

BBC

Learning Scotland



Autumn 2008

Thursdays 11.45–12.00

18 September to 2 October

BBC2

Unit One

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.

What? Where? When? Why?

Autumn 2008

Unit One

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Introduction to the series

The programmes

The *What? Where? When? Why?* series is designed to enhance the Revised Environmental Studies 5–14 guidelines at levels A and B. Each unit contains a wealth of opportunities to stimulate the natural curiosity, enthusiasm and imagination of all young learners. Children are encouraged to develop and formulate meaningful questions about their environment, their place within it and the factors, both past and present, that have shaped it. Each unit will focus on knowledge, understanding and skills, as well as ideas central to developing informed attitudes about responsible citizenship, sustainability, social equity and diversity.

Each programme can be used to initiate or enhance a unit of study in the classroom.

The aims of the series

The series has been devised to:

- use the environment in its widest sense to enrich the entire learning and teaching process
- provide children with a greater knowledge and understanding of the world in which they live
- develop skills involving critical thinking and problem solving
- help pupils begin to appreciate and develop attitudes informed by their understanding of social and environmental issues
- encourage pupils to recognise and value a commitment to learning which helps them further make sense of the world in which they live
- help pupils reflect on how they as individuals contribute to their environment and culture when they make decisions and decide upon courses of action
- enhance the appreciation of the inter-relationship of all living things and their environment.
- help cultivate consideration of natural, cultural and historic heritage
- provide teachers with practical advice and exemplification of a range of popular units of work at levels A and B Environmental Studies 5–14
- offer teachers a focused approach to the development of a unit which is manageable in the classroom
- provide teachers with clear and structured questions and activities which use the ideas and strategies embedded within the revised Environmental Studies 5–14 guidelines and yet enable individual approaches to suit particular requirements
- recognise that learning takes place in the world beyond the classroom and provide Parent Prompts which offer opportunities for parents and carers to enjoy and interact with their child.

Getting the most out of the programmes

To use the programmes successfully:

- pre-record and view each programme, so that you will be fully prepared for the classroom viewing session.
- set up a display of books and artefacts for each unit as it is studied.
- make sure the children know the key words which will be used in each programme, by using the key word banks given in the notes.
- before using the programmes, ask the children what they already know and what they would like to find out. Make a display of these questions so you can refer back to them.
- consider using some of the question mark breaks in the programme to pause and develop briefly a point with the children, using the key words where possible.
- arrange visits to places connected with the programmes, and/or invite visitors to the classroom, to give the children some first-hand experience.
- at the end of the programme, ask the children to give you three or four of the key words or facts they have learned.

The Teacher's notes

The support notes provide:

- a 5–14 Forward Plan of outcomes, strands and attainment targets focused on specific Learning Outcomes, to aid effective learning and teaching. This is directly linked to the activities, worksheets and assessments, in line with Revised Environmental Studies 5–14 National Guidelines.
- a page about the presenters of the programmes, The Happy Gang.
- introductory pages for each unit.
- a page of notes for the teacher for each programme. This provides a brief programme synopsis, suggestions for introducing the programme to the children, a list of key words, four key questions to test the children's understanding of what they have seen in the programme, and suggestions for extension work.
- worksheets for each programme.
- a parent prompt sheet for each programme.

The presenters

Mr P, Nicky, and Spatz

The Happy Gang (Mr P, Nicky and Spatz) present *What? Where? When? Why?* They are an established group of children's entertainers who have performed in schools and theatres.

The songs and music in the programmes are composed and performed by them.

They use certain catch phrases. For example, when they get an idea, they say, 'Ping!', and they always do a circular wave when they say 'Cheerio!'

Nicky usually wears pink and lime
green and she's a bit of a joker!
Oh, and — a- a- **atishoo!** —
she's *always* sneezing.



Mr P is always ready to fall asleep and he finds quiet corners to curl up in! He usually wears orange and royal blue. He tends to rush into situations and often ends up in a bit of a muddle.

Spatz is always hungry, and is for ever on the look-out for food. Apples are his favourite! He usually wears yellow and purple. He takes a real interest in the natural world and is good at solving problems.

The Happy Gang song — the signature tune

If your curiosity
is affected
by something you hear or see
get connected.
Don't be scared to try,
'What? Where? When? Why?'

Forward plan Environmental Studies: Social Subjects, Science

Programmes 1–3

Attainment outcome main focus: Social subjects – People and place

minor focus: Science – Living things and the processes of life

Level A/B

Strands	Pupil experience: what pupils should learn	Resources	Assessment
Knowledge and understanding	Pupils will be able to		
Using maps: developing an understanding of location and features of maps	(programmes 1–3) – identify locations included in the programme on a map of Scotland – recognise symbols for given weather types – record weather features relevant to each area on a map of Scotland using weather symbols	BBC programmes, teachers' notes, worksheets 'After the programme' discussions, using 'What? Where? When? Why?' questions as starting points	Children should peer-assess and self-assess their learning using the assessment sheet. Teachers can add their assessment to the sheet.
The physical environment: developing an understanding of physical processes in the earth's atmosphere and surface: weather and climate, landscapes and physical processes	(programmes 1–3) – state reasons why there are different weather conditions in different parts of Scotland at the same time – describe the main types of weather experienced in Scotland, including seasonal changes – select suitable clothing for an activity during different seasons, for example gardening – describe weather elements and some effects on people's everyday lives – state the affects different types of weather have on people's everyday lives, such as gardening, farming, children's outdoor play and sports	Suggested activities, and the resources recommended for them, are listed within the notes for each programme	
Human-physical interactions: developing an understanding of the interactions between people and the Earth's natural environment: land use, resources and changes, environmental issues and sustainability	(programme 1) – provide examples of outdoor activities that are reliant on specific types of weather and landscape		
Interaction of living things with their environment: developing an understanding of the interdependence of living things with the environment.	– give some examples of seasonal changes in the appearance of plants		

Forward plan Environmental Studies: Social Subjects, Science

Programmes 1–3 (continued)

Attainment outcome main focus: Social subjects – People and place
minor focus: Science – Living things and the processes of life

Level A/B

Strands	Pupil experience: what pupils should learn	Resources	Assessment
<p>Skills</p> <p>Preparing for the task: identifying appropriate sources of information</p> <p>Carrying out the task: selecting relevant information and/or equipment: find, select and record processing information in a variety of ways.</p> <p>Reviewing and reporting on the task: presenting findings in an appropriate and coherent way presenting conclusions that are relevant to the given purpose or issue.</p>	<p>Pupils will be able to</p> <p>(programme 1)</p> <ul style="list-style-type: none"> – suggest suitable drawings to symbolise each weather type – state during whole class discussion the typical weathers related to each season. – list different sources for weather reports (programme 3) – select appropriate resources to help carry out practical and written tasks <p>(programme 1)</p> <ul style="list-style-type: none"> – select appropriate symbol for a given weather type <p>(programme 1)</p> <ul style="list-style-type: none"> – recall specific facts about weather from programme through completing small group and individual tasks. – state their favourite weather conditions and give a reason for their choice. <ul style="list-style-type: none"> – present findings in a brief report such as a written report, a talk, or a poster – present some simple conclusions based on their findings 	<p>BBC programmes, teachers' notes, worksheets</p> <p>'After the programme' discussions, using 'What? Where? When? Why?' questions as starting points</p> <p>Suggested activities, and the resources recommended for them, are listed within the notes for each programme</p>	<p>Children should peer-assess and self-assess their learning using the assessment sheet.</p> <p>Teachers can add their assessment to the sheet.</p>

The following areas are also touched on during the topic — **Science: Earth and Space and Energy and Forces**.

Strands
Earth and Space: developing an understanding of the position of the earth in the Solar System and the Universe, and the effects of its movement and that of the moon.
Changing materials: developing an understanding of the ways in which materials can be changed.

Health: safety education

Introduction to the unit

The three programmes in this unit deal with Scottish weather. The Happy Gang look at how weather in different locations throughout Scotland can be very different on the same day, and the effects that weather can have on gardens, leisure, transport and how wild animals cope in the winter.

Suggested resources

Environmental Studies Teacher's Resource Book 1
— Aitken Ellis Laing Souter ISBN 0-17-423353-1

Science Key Stage 2 Scotland pp 4–6 (Stanley Thornes Blueprint) ISBN 0-7487-2213-0
(Although this is written for an older age group there are worksheets that can be used to extend the more able pupil.)

Folens Science In Action Teachers' Resource Book 1 Patricia Harrison, Christine Moorcroft, Joan Boden and Karen Hartley ISBN 1-85276-255-1

Folens Science In Action Teachers' Resource Book 3 Patricia Harrison and Christine Moorcroft ISBN 1-85276-261-6

<http://www.brainpop.com>

<http://www.bbc.co.uk/schools/whatisweather/>

<http://www.bbc.co.uk/paintingtheweather/>

<http://creativearchive.bbc.co.uk/>

<http://www.skratch-pad.com/kites/make.html> (plan for making a basic kite.)

Programme One **Blooming weather**

—Transmission date 18 September 2008

Content

Spatz has to make a programme about the weather for Happy TV and does not know where to start. As he discusses the weather with Mr P, Spatz begins to work out a suitable format for the new programme. Mr P is the presenter, Nicky is the craft expert and Heather the Weather helps tells us facts about the weather. Together they look at weather in different locations through out Scotland and the affects it has on our lives. Programme One focuses on gardens and plants.

Learning outcomes

- The learning aims of Programme One are
- to develop awareness of seasonal weather
 - to make the children aware that different weather conditions can occur in different parts of the country on the same day
 - to develop an awareness of symbols to represent specific weather types
 - to expand the children's knowledge of the affects of weather
 - to make the children aware that plants need suitable weather to grow.

Suggested resources for the activities

- Pictures of seasonal weather.
- Weather chart with moveable symbols.
- Map of Scotland.
- Suitable weather report web sites.
- packets of seeds.
- Worksheets 1a, 1b & 2.

After the programme

What type of weather did Mr P and Spatz like?

Where did Mr P's friend, who helped him with his weather report, live?
(*Pupils can answer by placing markers on a map, by naming places or by both methods.*)

When rain freezes, what is made?

Why did Spatz like winter best and Mr P like summer best?

Activities

Before the programme

- 1 Look at a large map of Scotland and pinpoint the different locations visited during the programme. Look at the landscape and discuss why weather can be affected by location and landscape.
- 2 Familiarize children with the word bank and the song.
- 3 Using drawings and photographs, discuss favourite seasons.
- 4 How can we record weather? Ask the pupils what weathers should be recorded. Ask the children to suggest and choose suitable symbols for their weather chart.
- 5 Familiarise the pupils with the words of the songs from the programme.

After the programme

- 1 Using either a wall display or a database, make a regular record of the weather.
- 2 Ask pupils to use a drawing package on the computer to create a picture of their favourite season, with text telling why they like it best.
- 3 In small groups, look at and discuss the information printed on packets of seeds, such as where and when to plant them and the best weather conditions for growth.
- 4 Carry out the sequencing activity in Worksheet 1, using version a or version b as appropriate.
- 5 Invite a gardener, parent or grandparent in to tell children about gardening and caring for plants at different times of the year.
- 6 Plant seeds and grow them in various locations. Record, compare and contrast the results. (The Stanley Thorne's Blueprint worksheets referred to on page 8 may be useful for this.)
- 7 Use Worksheet 2 to reinforce the location of each place visited. Less able pupils can cut and stick the location labels using the labels provided on the supplementary sheet. The more able children can simply write the place names in the boxes on the map. Compare the places visited with the places where the pupils live.

This activity, using Worksheet 2, can be carried out after each of the three programmes.

Assessment

- Pupils should be able to use appropriate words to describe weather.
- Pupils should be able to discuss the best time and place to plant seeds, using the information on the seed packets.
- Pupils should be able to predict what may happen to different plants in different locations, based on previous discussions and information on seed packets.

drizzle

hurricane

weather forecast

weather symbols

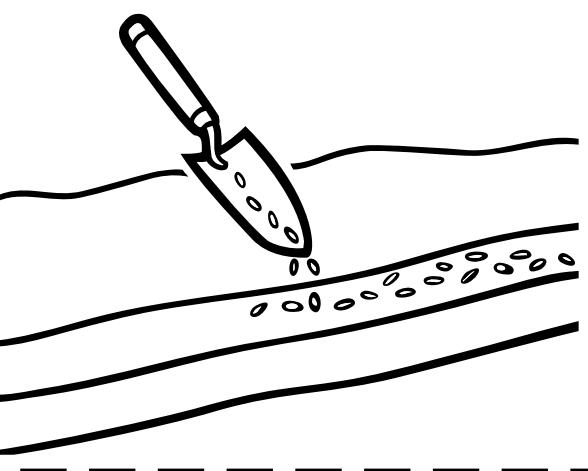
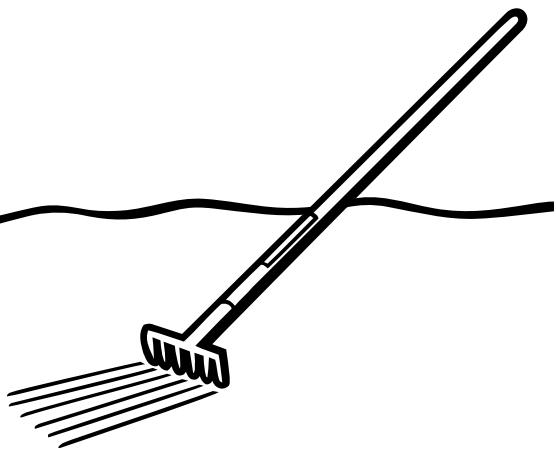
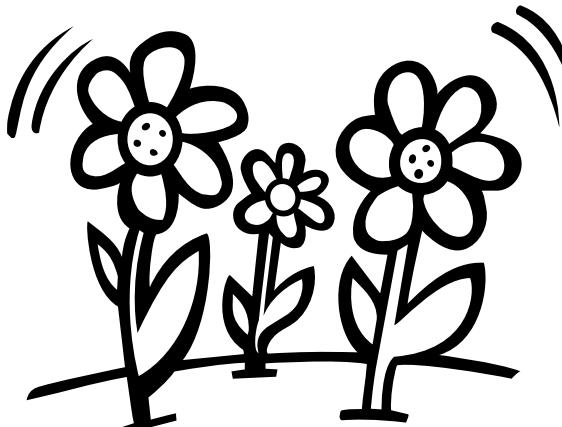
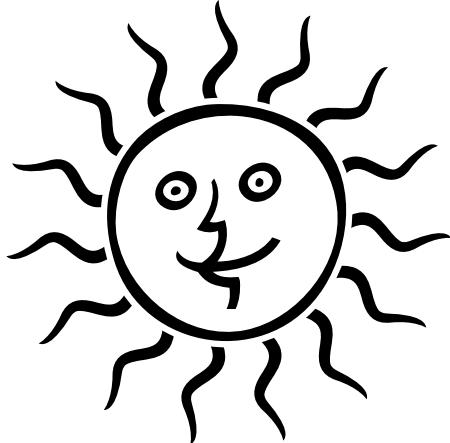
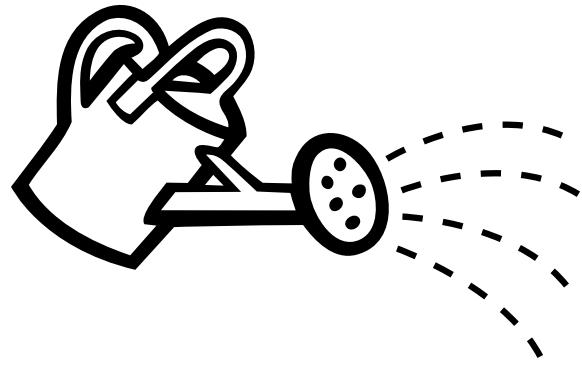
seasons

condenses

Name _____

Planting seeds

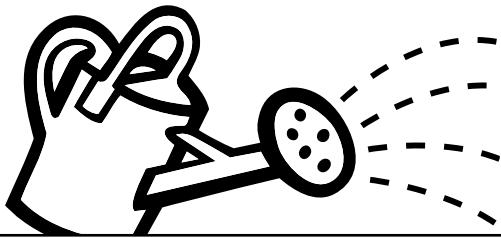
The drawings show some of the story of planting and growing some flowers. But they are all mixed up. Can you cut them out and stick them down in the right order?

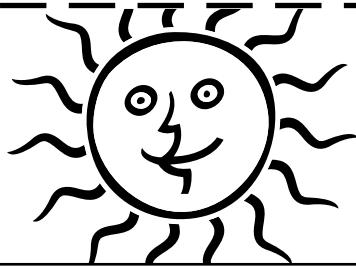


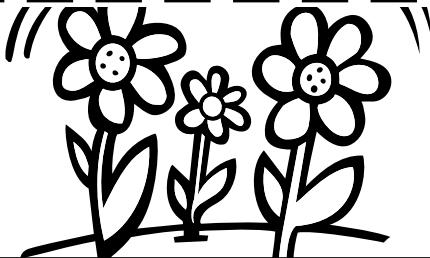
Name _____

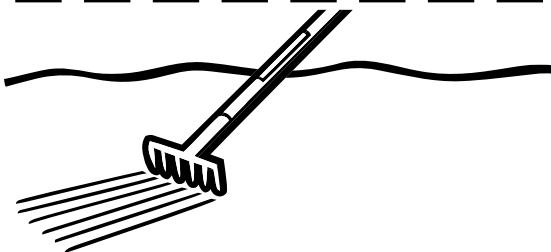
Planting seeds

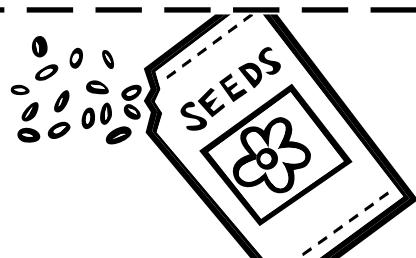
The drawings show some of the story of planting and growing some flowers. But they are all mixed up. Can you cut them out and stick them down in the right order, then write a sentence describing what's happening in the picture?

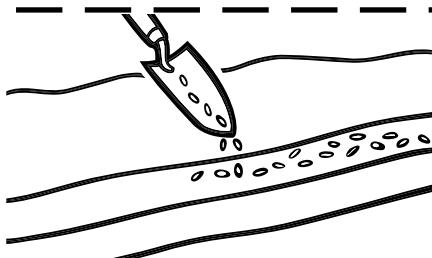






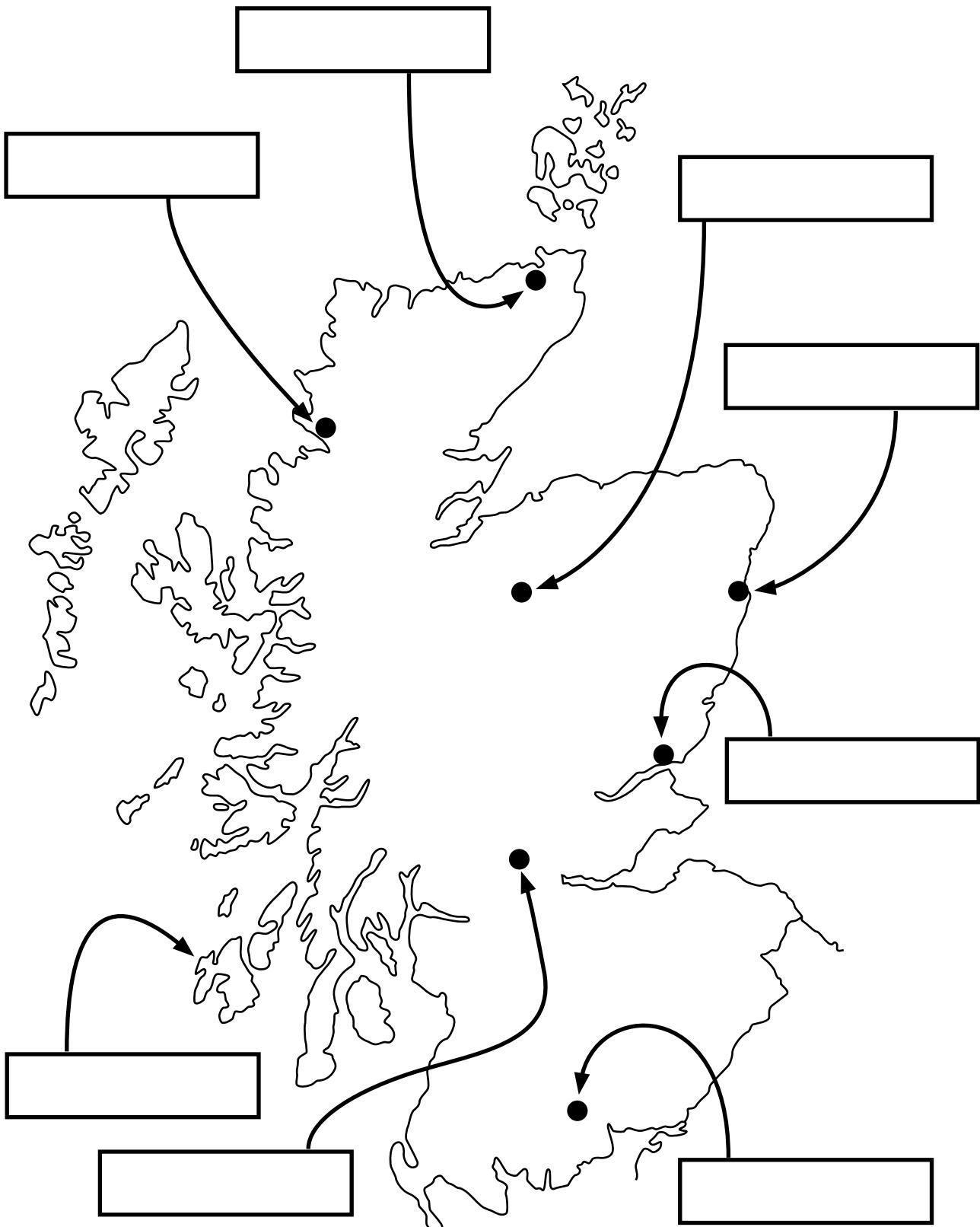






Name _____

Scotland



These labels can be cut up and given out to pupils for use with Worksheet 2.

Programme 1

Aberdeen	Aberdeen
Islay	Islay
Stirling	Stirling

Programme 2

Dumfries	Dumfries
Castletown	Castletown
Aviemore	Aviemore

Programme 3

Castletown	Castletown
Dundee	Dundee
Ullapool	Ullapool



Name _____

Blooming weather

In class we were looking at different types of weather.

Help your child to learn the words of the song. Talk about the words that are underlined.

Talk about the different kinds of clothes that are suitable for different kinds of weather.

Try to think of the sounds you hear in different weathers.

What do you see and feel in different weathers? How do they make you feel?

Whats the Weather like?

Is it showery in Shetland, sunny in Ayr,
Drizzly rain in Dundee?

All over the country people prepare,
for whatever the weather might be.

Is it thunder? Lightning?

Or later is it gonna be brightening?
Every day we hear someone say,
'What's the weather like?'

Is it raining? Pouring?

It's weather and you just can't ignore it
Every day we hear someone say ...
'What's the weather like?'



Discuss your favourite weather types.

Do you both like the same kind of weather?

Help your child to write some phrases describe their favourite weather in the spaces below.

Have fun.

Programme Two **Sporting forecast**

— Transmission date 25 September 2008

Content

Spatz is struggling to find ideas for the next weather programme. Mr P provides the inspiration when he announces that he is off skiing. With the help of children from around Scotland Mr P explores the activities people do in different types of weather and different landscapes. The programme also explores the difficulties experienced during the winter months and the fun we can have in the snow.

Learning outcomes

The learning aims of Programme Two are

- to develop an awareness of the needs of wildlife during winter
- to further develop children's awareness of locations in Scotland
- to develop the link between weather and leisure activities
- to develop their understanding of snow as frozen water
- to develop a basic awareness of thunder and lightning
- to develop an understanding of the difficulties caused by snow.

Suggested resources for the activities

Weather chart, seasonal weather pictures and map of Scotland used for Programme One.

Non fiction books depicting snow scenes and the difficulties that snow can cause.
(Kingscourt is a good source for fiction and non-fiction books to support these topics.)

Ice cube tray and containers for making and melting ice.

Worksheets 3a and 3b give observation sheets for making and melting ice. Less able pupils can draw their findings using sheet 3a. More able pupils can write about what they see using sheet 3b.

Pictures of wild animals in different weather conditions.

A video of thunder and lightning.

News report of severe weather conditions.

Tape recorder or video recorder for interviews.

After the programme

What winter sport was Mr P all dressed for at the beginning of the programme?

Where did Mr P's ski instructor say the best places for winter sports in Scotland were?

When do wild animals and birds struggle to find food?

Why did Nicky want to make a bird feeder?

Activities

Before the programme

- 1 Look at a large map of Scotland and pinpoint the different locations visited during the programme. Look at the landscape and discuss why weather can be affected by location and landscape.
- 2 Familiarize children with the word bank and the song.
- 3 Discuss pictures of Glenshee, Cairngorms, Glencoe or Nevis Range in winter and summer. Compare and contrast the similarities and differences.
- 4 List, or dress a teddy, with the sort of clothes we would wear during the winter to play outside.
- 5 Make a word bank describing snow, ice and hailstones.

After the programme

- 1 Talk about what can be done to help wild animals during the winter. Use pictures of the animals to help prompt the discussion. You could use the internet or reference books to research different ways of feeding wild animals and birds during cold periods.
- 2 Look at pictures of different activities, and discuss the type of weather that would be most suitable for them.
- 3 Look at how ice is made. Fill plastic cups with water, and place them in a freezer. Check them at regular intervals throughout the day and use Worksheet 3 to record the changes that have taken place. Pupils can work in trios to allow discussion about what is happening and why.
- 4 Take the ice formed in activity 3 and record the changes throughout the day as it melts, using Worksheet 3 once again.
- 5 Ask the pupils to write a personal story about finding snowy weather either difficult or enjoyable.
- 6 Interview a postman, the janitor or a bus driver about the effects of weather on their job. (The parent prompt sheet for this programme can be used to encourage children to think about questions for this activity at home. If you use it remember to fill in, or ask the children to fill in, the name or occupation of your class interviewee before the sheet is taken home.)
- 7 Repeat the Worksheet 2 activity to reinforce the location of each place visited.

Assessment

- Pupils should be able to demonstrate, during discussions, an understanding of the ways in which different weather types can affect the lives of wild animals.
- Pupils should be able to suggest different ways of recording the process of making and melting ice.
- Pupils should be able to use research skills to locate appropriate information from a given source.
- Pupils should be able to suggest appropriate questions to ask a postman, janitor or bus driver about the difficulties weather can cause for them.

temperature

cloudy

windy

cool

sunny

snowing

lightning

thunder

Name _____

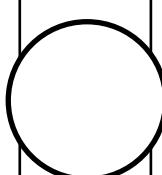
Making and melting ice

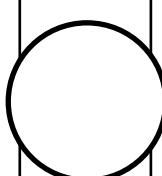
Check what's happening to the ice at regular intervals during the day, and make notes about what you find.

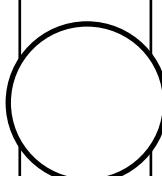
Making ice

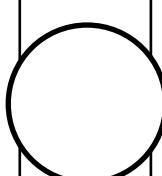
Time

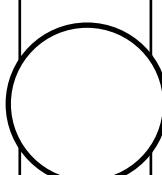
Melting ice

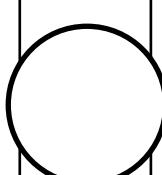














Name _____

Winter weather

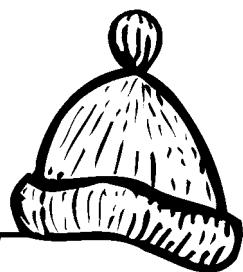
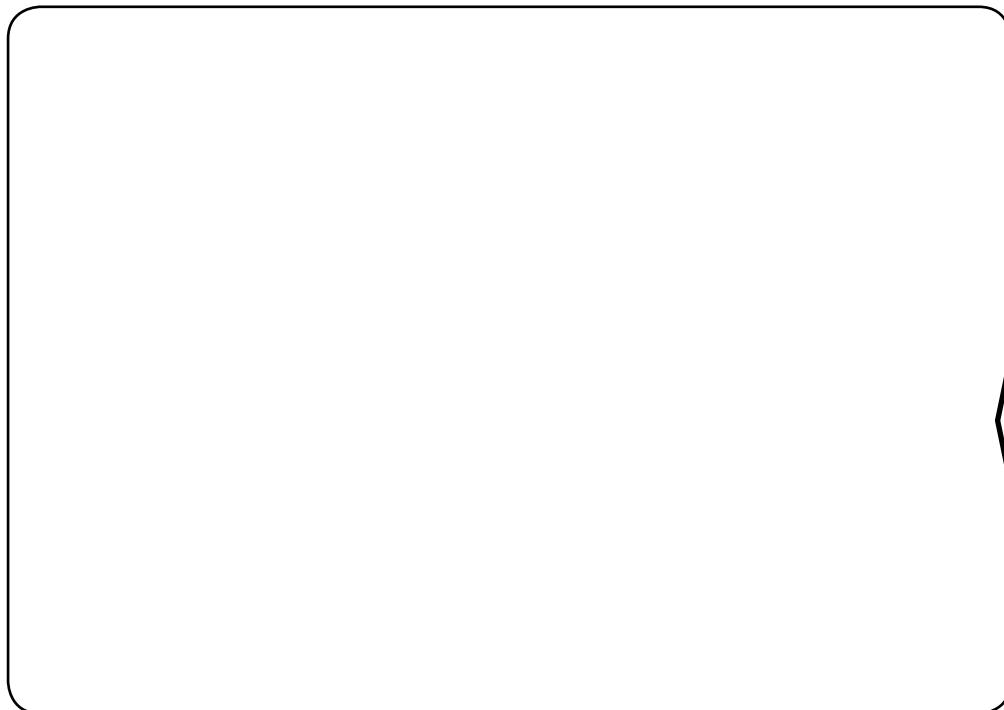
As part of our weather topic we are looking at winter weather. Winter weather can be fun, but it can also cause difficulties.

Talk about the different types of weather conditions you sometimes get in winter.

Think about the clothes you might wear in winter? What is special about them.

What effect does the winter weather have on wildlife?

Is it easier or harder to travel around in winter?



Draw a picture of something you and your child like to do in the winter weather.

Finally we are hoping to interview _____

about how the weather affects their job. Please help your child to think of some questions to ask them. Thank you.

Question 1 — _____

Question 2 — _____

Question 3 — _____

Programme Three **Going places — weather permitting**

—Transmission date 2 October 2008

Content

The last programme in the unit concentrates on transport problems caused by extreme weathers. We also learn about the direction and the four categories of wind. Mr P is visiting his Uncle Graham who is the skipper of a ferry. Uncle Graham tells about the best and worst weather conditions for sailing ferries. 'Heather the Weather' also helps us understand what causes fog and hailstones, and she explains about different strengths of winds. In this programme Nicky demonstrates how to make a basic kite.

Learning outcomes

The learning aims of Programme Three are

- to explain how clouds are formed
- to introduce the idea that weather can affect transport
- to introduce the concept of different strengths of wind from breeze to hurricane
- to develop an understanding of fog and hailstones
- to further develop the pupils' understanding of weather forecasting and why some people need to rely on forecasts.

Suggested resources for the activities

Weather chart, seasonal weather pictures and map of Scotland used for Programme One.

Pictures of different forms of transport in a variety of weather conditions, to prompt discussions.

BBC Schools weather website, 'What is Weather', Wind Force, Precipitation and Visibility.

<http://www.bbc.co.uk/schools/whatisweather/>

Materials to build a kite.

After the programme

What did Mr P's Uncle Graham do for a living?

Where did Uncle Graham stay?

When did Uncle Graham find it hard to travel to the mainland?

Why do travellers check the weather forecast before they leave?

Activities

Before the programme

- 1 Look at a large map of Scotland and pinpoint the different locations visited during the programme. Look at the landscape and discuss why weather can be affected by location and landscape.
- 2 Familiarize children with the word bank and the song.
- 3 Discuss different types of transport that the children use regularly.
- 4 Talk about ferries and how necessary they are for people who live on islands.
- 5 Make a word and phrase bank describing windy weather.

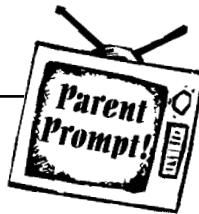
After the programme

- 1 Using the BBC schools 'What is the weather' website, discuss different types of wind.
- 2 At the start of the school day, put a small amount of water in a cup and mark the level. Ask the pupils to predict what will happen to the water level. Record the level at regular intervals and make a display of the results.
- 3 Mark level of water each day reinforcing evaporation.
- 4 Using a brightly coloured picture of one form of transport and some thin tissue or tracing paper, make a 'fog' picture by layering the thin paper over the picture. Putting a light such as a torch behind the picture can add to the effect.
- 5 Make kites and discuss what type of weather is best for flying kites, and why.
- 6 After flying the kite, pupils could write a personal account of their experiences and feelings about the activity. Encourage them to use words from the word and phrase bank

Assessment

- Pupils should be able to discuss the results of water experiment and relate it to evaporation.
- Through discussion, pupils should be able to predict what may happen when a picture is covered with thin tissue paper.
- Pupils should be able to state what type of windy weather would be best for flying kites, and why.
- In a writing task, pupils should be able to use appropriate words from the programme and the activities to give an account of their experiences of flying a kite.

storm hailstones calm fog moisture ice gale breeze evaporates



Name _____

Windy weather

We have been looking at different strengths of wind. Talk with your child about what they would see and hear during the different kinds of windy weather shown in the four boxes below. How would the wind make them feel emotionally?

Help your child to write a suitable phrase as a caption for each box.

