage and integration

Opportunities for integrated studies within SESE and with other areas of learning should be identified in planning: much work in the study of natural environments will utilise scientific skills and processes, while the study of human environments will present opportunities for integration with units in the history curriculum. It should also be remembered that the strands and strand units of the geography curriculum are not discrete: work on a geographical topic or investigation may incorporate objectives from a number of units.

It should also be noted that activities designed to develop the child's understanding of citizenship, community, human interdependence and relationships are more fully treated in the SPHE curriculum.

Within the content sections notes below strand units suggest some of the instances where linkage (i.e. integration within the geography curriculum) and integration (i.e. cross-curricular connections) might be established.

Skills and concepts development for fifth and sixth classes

The geographical skills and concepts below will be developed as work is completed on the strands and strand units of the curriculum.

A sense of place and space

Through completing the strand units of the geography curriculum the child should be enabled to

A sense of place

- explore and become familiar with the distinctive natural and human features of the locality, the county and Ireland
 - people and communities living and working in these areas*
 - how literature, culture, language and customs reflect the nature of places*
 - major natural features*
 - settlement: homes, other buildings, open spaces*
 - economic and leisure activities*
 - townland, parish and county boundaries*
 - major regions (e.g. Burren, Golden Vale)*
 - transport and other links between these features*
- become familiar with the distinctive natural and human features of some places in Europe and other parts of the world

A sense of space

- acquire an understanding of the relative location and size of major natural and human features
 - the major features of the locality and county*
 - some of the major features of Ireland*
 - county, provincial and other boundaries in Ireland*
- begin to develop an understanding of the names and relative location of some natural and human features of Europe and the world
 - a small number of major natural features*
 - some countries, capitals and major cities*
 - continental boundaries*
- estimate and measure distances and establish cardinal directions during exploration of the locality
- develop some awareness of directions in wider environments
- use and record directions and routes on maps.

Maps, globes and graphical skills

Through completing the strand units of the geography curriculum the child should be enabled to

Using pictures, maps and models

- develop familiarity with, and engage in practical use of, maps and photographs of a variety of scales and purposes
 - maps of locality, Ireland, Europe and the world*
 - bus, train and other route maps, aerial photographs*
 - maps on CD-ROMs and other electronic sources*
- develop an understanding of and use common map features and conventions
 - symbols (e.g. contour shading for mountains and lowland)*
 - key, index and simple grid-style references*
 - align (or set) a map of locality or region*
 - scale*
- use maps to record routes and directions in the locality and wider environments
- construct some simple maps and models of natural and human features in the local environment

Maps and globes

- compare maps, globes, aerial photographs, satellite photographs and other remotely sensed images
- recognise key lines of latitude and longitude on the globe
 - Equator, Tropics of Cancer and Capricorn, Arctic and Antarctic Circles, Greenwich Meridian, International Date Line*
 - latitude and longitude of Ireland*
- develop some awareness of problems of map construction
 - effect of various map projections on relative size of countries*
 - importance of perspective and bias in map construction.*

Geographical investigation skills

Through completing the strand units of the geography curriculum the child should be enabled to

Questioning

- ask questions about natural and human features and processes in the environment and their interrelationships

How have humans changed this place and why?

Why should a factory locate in this place?

Observing

- observe natural and human elements and processes in the environment and their interrelationships

colours and textures of natural materials

building styles and materials in urban or rural areas

varying farm and settlement patterns in rural landscapes

Predicting

- offer suggestions (hypotheses) based on a number of observations as to the likely results of investigations
- make inferences based on suggestions and observations
- propose ideas or simple theories which may be tested by experimentation

Investigating and experimenting

- carry out simple investigations and collect information from a variety of sources

observations and experiments in the environment and classroom

photographs, books, maps and other media

information and communication technologies

Estimating and measuring

- use appropriate simple instruments and techniques to collect data
 - improvised rain gauge, thermometer, trundle wheel, compass, record sheet*
- use appropriate standard units of measurement
 - mm of rainfall, distances in m and km*
 - wind speed using Beaufort scale*

Analysing

- sort, group and/or classify data on people, events and natural phenomena using a range of appropriate criteria
 - group buildings according to use in an urban area*
 - group fields according to crops grown on a farm*
- look for and recognise patterns and relationships in the environment
 - daily patterns in traffic flow on a road*
 - links between wind direction, temperature and rainfall*
- interpret information and offer explanations
- draw conclusions from suitable aspects of the evidence collected

Recording and communicating

- record and present findings and conclusions using a variety of methods including oral, written, pictorial, photographic, diagrammatic and graphical forms and using information and communication technologies

Evaluating

- review the methods used in investigations and assess their usefulness.

Strand: Human environments

Strand unit People living and working in the local area *and*

People living and working in a contrasting part of Ireland

These units will be completed using appropriate aspects of the following sub-units.

The child should be enabled to

People and communities

- learn about and come to appreciate the peoples and communities who live and work in the locality and in a contrasting part of Ireland

people who live and work in these areas

how people in these areas depend on each other

respecting and valuing diversity in the community

role of community groups and organisations

interdependence of local people and people in other parts of Ireland and the world

Natural environmental features and people

- become aware of the natural features in the locality and in a contrasting part of Ireland and their interrelationship with the lives of people living in these places

major natural features, flora and fauna

interrelationship of these features and the lives and work of people (e.g. lakes used as tourism attraction, river supplying power, mountains influencing farming)

changes to natural environments and their causes

Linkage

Natural environments—The local natural environment

Environmental awareness and care

Integration

History—Local studies; Continuity and change over time—Homes, housing and urban developments

SPHE: Myself and the wider world; Materials

Science: Living things—Plants and animals; Designing and making

Visual arts: work on colour, patterns and textures in the environment will complement work in visual arts.

Settlement: homes and other buildings

- explore, investigate and come to appreciate the major features of the built environment in the locality and in a contrasting part of Ireland

origins of the settlement

place-names, street names: their origins and meaning

shape or layout of features in the area in dispersed (e.g. single farmhouse) and/or collective settlements (e.g. groups of homes or buildings)

different types of homes in the area, including houses, cottages, flats, caravans, trailers, mobile homes

causes and effects of homelessness

location and uses of buildings

change, reconstruction and re-use of buildings

common building materials and patterns and their relationship to the environment

effect of weathering, pollution and other processes on appearance of buildings

People at work

- explore and investigate, especially through practical studies, *one or more* of the important economic activities of people in the locality and in a contrasting part of Ireland

Food and farming

investigate location, buildings and layout of a local farm
influence of soils and other factors on farming
work of the farmer through the year
awareness of different types of farming (e.g. tillage, livestock, dairy or mixed farming, horticulture, fish farming, organic farming)
changes in Irish agriculture (e.g. mechanisation, new technologies, environmental issues, markets, land use)
sale and distribution of farm produce
factors and activities affecting the life of farmers and farm families in Ireland (e.g. farm tourism and diversification, influence of EU)

Forestry

location factors for forests
work of forester during the seasons
work over the lifetime of the forest, the forestry cycle
types of trees grown and their uses
effect of forests on landscape and the environment
forestry and industry

Fishing

location of fishing areas, types of fish caught
workers on fishing boats and on shore
development of fishing industry
people and work involved in associated activities
fishing and the environment

Industry

site and location factors of a factory or industry
raw materials, process and products
distribution and sales
work of people involved
benefits and possible disadvantages for people and the environment in the area
changing patterns of industry (e.g. closure of older factories, growth of new industry)
importance of local enterprise
role of industrial agencies

Services

a service or services available in the area (e.g. postal service, banking, local authority, library services, health services, retailing, power and energy supply)
work of people involved
importance of service to the lives of people
suggestions for the improvement of service
role of county, national and rural service agencies and companies

Tourism, leisure and recreation

what makes place attractive to tourists
types of tourism, people who visit the area
local interests, pastimes and customs
tourism, leisure and recreation
infrastructure
work of people employed
caring for facilities, ideas for improving facilities
role of cultural, sporting and other voluntary associations
benefits and disadvantages of tourism
promotion of tourism, leisure and recreation industry in Ireland and abroad

Transport and communications

- learn about the methods of transport and transport routes in the locality and in a contrasting part of Ireland
road, rail, air, water, pipelines (e.g. gas)
- become aware of the advantages, disadvantages and roles of these methods
- learn about the available methods of communication
postal and telecommunications
electronic media (e.g. satellites, internet)
- become familiar with the work of people in these activities.

Linkage

Environmental awareness and care—Environmental awareness

Integration

History: Local studies

Science: Materials; Designing and making

Strand unit People and other lands

The child should be enabled to

- study some aspects of the environments and lives of people in *one* location in Europe and *one* location in another part of the world

location of these areas

peoples and communities that live there

language(s)

art and culture, customs and traditions

clothes

play and pastimes, leisure interests

population growth or decline

some major features of the natural environment

interrelationships of the lives of people and these features

homes and settlements

settled and nomadic lifestyles

major cities (e.g. cities in European or other countries)

shanty towns

work and work-places (e.g. farming or other primary producers, industry, services, tourism)

transport and communications

similarities and differences between these places and Ireland

trade, historic and other links these peoples have with Ireland

- develop an increasing awareness of the interdependence of people in these places and people in Ireland
- learn to value and respect the diversity of peoples and their lifestyles in these areas and other parts of the world
- become aware of various ethnic, religious and linguistic groups of peoples in Ireland, Europe and the wider world
- develop a sense of belonging to local, county, national, European and international communities.

Integration

History: Early people and ancient societies; Eras of change and conflict

Science: Designing and making

Strand unit County, regional and national centres

The child should be enabled to

- become aware of the location of the counties of Ireland, some of their towns and cities; the origins and geographical significance of their place-names
- identify some of their important buildings, features, facilities, parks, work-places
- learn of the movement of people to and/or from these centres
- become familiar with the names, locations and some well-known features of the capital cities of the European Union.

Strand unit Trade and development issues

The child should be enabled to

Trade

- explore, through the study of some major world commodities, trade issues
 - commodities used by people in Ireland (e.g. sugar, tea, coffee, bananas, rubber, oil)*
 - where and how they are produced*
 - environment where they are produced*
 - work of people who produce these products*
 - trading of these products*
 - manufacturing, sale and distribution in Ireland*
 - terms of trade, fair or unfair trade conditions*

or Famine

- become aware of the causes and effects of famine
 - causes*
 - environmental factors*
 - natural disasters*
 - social and economic factors*
 - unequal distribution of land, resources or food*
 - effects*
 - on families and communities*
 - on land and environment*
 - on population movements*

- examine the work of relief agencies and become aware of Irish involvement in them
- discuss possible short and long-term solutions to famine
- compare the experience of famine in Ireland with that of other countries

or Development and aid

- come to appreciate the inequalities between the developed and the developing world
- explore some of the issues and problems associated with aid
 - effect on recipients, appropriate technology*
- acquire some knowledge of the origins, work and Irish involvement in some major international organisations
 - United Nations High Commission for Refugees (UNHCR)*
 - major non-governmental organisations (NGOs) (e.g. Tr caire, Red Cross).*

Integration

History: Eras of change and conflict—Traders, explorers and colonisers from Europe, The Great Famine, Changing land ownership in 19th century Ireland

History: Continuity and change over time—Homes, housing and urban developments, Nomadism

Strand: Natural environments

Strand unit The local natural environment

The child should be enabled to

- investigate and learn about the main natural features in the locality and county

aspects such as

names and their origins

location relative to other features

relationship to major features of Ireland

size, shape and appearance

effect of weather and seasonal changes

physical processes which have shaped or altered the feature (e.g. erosion by water or ice)

of features such as

streams, rivers, lakes, hills, drumlins, valleys, mountains, lowlands, beaches, shorelines, cliffs, bays, headlands

- observe and develop simple understanding of the links between these features

marsh or bog between drumlins

erosion of coastline and resulting beaches

run-off and drainage patterns in the locality

(e.g. drains in the school yard, street or farmland linked to tributaries, rivers and flood plains)

- investigate the influence of these features on plants and on the lives of animals and people

range of flora and fauna

homes, economic activities, transport, communications

- become aware of the ways in which people, animals and plants have exploited and/or altered these features

water collection and supply, power generation

mining, removal of peat, farming, tourism.

Linkage

Human environments: People living and working in the local area

Integration

Science: Living things; Materials

Strand unit Land, rivers and seas of Ireland

The child should be enabled to

- become familiar with the names and locations of some major natural features in Ireland
mountain ranges, rivers, lakes, bays, headlands, islands
- become familiar with the relationship of these features with each other, with elements of the built environment and with significant natural features of Ireland
*towns built near rivers, harbours in bays
links between local stream and major river*
- understand some of the interrelationships between these natural features and the lives of plants, animals and humans.

Strand unit Physical features of Europe and the world

The child should be enabled to

- learn about a *small* number of the major natural features of Europe
Alps, Rhine, Mediterranean Sea
- become familiar with the names and approximate location of a *small* number of major world physical features
major mountain ranges (e.g. Rockies, Himalayas), major rivers (e.g. Nile, Amazon), deserts (e.g. Sahara, Great Australian), continents, oceans.

Strand unit Rocks and soil

The child should be enabled to

Rocks

- collect and identify some common rocks in the locality
- identify and explore the use of stone in building and other human activities, especially in the locality
- develop simple understanding of the structure of the Earth, using terms such as core, mantle, crust, plates of the crust, lava flow, volcano, earthquake
- learn about the characteristics of some common rock types and where they may be found in Ireland and in other parts of the world

become aware of major rock groups (i.e. igneous, sedimentary and metamorphic) and some common rock types (e.g. granite, limestone, marble)

Soils

- collect and examine soil samples and their constituents
- compare soil samples from different parts of the locality
compare constituent parts, colour, water retention
- learn of the relationship of plants and farming to soil types
- be familiar with some ways of changing and/or improving soil structure.

Integration

Science: Materials

Strand unit Weather, climate and atmosphere

The child should be enabled to

Weather observations

- use simple equipment to make detailed weather observations and recordings of phenomena
main cloud types, cloud cover, temperature, rainfall or other precipitation, wind strength and direction, atmospheric pressure (using domestic barometer)
- record and display simple weather observations in systematic way using graphs, charts and common meteorological symbols
- use analysis of weather recordings to associate simple descriptions of clouds, amount of cloud cover, wind direction and other conditions with particular types of weather; make and test weather predictions
- collect weather lore, especially local traditions and knowledge

Weather and climate

- explore weather patterns over the year in the locality using a variety of graphical and analytical skills
- begin to appreciate the difference between climate and weather
- develop some awareness of weather patterns in other parts of Ireland and factors influencing climate in the locality and in Ireland
altitude, distance from sea, distance from Equator, prevailing winds, aspect
- explore the relationships between climatic factors and aspects of building construction
shelter, aspect, sunlight, insulation, weathering
- become aware of the characteristics of some major climatic regions in different parts of the world
- explore the relationship of climate to plant, animal and human life

The atmosphere

- develop simple understanding of some atmospheric features
*nature of the atmosphere, properties of air
global wind movements, storms and weather disasters
the water cycle
atmospheric pollution.*

Integration

Science: Energy and forces—Heat; Materials—air may be investigated as a material; Designing and making

Strand unit Planet Earth in space

The child should be enabled to

The Earth and the sun

- observe and record the positions of the sun when rising and setting and at different times of the day
- investigate the relative lengths and directions of shadows and the intensity of sunlight at different times of the year
- observe the changing lengths of day and night during the seasons
- understand the importance of sunlight as a source of energy for plants and animals
- become aware of the influence of the sun on atmospheric conditions
- become aware of the dangers of sunlight for eyesight and skin

The Earth, moon and solar system

- recognise that the Earth, its moon, the sun, other planets and their satellites are separate bodies and are parts of the solar system
- develop a simple understanding of the interrelationship of these bodies, including day and night and seasonal movements
- recognise a few of the major star constellations

the Great Bear and Pole Star, Orion.

Strand: Environmental awareness and care

Strand unit Environmental awareness

The child should be enabled to

- identify, discuss and appreciate attractive and unattractive elements of natural and human environments
 - buildings and elements of the human environment which use natural and other materials in an attractive way and are in keeping with the scale of immediate surroundings*
- explore some examples of the inter-relationship of climate, natural features, flora, fauna and human life in different environments in Ireland and in some of the main climatic regions of the world
 - in locality*
 - ecosystem of tree, hedgerow, stream*
 - in Ireland*
 - boglands, mountains, Burren, rivers*
 - in other areas*
 - rainforest, grasslands, desert, tundra*
- recognise and investigate aspects of human activities which may have positive or adverse effects on environments
 - enhancement of the beauty of built environments*
 - protection of flora and fauna*
 - excess waste or non-biodegradable waste*
 - activities which affect the quality of air or water*
 - deforestation or desertification*
 - changes to buildings or streetscapes in towns*
 - recycling and reuse of materials*
- become aware of the importance of the Earth's renewable and non-renewable resources
- foster an appreciation of the ways in which people use the Earth's resources
 - mining, fishing, forestry, agriculture*
 - using wind, water, fossil fuels or nuclear energy to generate power*
 - using the environment for leisure activities*
 - processing raw materials in manufacturing*
- come to appreciate the need to conserve the Earth's resources.

Linkage

Many of the objectives of these units will be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental awareness and care is a cross-curricular strand common to the geography and science curricula.

Visual arts: an awareness of colour and textures in the environment will complement work in visual arts.

PE: Outdoor and adventure activities

Strand unit Caring for the environment

The child should be enabled to

- examine a number of ways in which local and other environments could be improved or enhanced
- identify and discuss a local, national or global environmental issue
 - an issue such as*
 - an incident of pollution*
 - construction of a new building, factory or road*
 - alterations to a building*
 - changes in farming practices*
 - traffic congestion and road safety*
 - suggestions for environmental enhancement*
 - global warming*
 - ozone depletion*
 - deforestation, desertification*
 - investigate the causes of the issue or problem*
 - identify and use ways to assess or measure the extent of the problem*
 - appreciate the roles and different views of people involved*
 - suggest possible actions and consider the effect of these on people and the environment*
 - participate in the resolution of the issue if possible*
 - organise collection of paper, aluminium cans or other materials for recycling*
 - compost waste in the school garden*
 - become aware of the need to use energy wisely in school and at home*
- come to appreciate individual, community and national responsibility for environmental care
 - explore concept of custodianship and its implications*
 - become familiar with concept of sustainable development*
 - appreciate the need to protect environments for present and future inhabitants.*

Linkage

Many of the objectives of these units may be achieved as children complete work in other strands of the geography curriculum.

Integration

Environmental care is a cross-curricular strand common to the geography and science curricula.

Visual arts: an awareness of colour and textures in the environment will complement work in visual arts.

PE: Outdoor and adventure activities

Assessment

Assessment in SESE

Assessment: an integral part of teaching and learning

The assessment of children's learning is an essential and on-going part of the teaching and learning process in SESE: in some form it will be a part of every lesson in geography, history and science. Teachers are constantly making judgements about their pupils' learning as they plan how to introduce and develop topics, concepts and skills, consolidate earlier lessons, assess the progress of individual pupils, identify difficulties, and praise and encourage learners.

Assessment enhances the teacher's awareness of each individual's learning, provides accurate information about the child's understanding and skills, and creates a picture of the child's holistic development throughout the broad range of curricular areas. It provides the basis for decisions about the pupil's further learning needs, assists in planning better educational experiences and is a natural element of a progressive child-centred curriculum.

Roles of assessment: why assess in SESE?

Assessment enhances teaching and learning in a number of ways. Primarily, assessment in SESE, as in other areas of the curriculum, should assist in planning and supporting future learning for the child. Assessment should indicate the positive achievements of each pupil as he/she is engaged in the study of geographical, historical and scientific topics and should indicate possible areas of development in the child's learning. Used in this way, assessment plays a constructive, *formative* role in the child's education. Information gained about the child's learning will be used primarily by the teacher but assessment will also involve the pupil in self-evaluation and in the setting of personal learning targets.

Assessment will also indicate areas of learning difficulty encountered by the child. The learning difficulties identified in SESE may include weaknesses in the child's understanding, gaps in his/her knowledge or a lack of certain skills. As assessment fulfils this *diagnostic* role it should help the teacher to identify approaches or learning experiences which would help to improve the child's learning. At times learning difficulties may be identified in one aspect of the child's geographical, historical or scientific development but on other occasions a weakness encountered in one area of SESE will reveal information about the child's learning in

the other SESE curricula. Many teaching and learning experiences in geography, history and science draw on and use a wide range of skills and concepts so SESE may also provide valuable opportunities to gain evidence of a child's progress in areas such as mathematics, language and social development.

Assessment should provide an indication of the child's overall achievement in a systematic way at regular intervals. Assessment may be used to fulfil this *summative* role when teachers seek to establish the outcomes of learning following completion of a unit of work or when they report to audiences beyond the child, for example when they communicate with parents or other teachers about the child's progress.

Assessment can also help the teacher to evaluate the suitability of the SESE programme selected by the teacher and school for a particular age-group, and can assist the teacher in assessing the effectiveness of the educational resources, methodologies and approaches deployed. Used in this *evaluative* role, assessment can help to identify how the learning experience could be improved for the child.

Assessment in geography

Assessment and the nature of geography: what should be assessed?

In geography children will learn about the Earth, its inhabitants and environment and the interrelationships between them. They will explore and become familiar with the lives of people in various environments and the links these have with the natural and human features to be found in these places. They will also come to appreciate how natural and human processes have helped to create or change environments. Learning in geography involves the acquisition of knowledge about environments and at the same time the development of geographical skills and the cultivation of important attitudes and values. Valid assessment in geography therefore must attempt to measure the child's achievements and progress in all these aspects of learning.

Strands and strand units

The geography curriculum is arranged in a number of strands and strand units. These outline the knowledge areas of the curriculum and indicate how appropriate skills may be developed as work on the units is completed. The range of geographical features, processes and environments to be explored and the depth of treatment expected in each strand is indicated by a progressive development and expansion in the strand units as the child progresses from one class level to another. The section on *Classroom planning* in the teacher guidelines illustrates how the strand units may be incorporated into schemes and units of work. The knowledge aspects of these units of work will be one important dimension of assessment in geography.

The curriculum makes it clear that much of the work in the infants to second class curriculum may be delivered through integrated themes and topics, and assessment should be sufficiently flexible to accommodate this pedagogical approach. Assessment techniques will also have to take cognisance of the varied range of environments which may be used as the basis of geographical work in the middle and senior classes, and the criteria which should inform the planning of a broad and balanced geography curriculum.

The flexibility offered by the curriculum and the requirement that the child studies elements from local, national and more distant environments make comprehensive planning, effective summative assessment and record-keeping essential within the school.

Geographical skills and concepts

The development and application of geographical skills and concepts is a second important dimension of valid assessment in geography. At each level in the curriculum the sections *A sense of place and space*, *Maps, globes and graphical skills* and *Geographical investigation skills* outline the skills and concepts which should be developed as the child engages in the observation and investigation of the environment and in the representation of spatial, locational and other geographical information in plans, maps, models and other forms. The objectives and exemplars listed under each heading in these sections are intended to indicate the degree of skill which should be expected at each level. In general, these geographical skills should not be developed in isolation but should be acquired as they become relevant in the context of work on local or other environments.

Skills, of their nature, involve process activities, so progress and achievement may not be immediately verifiable or readily recorded, especially in a skill such as observation. Children's understanding and mastery of geographical skills are demonstrated best when they are applied during the exploration and investigation of environments and the features and processes found in these places. The child will use geographical skills when working individually, but frequently the application of skills will be observed more readily in group work, class discussion and outdoor activities.

Many of the skills developed in geography, such as individual observation, estimating, measuring, predicting and analysing, will be complemented by similar skills in the science curriculum. Similarly, the child's ability to apply some skills, such as estimating, measuring, analysing, recording and communicating, may be contingent on elements of the mathematics, science and language curricula. This could also apply to the concepts of space, relative location, distance, direction and aerial perspective involved in *A sense of place and space* and *Maps, globes and graphical skills*.

If assessment is to be a valid indicator of the child's geographical skills and understanding it must seek to record and acknowledge the ability which the child demonstrates through a range of activities in varied learning situations. Assessment must involve the use of tools which can accommodate the subtleties of this learning process and assess the child's learning in the context of the environments with which he/she is familiar.

Values, attitudes and responsibilities

Assessment in geography will also be concerned with the values and attitudes which are developed in the child as he/she is engaged in the study of geographical topics. The curriculum stresses the role which geography may play in cultivating a sense of responsibility for sustaining and enhancing the environment and in fostering an appreciation of the interrelationships of all living things and their environments. Geography also cultivates open, questioning attitudes, a respect for various ethnic, cultural, religious and social groups, and an appreciation of human interdependence.

These attitudes are fostered by a balanced curriculum of geographical topics from local, national and wider environments in which the child is encouraged to apply geographical skills and concepts in an open, critical way. As in the case of skills, a child's development of these attitudes can only be gauged in the context of authentic discussions and learning situations. Assessment of the child's attitudes in geography must therefore rely strongly on the teacher's observations and his/her professional judgement of the child's approach and reaction to geographical topics and activities.

Assessment tools: how to assess

Assessment in geography must assess the child's knowledge and understanding of environmental matters, the acquisition of geographical skills and the development of attitudes. A range of assessment tools will be necessary, ranging from informal assessment techniques to more structured approaches. All the approaches used should arise naturally out of teaching and learning, and their effectiveness will be dependent on crucial teacher skills of observation, listening, interacting with the child and scrutinising the outcomes of learning tasks used in geography.

The following are among those which schools will find most useful:

teacher observation

teacher-designed tasks and tests

work samples, portfolios and projects

curriculum profiles.

It should be understood that it may not be practicable or desirable to use all these tools in every learning situation or within a particular time span.

Teacher observation

The details of the child's learning noted by the teacher in a variety of learning situations furnish some of the most important information about the child's progress. This information will be used to adjust the pace of lessons, to choose the most appropriate teaching strategies, and to identify the need for further reinforcement or appropriate extension work. Much can be gleaned from observing and noting the child's responses in a variety of situations, including:

- the responses the child makes to teacher questions and suggestions
- the participation of the child in the whole-class discussion of geographical features, processes, interactions and phenomena
- the way in which the child may identify and discuss environmental issues in a variety of environments
- the participation of the child in efforts to enhance the environment and to solve environmental problems
- the interaction of the child with others in discussions and group work
- the reaction of the child to learning materials.

Observations of children's learning in geography may be made in an incidental manner but at times the teacher may wish to assess children's progress in a more structured way. During such observation the teacher may decide to concentrate on a group of pupils rather than a whole class and observe the children's competence in a focused way. The teacher may take an active role in the proceedings by participating in the activities, talking to the child or asking questions, thereby gaining insight into the child's understanding of geographical concepts and mastery of geographical skills. The teacher may find that making a simple written note of observations can make the planning of further work for the individual, group or class more focused and systematic.

Teacher-designed tests and tasks

During work on the units of the geography curriculum, children will be engaged in a range of learning activities. Almost all these learning experiences may be used by the teacher to observe and collect evidence of children's progress as they explore geographical phenomena and processes and apply geographical skills.

Children should engage in a wide range of activities, including:

- giving oral, written or pictorial accounts and descriptions of environmental factors observed or studied
- collecting information from sources such as direct observation in the environment, interviews and books, electronic sources and the internet and other materials in the classroom and library
- observing accurately both inside and outside the classroom
- predicting outcomes of an investigation
- estimating, measuring and comparing
- analysing objects and processes
- sorting and grouping people, events and natural phenomena
- recognising patterns
- completing work cards or activity sheets which guide the child towards fulfilling particular tasks
- undertaking a range of outdoor tasks
- displaying and reporting on completed project work and on work in progress
- using elements of graphicacy
- using interactive multimedia computer programs which enable the child to explore geographical themes and topics and complete a range of tasks, puzzles or problems
- using maps and globes
- completing independent geographical research, recording and presenting the results
- completing teacher-designed revision tests on a unit or units of work
- engaging in practical environmental investigation or enhancement
- asking questions about aspects of the environment.

Teacher-designed tests and tasks that are intimately linked to the teaching and learning process may be used to assess both the child's knowledge of geographical topics and his/her ability to use geographical skills. The use of a range of tasks ensures a broad programme and encourages the child to demonstrate the fullest extent of his/her geographical understanding. The inclusion of tasks in media other than writing will enable the teacher to assess more accurately the level of geographical understanding of children with less developed literacy skills.

Work samples, portfolios and projects

Children's progress in geography may be documented and assessed over a term, a year or a longer period through the collection of a range of samples of their work in geography portfolios. Depending on the school's assessment policy, and the need to make the handling, scrutiny and storage of portfolios manageable, these may contain examples of work in progress or best samples of finished pieces together with teachers' comments.

The diverse learning activities in which the child will be engaged in the geography curriculum will provide a range of work from which samples may be selected. The inclusion of the child's efforts at map work, photographs of models constructed and areas visited, completed trail booklets, the results of project work, record sheets from experiments, computer disks and other forms of electronic storage should be considered for inclusion in the portfolio in addition to written work in copybooks and other formats.

Portfolios are particularly suited to the assessment of geography and provide positive reinforcement for the learner. The older child can be responsible for the maintenance of his/her portfolio, so gaining a pride in his/her achievements, and this can be further enhanced by encouraging the child to select his/her best samples for inclusion. Portfolios provide a simple yet effective record-keeping scheme within the school and can inform the summative assessment of the child's progress. An analysis of portfolios by the teacher can help in the evaluation of the content, methodologies and approaches which he/she has used and may facilitate the pooling of teaching and assessment experience among the school staff.

Curriculum profiles

Curriculum profiles comprise a number of indicators of achievement, i.e. short sentences which outline the range of geographical knowledge, skills and attitudes which might be expected of the child at different stages. The teacher seeks to match his/her observations of children and their work to the indicators in the profile as learning progresses or as work is completed on a unit and at other regular intervals. In this way, the profile may be used to assist the teacher in arriving at a professional judgement of the child's progress. At times sets of the indicators may be grouped, sometimes in the form of short paragraphs, so as to provide a general description of achievement at a number of particular levels. The profile may also be used to record progress as children demonstrate mastery of indicators. It may then be used to inform summative assessment and to report to parents and others.

The development of suitable geography profiles would facilitate greatly the reliable and valid assessment of the geography curriculum. The geographical skills and concepts outlined in the sections *A sense of place and space*, *Maps, globes and graphical skills* and *Geographical investigation skills* would provide a basis for the development of some of the indicators to be included in a geography profile, while other indicators would refer to the knowledge areas outlined in the content strands and the attitudes which are described in the aims and broad objectives of the curriculum. The close links which the strand units and skills sections of the geography curriculum have with the science curriculum should also be borne in mind.

A balanced approach to assessment in SESE

The primary aim of all assessment is to enhance the learning experiences of the child and it will be important that the assessment techniques utilised in geography and other areas of SESE should not detract from teaching time. The school's policy for geography should guide teachers in using assessment tools in a manageable and reliable way which is closely integrated with teaching and learning. The development and use of common approaches to recording teacher observations, the outcomes of learning experiences and the compilation of portfolios and curriculum profiles will facilitate a balanced and practical approach to assessment in the school.

Recording and communicating

Teacher observations, teacher-designed tasks and tests and work samples or portfolios, together with curriculum profiles and pupil profile cards, constitute a comprehensive system of assessing and recording each child's progress and achievements in the geography and wider SESE programme. The pooling and discussion of this information among the teaching staff can enable teachers to share expertise and develop a common understanding of pupil progress and assessment in SESE (a process referred to as *moderation*). Such co-operation can help to ensure continuity and reliability in the use of the assessment tools.

The range of assessment tools in SESE should provide essential information about the child's learning for pupils, teachers, schools, parents and other professionals and so facilitate future decisions about the child's learning.

Pupil profile card

The recording and communication of this information about the child's progress will be facilitated by the use of a pupil profile card. The pupil profile card, which may be developed for use in all primary schools, should contain a summative assessment of the child's progress in all curricular areas and of other aspects of his/her development.

The teacher's professional judgement of the child's development in geography based on the outcomes of teaching, learning and assessment throughout the year will form one aspect of the profile card. The section of the profile card for SESE should be sufficiently flexible to allow for the highly integrated nature of the area in the infant, first and second classes. As it should provide a basis for the planning of the child's future learning in another class or school it should include, or be accompanied by, information regarding the selection of geographical topics which the child has explored.

The possibilities and advantages offered by information technology in facilitating the recording, storage and transfer of pupil profile records should be explored and if possible used in the compilation of any widely used pupil profiling system.

Appendix

Glossary

aerial	literally from the air; used to describe the view from above, for example an aerial perspective
aerial photograph	a photograph taken from an elevated position, usually from an aircraft but also from a satellite; may be oblique or vertical
align	see <i>orientate</i>
altitude	distance above average (mean) sea level
anemometer	an instrument for measuring (and recording) wind speed
Antarctic Circle	the parallel of latitude at 66.5° S (see <i>latitude</i>)
Arctic Circle	the parallel of latitude at 66.5° N (see <i>latitude</i>)
aspect	the direction in which something faces; often used to describe sloping land or a building in relation to the sun
atmosphere	the layer of gases (mainly nitrogen, 78% and oxygen, 21%) surrounding the Earth
atmospheric pressure	the pressure exerted by the weight of the atmosphere on the Earth's surface, decreasing with height above sea level and varying with weather conditions; may be measured with a barometer and expressed as inches, millibars or hectopascals of pressure
barometer	an instrument for measuring atmospheric pressure
Beaufort scale	scale of wind speed ranging from 0 (calm) to 12 (hurricane, over 120 km/h) devised by Sir Francis Beaufort in 1805
built	constructed by humans; for example, built features in the landscape may include items such as buildings, roads, railway lines, fields, walls or power lines; a built environment is composed largely or solely of features constructed by people
cardinal points	the four main points of the compass, north, east, south, west
cirrus	see <i>cloud types</i>
climate	the average weather conditions experienced in a particular region over a lengthy period, the minimum being 30 years

clinometer	an instrument for measuring the angle of elevation of a slope
cloud cover	the estimated fraction of the sky covered in cloud, usually expressed in eighths (okta)
cloud types	terms used to classify clouds by form, by height and by whether they are rain-bearing or not; primary school children may be introduced to the three main forms, viz. cirrus (feathery), stratus (sheet or layer), cumulus (heaped)
cognitive map	a mental map or stored image of a place
contour	an imaginary line joining all points of equal height above or below sea level; this line when drawn on a map
core	the central part of the Earth
crust	the outer layer of the Earth
cultural environment	artistic, religious, ethnic, scientific, technological and recreational activities are aspects of cultural environments
culture	beliefs, behaviour and overall way of life shared by a group of people; a network or system of beliefs, ideas, symbols, values, behaviour and social relations together with its tools, buildings, works of art and other forms of artistic expression transmitted from one generation to the next
cumulus	see <i>cloud types</i>
deposition	the laying down of material which has been eroded and transported; for example, material eroded by a river may be deposited in a delta, rock eroded by the sea may be deposited as a beach
developed area/world	economically prosperous area or region
developing area/world	an area or region developing economic prosperity; often regarded as the converse of developed area

dispersed settlement	a pattern of settlement in which homes or other buildings are scattered rather than grouped together
ecosystem	a system formed by all organisms and their interactions with each other and with their physical environment; for example, the ecosystem of a hedgerow would include the soil, plants, insects and other animals, their interdependencies and interrelationships
electronic sources	sources of information including CD-ROMs, computer disks, on-line sources (such as those available via e-mail and the internet) and all other forms of information and communication technologies (ICT)
environment	the total surroundings or external conditions within which people, animals and plants live
Equator	the great circle of the Earth with a latitude of 0°, lying equidistant from the poles
erosion	the wearing away of rock or other surfaces, caused by the action of running water, ice, wind, wave action or by chemical processes; erosion involves both the breaking off of material and its removal
ethnic group	a group within a larger population distinguished by traits such as common geographical origins, language, culture or religious traditions
graphicacy	one of the four methods by which people communicate information (literacy, numeracy, oracy, graphicacy); the ability to record, communicate and interpret spatial and other information through the use of methods which do not rely primarily on verbal or numerical means; graphicacy involves the use of maps, plans, diagrams, photographs, models, globes, electronic displays and other methods
graphical	relating to graphicacy

grid	a system of parallel lines intersecting at right angles and producing a series of squares on a map so as to facilitate the description of each point within the squares by the use of co-ordinates or grid references; on simple maps an alphanumeric grid system having the vertical axis marked A, B, C etc. and the horizontal axis numbered 1, 2, 3 etc. will produce grid references such as 4A and 2C
iconic	in pictorial form; used to describe elements of a child's map, perhaps houses or trees, which are drawn in pictorial form in contrast to elements such as paths or roads which appear in true plan form
igneous rock	rock which has been formed by the solidification of molten rock material or magma; for example, granite and basalt are igneous rocks
key	an explanation of the symbols, shading and colours used on a map
landform	the shape, form and nature of a feature on the surface of the earth, for example a hill, mountain, beach
landscape	the total surface form of any rural or urban area, including both natural and human features
large-scale map	a map showing a small area on which features appear in great detail; the larger the scale the greater the detail which may be shown but the smaller the area of land depicted
latitude	distance north or south of the Equator measured as an angle with the centre of the Earth in degrees, the Equator being 0°, the North Pole 90° N and the South Pole 90° S; lines of latitude are parallel to the Equator and are therefore called parallels of latitude; see <i>Equator, Tropic of Cancer, Tropic of Capricorn, Arctic Circle, Antarctic Circle</i>
lava	molten rock or magma that issues from a volcano or fissure on the Earth's surface

location factor	a factor or consideration which encourages people to establish homes, work-places or other features in a particular place; for example, the availability of good transport links might be a location factor for an industry
longitude	the angular distance east or west of the Prime Meridian (i.e. the line of longitude running through Greenwich, near London) measured in degrees; all meridians of longitude meet at the North and South Poles and intersect parallels of latitude at right angles
magma	semi-molten rock found beneath the crust of the Earth
mantle	the part of the Earth lying between the core and the crust
meridian	a line of longitude
metamorphic rock	rock which has been derived from pre-existing rock which was altered by the application of heat and/or pressure; for example, marble is a metamorphic rock formed when limestone is subjected to heat and pressure
nucleated settlement	a cluster of dwellings or other buildings
oblique aerial photograph	a photograph taken from an aircraft or satellite with the camera pointing down at an angle rather than vertically; the photograph produced combines aspects of the ground view with those of the true plan so that buildings and other features are much more readily identified
orientate	set or align a map so that a north-south line on the map is parallel to the north-south line on the ground; for young children the orientation of maps and plans of small areas will involve linking real places to their representations on the map
parallel	a line of latitude

phenomena	events that can be studied and/or explained scientifically; for example, weather phenomena could include rainfall, a storm, a rise in temperature or the formation of clouds
plates of the crust	the large and rigid elements which make up the crust of the Earth; these plates may move slowly in relation to one another
primary industry	an activity directly concerned with the collection or use of natural resources; for example farming, fishing, hunting and mining (see <i>secondary industry</i> and <i>service industry</i>)
primary product	a product of a primary industry
Prime Meridian	the line of longitude which passes through Greenwich, near London; other lines of longitude are measured in degrees east or west of this meridian
process	a continuous change made up of a series of actions or events; for example, natural processes include erosion and deposition while processes such as settlement, migration and trading will be encountered in human geography
remotely sensed image	an image obtained using remote sensing
remote sensing	a means of obtaining information about a feature or phenomenon at a distance from it and without physical contact with it; for example, information might be obtained from sensors on aircraft (as in an aerial photograph) or a satellite (as in satellite images showing land use or temperature)
resource (natural)	a feature of the environment (such as minerals, fossil fuels, soils or climate) which may be used in order to meet human need; renewable resources are naturally replenished (e.g. solar energy, rainfall) while non-renewable resources are finite and so their exploitation will lead to their exhaustion (e.g. fossil fuels and minerals)

secondary industry	the processing of raw materials or foodstuffs; the making of articles or materials by physical labour or mechanical power (see <i>primary industry</i> and <i>service industry</i>)
sedimentary rock	rock formed from layers of sediment which have resulted from the breakdown of other rocks or organic material and the deposition of the debris in environments such as deep oceans and seas; for example, sandstone and chalk are sedimentary rocks
service industry	distributive trades (for example retailing and wholesaling), financial, commercial and educational institutions, transport and communications, professions and personal services, public administration and defence, construction, repair and maintenance services; often used as an index of development for groups of people in that it indicates their stages of economic advancement (see <i>primary industry</i> and <i>secondary industry</i>)
set	see <i>orientate</i>
settlement	any form of human habitation, varying from a single dwelling to the largest cities; the process which gives rise to settlements
signpost map	a plan indicating the direction to various objects or locations from a central point; for example, a signpost map might have a child's desk at its centre, from which arrows could radiate to indicate the direction to objects within the room
small-scale map	a map showing a large area on which features are represented in less detail; the smaller the scale the less detail which may be shown but the larger the area of land depicted
social environment	patterns of human behaviour, the social institutions developed by people, and the political and economic systems which they utilise are aspects of social environments

stratus	see <i>cloud types</i>
streetscape	the impression made on the senses (primarily visual) by the human and natural features of an urban area
sustainable development	the prudent and rational use of natural and human resources so as to maintain, protect and improve the quality of the environment for present and future generations
topography	the description of the surface features of a place
Tropic of Cancer	the parallel of latitude at 23.5° N
Tropic of Capricorn	the parallel of latitude at 23.5° S
Tropics	the area between the Tropic of Cancer and the Tropic of Capricorn
vertical aerial photograph	a photograph taken from an aircraft or satellite with the camera pointing down vertically; objects at the centre of the resulting photograph are shown in true plan form
weathering	the process by which rocks are decomposed or disintegrated by exposure (at or near the Earth's surface) to water, the atmosphere and organic matter; weathering is concerned with the breakdown of rocks, while erosion involves weathering and the transport away of the resulting rock debris
windrose	a graphic representation showing the frequency of winds blowing from the eight chief points of the compass

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This curriculum has been prepared by the Curriculum Committee for Social, Environmental and Scientific Education established by the National Council for Curriculum and Assessment.

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