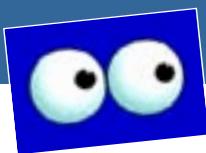




Scotland Learning



# **SEE YOU SEE ME**

**Spring 2009**

Fridays 11.40–12.00

*23 January to 6 February*

BBC2

## **Scottish Physical Features: The Southern Uplands**

### **Curriculum for Excellence**

These notes relate to re-transmitted programmes, and were conceived within the 5–14 framework. While the 5–14 terminology has been retained, teachers are encouraged to consider the content in terms of its contribution to promoting successful learners, confident individuals, responsible citizens and effective contributors.

# **See You See Me**

**Spring 2009**

## **Scottish Physical Features: The Southern Uplands**

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# Physical features — the Southern Uplands

## Introduction

This group of programmes is the third in a series which aims to develop children's knowledge and understanding of the physical landscape of Scotland. The previous programmes focussed on the Highlands and Islands and the Central Lowlands. This set focuses on the Southern Uplands, and it can be used independently of the others. Teachers and pupils may also like to visit the See You See Me 'Landscapes' website which has been built to complement the television programmes. This can be found at

<http://www.bbc.co.uk/scotland/education/sysm/landscapes>

The three programmes in this unit are closely linked to the 5–14 Environmental Studies attainment outcomes for People and Place Level B/C, in particular *The Physical Environment: Landscapes and Physical processes and Using Maps*.

The unit should enable pupils to

- extend their mental map by identifying and locating the British Isles, Scotland, Highland and Islands, Central Lowlands and the Southern Uplands on appropriate maps
- experience a variety of physical maps, road maps, tourist maps, brochures, guide books and so on
- build up a knowledge of terms for physical features
- identify and describe some of the features of the landscape of the Southern Uplands
- locate towns and rivers which are significant in the area and describe their main features
- develop an understanding of the effect of the physical landscape on people
- develop an understanding of the term diversity and appreciate the environmental concerns linked with the Scottish landscape
- develop informed attitudes to consider how individuals can contribute to their environment.

## Using the programmes

Goggs, an animated alien character, introduces us to Tess MacAuley, the number one tour guide for Tartan Tours and his cousin Sprokcket who has come in disguise from Planet 347 and chosen to holiday in Scotland.

In Programme One, Tess and Sprokcket set off on an entertaining journey to discover the Southern Uplands. After successfully exploring the Borders, Sprokcket falls ill with a strange illness and Tess has to continue the tour on her own. She keeps Sprokcket informed of the places she visits with videos and Goggs provides us with relevant factual information. In Programme Two we find out about Dumfries and Galloway and in Programme Three we discover how diverse each region is.

The content guide for each programme includes

- a brief outline of the story which identifies the areas visited
- a 'places, words and phrases' section which lists key places and geographical terms used in the programme
- suggestions on appropriate places to pause for discussion or reinforcement
- follow-up activities
- extension activities (for more able pupils working beyond Level C)
- example worksheets (teachers will, of course, want to produce their own to suit their own circumstances).

It is intended that teachers will dip into and adapt these activities to suit the stage and ability of the children and the unit of work being tackled. Some of the maps featured in the programmes are available as a separate file which teachers can download and print out. Pupils may wish to use these maps to follow Tess on her journey.

## Suggested resources

The following resources are also recommended for the study of the Southern Uplands.

- A globe or a map of the world.
- A large blank outline map of Scotland.
- Set of atlases which includes physical and political maps of Scotland.
- Blank maps of Scotland for a variety of mapping skills.
- Class copies of an OS map depicting an area of the Southern Uplands.
- Road maps and tourist maps.
- Tourist information on the Southern Uplands area.
- The websites suggested in the teachers notes.

## Before the programmes

Pupils should be familiar with using a variety of maps and their key features.

Ordnance Survey supply free class copies of OS maps depicting a school's local area and this is a good way of introducing children to OS maps.

Pupils should

- recognise an outline map of British Isles and know which part of it is Scotland
- be able to recognise certain key features such as towns, rivers, woodlands, moorlands, lochs, hills, railways and roads
- be familiar with the four points of the compass
- have some experience of orienting a map (perhaps by doing some simple orienteering in the school grounds).

# Programme One

— Transmission date 23 January 2009

## Programme content

Goggs opens the programme reminding us where Scotland is in terms of the United Kingdom and the world, using a globe. We are introduced to Tess MacAuley (number one guide for Tartan Tours) discussing holidays in the different areas of Scotland with customers.

Next we meet Sprokcket (Goggs's cousin) who has come to Scotland for a holiday and has decided to use Tess's expertise. She recommends the Southern Uplands. Goggs shows us that the Southern Uplands are in two regions – the Borders, and Dumfries and Galloway. After some discussion about transport Tess and Sprokcket suddenly arrive on a hillside near the River Tweed. Tess explains how the Southern Uplands were formed. Goggs takes us to the source of the River Tweed and a map shows us the river's route to Berwick-upon-Tweed and the North Sea. Meanwhile, Tess and Sprokcket discover the river's particular features and uses.

Tess and Sprokcket then go to the spectacular waterfall at the Grey Mare's Tail but, due to lack of transport, a visit to the steep sided valley of the Devil's Beef Tub is impossible. Goggs comes to the rescue with video footage.

The journey continues with visits to the fertile farming land of the Merse, the Eildon Hills and Kelso on market day. Tess explains how volcanic activity formed the Eildon Hills and Sprokcket eats something he shouldn't at Kelso market.

## Places, words and phrases

Key Places	Key words and phrases
Highlands and Islands	Source of river
Central lowlands	tributaries
Southern Uplands	angling
The Borders	salmon fishing
Dumfries and Galloway	valley
River Tweed	waterfall
River Teviot	textile mills
Tweed's Well	volcanic formation
North Sea	cobblestones
Grey Mare's Tail	market day
Devil's Beef Tub	
The Merse	
Eildon Hills	
Kelso	

## Pause points

- When Tess agrees to send a brochure to a telephone customer, pause to discuss the Highlands, the Central Lowlands and the Southern Uplands, and their relationship to each other, using a map of Scotland.

When Goggs identifies that the Southern Uplands is made up of two areas – the Borders and Dumfries and Galloway – teachers may want to pause and re-emphasise the location of each and compare it to where their own school is located.

- Teachers may want to further discuss how the Southern Uplands were formed, pausing at the point where Tess says that they create a 'natural border between Scotland and England'.

- 3 At the point when Goggs shows a video clip of the Devil's Beef Tub, time can be taken to find out what the pupils know about waterfalls and valleys and their formation.
- 4 Further explanation of the formation of the Eildon Hills may be needed at the point where Tess completes her sketch.
- 5 After Tess has read the description of Kelso from her brochure, locate and identify it on a map of Scotland.
- 6 Sprokcket asks if there is any chance of seeing a market. Pause and ask the pupils to look out for what type of goods are being sold at it.

## Follow-up activities

- 1 Make a list of all the important places featured in the programme. Locate them on physical and political maps of Scotland. Mark them on a blank map — you could use Worksheet 1, the outline map of Scotland, for this. Do the pupils know of any other important features of the Southern Uplands? Can they locate them on the appropriate maps and again mark them into their own maps?
- 2 Pupils should produce a brochure for one of the places featured in the programme. This can be done in groups and should include instructions on how to get there, using compass directions, as well as a brief description of the place.
- 3 Find out more about the River Tweed. Use a 1:50 000 or 1:25 000 scale map and ask the pupils to trace its course over five kilometres. They should identify river features, nearby physical features and human activity alongside the river. Then repeat this exercise with a local river and chart the differences and similarities. Use Worksheet 2, the River chart, to record the results. The website  
[www.bbc.co.uk/scotland/education/sysm/landscapes](http://www.bbc.co.uk/scotland/education/sysm/landscapes)  
which covers rivers in Scotland will be useful.
- 4 Use a variety of sources to find out more about volcanoes and Scottish physical features that have been formed by volcanic activity. Locate and mark these features on a map of Scotland. Investigate erosion and how it affects landscape.
- 5 Build up a fact file on the towns of the Borders (Kelso, Hawick, Galashiels, Jedburgh, Peebles, Melrose and Selkirk). Include information such as their population, their area in square kilometres, the type of geographical area they are situated in and any notable physical features, important buildings, shopping areas, markets, attractions and so on. Use Worksheet 3, the Southern Uplands Factfile
- 6 Organise a visit to a local town market.
- 7 Start a factfile on your local town or area. Arrange with another school in a different type of location to exchange findings.

## Extension activities

These activities can be for pupils working beyond Level C.

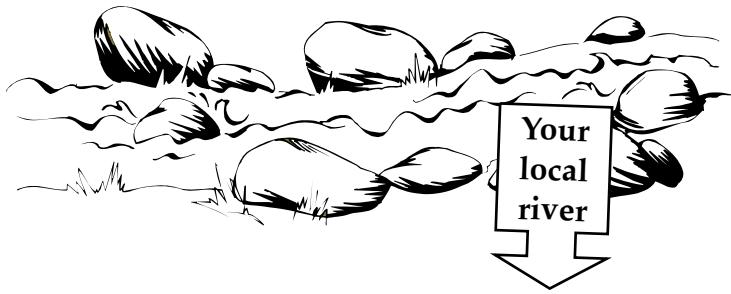
- 1 When map reading, use six figure grid references.
- 2 Colour in a political map of Europe to show the countries of Europe, and mark in capital cities.
- 3 Research and produce a personal project to include rivers, lakes, mountains, forests, towns, land use and leisure within another European country, and compare and contrast this data with the knowledge already built up about Scotland.

## Outline map of Scotland



## River chart

Fill in the first column in the chart below by finding out about the River Tweed. Then choose a river near where you live, and fill in its details in the second column.



### The Tweed

Location of the source	<hr/> <hr/>	<hr/> <hr/>
Location of the mouth	<hr/> <hr/>	<hr/> <hr/>
Sea it flows into	<hr/> <hr/>	<hr/> <hr/>
Length	<hr/> <hr/>	<hr/> <hr/>
Tributaries	<hr/> <hr/>	<hr/> <hr/>
Towns and villages along its course	<hr/> <hr/>	<hr/> <hr/>
Features of the river	<hr/> <hr/>	<hr/> <hr/>
Physical features near the river	<hr/> <hr/>	<hr/> <hr/>
Human activity alongside the river	<hr/> <hr/>	<hr/> <hr/>

## Southern Uplands Factfile

Name of city or town

Location

Area in square kilometres  Population

Rivers

Features of  
the landscape

Important  
landmarks

Land use

Tourist  
attractions

## Programme Two

— Transmission date 30 January 2009

### Programme content

Graphic maps show us the location of the Southern Uplands in Scotland. Goggs reminds us why Sprokcket is in hospital with 'sugaritis'. Tess comes to visit Sprokcket in hospital and reveals she has a camcorder so he won't have to miss out on the rest of his holiday in the Southern Uplands. A few days later a video tape arrives showing Tess at the start of her visit to Dumfries and Galloway, where she explains why the weather is wetter in this western part of the Southern Uplands compared to the eastern part called the Borders. Goggs emphasises this with an animation. Tess then goes on to tell us about the different types of farming in each area.

The weather also influences the types of farming in each area. Tess visits a dairy farm and finds out more about cows.

Her next visits are to Tongland Power Station, on the River Dee near Kircudbright, and a Wind Farm. She introduces the idea of water and wind power being used to turn turbines to produce electricity, in a simple but practical way.

Continuing on her journey, Tess then visits Portpatrick on the west coast and the start of the Southern Upland Way before going on to explore Logan Botanic Gardens (Goggs explains how it is affected by the Gulf Stream) and the hills, lochs, forests and moorlands of the Galloway Forest Park.

Sprokcket is delighted with the video but unfortunately his illness doesn't get any better.

### Places, words and phrases

<i>Key places</i>	<i>Key words and phrases</i>
Southern Uplands	western part
Dumfries and Galloway	eastern part
Borders	rainfall
Atlantic Ocean	water vapour
Potstown Farm	dairy farming
River Dee	arable farming
Tongland Power Station	water power
Wind Farm	wind power
Portpatrick	turbines
North Channel	electricity
Southern Upland Way	mountains
Stranraer	moorlands
Cockburnspath	rivers
Logan Botanic Gardens	hills
Gulf Stream	lochs
	forests

### Pause points

- 1 At the end of the weather graphic, pause and refresh the pupils knowledge of where Southern Uplands, the Borders and Dumfries and Galloway are on a big class map of Scotland.
- 2 After Sprokcket has been offered chicken or stew for his supper, discuss the contrast between farming in the two areas. How does the weather affect farming in each area? What did they find out about dairy and arable farming?

- 3 Once Sprokcket has upset the nurse by trying to spin his toy turbine with milk, take some time to talk about the two types of power used to generate electricity. How are they related to the local physical landscape? Introduce the idea of renewable resources.
- 4 After the visit to Portpatrick harbour, locate the town on a map which also includes Stranraer, the North Channel and the east coast of Ireland. Before going on to the section about the Southern Upland Way, ask the pupils to listen and look out for the main physical features on the route.
- 5 'Dinosaur Food' — discuss what is special about the plants at Logan Botanical Gardens (the influence of the Gulf Stream). Locate the Atlantic Ocean on a globe or a world map.
- 6 At the end of the programme ask the pupils to give their ideas on why there are so few people and houses in the Galloway Forest. Ask them what they think the land might be used for.

## Follow-up activities

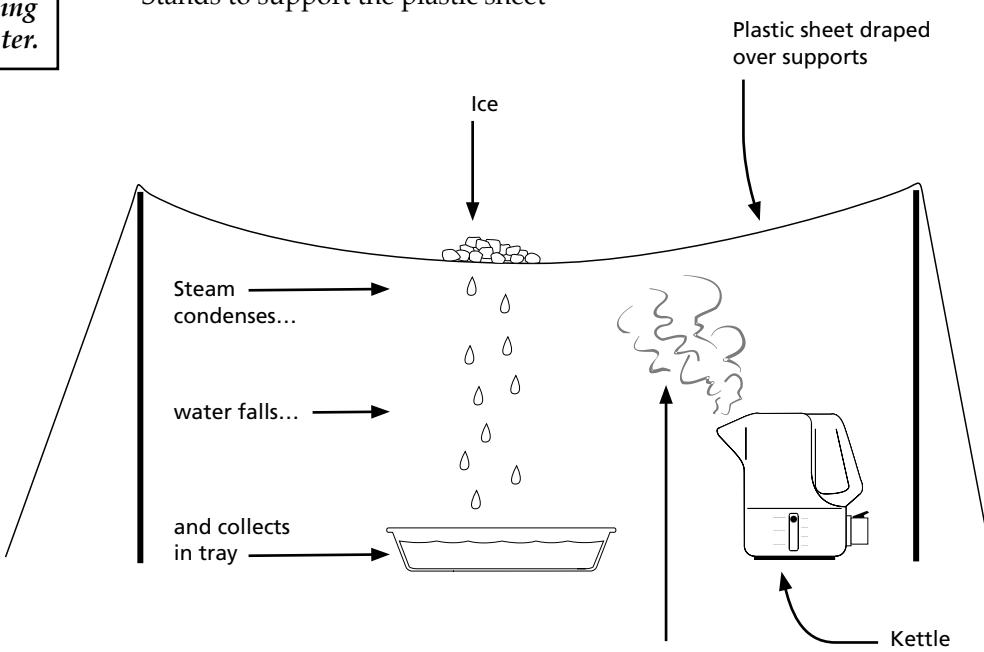
- 1 Make a list of all the important places featured in the programme. Locate them on physical and political maps of Scotland. Pupils can add them to their own maps.
- 2 Take a closer look at the weather cycle. Demonstrate by setting up the experiment shown below, using steam and ice. Then ask the children to complete Worksheet 4 on the water cycle.



*Remember — safety first when working with boiling water.*

You will need:

An ice pack or plenty of ice cubes  
 A kettle  
 A tray to catch the water  
 A large sheet of plastic  
 Stands to support the plastic sheet



Ice

Steam condenses...

water falls...

and collects in tray

Plastic sheet draped over supports

Kettle

The tray of water collected in the demonstration should be collected and left in a warm room so that the children can watch it evaporating again.

- 3 Compare and contrast dairy farming with arable farming. Worksheet 5, on farming, has a crossword with all the answers filled in. Pupils should write clues after collecting information from a variety of resources.

Teachers may want to take a more in depth look at farming. The Royal Highland Education Trust ([www.rhet.org.uk](http://www.rhet.org.uk)) has produced many good resources. Area advisers will help organise farm visits or arrange for a farmer to come to your school.

- 4 Discuss renewable and non-renewable resources, then ask the children to complete Worksheet 6.
- 5 Pupils could copy Tess's demonstration of how wind and water are used to turn turbines which produce electricity, and then draw a simple diagram.
- 6 Using appropriate maps, locate symbols used for mountains, hills, moorland, rivers, lochs, forests and pathways.

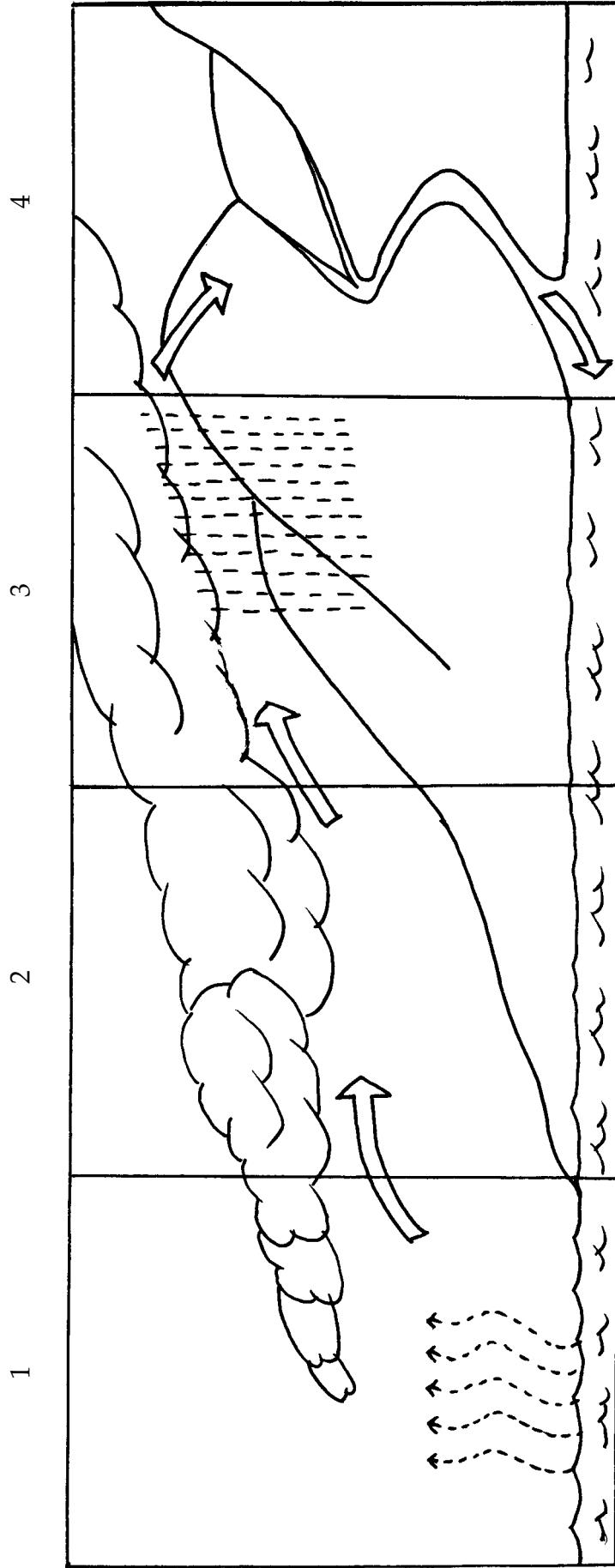
## Extension activities

- 1 Compare and contrast the weather and its effects in Scotland to that of a European country.
- 2 Compare and contrast one type of farming to a similar one in a European country. The Royal Highland Educational Trust ([www.rhet.org.uk](http://www.rhet.org.uk)) should be able to help with resources.
- 3 Investigate the advantages and disadvantages of the many different ways of producing electricity.

## The water cycle

Cut out the boxes at the bottom of the page and stick each one under the part of the picture which it matches.

Then colour the picture.



Water droplets in the clouds become heavy, and fall as rain or snow or sleet.

The sun heats the surface  
of the sea. Invisible water  
vapour rises into the air.

Rain water seeps into streams which flow into rivers. The rivers flow into the sea.

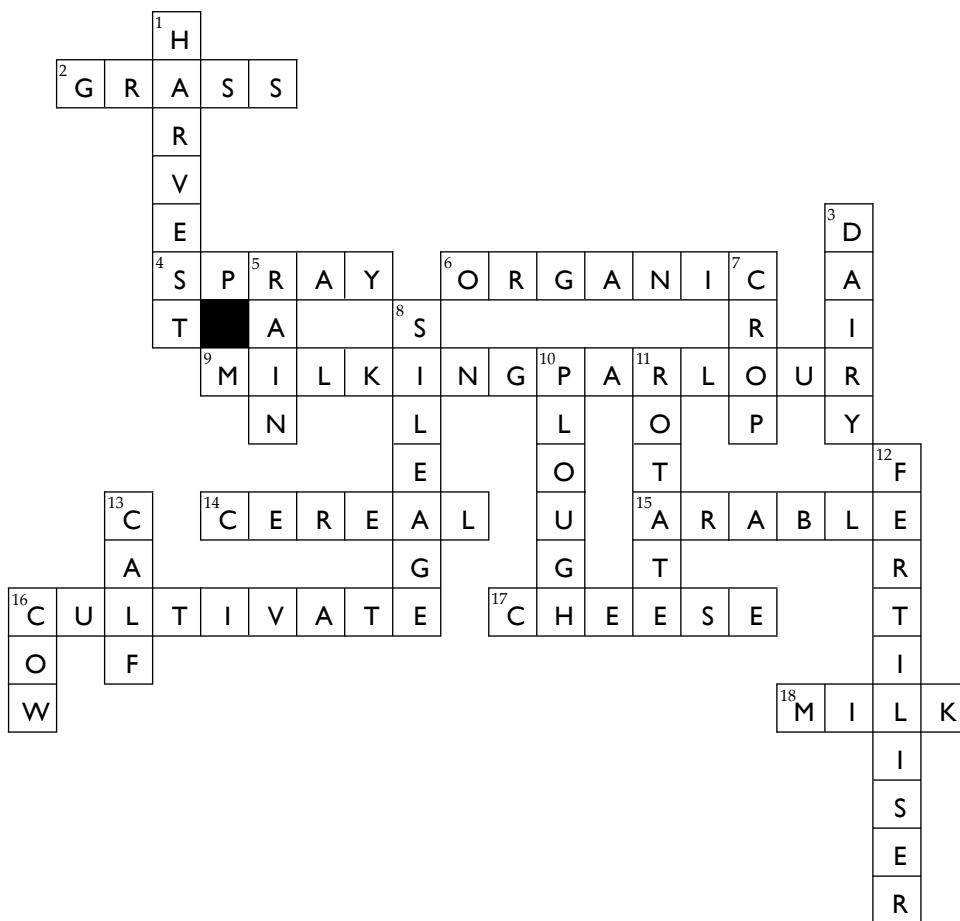
The water vapour condenses and forms clouds. Wind moves the clouds towards the land.

## Farming crossword

Here is an unusual crossword.

The answers have been filled in, but the clues are missing.

Find out about the answers, then write an interesting clue for each one.



### Across

2 GRASS

4 SPURRAY

6 CUTTING

9 MILKING

14 CEREAL

15 ARABLE

16 CUTTING

17 MILK

18 MILK

### Down

1 H

3 D

4 S

5 R

6 O

7 C

8 S

9 M

10 P

11 R

12 F

13 C

14 C

15 A

16 C

17 C

18 M

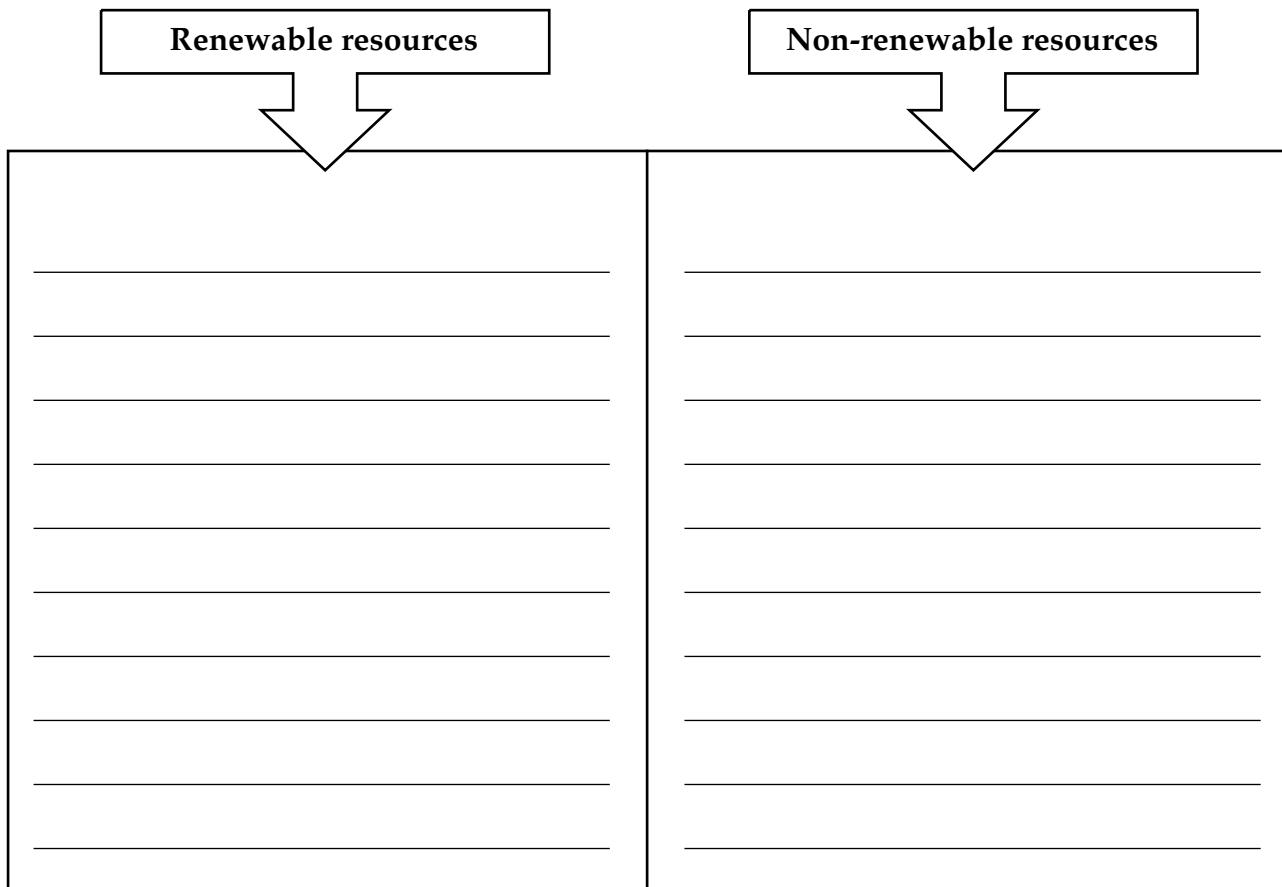
## **Renewable and non-renewable resources**

Renewable resources can be replaced.

Non-renewable resources do not replace themselves (except over a very long period of time)

Decide whether the resources named below are renewable or non-renewable and write each one in the correct box in the chart.

The diagram consists of ten rectangular boxes, each containing a word representing a natural resource or energy source. The boxes are arranged with some overlap and are connected by thin black lines to a central point at the bottom center. The words are: **gas**, **coal**, **wind energy**, **tin**, **trees**, **copper**, **solar energy**, **water**, **diamonds**, **grass**, and **iron ore**.



How can we save the non-renewable resources you have listed?

## Programme Three

— Transmission date 6 February 2009

### Programme content

This programme begins with Tess and Sprokcket sorting out how to get the video clips back to the hospital more quickly. Throughout the programme Goggs locates the places visited on his maps.

Tess once again continues on her discovery of the Southern Uplands, starting at an organic dairy farm near Gatehouse of Fleet in Dumfries and Galloway, which has extended its activities into ice-cream making and providing a tearoom and adventure playground for locals and tourists. She introduces the idea of diversification. Archive footage is used to show different types of diversification, such as textiles and electronics, and the general change to tourism throughout the Southern Uplands.

Tess then goes on to visit Glentress Forest in the Tweed Valley Forest Park, near Peebles in the Borders, where she tries out mountain biking and video clips show a range of other possible activities.

Eyemouth is Tess's next port of call. Goggs points out that fishing and its subsidiary industries are still important to many as a means of making a living, but that tourism also plays its part.

Tess returns to the hospital having run out of time to visit Wigtown, Scotland's National Book Town. Sprokcket, however, is determined not to be outdone and has persuaded Goggs to go there. The programme ends with Goggs finding a cure for sugaritis in a book he finds in one of the towns many book shops.

### Places, words and phrases

<i>Key Places</i>	<i>Key words and phrases</i>
Southern Uplands	ice cream making
The Borders	adventure playground
Dumfries and Galloway	diversifying
Gatehouse of Fleet	electronics
Rainton Farm	tourism
Peebles	forestry
Glentress Forest	mountain biking centre
Tweed Valley Forest Park	bird watching
Eyemouth	walking
River Eye	horse riding
Wigtown	fishing
	Scotland's National Book Town

### Pause points

- 1 When Goggs has located Gatehouse of Fleet on the map, do the same on class maps of Scotland.
- 2 After Sprokcket has licked the screen, talk about how businesses add new products or services, or change from one product or service to another — diversification. Ask pupils to listen and watch the next sections for types of diversification in the area.
- 3 At the end of the Glentress Forest section pause to find out which forms of diversification they noted. Locate Peebles on class maps of Scotland
- 4 When Tess orders her haddock and chips in Eyemouth, stop to locate the town on class maps. Discuss which coast of Scotland it is on and which sea the River Eye flows into.

## Follow-up activities

- 1 Make a list of all the important places featured in the programme. Locate them on physical and political maps of Scotland. Pupils can add them to their own maps.
- 2 Play the Mental Map Memory game.

Use a large map of the Southern Uplands that includes all the important places, physical features and symbols that have been shown in the programmes.

Split the class into small groups of three or four, and give each group a blank map of the Southern Uplands. Give each member of the groups a number.

To start the game, tell pupil number one from each group that they have 15 seconds to come and look at the large map and memorise as many features as they can. Then they return to their groups, and the groups are given two and a half minutes to add to their blank maps all the features that pupil number one can remember.

Then the process is repeated with pupil number two coming out and memorising features from the large map. The game can be carried on until the teacher decides that a suitable conclusion has been reached. If some pupils are finding the game difficult, the teacher could offer them strategies such as concentrating on individual features such as rivers or towns.

- 3 Discuss the idea of how the physical landscape affects the ways in which the land is used. What evidence of this was there in the programme?
- 4 Discuss the land uses in your school and its locality. Conduct a land-use survey in the school using an outline plan and colour code. Take photographs of different land uses and attach them to the plan. Encourage the pupils to think about how their local land-use map might compare to that of a different locality.
- 5 Individually or in groups, research one type of land use in the Southern Uplands and present findings on how the physical landscape affects this.
- 6 Investigate diversification in the locality of your school.
- 7 A new tourist attraction is being planned for your area. Pupils should consider the case for or against the proposal from different points of view. Role-play a community meeting being held to discuss it.

## Extension activities

- 1 Investigate one type of Scottish land use and discuss how the physical landscape affects it. Compare and contrast the situation to a similar land use in a different landscape in a European country.
- 2 Investigate diversification in a European country.
- 3 A local farmer is intending to diversify by using his land to build a go-kart racing track. Pupils should consider a case for or against the proposal from different points of view and produce a flier to put forward their case.