

# Geography

Guidance for Key Stages 2 and 3



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# Geography

## Guidance for Key Stages 2 and 3

**Audience** Teachers at Key Stages 2 and 3; local authorities; regional consortia; tutors in initial teacher training; and others with an interest in continuing professional development.

**Overview** These materials provide key messages for planning learning and teaching in geography. They include profiles of learners' work to exemplify the standards set out in the level descriptions and illustrate how to use level descriptions to make best-fit judgements at the end of Key Stage 3.

**Action required** To review learning plans and activities at Key Stages 2 and 3, and to prepare to make judgements at the end of Key Stage 3.

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**Additional copies** This document can be accessed from the Learning Wales website at [gov.wales/learning](http://gov.wales/learning)

**Related documents** *Geography in the National Curriculum for Wales; Skills framework for 3 to 19-year-olds in Wales; Making the most of learning: Implementing the revised curriculum; Ensuring consistency in teacher assessment: Guidance for Key Stages 2 and 3* (Welsh Assembly Government, 2008)

This guidance is also available in Welsh.

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## Introduction

The programmes of study set out the opportunities that learners should be given at each key stage and provide the basis from which you, as a teacher, can plan learning and teaching. They are divided into two sections, Skills and Range. The Skills section lists the skills to be developed in a subject and the Range section comprises the opportunities and contexts through which these skills should be developed and consolidated.

Ongoing formative assessment – assessment **for** learning – lies at the heart of good teaching. Through the assessments that you make in the course of your teaching, you will build up an extensive knowledge of your learners' strengths, as well as the areas that need further development, and you will use this knowledge to help you plan for the next steps in their learning. Learners will also gain understanding of specific learning goals and the associated success criteria so that, supported by you, they can develop their capacity for self-assessment and peer assessment. In this way, they can establish their current position, set and move towards targets, and discover if and when the targets have been reached. Individual targets are linked to improving the quality of a learner's work, as highlighted through formative feedback, and are therefore linked to success criteria for specific tasks. Level descriptions do not make effective targets as these describe attainment across the breadth of the programme of study at the end of a key stage.

Level descriptions can help to inform your planning, teaching and assessment at Key Stages 2 and 3 by indicating expectations at particular levels and progression in the subject. Evidence from assessment for learning will indicate where more time is needed to consolidate learning and when learners are ready to move on. You may wish to keep some evidence so that you can discuss a learner's work and progress with them and/or with colleagues or parents/guardians. However, there is no statutory requirement to keep unnecessarily complex records or detailed evidence on every learner.

The essential function of level descriptions is to help you make rounded summative judgements at the end of Key Stage 3 about a learner's overall performance. Level descriptions are designed neither to be used to 'level' individual pieces of work nor for the production of half-termly or termly data. It is only by the end of the key stage that you will have built up sufficient knowledge about a learner's performance across a range of work, and in a variety of contexts, to enable you to make a judgement in relation to the level descriptions.



It may be that some learners will be more advanced in some aspects of the work than in others, and that no one level description provides an exact fit. That is to be expected, and the range of individual learners' work included in these materials illustrates the making of best-fit judgements under those circumstances. Many schools/departments have found it helpful to develop their own learner profiles to support moderation of end of key stage judgements. These profiles also help to maintain a common understanding of standards when they are reviewed annually and refreshed when necessary.

When making judgements at the end of Key Stage 3, you should decide which level description **best fits** a learner's performance. The aim is for a rounded judgement that:

- is based on your knowledge of how the learner performs across a range of contexts
- takes into account different strengths and areas for development in that learner's performance
- is checked against adjacent level descriptions to ensure that the level judged to be the most appropriate is the closest overall match to the learner's performance in the attainment target.

National curriculum outcomes have been written for learners working below Level 1. These are non-statutory and guidance on their use is planned.

## Using these materials

This booklet is divided into four sections.


- Section 1 highlights key messages for learning and teaching in geography.
- Section 2 highlights expectations and progression in geography.
- Section 3 contains a series of Key Stage 2 learner profiles. These are designed to show the characteristics of the level descriptions.
- Section 4 contains a series of Key Stage 3 learner profiles. These are designed to show the use of the level descriptions in coming to judgements about a learner's overall performance at the end of the key stage.

This booklet is for reference when you wish to:

- review your learning plans and activities
- consider the standards set out in the revised geography Order
- work with other teachers to reach a shared understanding of the level descriptions
- prepare to make judgements at the end of the key stage
- develop your own learner profiles
- support transition from Key Stage 2 to Key Stage 3.

For ease of reference, the level descriptions are included in a leaflet with this booklet.

A CD-ROM is also included with this booklet. It contains a PDF version of *Geography in the National Curriculum for Wales, Skills framework for 3 to 19-year-olds in Wales* and this guidance.



This guidance is part of a series of materials that will help teachers at Key Stages 2 and 3 to implement the revised curriculum and its associated assessment arrangements. The series includes:

- *Making the most of learning: Implementing the revised curriculum* – overview guidance on implementing the new curriculum
- *Skills framework for 3 to 19-year-olds in Wales* – which includes guidance about progression in skills
- *Ensuring consistency in teacher assessment: Guidance for Key Stages 2 and 3*
- *A curriculum for all learners: Guidance to support teachers of learners with additional learning needs*
- specific guidance for all national curriculum subjects, personal and social education, careers and the world of work, and religious education.





*Section*

1

Key messages for learning and teaching  
in geography

The focus of this section is to help you plan for your teaching of the revised programmes of study to be relevant and motivating for each learner, i.e. to be learner centred. You should plan to provide opportunities for learners to develop skills through a breadth of contexts, places, environments and issues, that are identified under the heading Range. You should use Skills and Range as a flexible framework from which it is possible to select contexts and develop activities that will be relevant and motivating for learners.

### **Developing a Skills focus**

Your scheme of work should ensure that learners have the opportunities to develop, practise and apply the four skills identified in the programmes of study for geography and the *Skills framework for 3 to 19-year-olds in Wales*. Progress in Locating places, environments and patterns, Understanding, places, environments and patterns, Investigating and Communicating should form a relevant and realistic experience through which learners are able to develop skills for life. Useful questions to guide your planning and develop a skills focus would be:

- Have I planned sequences of activities that progress skills?
- Which geographical skill(s) from the programme of study does this lesson develop?
- What is the purpose of this activity? Does this activity introduce a new skill, consolidate a skill or apply and extend a skill?

A scheme of work is more likely to support the development of a range of skills if it offers opportunities for learners to:

- work practically taking a 'hands on' approach, using personal experience and proactive investigation
- work in a variety of settings in groups, individually, in the classroom and outdoors around the school and in fieldwork
- use thinking skills to think critically and creatively about their geography
- use a variety of communication skills.

**Examples of activities that can offer opportunities for skills development include:**

- using an enquiry approach to encourage learners to ask and find answers to relevant questions (Cathy, Key Stage 2)
- carrying out fieldwork; including identifying questions for investigation, gathering and selecting information, e.g. by observation, measurement or research, and evaluating why the information might be incomplete or skewed, e.g. by carrying out a survey of public opinion (Stephen, Key Stage 3)
- using visual images to develop an understanding of places and processes, e.g. by annotating a photograph to identify natural or human features of a locality (Cathy, Key Stage 2) or to identify particular patterns or processes
- using maps, photographs or data to identify and analyse differences between places or changes over time
- analysing data by sorting and sequencing, classifying or ranking to identify trends and patterns; using a Venn diagram to explore similarities and differences
- using maps, atlases, Google Earth, the OS web site, Geograph or geographical information systems (GIS) sites together with aerial photographs to locate places and to identify the characteristics and patterns of an area, e.g. wind farms (Rachel, Key Stage 2)
- creating sketch maps that locate places and features (Emma, Key Stage 3)
- answering a question by producing a structured response in extended writing
- researching an issue and holding a debate to develop communication skills and to demonstrate an understanding of different points of view, e.g. on a sustainability issue (Stephen, Key Stage 3)
- using peer assessment; learners write text, present a report or presentation that is evaluated by peers against set criteria for effectiveness of description or explanation (Richard, Key Stage 3)
- participating in problem-solving activities about development in Gambia (Rachel, Key Stage 2) or a decision-making exercise about sustainable development in Kenya (Stephen, Key Stage 3).

**Examples of activities that offer only limited opportunities to progress skills and/or understanding and that are best avoided include:**

- copying diagrams or text without any requirement to manipulate, adapt or apply information
- time consuming 'colouring in' exercises that do not develop a geographical skill or understanding
- researching on the internet, downloading, cutting and pasting without a requirement to select and use material to investigate a geographical question
- producing posters or pamphlets that may be very descriptive and have limited learning outcomes beyond presentation skills
- following enquiry questions that have no obvious relevance for geography and that will not develop geographical understanding.

### **Implementing the Range**

The contexts selected for your scheme of work should cover, as a minimum, those listed under the heading Range, which has been designed to ensure balance and breadth for learners at each key stage. In designing your scheme of work the focus should be on the learner and, in selecting various contexts, you should ask the question, 'How relevant is this context for learners in this school?' The Range is designed to offer flexibility for you to choose topics and approaches that will be relevant for learners.

The contexts may be covered separately or combined. They do not necessarily require equal amounts of study time. They may be used as a flexible framework within which to explore other current relevant geographical topics of interest to learners.

**Examples of different ways that might be used to cover the Range requirements of the programme of study include the following.**

- Each item in the Range is covered as a discrete topic, e.g. one locality or one theme.
- Items from the Range are combined, e.g. combining sustainability aspects with the study of a particular locality or theme.
- A topic or theme is extended to cover a geographical aspect not specifically listed in the Range but through which the listed skills could be developed. It might cover a topic or activity in which the school has a particular interest or specialism, e.g. at Key Stage 3 it would be possible to cover more about weather and climate within 'The physical world: a study of coastal or river processes' or be the basis for an investigation into flooding (Emma, Key Stage 3).
- A context of your own design is developed from aspects of the Range, e.g. a unit to develop investigation and communication skills and link with a cross school curriculum project such as 'A global citizen week' or a 'Food and fitness fortnight'. An activity to look into 'Where in the world food came from and why?' might develop several skills including map work skills, understanding of economic processes, recognition of patterns, and views and opinions of sustainability issues such as food miles.

The following sections offer additional guidance on elements of the Range including those that are new to the revised programmes of study for geography.

### **Key Stages 2 and 3: Investigating**

Activities across the key stages should be planned to develop learners' skills in investigating. Investigations offer opportunities for a real enquiry experience in which learners pose their own questions, seek their own answers and develop understanding. The enquiry approach can place the learner at the centre of the learning experience.

At Key Stage 2, learners should be supported and encouraged to take an enquiry/investigative approach to work both in the classroom and outdoors. In particular they should have opportunities to pose questions and develop their skills to measure and collect first-hand data through fieldwork. You should ensure that learners have adequate opportunities through the key stage to make progress in these investigative skills, for example to begin to construct short sequences of questions and to use the data they have gathered to draw conclusions.

At Key Stage 3, learners should have opportunities to investigate more complex questions and become more independent, analytical and evaluative in their enquiry work. Investigations do not need to be very large pieces of work and should avoid becoming lengthy, unstructured, descriptive projects. Rather, they should offer opportunities for learners both in the classroom and through fieldwork to practice and engage with each of the stages of investigation, particularly those requiring analysis, learning and evaluation.

During the key stage, learners should carry out at least one complete group investigation and one independent investigation, the demand of which should encourage progression towards GCSE research and fieldwork.

### **Planning for investigation: a checklist**

#### **Asking questions**

- Are the questions being posed relevant, i.e. geographical?
- Are learners being supported to organise a sequence rather than a mere collection of questions?

Not all questions that learners will raise are necessarily geographically useful. Similarly questions that produce only descriptive responses to 'What?' without requiring a response to 'Where?' or 'Why?' are unlikely to progress geographical understanding. For example, the question 'What do people eat in Burkina Faso?' could produce only descriptive information. A follow up question of 'Why?' is required to encourage the investigation of the natural or human features of the area or of factors such as climate or transport networks which might provide explanations.

#### **Collecting and recording data**

- Have opportunities been provided for learners to carry out first-hand measurements?
- Has the location and time of data collection been noted?
- Has a sketch map of the location been drawn?
- Can learners say how accurate their data is or is not, and why?

### **Organising and analysing**

- Can learners identify and interpret what the data shows?
- Can learners analyse the opinions gathered in their survey?

Encourage learners to annotate tables or graphs or talk through what they can see in the information. For example, as an initial interpretation, can they identify the highest/lowest, smallest/largest or the average? Support learners to recognise differences from place to place and time to time, and begin to see the 'big picture' of trends and patterns.

### **Drawing conclusions**

- From their organised data, can learners draw factual conclusions about the similarities and contrasts, causes and effects or interactions between features or processes?
- Can they begin to develop explanations?
- Can learners weigh evidence to make decisions or support a point of view?

### **Evaluating the investigation**

- Do learners evaluate their investigations?

Encourage learners to reflect on their work by responding to evaluative questions such as:

- Did I complete what I set out to achieve?
- How could I have improved my investigation?
- How valid were my results?
- How could this investigation have been extended?
- What do I need to investigate next?
- What have I learned?

### **Key Stages 2 and 3: Asking and answering questions**

Each programme of study provides a list of key questions that underpin learning in geography. They are generic to all contexts and can be used to help learners develop their skills in geography. A shortened form of these questions might be written as the five Ws – ‘Who?’, ‘What?’, ‘Where?’, ‘When?’, ‘Why?’ The questions provide a template to encourage learners to develop beyond description to analysis and explanation through an investigative approach.

### **Key Stages 2 and 3: Fieldwork**

It is a requirement of the programmes of study that learners carry out fieldwork to observe and investigate real places and processes. Planned visits to different parts of Wales or exchanges to schools in other countries provide a window on the real world and broaden learners’ experience. However, learners should also be provided with opportunities to carry out practical fieldwork investigations to practice, develop and progress their skills. Fieldwork should involve first-hand measuring and collecting of data whether on school premises, in the local area or further afield (Rachel, Key Stage 2; Richard, Key Stage 3).

### **Key Stages 2 and 3: Geography in the news**

The programmes of study require learners to study ‘Geography in the news’ to help develop an appreciation that ‘geography is all around’ and relevant to their everyday lives in the twenty-first century. You will need to develop strategies for incorporating ‘Geography in the news’ into your scheme of work that will balance the need for immediacy with the need to plan ahead. Not all news will be geographical or offer obvious opportunities to develop geographical skills. News to which the key questions can be applied is likely to indicate that the item can usefully be considered ‘Geography in the news’, e.g. ‘Where is it happening?’, ‘What is that place like?’, ‘How and why is it changing?’, ‘Which processes are occurring?’, ‘What patterns and trends can be identified?’, ‘How are people’s lives being affected?’ (Alan, Key Stage 2).



**Examples of how 'Geography in the news' might be covered in a scheme of work include the following.**

- Local scale geography: A planned unit of work that uses a local investigation of a current issue/problem. Examples might be 'Traffic problems in our town', 'Building a new retail park' or 'The Impact of a new industrial development' (Stephen, Key Stage 3).
- Up-to-date examples: An item that can be included within an aspect of the Range to ensure a topic is up-to-date. For example, learners research the impact of a recent flood as part of their investigation into hazardous environments or conduct a survey or a debate to develop views and opinions about migration.
- Immediate interest lesson: A lesson replacing a planned lesson at short notice to address a dramatic event but that provides opportunities to address the same skills development as the planned activities, e.g. a lesson on the tsunami that looks at patterns of impacts, or causes and effect, or points of view/opinions.
- A research activity that develops understanding of the processes of change by following up a previous event, e.g. 'How is Cardiff Bay developing?' or 'The effects of the tsunami three years on' (Stephen, Key Stage 3).
- A view of the world: A short class activity, a wall display, regular timetable slot or a school link with other countries, kept up-to-date by learners to address questions, e.g. 'Where in the world?', 'What is happening?', 'Why?'
- The geography of an event as it develops: Following a current event or issue of interest to learners, e.g. a major sporting event such as a World Cup or the Olympics to analyse global connections. An investigation into the spread of a disease, such as foot and mouth disease or bird flu, that could offer opportunities to consider the links between producers, consumers, economic development and sustainability.

## **Key Stage 2: Choosing an aspect of the geography of the whole of Wales**

In deciding on which aspect of the geography of the whole of Wales to incorporate into your scheme of work, useful questions to consider would be:

- Will it provide learners with an opportunity to investigate what Wales is like?
- Will it provide a vehicle for learners to develop a basic knowledge of the geography of Wales before commencing Key Stage 3?

Any topic chosen should be designed for learners to appreciate the shape and size of Wales, to recognise its main natural and human features, and to be able to think about the key questions in relation to Wales. Some examples of investigations into an aspect of the geography of the whole of Wales are:

- Why do we have national parks?
- Why are our rivers important?
- Where do we live?
- How and why are our towns on the coast the same or different?
- What is the weather of Wales like?
- Investigating wind farms in Wales (Alan, Key Stage 2).

Your chosen aspect will usually need to draw on other aspects. For example, an investigation into the 'Where?' and 'Why?' of farming in Wales would need to consider the weather in Wales. Similarly an investigation into the 'Where?' and 'Why?' of the towns of Wales could introduce the natural background of mountains and rivers to explain the locations of the towns. Your chosen aspect could also provide a vehicle for designing a theme that integrates different areas of the curriculum, e.g. with history or with science (Alan, Key Stage 2).

**An example of an aspect of the geography of the whole of Wales: national parks**

Examples of investigative questions and activities to develop the four skills of the programme of study include the following.

**Locational skills**

Learners investigate the question ‘Where are our national parks?’

They explore the locations using the atlas. They think about who visits a national park, where the visitors come from and how far they might travel. They describe the pattern of the location of the national parks.

**Understanding places**

Learners investigate the questions ‘What are these places like?’ and ‘Are they different or all the same?’

Learners use photographs, maps, an OS map and grid references to identify what visitors would see in the national park. They plan a daytrip to a national park.

**Investigating**

Learners work independently and in groups to carry out an investigation to find answers to geographical questions. They identify questions to ask and answer, e.g. ‘How can I find out what the weather is like in the national parks?’ Learners identify their own questions in which they are interested, e.g. ‘How can we make national parks better?’

They collect first-hand information, e.g. by carrying out a survey in the school about visits to national parks. They collect secondary information by conducting internet research. They use Google Earth or Multimap to plan routes and places to visit.

**Communicating**

Learners present their conclusions, views, opinions and decisions.

They make a presentation, e.g. including sketch maps, annotated photographs, PowerPoint slides, on their chosen question, e.g. ‘Why are national parks a good idea?’ or ‘How could we improve the visitor areas?’

This sequence of activities could include a visit to a national park where learners could have experience of collecting first-hand information, for example through surveys of environmental quality or visitor numbers.

## Key Stage 2: Living in other countries: Choosing two contrasting localities

Localities should be chosen that provide learners with an opportunity to compare their own lives in Wales with two different contrasting localities elsewhere in the world. You may select localities with different economic characteristics and that contrast in some way from the learner's own locality, e.g. localities that have different natural (physical) characteristics. The localities chosen should provide opportunities to identify both similarities and contrasts between countries and use a combination of some of the following: contrasts of climate (hot or cold countries), contrasts of location (rural or urban) and contrasts of wealth (economically developed or economically less developed). Localities should be selected that will encourage careful observation and investigation and provide opportunities to counter generalisations and stereotyping about people's lives in other parts of the world, e.g. to counter the assumptions that all people are poor in an African country or that all are rich in a European country. Schools could use opportunities to link with schools in their contrasting localities.

Contrasting localities might typically be:

- an urban locality in a tropical country, such as Lesotho or Botswana, and a rural locality in a cold country, such as Finland
- an urban locality in Europe or China, such as Paris or Beijing, and a rural locality in the tropical West Indies, such as St Lucia.

### Examples of geographical questions about contrasting localities

- How is my locality in Wales different from...?
- What do I already know about...?
- Where is...?
- How would I get to...?
- How can I find out more about...?
- What is the weather like? Why?
- What are the buildings like? Why?
- What jobs do people do? Why?
- How do people travel? Why?
- How do people use and care for their environment? Why?

## Geography and skills across the curriculum

A non-statutory *Skills framework for 3 to 19-year-olds in Wales* has been developed in order to provide guidance about continuity and progression in developing thinking, communication, ICT and number for learners from 3 to 19.

At Key Stages 2 and 3, learners should be given opportunities to build on the skills they have started to acquire and develop during the Foundation Phase. Learners should continue to acquire, develop, practise, apply and refine these skills through group and individual tasks in a variety of contexts across the curriculum. Progress can be seen in terms of the refinement of these skills and by their application to tasks that move from: concrete to abstract; simple to complex; personal to the 'big picture'; familiar to unfamiliar; and supported to independent and interdependent.

Icons have been used in the geography Order to signal explicit requirements for the development of skills and learning across the curriculum. However, in planning a scheme of work relevant for learners you will identify other opportunities to enrich learning.

### Developing thinking

Learners develop their thinking across the curriculum through the processes of **planning**, **developing** and **reflecting**.

In geography, learners will have opportunities to:

- investigate, plan enquiries and carry out fieldwork (Richard, Key Stage 3)
- gather, sort and evaluate information, draw conclusions and form opinions to develop their understanding about places, environments and the geographical issues that affect the world around them (Rachel, Key Stage 2)
- reflect on what they have learned in one context to develop more abstract understanding, and apply their skills and knowledge to different places, environments and issues.

You should plan your schemes of work to provide opportunities for learners to use these skills and develop their geographical thinking by:

- finding out where **Places** are and appreciating the importance of a location in explaining the character of places, environments and issues
- recognising that features around them are not evenly distributed and that they form **Patterns** for which there are explanations (Emma, Key Stage 3)
- identifying and investigating the **Processes** that create features and cause change (Alan, Key Stage 2)
- recognising different **Linkages**; how natural and human processes interact, interrelate, are interconnected or may be interdependent (Emma, Key Stage 3)
- applying their understanding at different **Scales** from the personal to local, regional, national, international and global.

### Developing communication



Learners develop their communication skills across the curriculum through the skills of **oracy, reading, writing** and **wider communication**.

In geography, learners will have opportunities to:

- select, use, apply and combine a variety of skills to communicate their geographical understanding, including through extended writing with specialist terminology, maps and images (Stephen, Key Stage 3)
- investigate to acquire information, assess the authenticity and bias of data and media reports, and adapt their own presentations to different audiences
- discuss geographical issues, develop and justify their ideas, views and opinions in debates and through multimedia presentations (Rachel, Key Stage 2; Stephen, Key Stage 3).

## Developing ICT



Learners develop their ICT skills across the curriculum by **finding, developing, creating and presenting information and ideas** and by using a wide range of equipment and software.

In geography, learners will have opportunities to:

- use ICT skills to access the internet for worldwide information (Cathy, Key Stage 2)
- use geographical information systems (GIS), satellite imagery and software for mapping technology to analyse data and study patterns
- use equipment in fieldwork to gather and organise information and select programmes to enhance their presentations of findings.

## Developing number



Learners develop their number skills across the curriculum by **using mathematical information, calculating, and interpreting and presenting findings**.

In geography, learners will have opportunities to:

- apply number skills in the classroom and in fieldwork to measure, gather and analyse data (Richard, Key Stage 3)
- use mathematical information to understand direction, distances and scale, and to determine locations when using plans, maps and globes.

## Geography and learning across the curriculum

At Key Stages 2 and 3, learners should be given opportunities to build on the experiences gained during the Foundation Phase, and to promote their knowledge and understanding of Wales, their personal and social development and well-being, and their awareness of the world of work.

Geographical activities can provide opportunities to develop both personal and social education (PSE) and the Curriculum Cymreig, and emphasise geography's relevance in the twenty-first century to the everyday lives of learners.

### Curriculum Cymreig



Activities could provide opportunities for learners to:

- explore the diversity of the natural and human landscapes in Wales through investigations and fieldwork (Richard, Key Stage 3)
- examine the economic processes that have changed Wales and how decision making at local, national and European levels can affect Wales' development
- explore the reasons for economic and environmental issues that affect communities in Wales, including their own.

### Personal and social education



Activities could provide opportunities for learners to:

- develop an appreciation of their role as local and global citizens and the diversity of communities in Wales and other countries
- investigate how and why environments change and the importance of sustainability (Alan, Key Stage 2)
- enquire into the links between producers and consumers and how people's economic and environmental actions in one part of the world can impact on the lives of others; research information about places and peoples to counter stereotyping (Rachel, Key Stage 2)



- make well-informed judgments about issues, develop their own views and opinions, and appreciate the values and attitudes of others (Stephen, Key Stage 3)
- develop a sense of place and identity through investigating the links between communities and between regions in Wales, as well as understanding relationships between Wales and other countries.

### Careers and the world of work



Activities could provide opportunities for learners to:

- investigate factors that affect the economy in their local community, in Wales and globally, and the potential impact on employment opportunities, including on their own career development
- develop valuable work-related skills and techniques, including the use of GIS, using and creating maps, carrying out investigations, problem solving and decision making.



*Section*

# 2

Expectations and progression in  
geography

In this section, the statements from the level descriptions have been organised to describe progression in the four skills across the breadth of knowledge and understanding demonstrated through study of the contexts in the Range. They should be used to plan schemes of work and activities that provide opportunities for pupils to progress. (\*Statements from the Exceptional Performance level descriptions have not been included in these groupings.)

### **Progression in Locating places, environments and patterns**

1. Pupils describe where they are, using everyday terms, draw a simple map and follow directions.
2. They find information from a map, draw simple maps with symbols and are aware of compass directions.
3. They use globes and maps to find information about places and draw maps using a key and symbols, and understand directions.
4. They use direction, distance, and simple co-ordinates on maps, in atlases and on globes to locate places, and draw maps using a key and appropriate symbols. They begin to recognise patterns of obvious distributions of places and how they are connected.
5. They locate places accurately, use map co-ordinates, understand distance and direction, and draw maps with a sense of scale and proportion. They describe obvious geographical patterns and how places are interconnected.
6. They construct and use maps, showing understanding and accuracy in use of scale, co-ordinates and direction. They identify and describe geographical patterns, and recognise how places and patterns are interconnected.
7. They construct and use plans and maps and apply map skills accurately to obtain information. They identify and explain geographical patterns and how places and patterns are interconnected.
8. They demonstrate and apply a range of skills accurately and competently. They interpret maps to obtain information, and construct maps and plans that convey their geographical understanding. They explain how places are interconnected at different scales and how geographical patterns are formed and change.

### **Progression in Understanding places, environments and processes**

1. Pupils recognise features of specific places and are aware that some change.
2. They describe the natural and human features of different localities and recognise how some change. They recognise that people's actions affect the environment.
3. They recognise simple comparisons and offer some reasons for the natural and human features of different localities. They recognise that people have impacts on their environment.
4. They begin to explain the natural and human features of different localities and how and why places are different. They identify straightforward causes and consequences of change and show some understanding of how people's actions, including their own, can improve or damage the environment.
5. They describe and offer explanations for the characteristic natural and human features of different localities. They identify reasons for the differences between places, and describe how processes and the role of people in managing their environment result in changes to places.
6. They explain physical and human features and some processes. They compare and contrast places, explain how places change, and begin to recognise trends. They describe how people affect the environment and how change can be sustainable.
7. They explain a range of physical and human features and processes, and describe the interactions within and between the processes. They explain how places change, identify trends and describe how people have different impacts on the environment. They recognise environmental issues and understand how change can be managed sustainably.
8. They offer explanations for interactions within and between physical and human features and processes. They explain how places change, identify trends and future implications. They explain how people and environments are interrelated, and recognise the causes and consequences of environmental issues, including sustainable opportunities.

## Progression in Investigating

1. Pupils find answers to simple questions about places using resources provided.
2. They ask simple questions, make observations, collect information indoors and outdoors, and find answers using resources provided.
3. They ask and respond to a range of simple questions, observe, collect and record information indoors and outdoors, and find answers to their investigations.
4. They suggest relevant questions, observe, collect, measure and record relevant data, indoors and outdoors, and organise information to present straightforward conclusions to their investigations.
5. They ask relevant questions and suggest sequences, collect, accurately measure and record relevant data from different resources, including from fieldwork. They use evidence and draw plausible conclusions from their investigation.
6. They identify relevant geographical questions, establish sequences for their investigations, select, collect, measure and record relevant data from a range of sources, including fieldwork. They analyse information to provide logical explanations and present conclusions that are consistent with the evidence.
7. With growing independence they implement effective sequences of questions and select their own methods for investigations. They collect, measure and record accurately more complex data, including that obtained from fieldwork. They analyse evidence to construct and justify valid explanations and substantiated conclusions.
8. They show independence in identifying appropriate questions and implementing effective sequences of investigation, including for fieldwork, and work independently to collect, measure and record accurately more complex data. They analyse and interpret evidence, explain the relationships between cause and effect, and reach substantiated conclusions. They evaluate their methodology and findings and assess the reliability of evidence.

## **Progression in Communicating**

1. Pupils express their views on features of places.
2. They express their views about the environment of a locality.
3. They express their views about places, supported with some reasons, and recognise that people have different views. They present information in a variety of ways.
4. They express their own views and begin to take account of other peoples' views and opinions on geographical issues. They present information and ideas using some geographical terms and appropriate methods.
5. They evaluate different opinions to help form and express their own views and make decisions, including about current geographical issues. They communicate their understanding using correct geographical vocabulary, and by selecting appropriate methods.
6. They distinguish between fact and opinion, evaluate conflicting views and opinions, justify their own views and make informed decisions about current geographical issues. They select and use correctly geographical terminology and techniques to present information.
7. They evaluate conflicting views and opinions to help them form and justify their own views, and make informed decisions about current geographical issues. They evaluate fact and opinion and begin to recognise bias. They select and use accurately geographical terminology and a range of appropriate techniques to present information.
8. They use their own ideas, and consider conflicting views and opinions to draw conclusions and make informed decisions about current geographical issues. They select and use precisely a range of geographical terminology and appropriate techniques to effectively present information.

### **Progression in the range of knowledge and understanding**

Pupils should progress their skills through an increasing range of knowledge and understanding of places, environments and issues from the immediate locality to national and global scales.

### **Progression in locational awareness**

Developing a sense of locational or spatial awareness is an important skill for everyday life. In geography, pupils should be supported and encouraged to apply their location skills and enhance their understanding in every possible circumstance. Essential ways of developing those skills are:

- ensuring that for every context or topic, pupils can answer the question ‘Where is this?’; if pupils are confused about a location, they are unlikely to be able to understand the factors that influence the geography of that place
- integrating map work into the context of the lesson so that it has a relevance and a purpose rather than teaching a ‘map skills lesson’
- ensuring that pupils have access to resources that provide a clear sense of place, maps of different scales, atlases, Google Earth, the OS website, GIS sites, and aerial and satellite images
- carrying out fieldwork to appreciate the scale of the real world
- encouraging pupils to draw their own sketch maps, whenever possible, to support their written work; unlike downloading a map from the internet, drawing a sketch map will require pupils not only to combine an understanding of mapping skills (scale, direction, etc.) but to select information that can support their argument or point of view and convey extended understanding
- ensuring that sketch maps and plans demonstrate an understanding of:
  - the types of features that occur in the area of the map or plan
  - where those features are located in relation to other features
  - the patterns formed by the relative position of similar and different features
  - how the real world can be represented by increasingly abstract symbols and increasingly accurate scale.



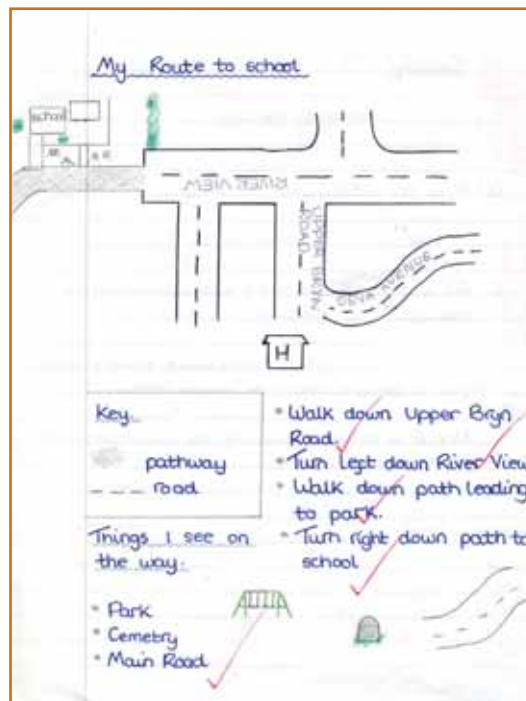
The following examples illustrate aspects of progression in sketch maps.

### Work characteristic of Level 2



A simple sketch map using pictorial symbols showing a limited range of geographical features but with a sense of the relative positions of features.

### Work characteristic of Level 4



The map shows a pattern of roads in a local area with correct locations and using a basic key, and showing features such as the school buildings in plan form.

### Work characteristic of Level 5



This map uses abstract symbols to represent selected types of features and classifies features by colour. The map has a key and accurately represents the land use of the locality.

The map below has a sense of scale and proportion of a larger area and has determined a classification of land use to record features and show patterns interpreted from an OS map. However the map shows no relief or location so that the map conveys no sense of topography or direction and therefore limited geographical understanding of how the patterns interrelate.

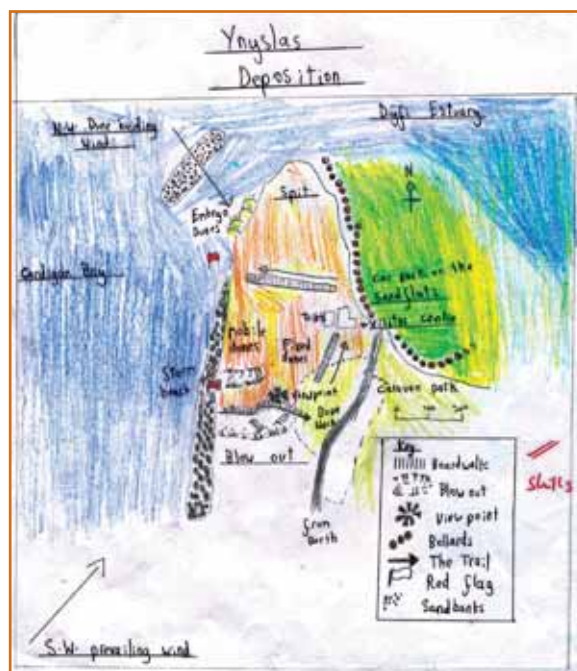


### Work characteristic of Level 6



The pupil uses conventional signs to illustrate the location of selected features showing a pattern of the settlement to scale, though the scale is not shown. There is some very limited information about the physical background, with one spot height and a river marked, though no direction of flow. This conveys appreciation of the human geography but little of the physical context of the settlement.

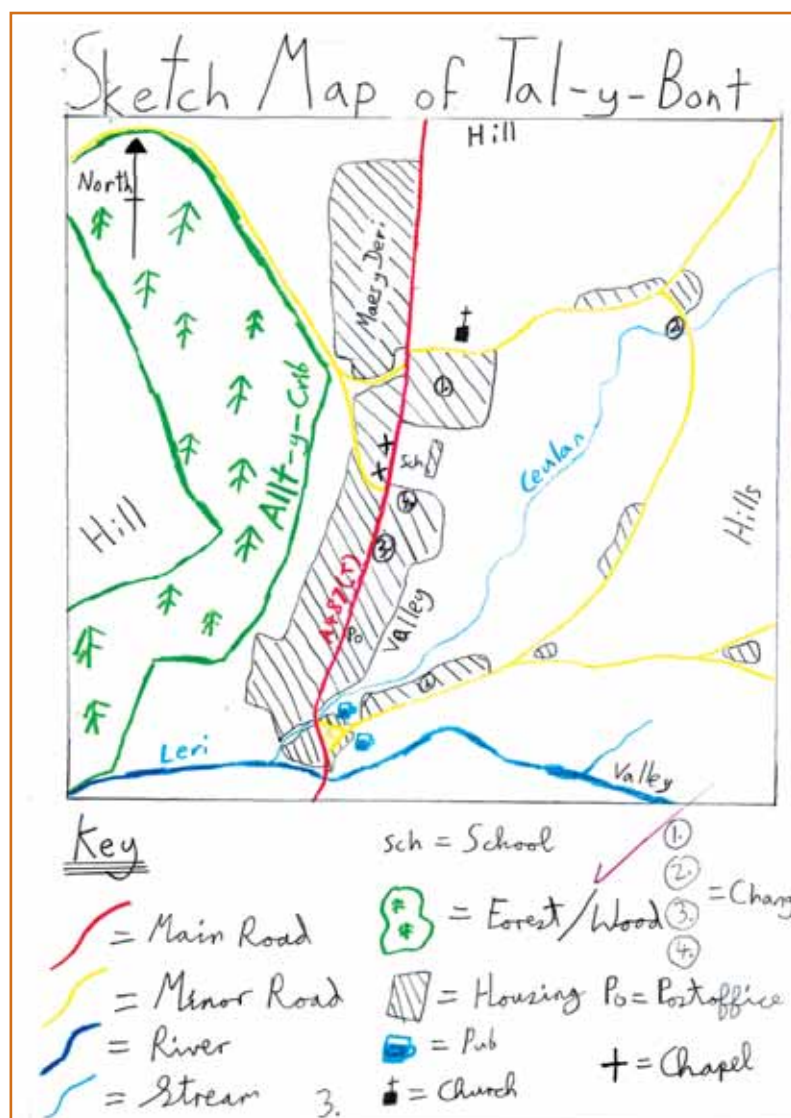
### Work characteristic of Level 7



The pupil uses this sketch map to illustrate a fieldwork investigation into the physical and human processes affecting sand dunes. The map indicates accurately directions of winds and the location of the sand dunes. The pupil constructs the map using a range of symbols to show both physical and human features of the area, and uses correct geographical vocabulary.

### Work characteristic of Level 8


The pupil uses a sketch map to support an investigation into change in a local area. He uses conventional signs and makes two categorisations of land use to illustrate understanding of the patterns via a symbol for a built-up area and a symbol for a forest. The use of labels to indicate valleys and a hill provides a strong sense of topography, as does the indication of the width of the river indicating the tributaries and direction of flow. The pupil has used annotation of 1, 2, 3, 4 to indicate locations he has identified as changing. The map conveys understanding of the interrelationship between hillside and forest, and between built-up areas, valleys and rivers.



*Section*

# 3

Using the level descriptions in Key Stage 2



There is no requirement to make end of key stage judgements in geography at Key Stage 2. However, knowledge of the characteristics of the level descriptions will help you to recognise learners' strengths, as well as areas for improvement, and to plan for progression.

You may find the following points useful when considering the profiles in this section.

- The learner profiles are not presented as a model for how you should collect evidence about your learners. Decisions about collecting evidence, and about its purpose and use, are matters for teachers working within an agreed school policy.
- The commentaries on the pieces of work have been written to indicate particular qualities of the work and make links to characteristics of the level descriptions. They are not intended as an example of a report to parents/guardians.
- The materials in each learner profile can only represent a small part of the information and experiences that make up a teacher's knowledge of each learner. They do not reflect the extent of the knowledge of each learner that you will have built up over time across a range of different contexts. You will use this knowledge to recognise learners' strengths and areas for development, and to plan for progression.
- Some of your learners may need to use a range of alternative forms of communication to show what they know, what they understand and what they can do.

## Cathy | Characteristics of Levels 3 and 4

Cathy is an 11-year-old learner in Key Stage 2.

Her teacher knows much more about Cathy's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Cathy's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Cathy's profile shows some characteristics of Levels 3 and 4, but mainly characteristics of Level 3.

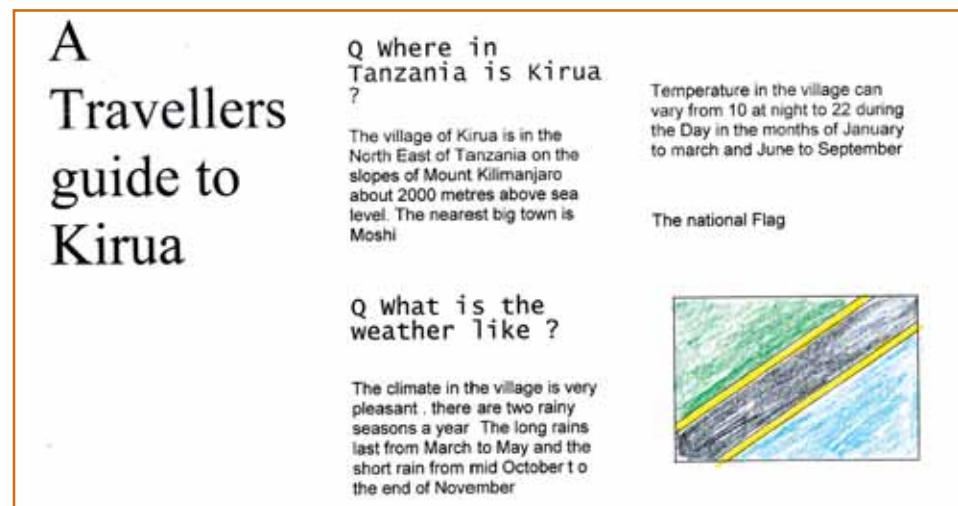
Cathy's teacher planned for the class to investigate three aspects of the programme of study in Year 6. In addition to investigating a new topic of 'What is it like to live in Kirua?', pupils extended their earlier study of the local area by carrying out fieldwork to develop their understanding of similarities and differences of local human features. As an environmental issue and topic in the news, pupils also carried out an investigation into deforestation. The teacher covered other geography in the news fortnightly by discussions based on a news display board organised by the pupils. The scheme of work for the year provided opportunities for the pupils to develop across each of the four skills of the programme of study.

### Investigating | 'Living in other countries' An economically less developed country

My Tanzania Fact File	
Where is Tanzania?	Tanzania is on the right side of Lake Victoria: the East side.
How large is Tanzania?	945,000 km <sup>2</sup>
What is the weather like?	In Tanzania, the weather is tropical but on the mountain, it is below freezing.
Are there natural disasters?	Volcanoes
What is the highest mountain?	Mount Kilimanjaro
What is the size of the population?	29,058,470
What is the capital city?	Dares Salaam
How long can you expect to live?	With a good diet

Pupils investigated the question 'What is it like to live in another country?' They talked with a visitor from Tanzania and watched a video about Kirua. Cathy carried out some basic research about the country to complete a 'scaffolded' question sheet. She used an atlas and a globe to correctly locate Kirua but only used directional terminology (the eastern side) with prompting.

Working in a small group using the internet, Cathy researched answers to *simple questions* structured by the teacher (a characteristic of Level 3) and helped to produce a pamphlet. She contributed to the pamphlet, 'A traveller's guide to Kirua', designed by the group, by cutting and pasting relevant passages as answers to two questions though she did not add anything to suggest she understood the terminology in those passages, e.g. 'rainy season', or the implications of the temperature data. Cathy also decorated the pamphlet with a national flag.



The class studied photographs of Tanzania on the whiteboard and discussed which were natural features and which features might have been created by people. Cathy recognised *natural and human features* of Kirua shown in photographs (a characteristic of Level 3). She correctly classified vegetation and the height and relief of the land as 'natural', and transport and houses as 'human' features. She was not sure about how to classify mud roads but decided that they were human because they were used by people. She offered one simple explanation, 'Because they don't have much rain'.

In my photographs I found	
4 Natural Features	4 Human Features
Mount Kilimanjaro is the biggest mountain in the hole of Airica	They have bikes made out of wood
Kirua has lots of trees and bushes	They have roads covered with mud
The grass is brown . I think it is because they don't have much rain	There houses are made of mud and bamboo
There land is mostly flat	They have no door a rusty roof and no glass in there windows



## Investigating 'Living in other countries' An economically less developed country

The teacher planned for the pupils to investigate the main features of several different countries in Europe to develop their locational skills and to study contrasts to life in Tanzania. Pupils were encouraged to look at the ways in which European countries were the same as or different from Wales. At the end of their investigations pupils reviewed their work. Cathy's review of her work can be seen below.



Cathy's review shows that she enjoys carrying out basic research to find information about places and recognise simple comparisons of different localities (characteristics of Level 3). Though she largely reviews her work on the basis of its neatness and care with which she colours her illustrations, she is keen to carry out more research to answer the question 'How many countries are there in the whole world?' Cathy's work addresses the questions 'Where is this place?' and 'What is it like?' but now Cathy needs encouragement to move on and pose the question 'Why?' so that she can begin to explain how and why places are different (a characteristic of Level 4).

**Investigating** | **'Living in my world'**  
**'Geography and the news'**

Pupils investigated an issue in the news, 'Deforestation in Brazil'. The teacher used photographs on the whiteboard to introduce the topic and explain the word 'deforestation'. Pupils offered words that described what they observed and what they felt. Cathy contributed 'tree stumps', 'horrible', 'poor people'. The class was asked what they would like to find out about the pictures, to think about how people can change their environment and how people might care for the environments.

**Set yourself 5 geographical questions about deforestation . Use the classroom library and the internet to help you answer your questions**

- Q1** Why are rainforests disappearing? .....  
Rainforests are disappearing because lots of rainforests have been cut down and not been replaced.
- Q2** Who is destroying the rainforests? .....  
Men are destroying the rainforests to sell land make money and to make room for farming and new roads.
- Q3** What can we do to stop the rainforest disappearing? .....  
To help deforestation stop by every tree they cut down we could plant two new trees and we could about how to make stuff without wood.
- Q4** What is being destroyed by deforestation? .....  
we are destroying plants, animal houses and people homes
- Q5** What will be left if we don't do anything? .....  
If they carry on digging up rainforests there will be no trees left and there will be more floods and droughts and no animals will be left.

The teacher helped Cathy to formulate five geographical questions to which Cathy *responded* (a characteristic of Level 3). Based on her research Cathy designed an e-mail to be sent to a logging company. In her work Cathy showed some *understanding of how people's actions can damage the environment* (a characteristic of Level 4) and *expressed her views* about deforestation *supported with some reasons* (a characteristic of Level 3). She made a suggestion as to how the situation might be improved.

e.mail: [brazildeforestation@hotmail.com](mailto:brazildeforestation@hotmail.com)  
Subject: Deforestation in Brazil

Dear Sir or Madam,

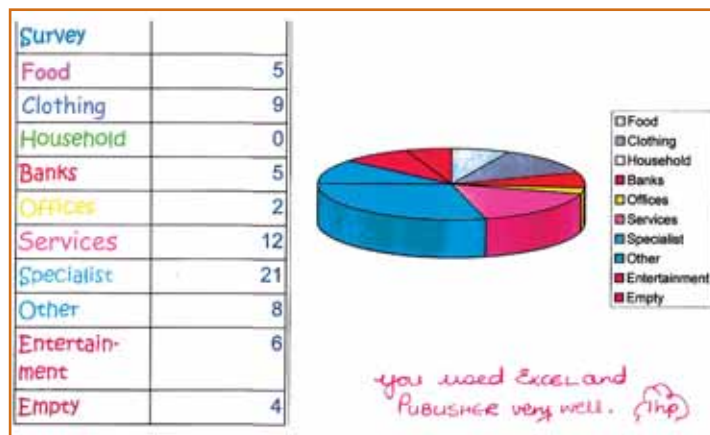
I am writing to you about deforestation in Brazil. My teacher told me that 20 percent of the worlds oxygen comes from the Amazon rainforests. If we cut the down this will become less and less. Did you know that deforestation causes the amount of fresh air we have to fall? It also kills plants and animals habitats, and also some people have to move house. Deforestaion also causes floods and droughts. They are cutting down trees for farms, roads and to sell and not replacing them. I think we should replace every tree that is cut down. What do you think?

Cathy

For the fortnightly news round up, the teacher extended the work on deforestation by focusing on examples of how the environment changes. Cathy contributed a photograph of forest fires in California that were threatening people's houses but contributed little to the class discussion which looked at similarities and differences between the loss of forests in the two countries. Cathy needs encouragement to pose her own geographical questions and think about *how and why places are different* and how they change (a characteristic of Level 4).

## Investigating 'Living in Wales'

As part of the Year 6 programme the pupils carried out fieldwork in their local area. They studied maps to identify changes and worked in groups to compare their local high street with a nearby retail park. Cathy *collected and recorded information* for the group (a characteristic of Level 3), completed a tally sheet and used ICT to record the outcomes. In her analysis she provided some *simple comparisons and offered some reasons* (a characteristic of Level 3) about the advantages and disadvantages of a large retail park but did not complete her work by describing why people might shop in the local high street.



Culverhouse cross

Culverhouse cross is an area near Ely that has changed a great deal over recent years. Years ago there were fields and the main road the A48. Today Culverhouse cross is very busy because it is a retail park

What is at Culverhouse Cross?

1. Shops very large shops: Tesco, marks and Spencer, Pricerid, Monecare, Carpetright, B&Q, Homebase corner
2. Restaurants McDonalds, Burger King
3. Services Petrol Station
4. Others Hotel

<p>A retail park is a good idea because:</p> <ul style="list-style-type: none"> <li>• you can get all your shopping in one place.</li> <li>• Easier to park your car</li> </ul>	<p>A retail park is not a good idea because:</p> <ul style="list-style-type: none"> <li>• There will be accidents with cars</li> <li>• There will be lots of pollution</li> <li>• People would get killed if ambulances couldn't get through</li> </ul>
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## Summary

Cathy's profile shows some characteristics of Level 3 and Level 4 but mainly the characteristics of Level 3.

She demonstrates some knowledge and understanding of the character of different localities and environments and describes geographical features. She can offer some simple comparisons and reasons. She also recognises that people have an impact on their environment, and shows some understanding of cause and effects. In her investigations she responds to simple questions, and collects and records information. She reviews her work thoughtfully but concentrates on presentation rather than what she might have learned.

Overall the teacher considered that Cathy had progressed in each of the four skills of the programme of study, particularly in locating places and expressing a point of view. As a next step, Cathy needs to develop her descriptions and begin to explore explanations by posing the question 'Why?'

## Alan | Characteristics of Levels 4 and 5

Alan is a 10-year-old learner in Key Stage 2.

His teacher knows much more about Alan's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Alan's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Alan's profile shows some characteristics of Levels 4 and 5, but mainly characteristics of Level 4.

Alan's teacher planned for the class to investigate coastal towns as an aspect of the geography of the whole of Wales and carry out a fieldwork visit to Llandudno. The teacher also planned an emphasis on issues associated with sustainability for the Year 6 scheme of work. The proposal to site a wind farm locally provided an opportunity for a topic to link with science, investigate a local issue in the news and investigate global warming. The scheme of work for the year provided opportunities for the pupils to develop across each of the four skills of the programme of study.

### Investigating | 'Living in Wales' A local issue

As the first part of an investigation into the production and use of energy, pupils carried out a survey of when and where electricity was used in the school. Pupils were encouraged to identify what they knew about wind farms and construct five geographical questions to guide further investigation. Alan *suggested relevant questions* for investigation (a characteristic of Level 4), e.g. 'Why do we not put them in the sea?' Some questions, e.g. 'How long will they last?', that reflected his interest in science, proved less relevant to the issue of where to site the wind farm. He worked enthusiastically and independently using the internet, software and a number of science books to find answers to his questions.

Set yourself 5 geographical questions about wind farms.  
Using secondary resources answer your own questions.

Q1. How noisy are wind turbines?

A After lots of detailed research there seems to be two sides to this question. Some groups seem to think that they are quite quiet and that you could hold a conversation underneath them, however, some research states that they are as noisy as a chainsaw or a car travelling at 70 mph.

Q2. What happens if there is no wind?

A It seems that if the wind stops the wind turbines do not produce electricity and other sources of energy need to be used such as coal or gas. They do store some energy, but they don't have large areas to store this energy because it's expensive.

Q3. How long do they last?

A I was quite surprised to find out that they last up to 25 years. I thought it be less than that. If they are looked after and repaired they can last as long as a car. The first set of wind turbines are still going after 20 years.

Q4. Just How big are they?

A I have found out that they vary in size. The smaller ones are around 25 metres and the largest ones are up to 80 metres. I looked at my house and I guess they would be about 7-8 times bigger than my house. I didn't realise they would be that enormous!

Q5. Why do we not put them all in the sea?

A Although this would stop alot of the arguments about wind farms the information I have found out tell us that they are very expensive to build compared to building on land and take longer to put up. Also we need to have many wind farms to meet our targets to stop climate so we need to build on land

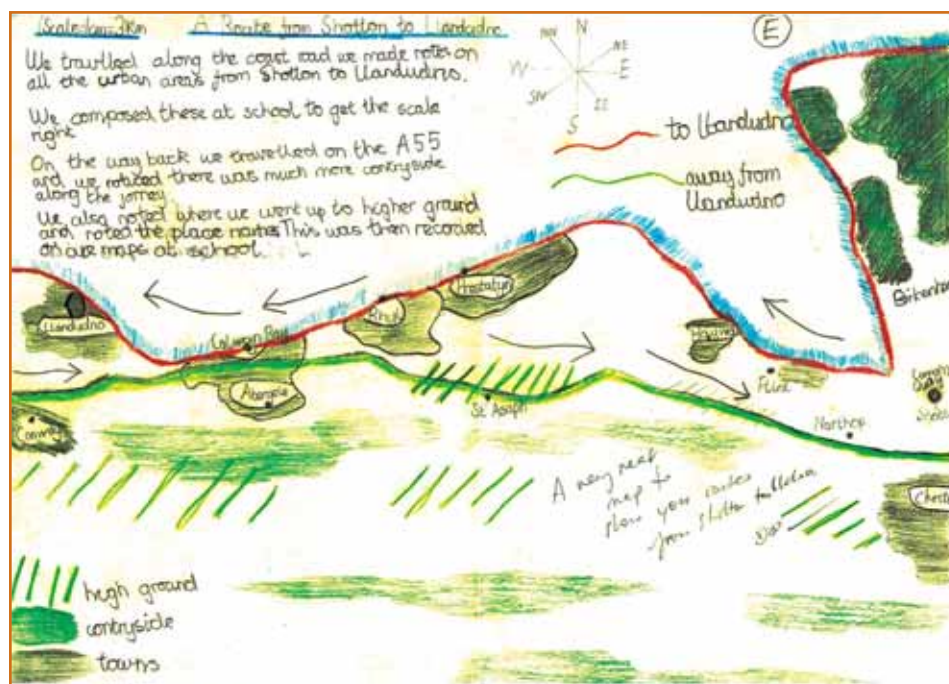
Pupils were asked to use their research to identify physical and human factors that might affect the location of wind farms and design a poster for a meeting about the new wind farm proposed for their local area. For his poster Alan presented information using appropriate methods about wind farms (a characteristic of Level 4) and identified some straightforward causes and consequences of change (a characteristic of Level 4).





## Investigating 'Living in Wales' An aspect of the geography of the whole of Wales

As a basis for developing locational skills and an awareness of the geography of Wales, the pupils investigated the differences and similarities of 'Towns on the coast'. They investigated the coastal towns of Llandudno, Holyhead, Milford Haven, Cardiff and their home area Shotton. Alan could locate these places on the map of Wales and drew a map of the route taken along the North Wales coast showing the position of coastal settlements. His sketch map had a good sense of *scale and proportion* showing the relative positions of high and low ground and coastal towns to illustrate *patterns and how places are interconnected* (characteristics of Level 5).



Pupils were asked to identify and describe differences between Llandudno and Shotton looking at the location, the attractions and industries. Alan made some simple comparisons of the features of the two towns, e.g. Llandudno's 'golden sand and clean blue sea' compared with Shotton where 'the sand is muddy and the water not suitable for swimming', to *explain how and why places are different* (a characteristic of Level 4). Occasionally his explanations suggested that his understanding of the features or the terminology he used was incomplete, as in his use of 'Victorian' and 'small' to compare shops.

**Location** They are different in that Llandudno got away winning beach with golden sand and with a clean blue sea whereas Shotton has got a beach but the sand is muddy and the water isn't suitable for swimming in also on the beach is quick sand. Llandudno has got victorian shops but Shottons got small shops.

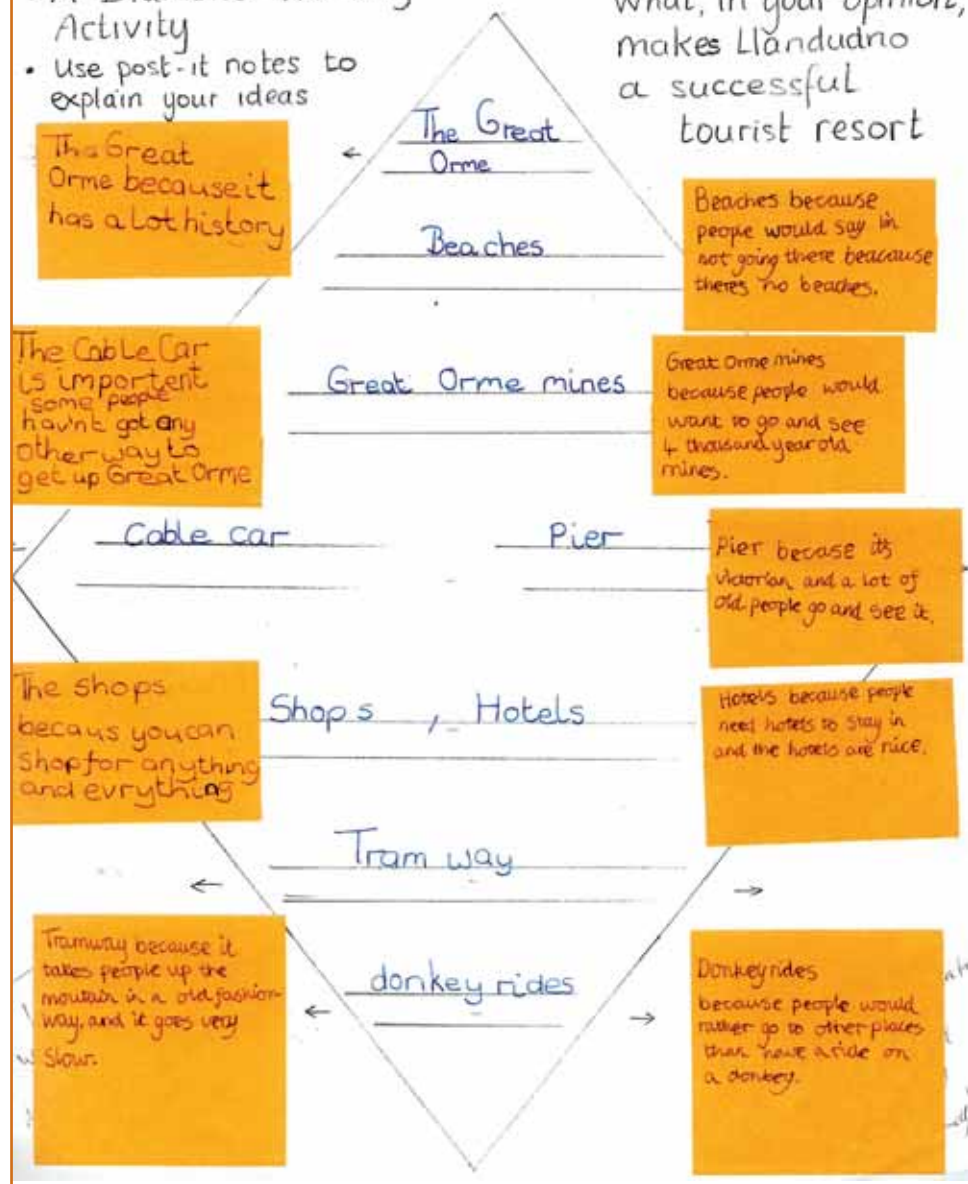
**Industry** Llandudno and Shotton are also different from each other because Llandudno got a big shopping centre and lots of shops but Shottons got loads of factories like British aerospace, Shotton steel and lots more. Also Llandudno got the hotels to make money but Shottons got the leisure centre that has lots of jobs that make money. This report shows that our evidence from a class trip observing the location and carrying out a survey, Llandudno is quite different from Shotton, even though they are both on the coast.

The class divided into groups to complete a diamond ranking exercise to assess the importance of the different attractions in Llandudno and then used sticky notes to explain their ideas. Alan worked in a group of three. He contributed the comments on the left-hand side of the display *beginning to explain the features* (a characteristic of Level 4), e.g. the 'cable car is important – some people haven't got any other way up the Great Orme.'

# LLANDUDNO



- A Diamond Ranking Activity
- Use post-it notes to explain your ideas

What, in your opinion, makes Llandudno a successful tourist resort



## Investigating | 'Living in Wales' Caring for places

The teacher organised a series of activities as part of a cross-curricular sustainability and global citizenship awareness raising week. Pupils looked at a display of tabloid newspapers with dramatic headlines about global warming. The class explored the differences that global warming might make to their environment. Alan suggested 'No snow'.

<i><b>The Daily Sun</b></i>	
<b>Snowdon will be snowless</b>	Go to page 11 to find out latest gossip on Beckham's palace!
<p>Snowdon, the highest mountain in Wales, will have no snow on it! Scientists say Snowdon will be affected by Global warming. Chemicals have been sent up into the air and created a hole in the ozone layer. We can help by not using our cars as often and start walking and cut down on smoking.</p> <p>People, after a shower normally uses deodorant but they should just get dressed. The world top scientists say ` That Snowdon has 15 years left. People in north Wales will be sad to see Snowdon without any snow on. Everybody is trying hard to prevent this from happening.</p>	
	<b>Snowdon in 15 years time!</b>
	

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After discussion, based on all the ideas contributed by the class, pupils designed their own tabloid front page. Alan carried out more research than others in the class, recognising that *some people have impacts on their environment* (a characteristic of Level 3). However the reasons he developed on this difficult topic were confused, in particular, about the use of deodorants (rather than aerosols) and people smoking. He will need guidance to distinguish between the causes and effects of two separate global processes: the growing hole in the high level ozone layer (that normally protects us from any harmful effects of the sun's rays) and the greenhouse effect by which the atmosphere is warmed and which is largely the result of the increase of CO<sub>2</sub> in the atmosphere.

All the work was displayed and pupils encouraged to think about the range of effects of global warming and the teacher posed the question, 'What can we do about this problem?' To answer the question pupils were invited to put down their ideas in a letter to the First Minister. In his newspaper article and his letter Alan shows some understanding of *how people's actions including his own can improve or damage the environment* (a characteristic of Level 4).

June 2007

Dear First Minister

I am writing to tell you my point of view about global warming and to ask you about what you and your government are doing to stop this problem

I believe that if we do not try and stop it then there will be major problems around the world such a droughts and floods

At my school we have been doing all we can to prevent the global warming threat from happening.

We have put up a lot of signs around the school building to encourage children to save energy. For example switching off the lights and computers

We have also started to recycle much of our classroom waste. Certain people in each class are known as energy savers

I think that people in general are not recycling enough and are not trying their best to stop global warming

If we don't do anything soon then the planet that we call Earth is going to be a very different place

Do you think that there is anything else that we can do

Yours sincerely

Alan Roberts

## Summary

Alan's profile shows some characteristics of Level 3 and Level 5 but mainly the characteristics of Level 4.

He shows knowledge and understanding of places, environments and issues at more than one scale in his work on a local wind farm, the coastal towns of Wales and global warming, and he can locate places accurately.

In his investigations he researches broadly scientific aspects of processes, though the resulting explanations are sometimes confused or incomplete. He does identify some straightforward causes and consequences of change and he shows some understanding of how people's actions, including his own, affect the environment.

Alan suggests some suitable questions for investigation and uses a variety of secondary sources to carry out his investigations from which he draws plausible conclusions. It was not possible to identify if Alan could accurately measure relevant data as his class did not have the opportunity to carry out any fieldwork during Year 6, though they had carried out a traffic survey at the beginning of Year 5.

Overall the teacher considers that Alan has progressed in each of the four skills of the programme of study, particularly in Locating places, environments and patterns. As a next step, Alan needs to identify relevant questions that can help him to understand and explain why places are different and how they change. Alan also needs to develop his understanding of his own observations by asking the follow up question 'Why?'

## Rachel | Characteristics of Levels 5 and 6

Rachel is an 11-year-old learner in Key Stage 2.

Her teacher knows much more about Rachel's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Rachel's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Rachel's profile shows some characteristics of Levels 5 and 6, but mainly characteristics of Level 5.

Rachel's teacher planned opportunities for the class to investigate issues at different scales, locally, nationally and in another country. The aim was for pupils to develop their skills in evaluating evidence and communicating their ideas in a variety of different ways. The scheme of work for the year provided opportunities for the pupils to develop across each of the four skills of the programme of study.

### Investigating | 'An issue in the local area' A housing project



Prompted by a development in the grounds of a local school, the class debated the advantages and disadvantages of a possible housing project on their school field. The teacher made available templates adapted from Unit 4 of the *Key Stage 2 Geography Optional Assessment Materials* (ACCAC, 2001). Pupils had to decide what information they would need to present their views to the local council.

**Write a detailed description of the location of our school and its field**

Curt Yr Ala Junior School is situated in the South-East of Wales. It is located in Ely, Cardiff. It is a built-up area and is very close to the M4 (Approx 4km). Ely is in the North West of Cardiff and is neighbouring towns; Barry and Newport. It is quite a busy place and within it is a lot of housing. There is a lot of traffic in the morning and afternoon rush hours with people commuting to and from the city centre. The school field that may be used for housing is located to the South of the school and is approximately 7 times bigger than the school itself. The field and the school is around 5km from the city centre.

Rachel decided that it was important to explain where the school was located and produced an accurate sketch plan of the locality and a description of the location of the school. She used directional vocabulary to locate the school and showed *understanding of distance and direction* (characteristics of Level 5) at different scales by her references to south-east Wales, north-west Cardiff and the distance from the city centre.

Who thinks the housing project is a good idea	Why?
Danielle (10 Yrs Old)	more people would have somewhere to live.
Mr Williams (Teacher)	The school would benefit because money gained from the sale of the land could be used to buy new resources and improve the current building.
Yazid (8 yrs old)	It will make more money.
Callum (9 yrs Old)	More people commute to Ely.
lauren (8 yrs old)	" "
Mitchell (10 yrs Old)	Children can sketch them.
Jason (10 yrs Old)	Stop hayfever.
Rhian (7 yrs Old)	house homeless people.

Together with a partner, Rachel conducted a survey of opinions by interviewing pupils and teachers and *recording relevant data* on the templates provided (a characteristic of Level 5).

Who doesn't think the housing project is a good idea?	Why?
Chloe (10 yrs Old)	It will decrease the amount of space for the children to play on.
Mrs Griffiths (Teacher)	Too many houses already and it won't be a benefit to the school.
Chelsea (10 yrs old)	ruin habitats in the area
Courtney (7 yrs Old)	a smaller playground.
Miss Pats (Teacher)	Children need a better playground
Joshua (10 yrs Old)	no summer games
Jacob (10 yrs Old)	cancelled tournaments.
Shelby (10 yrs old)	smaller playground.
Rian (8 yrs Old)	ruin habitats in the area.
Ben (8 yrs Old)	cancelled sports day
Georgia (9 yrs old)	" "



She used the evidence (a characteristic of Level 5) to complete an analysis of the pros and cons of the development and write a speech considering different opinions and putting forward her own point of view. She read out her speech confidently and the teacher noted how Rachel met the criteria for the task.

### What might be the potential benefits of having housing built on the school field?

- It may bring more money into the school from the sale of the land.
- It would become more populated which would mean more people would use the local shops bringing more money into the area.
- The size of the school may need to increase to allow the new children to access to the school; this may mean new classrooms, resources and teachers.
- more jobs would be created for the building of the houses.
- maybe new jobs afterwards to make sure the housing area is clean and tidy.
- The roads would be improved making it safer for children.

### What might be the potential damages of having housing built on the school field?

- The children would be in danger during the build of the housing estate.
- It would destroy habitats in the area.
- It would make more pollution particularly noise during the building.
- The road into the school would be more congested which may result in more accidents.
- The school wouldn't be able to use the school which would mean children wouldn't get taught certain things properly.
- smaller playground area which can cause arguments between the children because they can't spread out and play.
- Local groups who use the field wouldn't be able to use the field which would mean some local events maybe cancelled or taken elsewhere.
- Increase in litter pollution.
- some children and parents may get fed up with all the mess and noise and might move to a different school.

## Investigating | 'Living in Wales' Energy and wind farms

The teacher selected energy as an aspect of the geography of the whole of Wales that offered opportunities for the pupils to carry out surveys, investigate the distribution of population and think about sustainability issues.

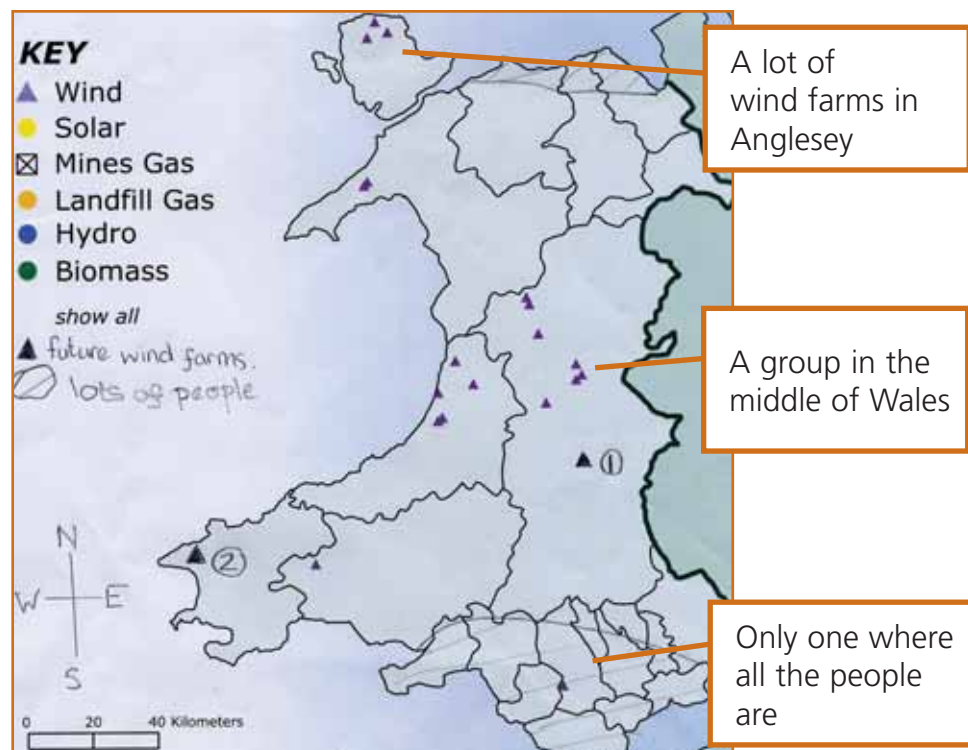
Pupils investigated three geographical questions, 'Where are there wind farms in Wales?', 'Why are the wind farms located there?' and 'Can you locate on your map two possible locations for future wind farms and describe why you put them there?' Rachel used the internet and her atlas to describe the distribution of wind farms and the factors that affect their location. She classified a number of advantages and disadvantages of wind farms as sources of energy identifying *the differences between places* and making connections between *natural and human features* of Wales (characteristics of Level 5).

She *used her evidence* (a characteristic of Level 5), plus an internet source for her map, to make a decision and suggest new sites for wind farms. She decided to locate one wind farm in lower mid Wales 'because this area is hilly and will receive lots of wind. It is a rural area but away from other wind farms so it can produce energy for a different location'. Her second choice was south-west Wales 'because it is near to the coast where it is windy and there are not any other wind farms in this area. Also the area is quite rural'. The map also shows that she recognises and connects *obvious geographical patterns* (a characteristic of Level 5), e.g. of wind farms and of centres of population.

**Your task: Describe the location of wind farms in Wales and give reasons why they are where they are.**

There are a large number of wind farms in Mid Wales because the ground is hilly and the wind turbines can produce more electricity as there is more wind. Some wind farms are located near the coast in the west of Wales. In all there are a total of 32 wind farms in the whole of Wales. Lots of wind farms in the middle of Wales are positioned together because it is a rural place or that the town or city near by needs a lot of electricity and two or three wind farms together can give them enough power. Wind farms are not located in the urban places, for example in the middle of towns because the buildings around block the wind so that little electricity is made.

Wind farms have advantages and disadvantages. One advantage is that they are environmentally friendly because they do not produce any chemical or radio active waste. This means that they do not damage the ozone layer. A disadvantage is that they can interfere with communications including telephones and televisions. People who are against wind farms claim that each year over 70,000 birds are killed and that sometimes even bats are. However people who are for wind farms say that cars kills 57 million birds a year as well as the damage they do to the environment.



## Investigating 'Living in other countries' The Gambia

Pupils investigated the question 'What is it like to live in another country?' They talked with a visitor from the Gambia who showed them artefacts, demonstrated dances and talked about a day in the life of a child. Each pupil then completed a K.W.L. grid to identify in the first column what they knew (K) already and in the second column what they wanted (W) to find out. Rachel constructed a number of relevant questions though not in a sequence. She posed only one question about the location of features. The last column in the grid 'What I have Learned' (L) was completed at the end of the activity.

What I Know	What I Want to know	What I have Learned
<ul style="list-style-type: none"> <li>✓ Home to the white crocodile</li> <li>✓ Boys like dancing as much as girls</li> <li>✓ Girls didn't go to school</li> <li>✓ The capital of Gambia is Banjul</li> <li>✓ They use elephant hey to make roofs</li> <li>✓ They carry things on there heads</li> <li>✓ Gambia is the smallest county in Africa</li> <li>✓ They can't afford electricity</li> <li>✓ 1=kilin 2=fula 3=saba 4=nani</li> </ul>	<ul style="list-style-type: none"> <li>✓ What to children learn about?</li> <li>✓ Why did Nasa build the airport?</li> <li>✓ How far is Gambia from the equator?</li> <li>✓ Why don't girls have to pay for high school?</li> <li>✓ What do the colours of flag represent?</li> <li>✓ What sort of toys do children play with?</li> <li>✓ What are the main attractions in The Gambia?</li> <li>✓ What do Gambian people do for a living?</li> <li>✓ Why are Gambian children so happy?</li> </ul>	<ul style="list-style-type: none"> <li>✓ Gambian population - 1,558,472</li> <li>✓ Largest city Banjul.</li> <li>✓ The River Gambia is 1130km (700) miles long.</li> <li>✓ The River Gambia runs from North Guinea to Atlantic ocean.</li> <li>✓ Insects, alligators, hippos and crocodiles live in the River Gambia.</li> <li>✓ The River Gambia is used for washing, cleaning and heating.</li> <li>✓ Nasa is the only airport in The Gambia.</li> <li>✓ The name of the airport comes from a man named Nasa.</li> <li>✓ All boats are made from wood.</li> <li>✓ The boats are called Pongos.</li> <li>✓ Nasa is 20 years old and international.</li> <li>✓ It takes 6 1/2 hours from here to the Gambia.</li> <li>✓ A school dinner costs 3,000 (p)</li> <li>✓ A naming ceremony takes place 7 days after a birth.</li> <li>✓ Gambians make their own music.</li> </ul>
<ul style="list-style-type: none"> <li>5=loloo 6=waren</li> <li>7=warenwilly</li> <li>8=say 9= knonto 10=tang</li> <li>✓ They chew kola sticks</li> <li>✓ They put coal in irons</li> <li>✓ They have yellow and green taxis</li> </ul>	<ul style="list-style-type: none"> <li>✓ Why does it cost 20p for children to go to nursery for a term?</li> <li>✓ Why are African bodies different to ours?</li> </ul>	

Working in groups, pupils carried out a number of activities to develop their independent investigation skills. Each group identified the questions that they wanted to ask about the Gambia. The class also collectively suggested questions for each of the individual groups to include in their investigation. Rachel's group selected to investigate 'Homes'. They prepared their information and wrote a script for a PowerPoint presentation.

**Laura:** We have been researching homes.

**Rachel:** Around the coast and the capital there are houses which have access to electricity and telephones.

**Carys:** Some buildings are modern.

**Laura:** Families live together in compounds with more than one home behind the walls. (A compound is a group of small one roomed huts built very close together, usually in a circle.)

**Rachel:** As you travel further from the coast you see villages with mud brick houses and thatched roofs.

**Carys:** Around Janjanbureh the houses are often concrete blocks with corrugated tin roofs.

**Laura:** A round house to your right Right A rectangular house to your left

**Rachel:** Corrugated iron roofs are common, They make a lot of noise when it rains. (right)

**Carys:** The roof overhangs and provides shelter from the hot sun in the day and for beds at night. (left)

**Laura:** Some houses are made from mud bricks. The roof supports hold a straw roof.

### TRIBES AND THEIR MEMBERS.

This is the Head of the Village at Boraba. He is from the **Mandinka** tribe. (right)

(left) The chairperson of the Mother's Club at Boraba is from the **Fula** tribe.

Some Gambian teachers visited England. Here Rohey is showing the children how to make ataya tea. She is from the **Wolof** tribe.

**Mandinka** and **Fula** are the two main tribes at Boraba and in the Gambia. The **Wolofs** are the third tribe.

The **Wolofs** particularly live around the capital, Banjul and Serakunda both near the coast.

The **Jolas** are known for growing rice. They also live where palm trees grow. They process them for oil. It is also possible to make wine from the sap of the trunk. Only the Christians would drink this as Muslims do not drink alcohol.

The **Serahulle** are found in the north. Traditionally they were slave raiders.

The **Aku** are the people of the coast. They were once slave raiders. In America, they were used as slaves.

### How the Gambian bricks are made.

1. The soil was dug out to form bricks
2. Shaped and left to dry.
3. Piled up ready for use.
4. The walls are nearly finished.
5. This elephant grass will be used for the roof.
- 6.

## We are a TEAM!

THESE MEN FROM VILLAGES AROUND **BORABA** ARE WORKING TOGETHER TO BUILD A NEW HOUSE ON THE SCHOOL GROUNDS. SOME OF THE TEACHERS LIVE ON THE SCHOOL GROUNDS.

WORKING TOGETHER AS PART OF THE COMMUNITY IS VERY IMPORTANT AND STRONG IN THE GAMBIA.

## THANKYOU FOR WATCHING

WE HOPE YOU ARE NOW MORE FAMILIAR WITH GAMBIAN HOMES AND FAMILIES.

# HOMES

- Around the coast and the capital there are houses which have access to electricity and telephones. Some buildings are modern.
- Families live together in compounds with more than one home behind the walls. (A compound is a group of small one roomed huts built very close together, usually in a circle.)
- As you travel further from the coast you see villages with mud brick houses and thatched roofs.
- Around Janjanbureh the houses are often concrete blocks with corrugated tin roofs.

A round house. (right)  
A rectangular house. (left)

The class listened to all the presentations and took notes. Rachel used good note-taking techniques selecting appropriate key points to record. Although in her own investigation into the Gambia not all her questions are geographical or followed through, she gathered and *analysed information* from other presentations to make logical connections in her diagram (a characteristic of Level 6) by classifying the information of the four areas of investigation. In her diagram Rachel demonstrates that she can *describe and offer explanations for natural and human features* and also identifies how *places are interconnected* (characteristics of Level 5). She selected and used *correctly geographical terminology*, e.g. in recognising the location and links of a primary transport hub (a characteristic of Level 6).



The teacher asked Rachel and a small group of more able pupils to use what they had learned and apply their understanding to how life in the Gambian village should or could change. Rachel suggested that the village would benefit from a new school. The teacher prompted that new developments cost money. The diagram below was Rachel's answer to the question 'How could a village in the Gambia raise money to build a new school?' Her map of the Gambia shows that she understands distance and direction and can draw maps with a sense of scale and proportion (a characteristic of Level 5). The maps also show that she recognises obvious geographical patterns (a characteristic of Level 5) of the location of settlements and their relationship to the shape of the Gambia. In her annotations, Rachel is beginning to demonstrate characteristics of Level 6 by expressing opinions, justifying her views and making informed decisions in carrying out this problem-solving activity on the Gambia.

# HOW COULD A VILLAGE IN THE GAMBIA RAISE MONEY TO BUILD A NEW SCHOOL?

The fruit will now fly off to Cardiff airport in Wales. Then a lorry will transport the goods to all Tesco super markets in Wales. 10% of the money raised will go back to The Gambia to build a new lower basic school. The other 90% will go to Tesco.

Small farmers and the Jola tribe grow food and sell it to a busy market. Next a buyer from eg. Wales will buy Gambian fruit from that market to a food company in Wales eg. Tesco. 10% of the money spent on the Gambian fruit at Tesco will go back to The Gambia to build a new school, and 90% of the money spent will go to Tesco. Don't forget the fruit growers have volunteered to grow fruit. They won't be earning money in this process that means GAMBIAHS CARE FOR THEIR COMMUNITY !!!

This fruit is being grown at a quiet end of The Gambia, where there are no built up areas. A small farmer is growing mangoes and cassava and the small farmer is growing avocados and don't buy!

Wales

Atlantic Ocean

The Jola tribe live on the Atlantic ocean coast and grow rice.

Senegambia

Senegal River

Sukuta

Okras

Mangoes

Avocados

Rice

Okras

Cassava

Honey

Pineapples

Cardiff

Tesco

## Summary

Rachel's profile shows mainly the characteristics of Level 5, though she is beginning to demonstrate some characteristics of Level 6.

Rachel demonstrates knowledge and understanding of the character of different localities and environments, and in her maps and her descriptions demonstrates that she understands distance and direction, and recognises obvious geographical patterns.

She identifies the differences between places, makes connections between natural and human features offering explanations for the characteristics of places, as her work on wind farms in Wales and the Gambia illustrates.

She works independently in her research, demonstrating a range of investigative skills and suggests solutions when addressing issues. She collects only a limited range of primary data in her opinion survey though she uses secondary information including an internet source in her research on wind farms. She does not demonstrate her ability to gather data by measurement although she had done this in a simple traffic survey carried out in Year 5.

In her suggestions for the new school in the Gambia, Rachel is beginning to demonstrate elements of Level 6 characteristics in expressing opinions as she does in justifying views and making decisions in a problem-solving activity. She uses a range of presentational methods including a well-organised PowerPoint presentation. She correctly uses a very good range of vocabulary, including 'rural', 'urban', 'town', 'city', 'environmentally friendly' and 'primary transport hub'.


Rachel is an independent learner with a breadth of skills, and a confident communicator who employs a wide range of presentational skills and geographical vocabulary. As a next step, Rachel needs to develop her practical investigating skills including measurement and recording of primary data. She should also be encouraged to organise her questions into a sequence to consider both 'Where?' and 'Why does this happen?'



*Section*

# 4

Making judgements at the end of Key Stage 3



This section shows how level descriptions can be used when making judgements about which level best describes a learner's overall performance at the end of the key stage.

You may find the following points useful when considering the profiles in this section.

- The learner profiles are not presented as a model for how you should collect evidence about your learners. Although you will want to be able to explain why you have awarded a particular level to a learner at the end of the key stage, there is no requirement for judgements to be explained in this way or supported by detailed collections of evidence on each learner. Decisions about collecting evidence, and about its purpose and use, are matters for teachers working within an agreed school policy.
- The commentaries on the pieces of work have been written to explain the judgement made about a learner's performance. They are not intended as an example of a report to parents/guardians.
- The materials in each learner profile can only represent a small part of the information and experiences that make up a teacher's knowledge of each learner. They do not reflect the extent of the knowledge of each learner that you will have built up over time across a range of different contexts. You will use this knowledge to make a rounded judgement about the level that best fits each learner's performance.
- You will arrive at judgements by taking into account strengths and weaknesses in performance across a range of contexts and over a period of time. Opportunities will need to be provided for learners to demonstrate attainment in all aspects of the level descriptions.
- Some of your learners may need to use a range of alternative forms of communication to show what they know, what they understand and what they can do.

## Richard | Level 5

Richard is a 14-year-old learner in Key Stage 3.

His teacher knows much more about Richard's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Richard's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Richard's teacher judges that his performance in geography is best described as Level 5.

Richard's teacher planned opportunities to work both in and out of the classroom and for Richard to carry out investigations in a group and independently. The aim was for pupils to develop their skills in investigating the causes and effects of physical and human processes, and to understand why places and environments change. The scheme of work for the year provided opportunities for the pupils to develop across each of the four skills of the programme of study.

### Investigating | 'The hazardous world' What happens when a volcano erupts?

#### Sicily News Top Story : Etna Erupts

Yesterday My Etna erupted again. It is near the city of Catania. The people of Catania were worried when they could feel small earthquakes and could hear the occasional rumble.

There were huge clouds coming from the main cluster of the most active volcanoes in Europe. There was heavy rain and thunder and lightning. Etna is the largest volcano in Europe. It has erupted 44 times this century.

When Etna did erupt it produced ash, lava, volcanic bombs and gases. The ash can choke people and covered the whole area in a thick white blanket. Authorities have warned people to stay well clear of the volcano because of the bombs and the lava. The lava destroyed many farmlands.

In January 1992 the lava overflowed the old crater and threatened the village. On the 12<sup>th</sup> April the Italian army used dynamite to slow down the lava but it had no effect. The US army dropped concrete blocks to divert the lava but they just floated away. Vineyards at the edge of Zafferena were destroyed

As part of an investigation into 'The hazardous world' pupils were encouraged to generate questions to investigate the spatial pattern and causes of tectonic activity and to independently research the 'geography in the news' of a recent volcanic eruption. They communicated their outcomes in a poster and a newspaper item. Richard, working in a group, suggested investigating the question 'What happens when a volcano erupts?'

Richard's news item is descriptive. He describes the characteristics of the eruption and uses data to indicate the scale of the event but provides no information about the process. He provides detail of the impacts and identifies some ways in which the eruption was managed. Richard provided photographs but no map to show the spatial impact of the places named.

## **Investigating** | **'Town and country'** **How and why has my locality changed?**

As part of a unit on changes in rural and urban areas, each pupil carried out a fieldwork and research investigation of their home area to investigate the question 'How and why has my locality changed?' Richard designed a simple questionnaire to interview local people. He applied some environmental criteria but obtained only one set of results. Richard identified and described changes and presented them with an annotated photograph and a sketch map. When the activities were finished the teacher organised pupils to peer assess one another's work. The peer assessment of Richard's work concentrated mostly on aspects of neatness and completeness but usefully drew attention to the limitations of his questionnaire.

<p><b>1. How Long Have You Lived In Llanbadarn Fawr? Why Did You Move?</b> Nearly three years. We had been in our old house a long time; it was time to move.</p> <p><b>2. Do You Like Living Here?</b> Yes, there are nearby shops, and the Park + Ride is close by.</p> <p><b>3. What Are The Main Differences Between Where You Used To Live And Where You Live Now?</b> There is less noise of the traffic here and there are no delivery lorries pulling up next door at six in the morning!</p> <p><b>4. Is There A Sense Of Community In Llanbadarn Fawr?</b> Yes. We went to the turning on of the Christmas lights in the village square and we meet people at the polling station.</p> <p><b>5. Do You Make Use Of The Available Services In Your Area?</b> Yes, there are handy shops within walking distance and I often use the Doctor's Surgery.</p> <p><b>6. Do You Work Locally?</b> No, I am medically retired.</p> <p><b>7. Do Your Children Go To School In The Village?</b> They used to when they were at Primary School age, but are both now in Penglais.</p> <p><b>8. Can You Name Any Changes In Llanbadarn Fawr Over The Past 13 Years?</b> There has been housing and retail development, also roadwork's that enable traffic calming measures.</p>
--


MY ENVIRONMENTAL SURVEY						
	High Quality			Low Quality		
	5	4	3	2	1	
Attractive	X					Ugly
Peaceful		X				Busy
Clean		X				Dirty
Tidy		X				Untidy
Safe	X					Dangerous
No cars parked			X			Many Parked Cars
Well kept	X					Badly Kept
Interesting		X				Boring
Like		X				Dislike

Changes in Llanbadarn Fawr

1. Glan Rheiddol - housing estate.

The first few houses to be built

Sketches annotated photographs



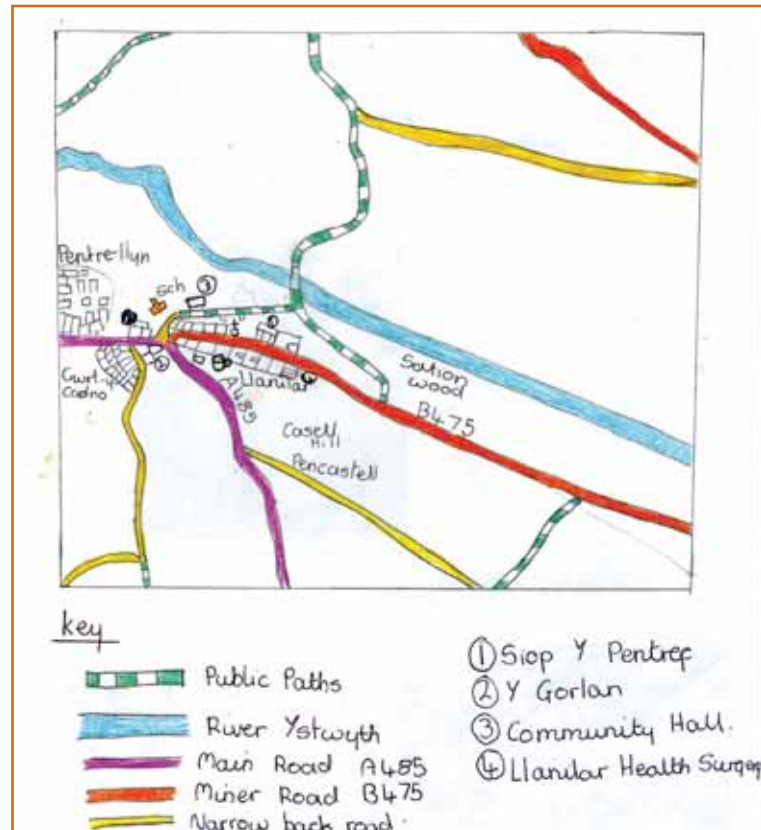
Houses still being built

The main road through the estate

Before this estate was beginning to be built six years ago, this used to be farmland. It was a dairy farm owning many cows and a few horses. There was an old farmhouse, and a few large fields surrounding it.

Now there is a fairly large housing estate, a large piece of land awaiting the Welsh Assembly Offices and a long road (Saint Brieuc) separating them.

This estate was built because new housing was needed for all of the people coming here from other countries. The road was built as a shortcut to the retail park. Before it was built you would have to drive up through Penparcau.



What is good

The cover is good because it is colourful, attractive and you can tell there has been effort put into it. I think the introduction is great because there is a lot of detail about the area. The changes with the pictures etc. are very good because it has a lot of information about them, especially the first one. The Interview has good questions and I find it interesting how you have laid it out. The conclusion is fine.

How to improve

The Contents page could have been a bit less plain. The sketch map page could have been filled a bit more. The Multi-map page could have been labelled more. The Interview could have been made longer.

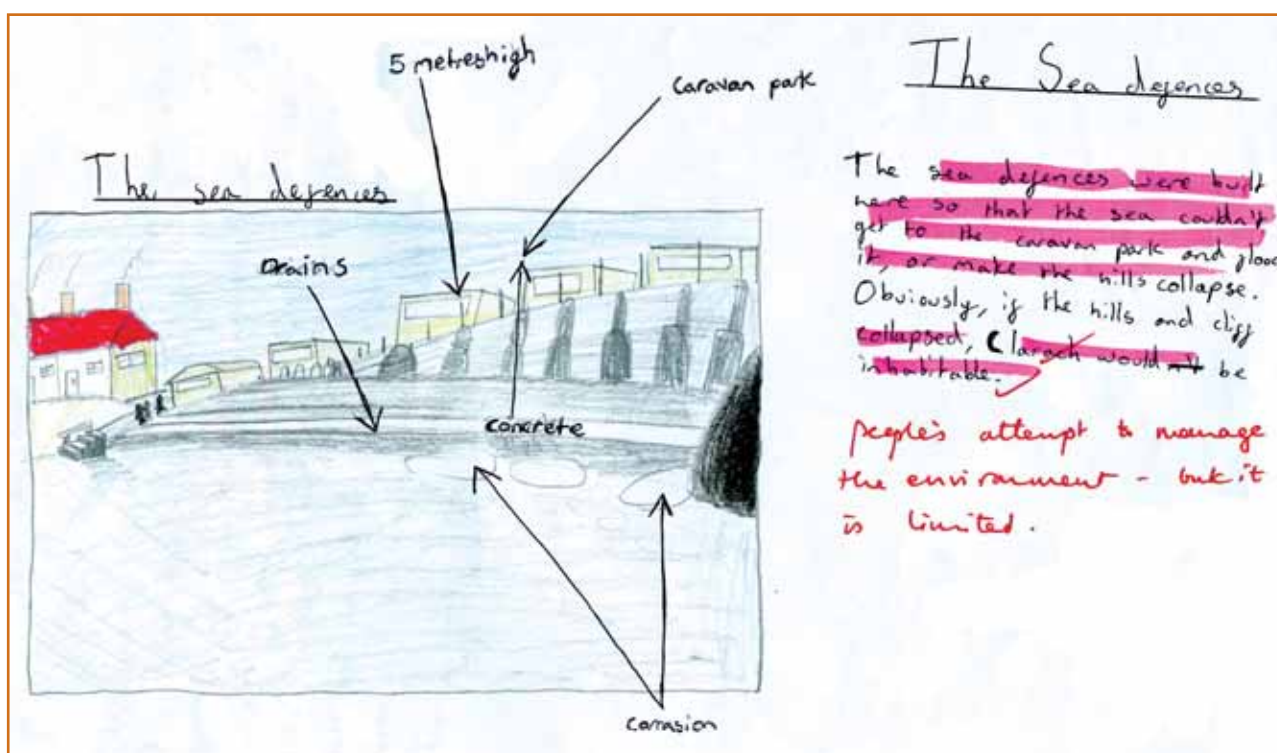
Grade

B!

An extract from a peer assessment of Richard's investigation.

## Investigating | 'The physical world: a coastal area' What are the processes at work?

Pupils carried out fieldwork in a coastal area to develop their skills of observation and to collect primary data. They were to investigate how physical and human processes interrelate through the questions: 'What are the features and processes at work here?' and 'How and why is this place changing?' They studied contrasting photographs and drew field sketches to develop an understanding of areas of erosion and areas of deposition. Richard's annotated sketch showed basic understanding of the process of erosion and located the threat to the human environment. Working in a group to carry out fieldwork in the Borth sand dunes, Richard used a quadrant and recorded measurements at three locations specified by the teacher. Each member of the group also investigated one physical feature of the dunes, Richard wrote about the blow out providing some detail of the human impact but little about the process by which it had been formed. He completed his fieldwork investigation with a conclusion and evaluation that was largely a commentary on the practicalities of the fieldwork day.



# The Blow Out

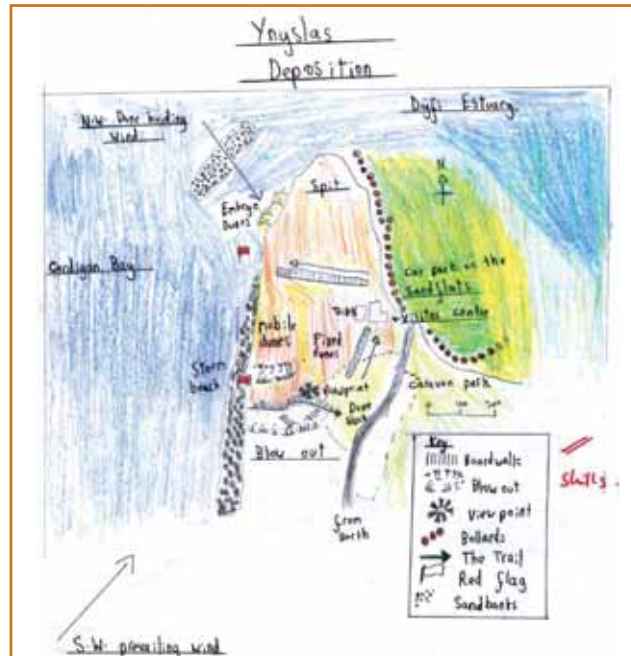
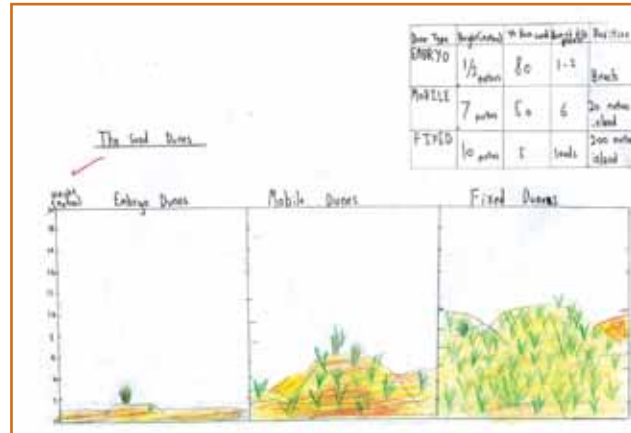
There is very little marram grass on the blow out because people have inhabited the area, thus destroying the marram grass. The dunes are very steep around the blow out because of people living here but there is quite a lot of people who don't chuck away old Christmas trees, wooden furniture etc. Instead they have them put here in the blow out to trap sand so that it does not blow away. People have also started to pull up marram grass in overgrown places and planted them in the Blow out. Board walks have also been built around the blow out so that humans can't damage it any more but we can only do so much and the wind will keep blowing the sand away.

# Conclusion

On the field trip we found out how transportation and deposition of material shapes the dunes and long shore drift, how coastal defences protect Borth, dune formations and the blow out. Also it was found how The Geo and The Arches and caves were formed and also about rock types.

# Evaluation

I think that I did quite well on the field trip because I listened and I learnt a lot and I thoroughly enjoyed myself. The only thing that I think I could have done better was paid more attention to the details on the cliffs and dunes. The trip could have been better if we went nearer to summer, if we had more time and I think we could have learnt a bit more if we were in a smaller group. But over all it was a good and enjoyable trip.





## Investigating | 'Threatened environments' Why is the Amazon rainforest at risk?


The teacher used an activity on the Amazon rainforest for pupils to develop their understanding of how places and environments change. The class discussed the ways in which the ecosystem of the Amazon rainforest was changing.

As an assessment assignment to be completed in class pupils were asked to compare three major impacts on the rainforest, and develop and express an opinion on the threats to the Amazon. They prepared for the assessment in homework and were encouraged to include illustrative materials they had researched.

Richard's work on the three main rainforest activities is descriptive. He includes a conclusion with a simplistic view of cause and effect summarised in his one-sided opinion of 'Stop them all!'


Amazonian Rainforest is at risk due to 3 major effects..  
Logging, Mining and Cattle Ranching.

The first main threat is Logging. This is a threat because loggers are cutting down trees with chain saws. When the tree falls it takes other trees with it, every one tree damages 28 other trees.  
The falling trees are blocking Rivers, Roads and other areas. Mahogany is expensive and they use it for furniture and doors.  
One Logger cuts down 7,500 trees a year.



The Second main threat is mining. This is a threat because they pick and shovel un-weathered rock then they heat it up and grind it. They also shoot heavy water at rocks and mud. This makes the scar effect. They do this to get cassiterite, tin ore. There are many other minerals that have been found such as oil and gas.

The Last effect is Cattle Ranching. This is a problem because it's the biggest cause of exploited rainforests. Rondonia was the first place to start it. Massive areas are cleared for farmers and they keep 2000 cattle on 3000 hectors. They use modern techniques and the soils are acidic which produces poor quality.



In my opinion they should stop all of them. Or only have a few people doing them all. That would cut down the risk of exploiting and damaging the forests. If they stopped logging we would have more oxygen. If they stopped cattle ranching then there would be more land for more animals. But mining wouldn't really make much difference.

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## Summary and overall judgement

Levels 4, 5 and 6 were considered and Level 5 was judged to be the best fit.

Richard demonstrates *knowledge and understanding of a range of places and environments at more than one scale*, and he has a good sense of location and draws sketch maps with a *sense of scale and proportion* (characteristics of Level 5). His maps demonstrate *identification of patterns*, as in his sketch map showing physical and human characteristics of the Borth sand dune area (a characteristic of Level 6).

Richard *describes features*, e.g. of his home locality, the Amazon rainforest and the volcanic eruption, and he *describes the role of people in managing their environment* in his work on the eruption of Mount Etna and the blow out (characteristics of Level 5). However he provides few details of processes to explain different features or how places change. Some explanations are incomplete or confusing as in his home locality study, e.g. 'The estate was built for people coming from other countries', and in his work on the Amazon, e.g. 'They use modern techniques and the soils are acid, which produces poor quality'.

He worked well in practical situations and *collected and recorded relevant data from sources* both working in a fieldwork group and also for his independent investigation of his locality (a characteristic of Level 5). However, because he conducted only one interview, he had insufficient information to draw plausible conclusions from his questionnaire. He is able to *present straightforward conclusions* to his research and *expresses his own view* on the geographical issue of deforestation and change in his home locality (characteristics of Level 4).

Richard's strengths are locating skills, constructing sketch maps, and using a variety of presentation and communication skills. He works well when provided with sectioned headings and a structure within which to work. As a next step, Richard needs to develop his depth of explanation and identification of linkages of cause and effect. He will need support to develop his investigating skills in planning and following through an investigation from asking questions to formulating a conclusion.

## Emma | Level 6

Emma is a 14-year-old learner in Key Stage 3.

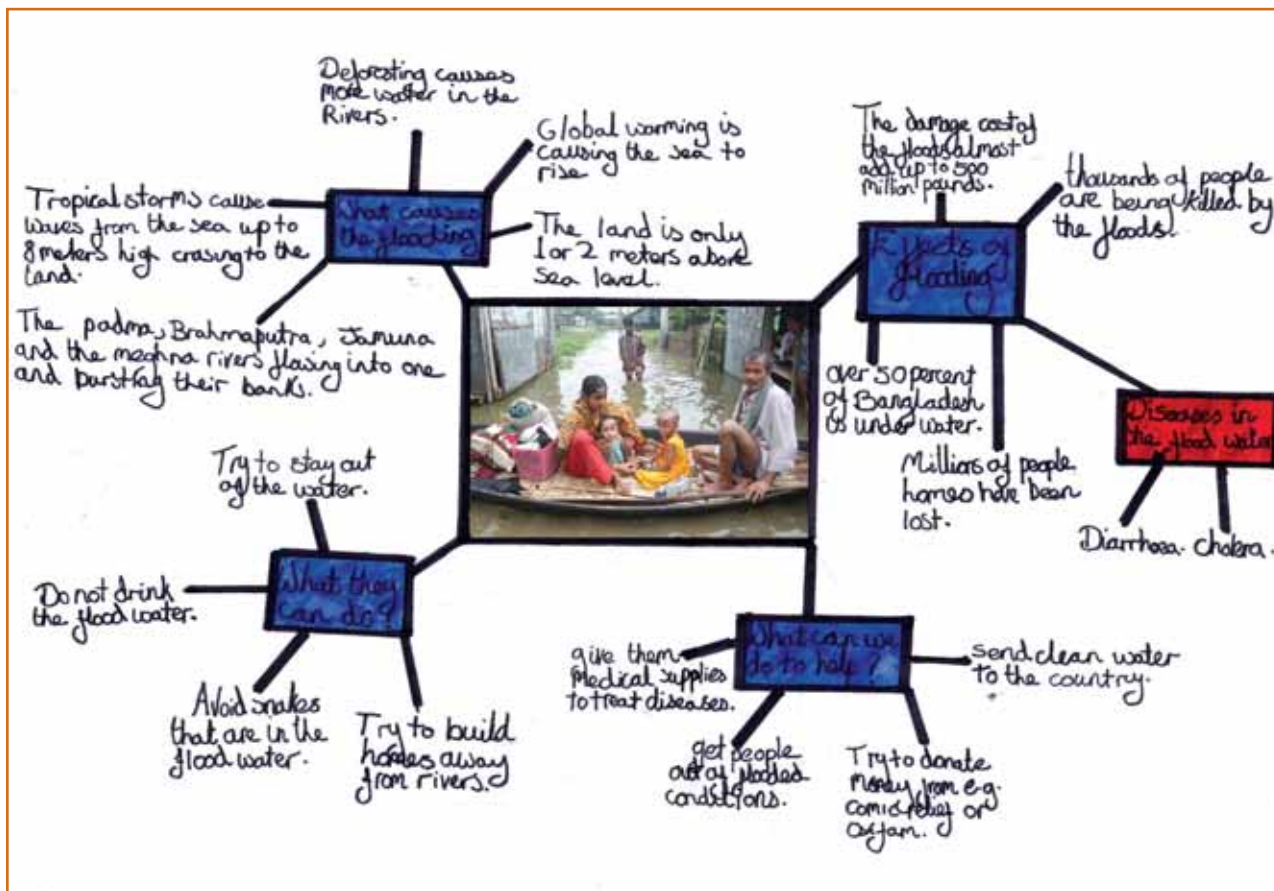
Her teacher knows much more about Emma's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Emma's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Emma's teacher judges that her performance in geography is best described as Level 6.

Emma's teacher planned for the class to focus on developing their locational skills and understanding of more complex interconnections. Many activities were planned as interactive group work and the outcomes displayed as posters or used as prompts for presentations. Pupils were encouraged to take responsibility for planning their learning, setting success criteria and taking part in peer assessment of outcomes. The scheme of work for the year provided opportunities for the pupils to develop across each of the four skills of the programme of study.

**Investigating** | **'The physical world'**  
**'Geography in the news'**  
**Why is Bangladesh one of the most flood prone countries in the world?**

The teacher used the topic of flooding in Bangladesh as a unit of work to combine several aspects of the Range of study; 'the physical world', 'the hazardous world', 'the rich and poor world' and 'an issue in the news'. Pupils worked in small groups to draw together what they had learned by classifying information and developing a concept map to identify causal linkages. Using this group work they produced an individual piece of extended writing.



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Emma organised and classified her ideas under headings of physical and human causes, for example including the physical impact of vegetation under 'physical' and deforestation under 'human'. Emma carried out further independent research before developing her explanation of the physical causes of flooding in Bangladesh. Many of her suggestions of the factors affecting flooding are sound. She links the factors of relief ('is very flat') with the forest 'being cut down'. However, some explanations are confused or incomplete, e.g. when she writes 'There are no hills or mountains for the water to stay behind'. She identifies the importance of the monsoon as a contributory factor but again her understanding of a cause is unclear when she emphasises temperature, e.g. 'it's humid and tropical', rather than precipitation as a factor.

### Investigating Flooding In Bangladesh

Bangladesh is a country that is infamous for its frequency and magnitude of its flooding.

I am going to explain why it is one of the most flood prone countries in the world.

Bangladesh is situated north east of India and South of Nepal.

There are many Reasons for the flooding in this country, some of which are physical causes and some are human.

#### Physical Causes

The physical contributions to the flooding in Bangladesh are: this country is very flat country, this effects it because there are no hills or mountains for the water to stay behind before flooding the settlements also thousands of trees are being cut down in the Himalayas which means there is no foliage to soak/drink all the excess water.

More physical contributions to the flooding is the climate of Bangladesh, it's very different temperature to Britain. It's often humid and tropical, this doesn't help the flood situation, as, in the monsoon season there is very heavy rainfall, which makes it harder for everybody, and the country itself to cope with.

#### Human Causes

The human contributions to the floods are the rapid growth of the country, urbanisation, large cities are being made bigger, Dhaka is the capital city and would have a big problem with this. Though it is not just a problem for the flooding, but also a problem for the wealth of the country. Also deforestation is a big issue, but it isn't just Bangladesh that are cutting down trees, it is also countries around Bangladesh and the Himalayas e.g. North India, Nepal and the southern part of China, it would help if

deforestation would stop in these parts of the country as they are in the river basins of the country's rivers.

#### Effects of Flooding.

Some of the effects of the floods are short term like losing crops, minor fatalities and overflowing sewers, but however the long term effects are that the diseases that cause the deaths e.g. cholera and typhoid, also the famine that the loss of rice crops can cause.

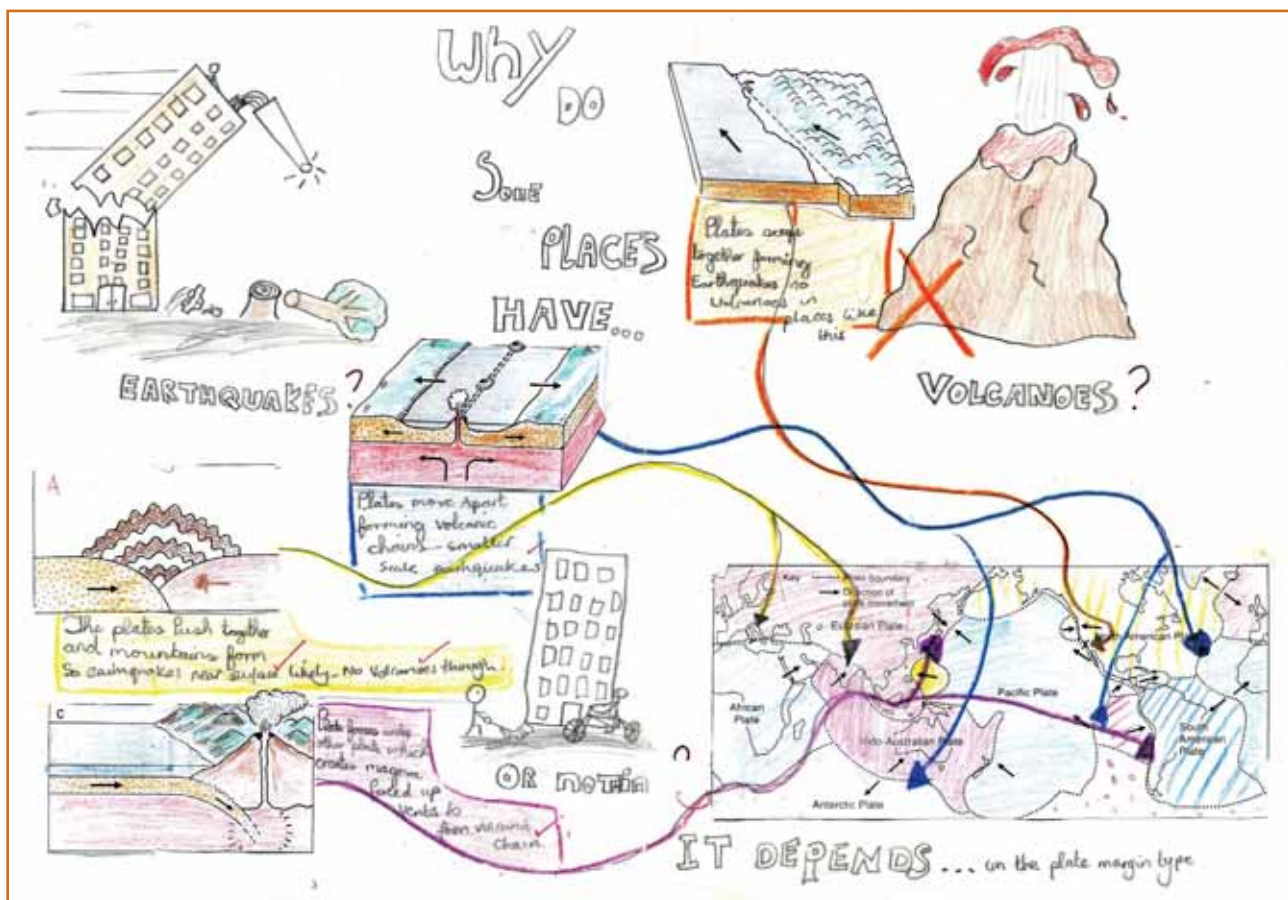
The loss of communication can be bad. Railways and roads would be washed away and bridges over the river Ganges would be torn down.

I think that Bangladesh was flooded so horrifically in the past, because they had only learnt how to come up with strategies to cope with the damage of flooding itself. However, the human responses to the flooding now are very good. The people of Bangladesh have started to build dams, to control river flow and hold back monsoon rainwater in the reservoirs, also the building of embankments and deepening river channels to stop the river overflowing. Aids during and after the floods are, 5,000 flood shelters being built all over Bangladesh. They are to improve flood warning systems also giving after care to the people once the floods have ended e.g. food, clean drinking water, tents, medicine and money is to be available.

But as the world becomes smarter so do the countries inside it. Aid and money has been sent to Bangladesh from richer countries such as U.S.A and Great Britain to help these include helicopters, boats, food, water and medicine

**Investigating 'The hazardous world'**  
**Why do some places have volcanoes and earthquakes?**

The class began their investigation of the hazardous world by looking at maps of the distribution of the most recent earthquakes and volcanoes that they had downloaded from the internet. In groups they discussed whether there were any patterns to the distributions. The teacher provided outline block diagrams of plate margins and the different processes were discussed. Emma produced this poster to show how different plate margins could account for different types of activity. She used colour to identify different types of activity. Her annotations illustrate a link between the feature of the activity and processes particular to a margin, e.g. 'earthquakes near surface likely. No earthquakes though.'



## Investigating | 'Threatened environments'

### How long can the Amazon rainforest last?

As part of their investigation for a debate into 'Threatened environments' pupils researched three main threats to the rainforests, i.e. logging, ranching and mining. They watched a video and discussed in groups their different points of view about the issues. Pupils were provided with a simple frame with which to prepare a speech to deliver to the class and were asked to review their own performance. Emma assessed her speech as being quite good because 'I covered the three main points but I was nervous and my conclusion was quite short'. Although quite short, Emma's details provide depth of description to evaluate the scale of the issues. She notes that 'mahogany is expensive', 'because of the variety of minerals more mining is likely' and 'ranching results in only poor quality meat and milk'. However her conclusion is incomplete and lacks a balanced overview.

#### My Speech on the Amazon Rainforest

##### Introduction

For hundreds of years the Amazon Rainforest has been one of the world's natural wonders. We have been using the resources from the forest causing no harm for years but now people are taking advantage of one of the world most beautiful places.

What we want to know is: Is it really worth it?

##### First Point

One of the main threats to the Amazon is logging. The loggers look for expensive Mahogany trees but they are very spread out. To get one Mahogany tree they have to cut down at least 28 others.

##### Second Point

Another threat to the Amazon is mining. The mines leave a huge scar on the land and take all of the natural resources from the ground. They are deserted when they are no longer needed. Many more minerals have been found in the rainforest so more mining is very likely.

##### Third Point

The biggest threat to the Amazon is cattle ranching. Huge areas are cleared for cattle to graze in but the land doesn't have enough nutrients in it and soon becomes useless. New areas are cleared and the old ones abandoned. This is killing the forest quicker than anything else and the only produce is poor quality meat and milk.

##### My conclusion

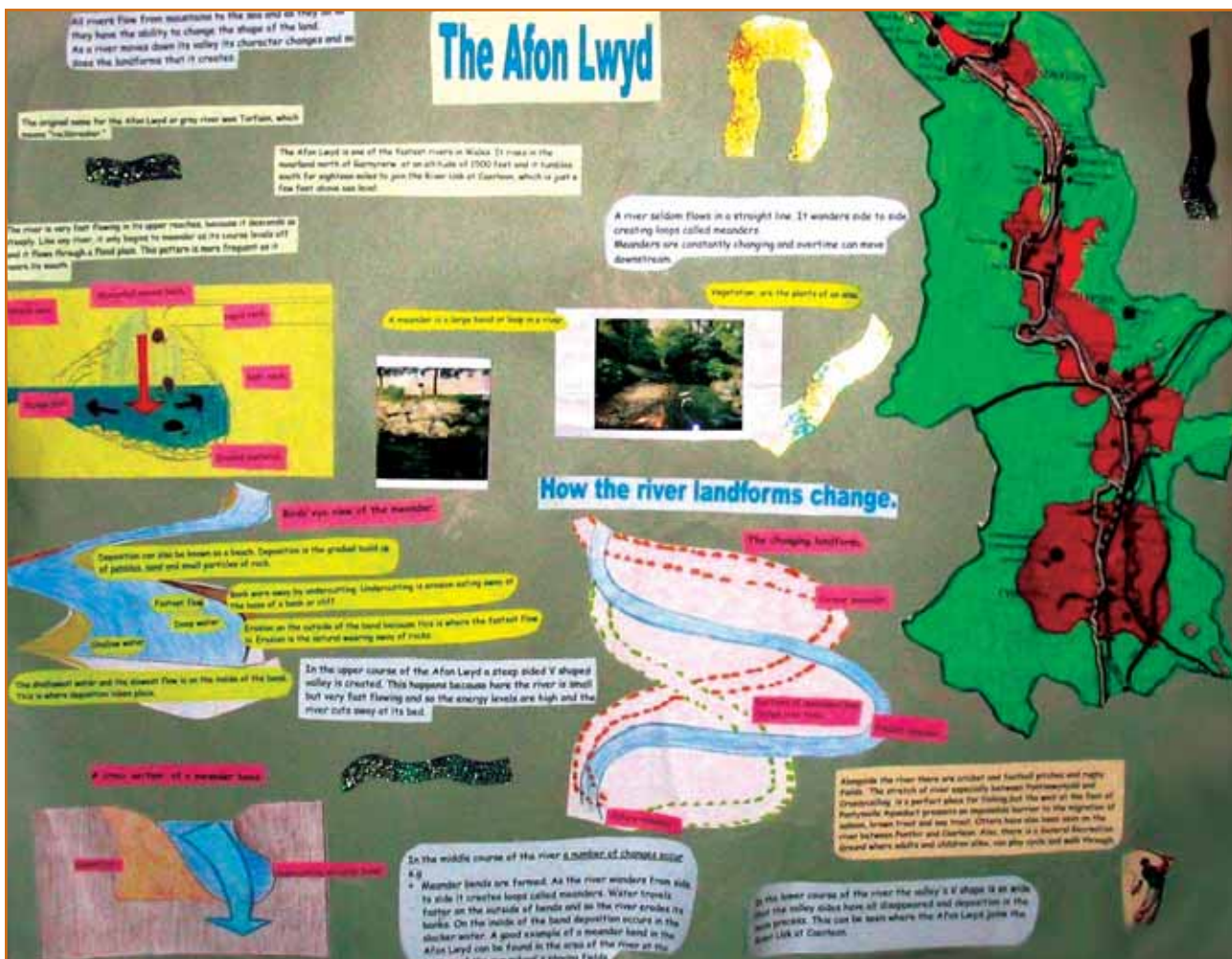
If the Amazon is to survive then something needs to be done. Every time a tree is cut down a new one should be planted and cattle ranching should stop as their is little point to it.

These alternatives may take longer and be more expensive but I think it is worth it.



**Investigating 'The physical world'**  
**Where, how and why does the Afon Lwyd meander?**

Pupils worked in groups to investigate river processes, in particular the process of meandering. They used a double lesson to visit a local river, complete field sketches, take photographs and identify features of the river. They did not carry out any measuring but had access to some cross-section measurements taken by Year 13 students. Groups made a presentation to the class each talking through their contribution. Emma had identified the built-up areas of the valley and coloured the map, took the photographs and contributed descriptions of the process (labelled in yellow on the poster) though it was not clear to which part of the map the photographs or the process description applied.



## Investigating | 'People and the planet'

### Why do people migrate from Mexico to USA?

Pupils listened to a migrant's story and made a list of key words that might describe the feelings of a migrant and why they decided to move. They were encouraged to think about the difference between push factors and pull factors and which they might find the most powerful. The task was to write a story illustrating how the different factors might have influenced a migrant. Emma constructs her story to emphasise the importance of both push and pull factors. She demonstrates good locational skills by including a located map and appropriate photographs.

#### Mexico to USA. A migrants story

My name is Isabella. I am a illegal migrant who migrated from Tijuana to San Diego



I was born in Ensenada, Mexico but my mother died when I was a baby. I lived with my father, auntie , two brothers and three sisters in a shanty town. When I was 16 my family moved to Tijuana hoping for a better life. Sadly my father died because of starvation 4 years ago. I wanted to follow in my fathers footsteps, just like he had tried to help me. Mexico had few opportunities and not enough jobs for the population. The shortage of food had got worse over the years . I hardly ate and water was expensive.



My friend from Ensenada migrated with her mother to the USA 6 years ago. But she never came back. That's when I decided I was going to migrate to the Us hoping that my life would be better off.. In the US I had a better chance of getting a job, I could improve my living conditions have abetter education have better medical care and better housing.



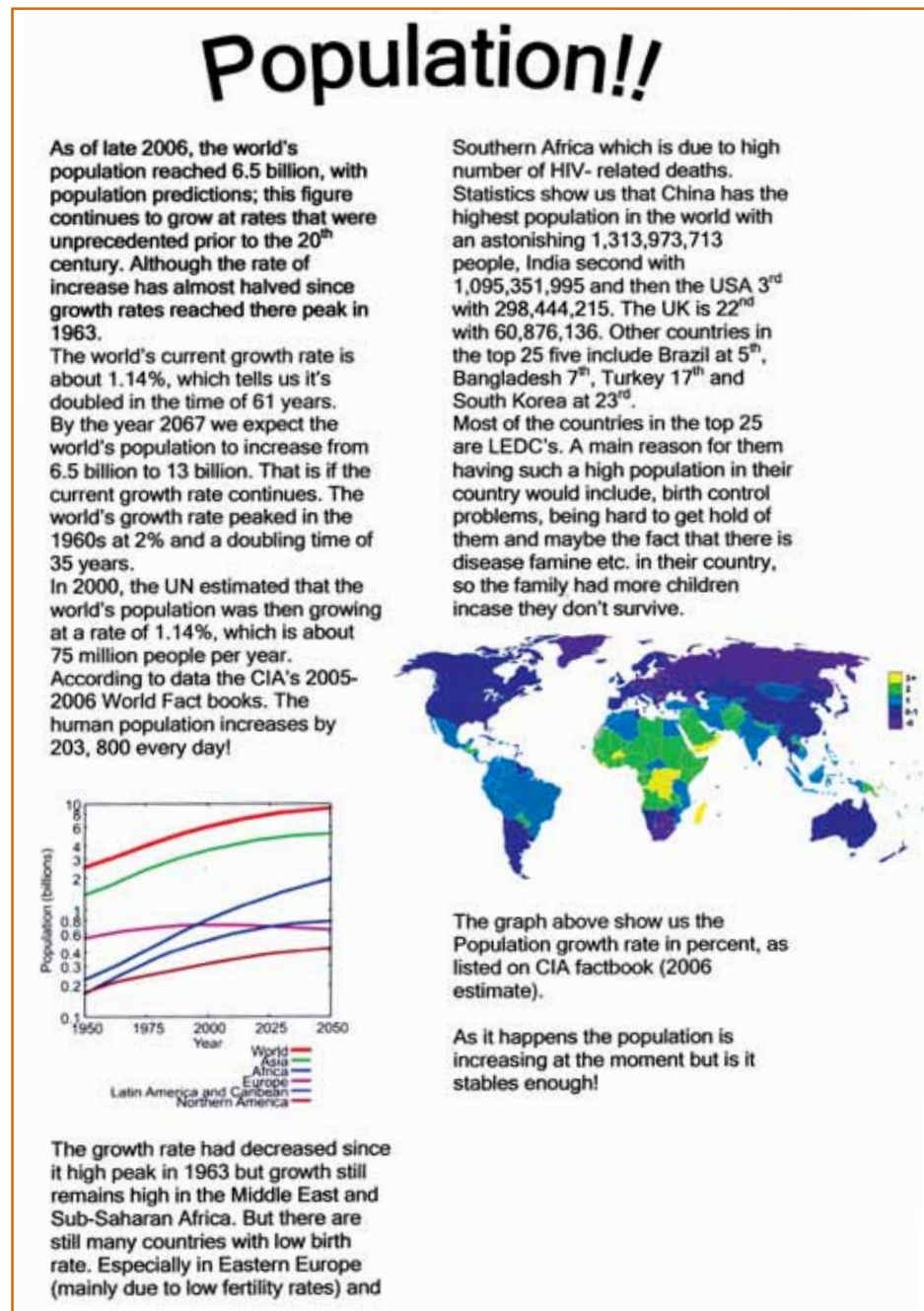
June 2nd 1999. The day had finally come. I didn't want to leave but I had made up my mind that I was going to have a better way of life. I had made a deal with a human trafficker to help me across the border. He drove a lorry containing crops for the large population that lived in San Diego. I paid him \$600 dollars to help me cross. On June 3rd I was in San Diego. I walked for 18 miles until I found my new home. It was a shelter that all Mexicans come if they are successful. Everyone in my shelter has a job. We work for the local Council. Helping to tidy up the city. I get paid \$50 a week which is plenty for me. I have been sending money back to Tijuana where my family remains. Life is certainly looking better.



Even though my life is much better than in Mexico, I hear stories of Mexicans who weren't as successful as me . I heard that they have been put into a detention centre and forced back to Mexico ! I have learnt that migration doesn't suit everyone's intention's and things don't always work out the way you expect them too. My migration has improved my life. I earn money and live independently. My life is successful and I hope it stays that way in the future.

## Investigating 'People and the planet' Is the world's population 'exploding'?

Pupils were set a homework research project to use the internet and produce on one side of A4 a word-processed newspaper item on the world's expanding population. Their broad remit was to include data to illustrate 'the explosion' and identify some reasons for it happening. Emma produced a well-researched piece with a lot of factual detail and included appropriate diagrams.



## Summary and overall judgement


Levels 5, 6 and 7 were considered and Level 6 was judged to be the best fit.

Emma has *begun to apply knowledge and understanding at different scales* (a characteristic of Level 6). She has work on volcanoes at the global scale, on Bangladesh at the national scale, on the Amazon rainforest at a regional scale and on the Afon Lwyd at a local scale. She locates places accurately, e.g. in her work on migration she uses a located map and appropriate photographs, though she is reluctant to construct her own sketch maps. In her work on plate margins and migration to Mexico, her annotations and use of maps demonstrate that she identifies and recognises *how places and patterns are interconnected* (a characteristic of Level 7). She identifies clearly the underlying principle of the pattern of different types of activity and of plate margins in her summary, e.g. 'It all depends on the plate margin.'

She *explains physical and human features and some processes* (a characteristic of Level 6). However her understanding is more secure in the simple causal narrative of migration, e.g. 'I wanted a better way of life', than in the detail of physical processes though she explains some of the factors that influence the processes. In her work on Bangladesh and the Amazon, she begins to explain the relationship between physical and human features and *how people affect their environments and how change can be sustainable* (characteristics of Level 6).

She has excellent research skills and is *able to select, collect and apply* secondary data (a characteristic of Level 6) and to *present conclusions consistent with the evidence* (a characteristic of Level 6) in her work on the population explosion. She *asks and responds to relevant questions* (a characteristic of Level 5) but has had little opportunity to identify and establish sequences of her own questions.

She *expresses her own view* (a characteristic of Level 5) about the exploitation of the rainforest but does not evaluate conflicting views. She selects and *uses correctly geographical terminology* (a characteristic of Level 6) and can communicate her findings.



Emma's work illustrates that she can identify and describe causal links and patterns but does not always understand the reasons for those linkages. As a next step she will need to develop sound explanations using logical cause and effect steps with detailed evidence. She should also be encouraged to address the question 'Why?' to provide more developed answers. For example, her work on the Amazon could have included justification as to why she considered 'there to be little point to cattle ranching' and why 'there might be different view points' on that issue. She will also need support to establish sequences for investigation and to have the opportunities to collect and record primary data. Emma downloads appropriate materials from the internet. As a next step she needs to select and adapt materials and use her own illustrative materials including sketch maps.

## Stephen | Level 8

Stephen is a 14-year-old learner in Key Stage 3.

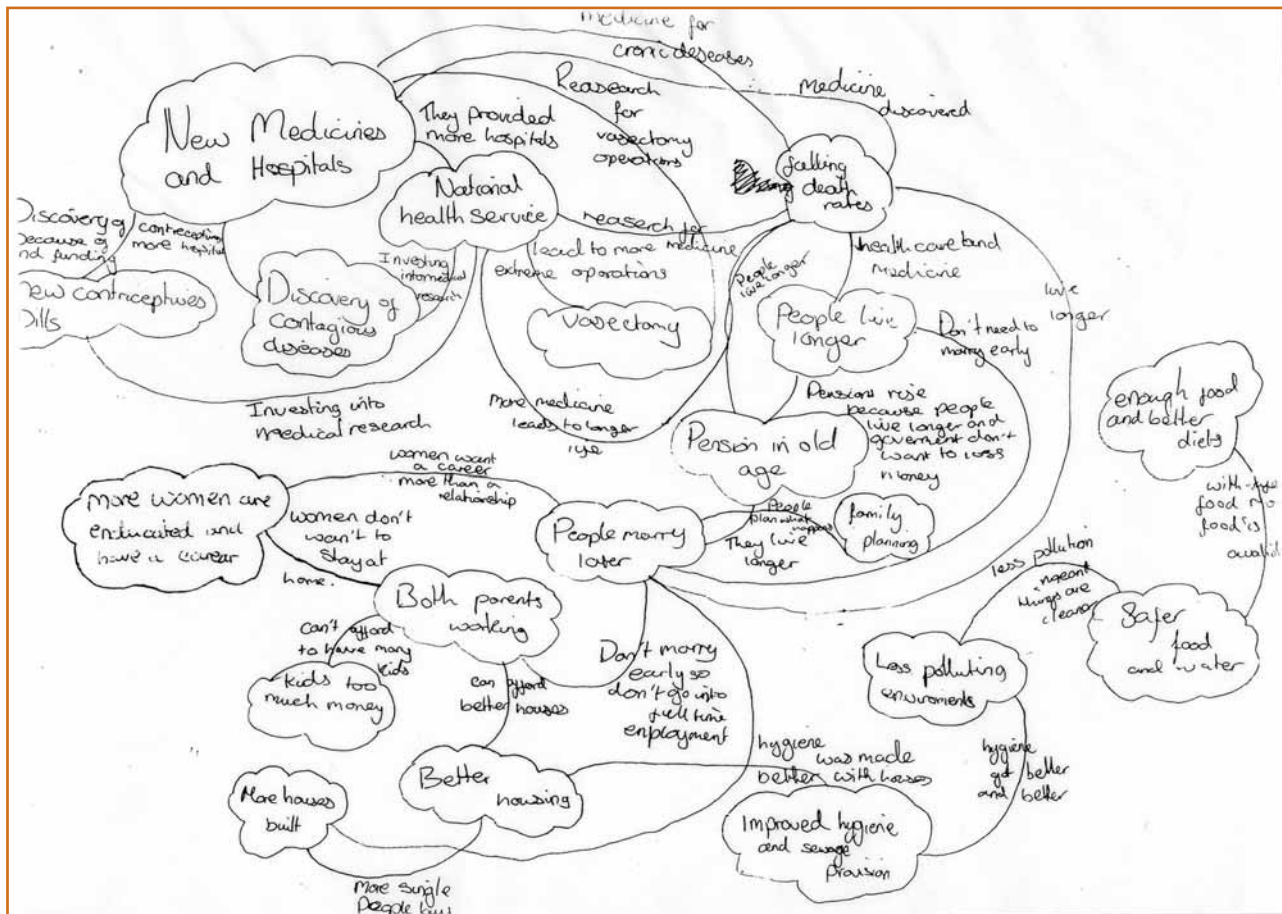
His teacher knows much more about Stephen's performance than can be included here. However, this profile has been selected to illustrate characteristic features of Stephen's work across a range of activities. Each example is accompanied by a brief commentary to provide a context and indicate particular qualities in the work.

Stephen's teacher judges that his performance in geography is best described as Level 8.

Stephen's teacher planned for the class to focus on developing their investigation skills, identifying geographical questions, exploring complex links and developing their opinions in activities both inside and outside the classroom. The activities were planned to stretch the more able pupils but also challenge the full range of ability. Pupils were encouraged to take responsibility for planning their own learning and evaluating the outcomes. The programme provided opportunities for the pupils to develop across each of the four skills of the programme of study.

### **Investigating** | **'People and the planet'** **Why do birth and death rates change?**

In a unit of study on population, the teacher concentrated on developing pupils' understanding of cause and effect and the complexity of interactions that bring about change. In one activity the pupils worked in groups to identify the factors that affect increases and decreases in birth and death rates and to write their suggestions on sticky notes that were displayed on a class poster. Using the collection of suggestions, each pupil drew a concept map to order their ideas. Stephen's diagram evolved to show a complex series of interactions. He explores in detail the impact of people marrying later, though his point 'pensions rise' requires further development to be clear.



**Investigating 'The rich and poor world'**  
**Why do so many people migrate to the USA?**

The teacher planned an activity to examine how countries are interconnected. Pupils investigated how migration was one way in which more developed and less developed countries are connected. They researched and analysed data and evaluated the reliability of their evidence. They then used the evidence to construct an extended piece of writing in which they had to identify and evaluate the reasons for migration. Stephen describes and explains migration and supports his argument with accurate factual data in a structured piece of extended writing. He evaluates and expresses a substantiated opinion as to the most important reason for migration. He acknowledges both sides of the issue and that there are different points of view about migration, 'some people think differently'.

### Why Do So Many People Migrate to The USA?

There are many complicated and inter-related reasons why people move from Mexico to the USA.

Migrants choose to go to America, because they think that they will have a better quality of life, and that they will have a higher standard of living. They expect enhanced education, including schooling, and superior resources. They want more advanced health services, and better chances of a job (there is 10% more employment in the USA, than in Mexico). One of the attractions to America, is that people can earn more than ten times the amount than in Mexico, (average of £21 000 more in the USA). Because there is more money, people believe that they can employ better services, e.g. a doctor.

In my opinion, the most important reason for people to move to the USA, is the chance of a better job. With a superior job, the people can earn more money, and higher wages (up to £21 000 more a year), citizens can afford a lot more. They can clothe their children, pay for health services, education, and housing. All these things raise the quality of life for Mexicans moving to the USA.

Some people think differently. Some of the North Americans say that the Mexicans are 'stealing' their jobs, houses, and money. They are of the opinion that they should come first in the money making. Some think that there are already enough people living in America, and 'why should they give way to the Mexicans, in their own country?' Some Mexicans have moved to the USA, but they are not happy. They cannot speak the language, but they were enticed by the 'pull' of the 'Dream World.'

Some migrants say that they have got a job and a home. They have got enough money, and they have a good quality of life. As a result, they are very happy. Their employers are also pleased, as they have been able to develop their businesses further, as the Mexicans do not expect a high wage, leaving the owners more affluent.

Health wise, the Mexicans living in their own country are used to a very poor service. This may be due to the small number of doctors, with only one doctor to approximately 1800 people. In the USA, healthcare is readily available, with one doctor to approximately every 400 people. That is more than 4 times less in the USA than in Mexico.

With education, 99% of the population of America has had at least some good schooling, compared to only 55% in Mexico. This gives us a difference of 44%. This may be due to America being a richer country, and Mexico being one of the poorer countries of the world.

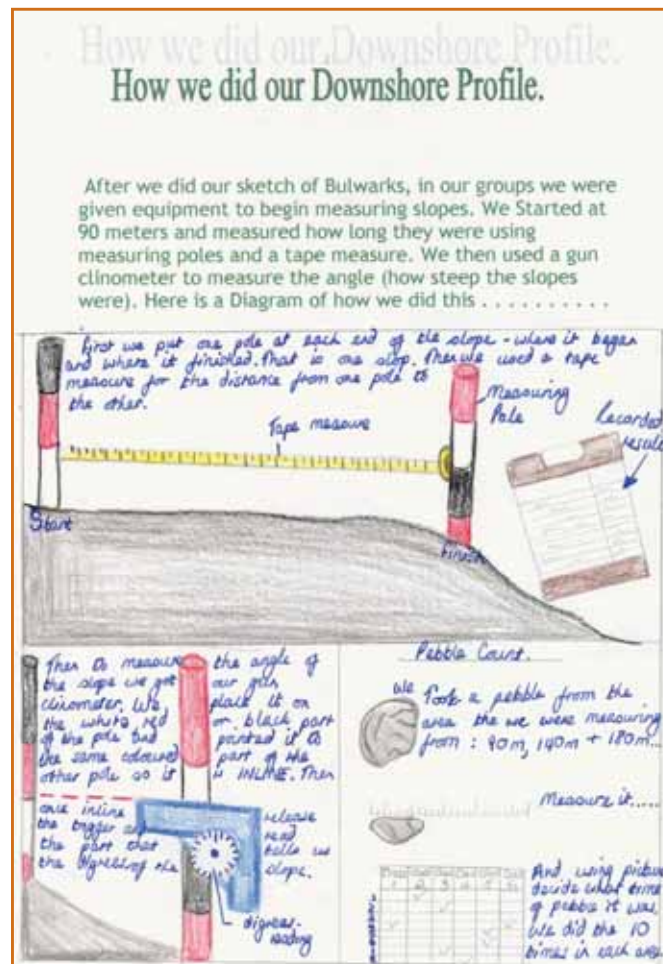
The jobs in the USA are more highly paid, and there is a higher employment rate (USA 93%, and Mexico 83%). The difference in salary is quite significant, because America is an MEDC, but Mexico is an LEDC.

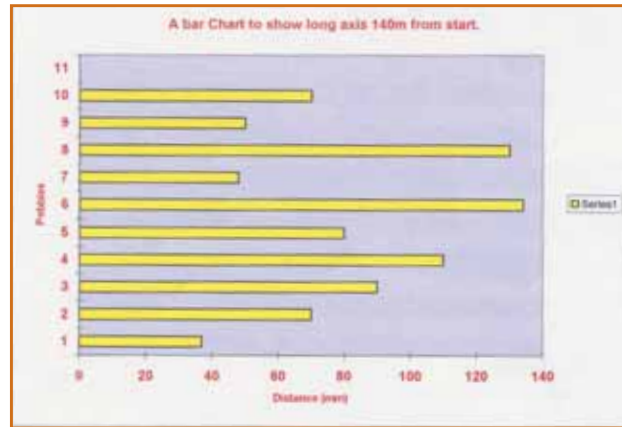
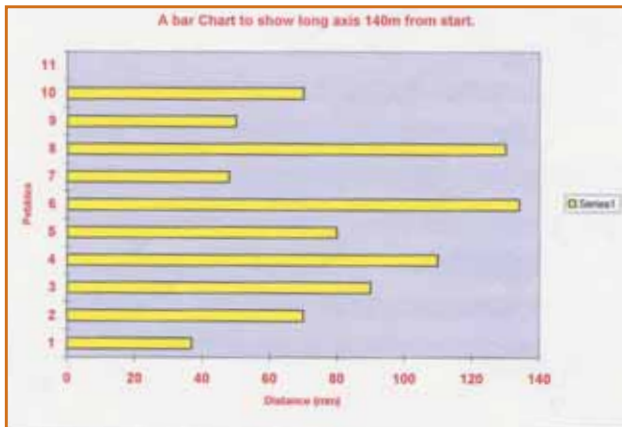
In conclusion, people move from Mexico to the USA for many different reasons. Some are happy, because they have found jobs and homes, but others have not. The migration from Mexico to the USA has affected both areas in many different ways, some good, and some bad.



## Investigating 'The physical world: coastal processes' A group investigation

Pupils took part in a day of fieldwork to investigate coastal erosion, deposition and transportation processes. The activities provided opportunities for individual and group working. Stephen identified a number of questions that he wanted to investigate. Some questions, e.g. 'What is the least effective coastal defence scheme?', were followed through to a conclusion though others were not, e.g. 'What is the difference between shale and limestone?' He worked in a group measuring and gathering primary data, a process that he described in his fieldwork file. His measuring was accurate and he logged and recorded the results, however, he didn't select his own methods because of the limited equipment resources available, though he comments 'We got to be in charge of our own project and to plan ourselves how we wanted everything to be set out'. He wrote up an account of each part of his enquiry process including a full conclusion and an evaluation of the fieldwork.





## Pebble Count

Profile no. 1  
Distance from start 90m

Pebble No.	Long Axis (mm)	Pebble Type
1.	70	5
2.	70	4
3.	87	6
4.	87	2
5.	74	2
6.	55	3
7.	115	5
8.	43	3
9.	60	6
10.	85	2

Profile no. 2  
Distance from start 140m

Pebble No.	Long Axis (mm)	Pebble Type
1.	37	3
2.	70	4
3.	90	5
4.	110	2
5.	80	2
6.	134	3
7.	48	5
8.	130	2
9.	50	4
10.	70	5

Profile no. 2  
Distance from start 180m

Pebble No.	Long Axis (mm)	Pebble Type
1.	100	4
2.	70	3
3.	90	5
4.	100	4
5.	70	5
6.	90	4
7.	95	2
8.	110	5
9.	60	5
10.	80	4

Stona Type

1	2	3	4	5	6
Very Angular	Angular	Sub Angular	Sub Rounded	Rounded	Well Rounded

## Conclusion

There were signs of erosion at the coastline. For at Porthkerry we studied an eroding cliff called Bulwarks.

We also discovered signs of deposition and transportation at Bulwarks. There were signs of a recent rock fall (deposition), and at Penarth some areas were higher than others due to long-shore drift (transportation).

The reason why some parts of the coastline are protected and other parts are not is because of properties or landmarks. For example if there are no properties or landmarks in a place on the coastline then it is pointless to protect them, where as Penarth has many attraction be side the coastline which need to be protected from flooding and other coastal threats.

I think that the most affective method of coastal protection would be curved walls like the ones at Penarth. I think this because the curved wall is simple, easy, works well and is quicker and cheaper than barrages and other types of coastal protection apparatus. For the curve the top of the wall forced the tide to throw itself back instead of it smashing into the wall and causing minor or major flooding.

Good Factors	Bad Factors
We got to see first hand the effects of the sea on land	It was difficult to get very accurate data while using the special equipment on our trip
We learned a lot of information about the three main coastal processes including what they do to the coast and what evidence they leave behind of their actions	We could have studied features on and surrounding the beaches in more detail
We enjoyed getting out of school and going to witness erosion, transportation and deposition taking place by the beautiful sea	It was very cold, windy and rained nearly all day while we were out visiting the coast
There were some lovely natural scenes that we got to view	It was hard to take proper sketches of the views we saw because of the terrible weather
It was a new and different experience for us.	Putting our results from the beach profiles into bar graphs and pie charts was harder than expected
We got to be in charge of our own project and to plan ourselves how we wanted everything to be set out, as there wasn't any strict compulsory guideline to follow.	It was difficult to walk along the pebbly beach at Porthkerry and I accidentally fell on my face there
We got the opportunity to learn how to use special geographical equipment	We could have gathered more data when doing the beach profiles so we could have made a proper comparison between the differences in shape and size of the slopes and pebbles at the top of the beach compared to further down the beach

### Investigating | 'The hazardous world'

#### The tsunami – what happened and why was there so much death and devastation?

The class was set the task of investigating the tsunami, and addressing the explanatory and evaluative question 'Why was there so much death and destruction?' as an assessment activity. Pupils discussed how to plan their investigation using the 5 Ws – 'Who?', 'What?', 'Where?', 'Why?', 'When?' – and a K.W.L. grid to identify what they already knew (K) and what (W) they needed to find out before they began their task. They completed the final column, 'What I have learned (L)', at the end of the activity. Stephen's work was clearly structured. In the first section he examined the physical processes and provided clear detail of the way in which a combination of factors might bring about an extreme event. He linked this to maps and diagrams that emphasise the location and pattern of the impact of the hazard. In the second half of his answer he examined the human/economic factors affecting the scale of the disaster. His investigation of the topic included appropriate location and numerical data to support his argument.

THE INDIAN OCEAN TSUNAMI, 26<sup>TH</sup> DECEMBER 2004, WAS THE BIGGEST NATURAL DISASTER SINCE THE TANGSHAN, CHINA QUAKE OF 1976, WHICH KILLED OVER 650,000 PEOPLE. IN THIS INVESTIGATION, I INTEND TO FIND OUT WHAT HAPPENED, WHY THERE WAS SO MUCH DEATH AND DEVASTATION AND WHY THE WORLD WAS MUCH MORE HORRIFIED BY THIS DISASTER THAN ANY BEFORE IT.

THIS HUGE NATURAL DISASTER WAS CAUSED WHEN TWO PLATES, THE EURASIAN AND THE INDO-AUSTRALIAN (BELOW LEFT), SUDDENLY RELEASED ENERGY THAT HAD BEEN BUILDING UP OVER TIME. THIS CAUSED AN UNDERSEA EARTHQUAKE, THE BIGGEST EARTHQUAKE FOR 40 YEARS – 9 ON THE RICHTER SCALE, RELEASING A TSUNAMI, A SERIES OF LARGE WAVES, WHICH CROSSED THE 4,500KM WIDE INDIAN OCEAN IN LESS THAN 7 HOURS (BOTTOM RIGHT SHOWS CROSS SECTION THROUGH TSUNAMI). IN DEEP WATER, THE TSUNAMI REACHED SPEEDS UP TO 500KM AN HOUR, BUT WHEN IT REACHED SHALLOWER WATER THE WAVE SLOWED DOWN, BUT INCREASED IN HEIGHT. THE HEIGHT AND THE ENERGY THE WAVE STILL HAD WHEN IT REACHED THE SHORE WAS BASED ON MANY THINGS, CURRENT, WIND AND THE ANGLE OF THE SEA FLOOR. (THE SHALLOWER THE ANGLES OF THE SEA FLOORS' APPROACH TO THE BEACH THE SMALLER THE WAVE AND THE LESS ENERGY IT HAS. IF THE SLOPE IS LESS THAN 3° THE ENERGY IS DISSIPATED OVER A LARGE DISTANCE. IF IT IS 3° - 11° THE ENERGY IS CONCENTRATED WHERE THE WAVE BREAKS. IF IT IS 11° - 15° THE ENERGY IS RELEASED ALONG THE BEACHFACE, AND IF IT IS OVER 15° A LARGE AMOUNT OF ENERGY IS FORCED AGAINST THE BEACH (LEADING TO PROBABLE FLOODING OF THE AREA BEHIND THE BEACH.)



THE COUNTRIES WORST HIT BY THE TSUNAMI WERE INDONESIA, SRI LANKA, INDIA AND THAILAND. THIS IS BECAUSE THEY WERE THE CLOSEST COUNTRIES TO THE EPICENTRE OF THE TSUNAMI-CAUSING EARTHQUAKE. THEY WERE NOT THE ONLY PLACES EFFECTED THOUGH AS YOU CAN SEE IN THE MAP BELOW (YELLOW COUNTRIES ARE COUNTRIES EFFECTED)



OTHER REASONS THESE COUNTRIES WERE SO BADLY AFFECTED WAS THAT THEY WERE VERY APPEALING TO TOURISTS AND MANY PEOPLE WERE SPENDING CHRISTMAS AND NEW YEAR OUT THERE SO WERE ON THE BEACH WHEN THE WAVE STRUCK RESULTING IN MANY DEATHS OF TOURISTS FROM AROUND THE WORLD. ANOTHER REASON WAS AS THESE COUNTRIES WERE LESS ECONOMICALLY DEVELOPED COUNTRIES (LEDCS), THEIR ECONOMY WAS BASED ON TOURISM SO MANY PEOPLE LIVED IN THE COASTAL TOWNS AND CITIES. THIS RESULTED IN OVERCROWDING AS PEOPLE WANT TO LIVE WHERE THEY CAN MAKE MONEY. THIS CAUSED MANY BUILDINGS TO BE BUILT CHEAPLY AND THEREFORE NOT VERY WELL, WHICH MEANT WHEN THE WAVE HIT THE BUILDINGS WERE SIMPLY SMASHED TO PIECES AND THE BROKEN PIECES OF TIMBER JOINED THE REST OF THE DEBRIS BEING WASHED ALONG BY THE WAVES, CAUSING MANY PEOPLE IN THE STREETS TO DIE OF BLOWS TO THEIR BODY FROM DEBRIS. THIS AND THE FACT THAT THERE WAS NO ADEQUATE WARNING SYSTEM (CAUSED BY THE COUNTRIES' LEDC STATUS) RESULTED IN MUCH DEATH AND DEVASTATION. MOST PEOPLE WERE KILLED OR INJURED IN THE COASTAL TOWNS AND LOWLYING AREAS AS THE WAVE SIMPLY HIT WITHOUT WARNING.

ONLY WHEN THE WAVES HAD RECEDED, PEOPLE COULD SEE HOW MUCH DEVASTATION WAS CAUSED. THERE WERE DEAD BODIES EVERYWHERE. IMMEDIATELY A WORLDWIDE DISTRESS CALL WAS SENT OUT, AND WITHIN A WEEK OR TWO PEOPLE WERE DONATING FOOD, DRINK, SHELTER AND MEDICINE FOR THE SURVIVORS. OTHERS WERE ORGANISING ACTIVITIES TO RAISE MONEY FOR THE TSUNAMI RELIEF FUND. OUT IN THE COUNTRIES EFFECTED VOLUNTEERS STAFFED HOSPITALS, WHERE THE DOCTORS HAD BEEN KILLED, DISTRIBUTED FOOD AND MEDICINE TO THE SURVIVORS, AND SET ABOUT THE HORRIBLE TASK OF BURYING THE BODIES FOUND IN THE STREETS AND THE BODIES WASHED UP ON THE BEACHES DAILY. SO DISEASES WOULD NOT SPREAD FAR. NOW 4 MONTHS ON, THE DONATED MONEY IS GOING TO MORE LONG-TERM HELP, FOR EXAMPLE REBUILDING

HOMES, SCHOOLS, HOSPITALS AND LIVELIHOODS. UNFORTUNATELY THERE WERE SO MANY PLACES AND PEOPLE EFFECTED THE CANCELLING OF THE EFFECTED COUNTRIES DEBTS AND THE \$7 BILLION+ RAISED, IS NOT ENOUGH! THE TOP INTERNATIONAL DONATORS ARE: IMF - \$1 BILLION, USA - \$650 MILLION, GERMANY, INDIA & EU COUNCIL - \$600 MILLION EACH, BRITAIN, JAPAN & ASIAN DEVELOPMENT BANK - \$500 MILLION EACH, CANADA - \$400 MILLION, WORLD BANK - \$250 MILLION. ALL COUNTRIES DID THEIR BIT TO HELP BUT SOME RICH COUNTRIES GAVE LESS THAN WHAT WAS EXPECTED OF THEM, AND SOME POORER COUNTRIES GAVE MORE THAN WHAT WAS EXPECTED FROM THEM.

THE LOGISTICS OF DELIVERING THIS AID TO THE PLACES THAT NEEDED IT WAS FRIGHTENGLY HARD. THIS WAS BECAUSE MUCH OF THE TRANSPORTATION NETWORK WAS DESTROYED BY THE TSUNAMI. PEOPLE THEREFORE HAD TO ORGANISE AIRDROPS TO DISTRIBUTE FOOD, HELICOPTERS TO CARRY HEAVY LIFTING EQUIPMENT, AND SHIPS TO CARRY MEDICS TO THE MOST EFFECTED PLACES. THE MANAGEMENT OF ALL THIS MUST HAVE BEEN A NIGHTMARE

COUNTRY	CONFIRMED DEATHS	ESTIMATED DEATHS	INJURED	MISSING
INDONESIA	125,598	220,172	100,000	94,574
SRI LANKA	30,957	38,195	15,686	5,637
INDIA	10,749	16,413	0	5,640
THAILAND	5,395	11,000	8,457	3,001
SOMALIA	298	298	-	-
BURMA	68	290	45	200
MALAYSIA	68	74	299	-
MALDIVES	82	108	-	26
SEYCHELLES	1	3	-	-
TANZANIA	10	10	-	-
KENYA	1	2	-	-
TOTAL	173,233	266,880	125,000	109,076

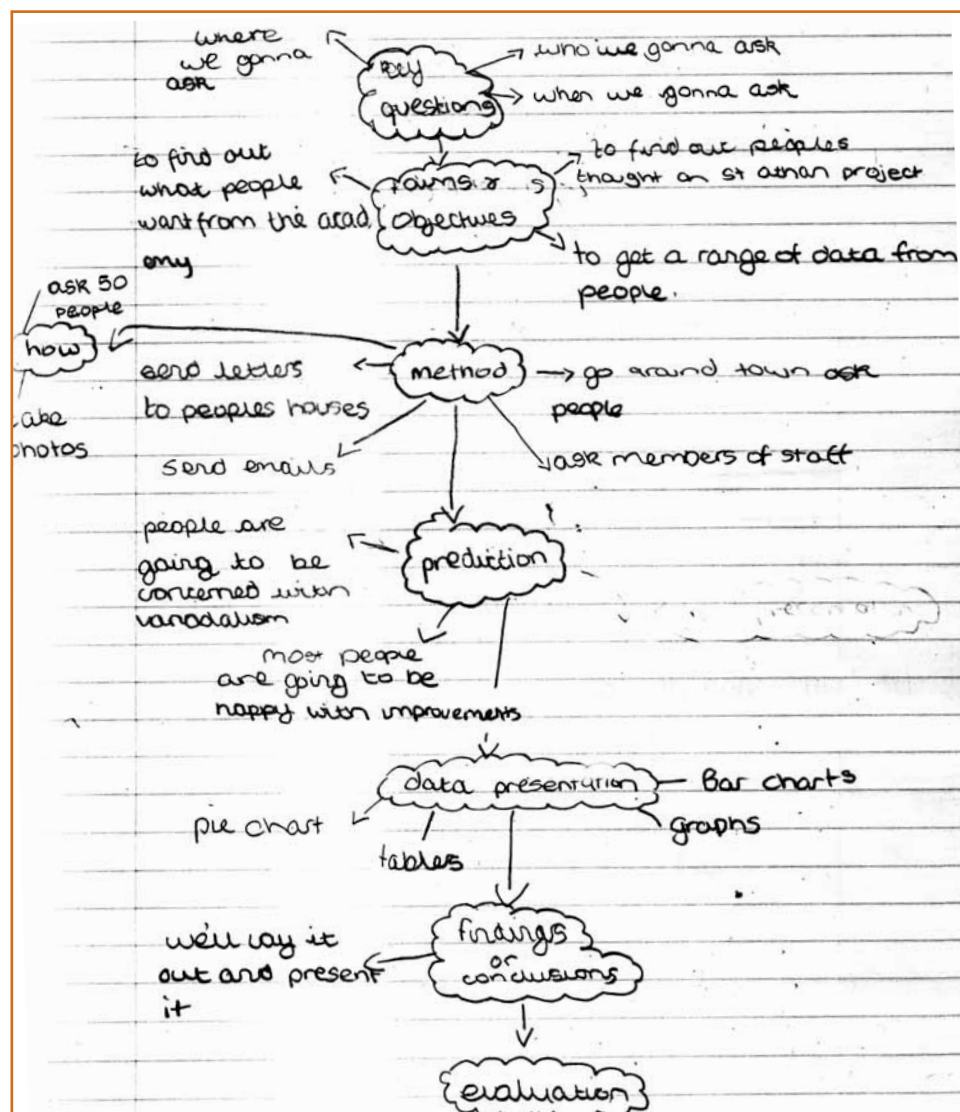
THE TABLE ABOVE SHOWS SOME OF THE COUNTRIES AFFECTED AND HOW MANY PEOPLE DIED IN THOSE COUNTRIES. IT ALSO INCLUDES FOREIGN TOURISTS IN THOSE COUNTRIES AT THE TIME THE WAVE STRUCK. THIS IS ONE REASON WHY THE RESCUE OPERATION WAS SO MASSIVE AS MANY COUNTRIES' REPRESENTATIVES WERE SENT OUT TO THE EFFECTED COUNTRIES TO BRING THEIR SURVIVORS SAFELY HOME.

WE HAVE ALL LEARNT FROM THIS DISASTER THAT ALL COUNTRIES AT RISK NEED NEW, OR BETTER, WARNING SYSTEMS, BETTER BUILT BUILDINGS, SEA DEFENCES TO SOFTEN THE BLOW OF FUTURE TSUNAMIS AND SHELTER FOR PEOPLE TO GO TO IN TIMES OF DISASTER. UNFORTUNATELY MOST OF THESE ARE TOO EXPENSIVE FOR THE COUNTRIES AT RISK TO BUY, AS MOST OF THE COUNTRIES ARE LEDCS. HOWEVER, IF WE ALL HELP WE CAN IMPROVE THESE SO THAT NEXT TIME WE WILL BE READY....

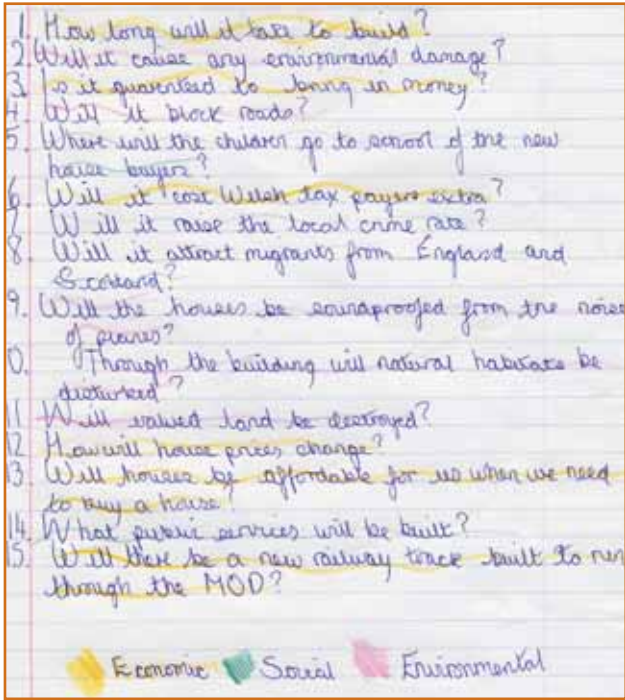
## Investigating 'Geography in the news' Fieldwork investigation of a local issue

Following the appearance of a number of news items about a proposed development for the local area, the teacher amended her scheme of work on economic development to include consideration of the possible impact of a new economic development in the local area. It provided an opportunity for pupils to develop their investigating and communication skills. They investigated newspaper articles stating that the Ministry of Defence was to build a training facility locally described as 'an economy transforming investment'.

Stephen worked in a group and took a lead part in organising and carefully thinking through the steps they needed to take to determine the sequence of their investigation.



A key part of the enquiry was to use a questionnaire to canvass local opinion. Each pupil had to suggest their own questionnaires and then as a group decide on one questionnaire to be used. Stephen decided that they should ask questions that could be grouped into three different categories (social, environmental and economic) that were chosen because these were the three types of possible impact.



**My Questionnaire on the New Training Academy In St.Athan**

Please circle the appropriate options

1. Where do you live? \_\_\_\_\_

2. What is your gender?    Male    Female

3. What is your age group? Please circle one  
 Student    25-45    Middle- Aged    Retired

4. What rating would you give the new training academy ?  
 1    2    3    4    5    6    7    8    9    10

5. Are you concerned about any of these issues? Please circle all appropriate

Environmental pollution	No space in schools, jobs etc. because of migrants etc.
Overcrowded population	Cost e.g. bigger taxes and new houses
Migration from other parts of the British Isles	Blocked roads
Lack of health facilities	

6. What are you most looking forward to getting from the academy (what benefit)?

7. Do you think the training academy will benefit the younger generation?

Yes                  No

8. Because of the predicted 10-15% rise in the housing prices do you think it will have an impact on first time house buyers.

Yes                  No

If yes what kind of impact?

9. Do you think the £14 billion contract, which is said to be bigger than the Olympics, is value for money?

Yes                  No

After gathering the primary data, Stephen wrote his own conclusion and an evaluation of the practical issues that may have affected the reliability of the outcomes.

Are you concerned about?

Reasons	Tally	Total
Environmental Pollution		4
Overcrowded Population		1
Migration from other parts of the British Isles		1
Lack of Health facilities		3
No space in schools, jobs etc because of migrants etc		6
Blocked roads		1
Cost e.g. bigger taxes, <sup>more houses</sup>		3

The tally chart shows the total of people out of seven who were concerned about different issues.

Conclusion

One possible conclusion is that people aren't looking forward to the Academy being built because a lot of concerns were selected and only more jobs were looked forward to.


Evaluation

In our questionnaires we took a while to work up the nerve to ask people so we wasted a lot of time and maybe that's partly the reason we only got 7 people to answer a questionnaire. We had quite a balanced selection of gender to ask ~~to~~ and a fairly balanced selection of ages. We could've had a wider range of data if we went at night or on a Saturday when less people were at work. In our questionnaire we had to cross off a question because we realised it didn't make sense when we ~~to~~ asked the first few people. Less people were asked because we were stationed in a small area of Markit and many people said they'd already been asked. When it started to rain we had to find shelter in near the same place as everyone else and our time was shortened. Quite a lot of people who we asked didn't know much about the Academy.

## Investigating | 'The rich and poor world' A role-play activity

Through role play the class investigated issues of sustainable development in a region of Kenya. Stephen took the role of the President, produced a PowerPoint presentation, made an introduction to the debate, heard the submissions of the other stakeholders and made a speech with a concluding decision. In his activity file he recorded a complete set of notes on each of the submissions and his own conclusion on the evidence. He drew on this evidence to produce his final conclusion. The teacher assessed the pupils' wider skills of preparing for the debate, gathering evidence, note taking and presentational skills in conducting the debate.

**Introduction**



The Baringo District is an administrative district in the Rift Valley province of Kenya. It is situated North of Nairobi with a Longitude of 36 degrees East and a Latitude of 1 degree North. It has an area of 8,646km and its capital town is Kabarnet.

There are two local authorities in Baringo, Kabarnet municipality and the Baringo county council and fourteen administrative divisions. The district has three constituencies, Baringo Central, Baringo East and Baringo North. The Baringo District is named after the local lake and is an area of geothermal activity and a place where human fossils have been found.

The climate in Baringo is semi-arid meaning it is quite dry for most of the year and doesn't get much precipitation with the average rainfall being just 300mm a year. All the rivers in Baringo are ephemeral, the volume of flowing water is seasonal, limited and can sometimes dry up all together.



The vegetation in Baringo is dry Savannah scrub with plants and trees sparse and not growing very well. It is very dusty. Not enough water for plants to grow and in some areas grassland has been over grazed.

The people of the Baringo District live scattered around in homesteads looking after their large families. A homestead is a farmhouse type building with some land around it for them to grow their crops. The house will be made from mud, dung and have thatched roofs, although some now have slightly sloping concrete roofs to collect the rain water. Around the mud houses will be thorn bush fencing to protect from wild animals. If animals are kept they will be brought by the houses at night so they can have the protection of the thorn bush fences as well. Families only live in the homesteads for a few years and they move on to a different patch of land because they will have exhausted the surrounding land and their houses will start needing repairs.

There is very little employment opportunity for men other than working as a fisherman or at safari's or wildlife parks. The women will stay at home and keep the house, sometime working on the land.

We are going to have a debate about what to do with the Baringo area, there are several different companies that are interested in taking over the land and we are going to hear what they have to say.

## Conclusion

In conclusion to the meeting held on 24<sup>th</sup> April, 2007 to determine the use of land in the Baringo District I as the President have taken into account everybody's arguments and have made a decision that I believe will benefit Kenya.

I have decided that it should be used for sustainable development by the Charity Workers, Tourist Representatives and the Maasai should be allowed to graze in the park.

The Charity Workers can give everyone those little self help projects and train the teachers so they can improve the children's chances of getting out of poverty. They should teach people about HIV/AIDS and build hospitals and schools.

The Tourist Representatives should get some land to have a national park on which will supply some of the locals with a proper paid job, but they should make an agreement with the Maasai so they can graze their cattle and have some of the self help projects.

The reasons behind my decision are that small projects where people look after themselves are generally more reliable and give them more security although they do take longer. I have tried to incorporate a bit of what everybody wanted although I had to dismiss the idea of a plantation because it did not benefit enough people to outweigh the downsides.

Overall I think there was a good outcome and I hope that the right decision was made and that it will benefit people for years to come.


## Summary and overall judgement

Levels 7 and 8 were considered and Level 8 was judged to be the best fit.

Stephen shows and applies his *knowledge and understanding of a wide range of places, environments and issues* (a characteristic of Level 8). He uses the internet, large scale plans and the atlas to obtain information and locate his investigations though he rarely constructs his own sketch maps or annotated diagrams. In his investigation into the tsunami he is able to identify and *explain how patterns are formed* and explain a range of physical and human features and how they were connected (a characteristic of Level 8).

Stephen offers good *explanations for interactions between physical and human features and processes* (a characteristic of Level 8) where he recognises that the economics that have driven coastal developments had resulted in more people being affected by the tsunami. He also provides a clear explanation of the complexity of factors affecting the energy of a tsunami. Further evidence that he is capable of working beyond Level 7 is demonstrated in the concept map in which he recognised the complexity of interactions between processes though not all points are clearly expressed, e.g. 'pensions rise'. In his coastal fieldwork and in the debate on Kenya he *recognises environmental issues* (a characteristic of Level 7), e.g. 'in some areas the land becomes overgrazed' and 'they will have exhausted the land', however he does not provide a valid explanation of why that happens.

Stephen showed different skills in conducting the two investigations. In both, he demonstrated the ability to work independently and evaluate the process. In the coastal fieldwork he *collected accurately* primary data and came to *substantiated conclusions* for some of the questions investigated (characteristics of Level 7). In the independent investigation of a local issue he *implemented a sequence of questions for the investigation* (a characteristic of Level 7). For both investigations he evaluated the process, identifying and acknowledging limitations, 'we could have gathered more data', though in some instances the points were simplistic, e.g. 'it was difficult to walk along the pebbly beach'.



In his work on migration, Stephen describes and explains the process and supports his argument with accurate factual data in a structured piece of extended writing. He considers different points of view and *makes an informed decision* (a characteristic of Level 7). He recognises that migration has both 'good and bad effects in different areas'. The teacher assesses Stephen's skills in the debate as characteristic of Level 8 because he showed *independence in identifying appropriate questions* during the debate, *used his own ideas and considered conflicting views and opinions to draw conclusions*, e.g. 'I dismissed the idea of a plantation because it did not benefit enough people to outweigh the downsides'. In the debate, Stephen spoke confidently and used precise terminology, e.g. 'dry savannah scrub', some of which was newly acquired through his research, e.g. 'rivers are ephemeral'.

As a next step, Stephen should construct his own diagrams, plans and maps to convey geographical understanding and draw on data to identify trends and future implications, as well as how patterns evolve and change. He will need support to develop his investigative skills, including collecting more complex primary data and carry out a complete enquiry independently.

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