Lesson in a Box

Curriculum Based Activities for school visits to

Colliers Wood

within the Greenwood Community Forest



Welcome To Lesson in a Box

This activity kit has been designed for use with groups of children in the outdoors to help enrich their knowledge of the environment and their local area. The activities are linked to the National Curriculum and QCA documents but are equally valuable for groups not working to these targets. The resources have been designed to be accessible to all teachers and group leaders most of whom will not be environmental education specialists.

The activities are designed to support the curriculum while providing a wide variety of experiences which are easy to follow and fun to do. The activities can be linked to form a daily programme or used individually to complement existing subject planning.

Included in the activity sheets:

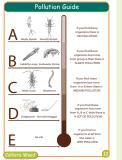
- A description of suggested activities
- What you will need for each activity
- Instructions on how to do the activities
- Ideas for further work
- Photocopiable sheets related to the activities

The activities can be used with KS1 and KS2 pupils. The Teacher Lesson Planning Grid links all of the activities to the National Curriculum and QCA documents and shows learning outcomes and resources needed. It is intended that this grid will complement subject planning structures in schools.













Although the aim is that groups self-lead their activities, some INSET training and on site support is available and is outlined in An Introduction for Teachers and Leaders included in this kit. It is intended that this publication will provide the information required by leaders when organising a visit to Colliers Wood.

Also included in this pack is Safety In Groups Guidelines. This includes advice on safety policies, codes of practice and risk assessments for schools visiting Colliers Wood, covering the health and safety aspects of organising a visit to a non- LEA site. Further advice on risk assessments and copies of activity specific and site specific risk assessments are available from the Broxtowe Borough Council, Tel: 0115 9177777.



Equipment contents for Lesson in a Box

Item	Quantity	Missing
Colour Swatches	10	
Tarpaulin	1	
Large White Sheet	1	
Bags (for collecting)	15	
Long Rope	1	
Tape Measure	1	
Ball String	1	
Sticky Cards	30	
Ноорѕ	4	
White Trays	5	
Small Pots (bug viewer)	35	
Pooters	10	
Plastic Beakers	30	
Large Pond Nets	5	
Small Nets	5	
Magnifying Glass	15	
Small Mirrors	15	
Whistle	2	
Blindfolds	15	
Throw Line	1	
Woodland Trail Guide	10	
Freshwater Trail Guide	10	
Woodland Plants Guide	4	
Paper Fasteners	Вох	
Mini Flags	30	
Lolly Sticks	30	
Stained Glass Window Cards	30	

Missing items and comments

For missing equipment, please photocopy this sheet and:

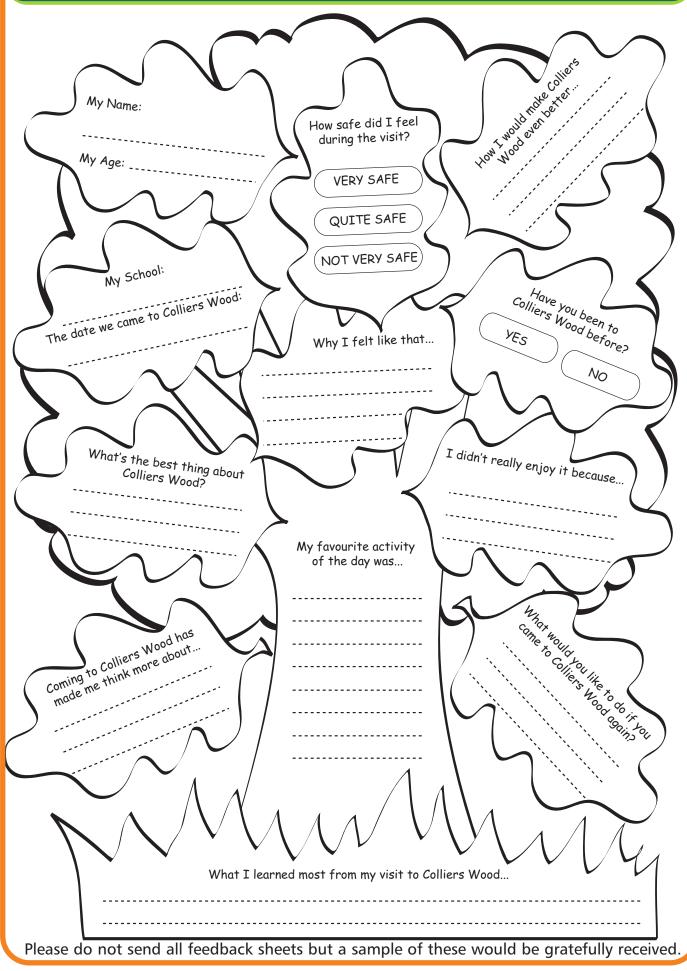
- record missing items in the right hand column of the table above.
- sign and return this form to the Lesson in a Box lender.

Comments

..... School Name Signed Date Colliers Wood

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Pupil feedback sheet - Colliers Wood



Teacher and Leader Feedback Sheet

Please take a few minutes to complete this questionnaire and hand it back when you return Lesson in a Box. Your feedback is important to us and helps us to make adjustments so that the resource is easier to use.

General Questions

Site visited
Date of visit
School or group
Contact name
 How did you find out about Lesson in a Box?
Letter article leaflet word of mouth
Other
Age and number of children participating in the activity?
• How long did your visit last?
Booking Procedure
\cdot How easy did you find the booking procedure for Lesson in a Box?
Easy difficult very difficult
• How can we make it easier?
Content of the resource
• What activities did you try on your visit?
Colliers Wood

Teacher and Leader Feedback Sheet

• Do you have any comments about any of the activities that you tried?.....

• Do you have any general comments about the kit?

Future use

• Would you consider borrowing the box again in the future?yes/no
If so, is there anything that we could do to make this easier for you?
• Have you or any of your colleagues used Lesson in a Box before ?yes/no
• Have you ever attended a Lesson in a Box training event ?
• Would you, or your colleagues, like to be included in any training in the future?yes/no
The Site Visited
The Site Visited • Do you have any comments about the general appearance of Colliers Wood?
• Do you have any comments about the general appearance of Colliers Wood?
• Do you have any comments about the general appearance of Colliers Wood?
• Do you have any comments about the general appearance of Colliers Wood?

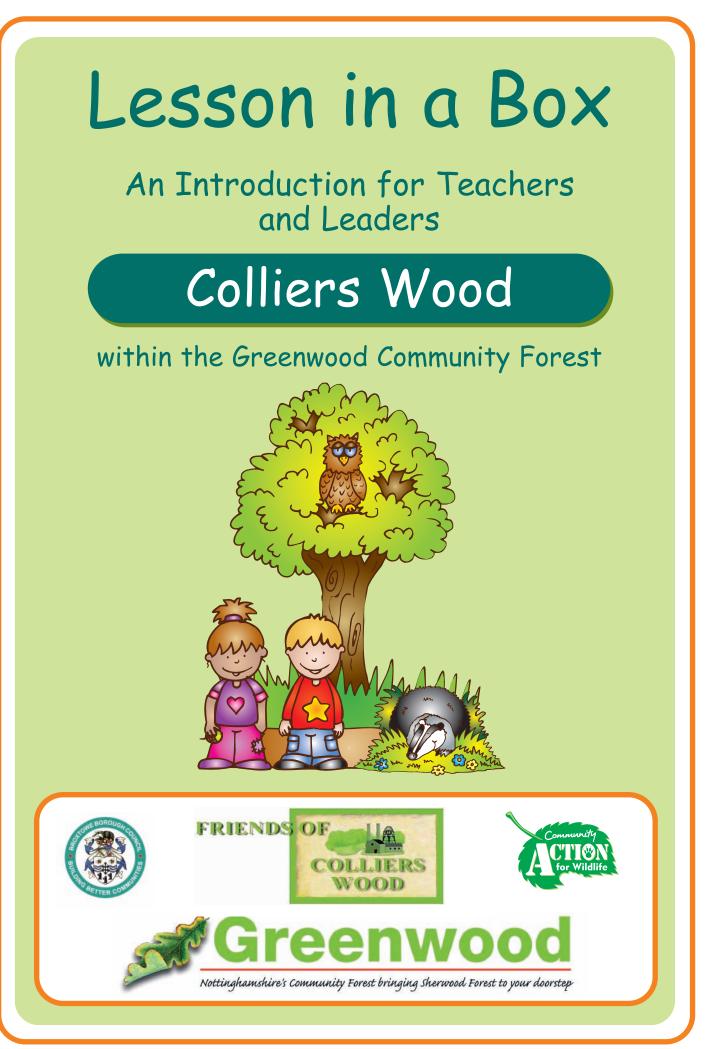
Lesson in a Box and Fun in a Box

There are three Lesson in a Box resource kits to cover activities on Brierley Forest Park, Huthwaite, Colliers Wood, Moorgreen, Boundary Wood and Tippings Wood LNR, Blidworth.

Contact the Greenwood Team for further information on these free to loan resources on 01623 758231.

There are also Fun in a Box resource kits which are activity based and can be used on any site with suitable habitats and space. These kits are aimed at smaller groups although resources can be shared. Below is a list of titles. Contact the Forestry Commission at Sherwood Pines on 01623 822447 for details of this free to loan scheme (nominal registration fee).

Activity title	Activity description
New Country	Using the five senses to explore the natural world
Nature Detectives	Looking for animal tracks and signs
Connecting	Environmental games
Correct ID	Plant and tree identification
Mini-beast Safari	Looking at small animals and pond dipping
Hideaway	Shelter building
Where Now?	Orienteering and mapping
What's for Dinner	Food chain ecology
Imaginary Creatures	History and folklore in nature
Flying High	Birds and flight
Natural Verses	Sensory activities, reading, observing and writing
Tree Modellers	Outdoor maths
Natural Beauty	Natural art and crafts
Woodland Wonder	Managing woodland
The Card Factory	Card/paper making
Nature Nurtures	Living off the land - Iron age life
Sounds of Music	Making musical instruments
Kite Flight	Kite making



Greenwood Community Forest



Greenwood is Nottinghamshire's Community Forest, and with a working partnership is transforming the local landscape to make it a greener and healthier place to be. We are creating green spaces on derelict land around towns for recreation and sport, providing new habitats for wildlife, making outdoor classrooms for environmental education and much more on the doorsteps of over a million people living in and around the towns of Nottinghamshire.

Colliers Wood is one of a growing number of forest parks within the Greenwood Community Forest.

As well as these resource kits, the Greenwood Team can offer environmental experience workshops to suit your needs, based on arts, environment and health themes on green spaces and country parks within Greenwood. These are free, fun, informal visits that are linked to the National Curriculum. Please contact us on 01623 758231 if you are interested in taking part in a workshop.



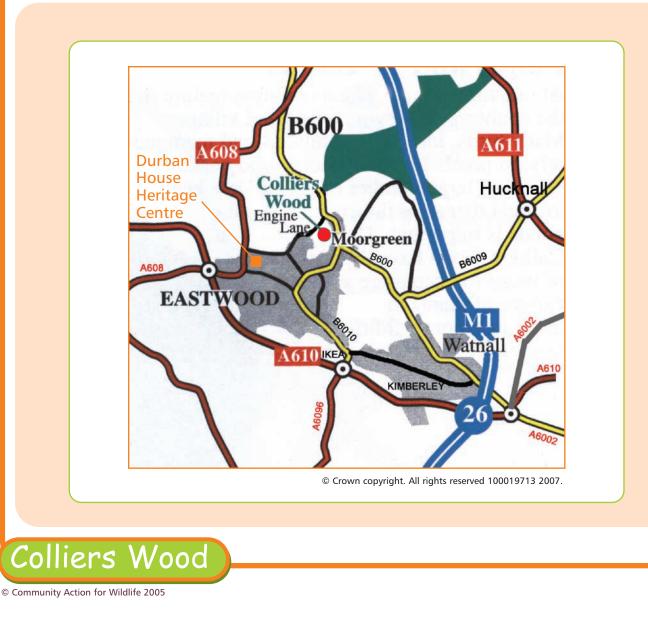
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Colliers Wood is a 12 hectare site on Engine Lane, close to the town of Eastwood. The site is managed carefully to ensure ongoing improvements in habitat diversity and to promote accessibility by the general public.

Colliers Wood offers an exciting variety of curriculum opportunities across the woodland, grassland and wetland habitats. There is an extensive network of footpaths over the whole site available for use by visitors. Visitors with limited mobility should be aware that the site has hilly terrain.

Please do not wander too far off the marked paths, as you may be walking into a sensitive wildlife area.

Colliers Wood is easily reached by road and public transport. The park is open to the public all year round. The site lies off Engine Lane at Moorgreen and is approximately one mile from Durban House Heritage Centre on Mansfield Road. If accessing the site from Durban House, please note there is a 2-metre height restriction barrier approximately half a mile from Durban House at the entrance to the Industrial Estate. There is a car park at Colliers Wood which has a 2-metre height restriction barrier. Contact Traveline on 0870 608 2608 for travel plans.



The History of Colliers Wood

Colliers Wood is a community woodland within the Greenwood Community Forest created on the former Moorgreen Colliery site. The wood has been designed to restore the landscape common to the area before the mine was developed.

Moorgreen Colliery was sunk by the Barber, Walker & Company in 1868 and was one of five pits owned by the family. Two shafts were sunk and coal production commenced in 1871, reached its peak in 1963 and was gradually decreased until closure in 1985.

Restoration of the site was undertaken during 1997/8 with extensive habitat creation for wildlife forming an integral part of the scheme.

The site is now enjoyed by the local community and supported by the Friends of Colliers Wood, who work with Broxtowe Borough Council to actively encourage and promote continued community involvement.

The area has great local historical value and has close links with the D. H. Lawrence Heritage at Durban House Heritage Centre in nearby Eastwood. Lawrence's father worked at Moorgreen's sister pit of Brinsley and Lawrence used local characters and events as a source for many of his books.

Booking

Lesson in a Box is reserved by booking form (sample attached) available from Durban House Heritage Centre, Mansfield Road, Eastwood, Notts NG16 3DZ. Tel: 01773 717353 or email: culture@broxtowe.gov.uk.

Please refer to **"Educational Visits Policy For Nottinghamshire Schools"** when planning the numbers of staff for supervision of groups visiting the park.

Parking

Car parking for organised groups is available, if booked in advance, at Durban House Heritage Centre and at Colliers Wood, Engine Lane.

Facilities available to schools

Durban House Heritage Centre, which is accessible by wheelchair, has a bistro and a meeting room that can be booked for group use. The D. H. Lawrence Birthplace Museum is also available for organised school visits. Tel: 01773 717353.



Toilet facilities

These are situated at Durban House Heritage Centre and include toilets accessible by wheelchair. Please inform the centre if you are bringing a school group and are intending to use the facilities.

Equipment and materials

When using the resource kit, please check the contents of the box on the checklist enclosed before use and report any missing items on returning to Durban House Heritage Centre.

For your visit you will need to provide:

- Clipboards
- Paper
- Pencils
- Erasers and pencil sharpener
- First Aid kit

All other equipment is provided for each activity. You may need to photocopy worksheets and make the pond dial in class before your visit.

Working at Colliers Wood

The map provided shows paths in the park and it is important that school groups stay on these, unless instructed to explore further, to avoid trampling through environmentally sensitive areas. The attached map indicates some of the different activity areas.

If working in the copse please arrange for this area to be accessible. There is also a key to open gates for wheelchair access.

Colliers Wood is a public site so please ensure children are aware of "stranger danger" procedures and how to behave when dogs are around.

There is also a wheelchair accessible auditorium capable of seating 50 children on site which can be used as an outdoor classroom.

Doing our bit for the environment

Please take your lunch box rubbish back to school and recycle cans, foil, and paper.



Trailblazer

Many schools are now taking part in the Trailblazer scheme and a day at Colliers Wood is an excellent way of working towards credits and awards. Further details can be obtained from Nottinghamshire County Council and Nottingham City Council education departments. Schools are encouraged to work towards credits in all strands of the scheme. A day on site lends itself to the PLAN – DO – REVIEW model and children can be involved in all aspects of a visit. One idea for a children's review sheet is included in this section.

After your visit

When using Lesson in a Box, please clean items such as pond dipping equipment and replace any resources used before returning the resource to Durban House Heritage Centre.

Please fill in an evaluation form which can be found in the pack, to help us continue to provide what you need.

After your visit, photographs, children's work, letters, drawings, artwork, photocopies of Trailblazer record books etc will be gratefully received by Durban House Heritage Centre.

Thank you.

HAVE A GREAT DAY.





Booking Form for a Group Visit

Date and time you wish to collect Lesson in a Box	
Date and time you wish to return Lesson in a Box (up to 7 days later)	
Date and time of visit to Colliers Wood:	
No in group:	
Age range:	
No. of leaders/helpers	
Group leader:	
Name of school or group:	
Contact address:	
Post code:	
Contact telephone number:	
During your visit, do you require: ple	ease tick (box)
Parking facilities at Durban House Heritage Centre?	yes no
Parking facilities at Durban House Heritage Centre? If yes, amount of space required and times	yes no
-	yes no
If yes, amount of space required and times	
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre?	
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required	yes no
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required Use of lunchroom at Durban House Heritage Centre?	yes no
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required Use of lunchroom at Durban House Heritage Centre? If yes, times required	yes no
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required Use of lunchroom at Durban House Heritage Centre? If yes, times required Wheelchair access to Colliers Wood?	yes no
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required Use of lunchroom at Durban House Heritage Centre? If yes, times required Wheelchair access to Colliers Wood? If so, please sign for the access gate key on collection immediately prior to visit and sign on returning key immediately following visit	yes no
If yes, amount of space required and times Toilet facilities at Durban House Heritage Centre? If yes, times required Use of lunchroom at Durban House Heritage Centre? If yes, times required Wheelchair access to Colliers Wood? If so, please sign for the access gate key on collection immediately prior to visit and sign on returning key immediately following visit Do you require access to the copse for investigating habitats?	yes no

Booking Form for a Group Visit

I wish to book Lesson in a Box for a visit to Colliers Wood. I confirm I have read and understood the booking notes in 'An Introduction to Teachers' and will ensure that the group complies with the conditions outlined.

Signed:	Date:
Name:	Position:
Signed:	Date:
(On behalf of Durban House Heritage Centre).	

Please sign below on collection and return of Lesson in a Box/access gate key

I have collected Lesson in a Box	I have collected the access gate key
Signed:	Signed:
Name:	Name:
Position:	Position:
Date:	Date:
Signed: (On behalf of Durban House Heritage Centre).	Date:
I have returned Lesson in a Box	I have returned the access gate key
I have returned Lesson in a Box Signed:	
	Signed:
Signed:	Signed: Name:
Signed: Name:	Signed: Name: Position:
Signed: Name: Position:	Signed: Name: Position:
Signed: Name: Position:	Signed: Name: Position: Date:

Please return to: Lesson in a Box, Durban House Heritage Centre, Mansfield Road, Eastwood, Nottinghamshire, NG16 3DZ. Telephone: 01773 717353 Fax: 01773 713509 Email: culture@broxtowe.gov.uk





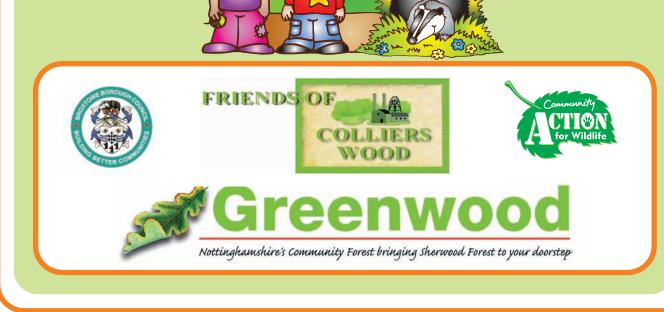
Lesson in a Box

Teacher Lesson Planning Grid

These guidelines cover: National Curriculum objectives QCA Learning Outcomes Resources needed

Colliers Wood

within the Greenwood Community Forest



Resources Needed	Nets, trays, magnifying glasses, clip boards, pencils, Freshwater Trail Guides, mini- beast record sheets, Pollution guide 2m length string, mini- flags, pooters for small creatures, Woodland Trail Guides, pots
Learning Outcomes	 Have a "hands on" knowledge of the life processes and living things (plants and animals) found in the woodland. Experience planning, making and setting of pit fall traps for mini beast collection/observation/sorting/classification. Investigate the mini beast life of the woodland through leaf litter survey, pit fall trapping, tree shaking and general observation. Better understand the properties of the natural materials in the woodland. Increase knowledge of bio-diversity in the area local to their working. Gain greater understanding of the energy flow through the woodland. Increase knowledge of bio-diversity in the area local to their working. Gain greater understanding of the energy flow through the woodland including soil making, life cycles, food webs, interdependence and adaptation and the importance of micro organisms especially fungi. Understand that their actions will have consequences and a careful approach should be adopted to environmental welfare. Develop an understanding of the importance and value of biological diversity (Agenda 21) and how their actions can impact on the environment.
National Curriculum and QCA Units Supported by this Activity	 Science - K5 1 and 2 Life Processes and Living Things Materials and Their Properties Materials and Their Properties Materials and Their Properties QCA Units - K5 1 and 2 Science 18 - Growing plants 12 - Sorting and using materials 12 - Sorting and using materials 12 - Variation 28 - Helping plants grow well 27 - Variation 28 - Helping plants grow well 29 - Habitats 20 - Characteristics of materials 20 - Naracteristics of materials 21 - Rocks and soils 22 - Variation 23 - Rocks and soils 24 - Habitats 25 - Life cycles 64 - Interdependence and adaptation 63 - Interdependence and adaptation 64 - Interdependence and adaptation 65 - Micro-organisms 66 - Micro-organisms 67 - Micro-organisms 68 - Micro-organisms 69 - Micro-organisms 60 - Interdependence and adaptation 61 - Around our school, the local area 6 - Investigating our local area 8 - Improving the environment
Activity	Study of Pond Ecosystem Mini-beast Safari and Fishing
Page	

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Resources Needed		© Community Action for Wildlife 2005
Learning Outcomes	 Have a "hands on" knowledge of the life processes and living things (plants and animals) found in the pond. Recognise the importance of marginal vegetation as habitats and experience their planting. Experience collection, observation, sorting, identification and classification of aquatic creatures. Greater understand the energy flow through the aquatic environment including life cycles, food webs, interdependence and adaptation. Understand that their actions will have consequences and a careful approach should be adopted to environmental welfare. Develop an understanding of the importance and value of biological diversity (Agenda 21) and how their actions can impact on the environment, especially on the quality of water. 	G
National Curriculum and QCA Units Supported by this Activity	 Science - KS 1, 2 Life Processes and Living Things Materials and Their Properties Materials and Their Properties OCA Units - KS 1 and 2 - Science 18 - Growing plants 1C - Sorting and using materials 1C - Sorting and using materials 2B - Plants and animals in the local environment 2C - Variation 3B - Helping plants grow well 4B - Habitats 5B - Life cycles 6A - Interdependence and adaptation 6A - Interdependence and adaptation 6A - Interdependence and adaptation 6A - Interdependence and skills 6A - Interdependence and skills 6A - Interdependence and understanding of places 6A - Knowledge and understanding of patterns and processes 7 - Knowledge and understanding of patterns and processes 8 - Hound our school, the local area 2 - How can we make our local area safer? 6 - Investigating our local area 8 - Improving the environment 11 - Water 	ро
Activity	Study of Pond Ecosystem Mini-beast Safari and Fishing continued	Colliers Wood
Page		Collie

Resources Needed	Mirrors (suitable for children)	© Community Action for Wildlife 2005
Learning Outcomes	 Develop awareness of the richness of the environment. Increased awareness of the qualities of materials. Improve observation and concentration skills. Understand how we learn about our environment through our senses. Explore ways of framing images - frame and record an interesting viewpoint lentify and record a variety of features and aspects of the environment. Develop sketches from observations. 	9
National Curriculum and QCA Units Supported by this Activity	 Science - KS 1 and 2 Life Processes and Living Things QCA Unit - KS 1 and 2 Science 1A - Ourselves 1B - Growing plants 2B - Plants and animals in the local environment 3C - Characteristics of materials 3E - Habitats 2B - Habitats 2A - KS 1 and 2- Recording from first-hand observation, represent and communicate observations. Investigating qualities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. QCA Units - KS 1 and 2 Art 1B - Investigating materials 2A - Picture this 2A - Picture this 2B - Mother Nature, designer 3B - Investigating pattern 4A - Viewpoints 6C - A sense of place 9 - Visiting a museum, gallery or site 	DO
Activity	High in the Sky	Colliers Wood
Page		Collis

Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
Quadrats and Transects Survey (Exploring a hedgerow)	 Science - KS 1 and 2 Life Processes and Living Things OCA Units - KS 1 and 2 Science 1B - Growing plants 2B - Plants and animals in the local environment 2C - Variation 3B - Helping plants grow well 3D - Rocks and soils 4B - Habitats 5B - Life cycles 6A - Interdependence and adaptation 6B - Micro-organisms Geography - KS1 and 2 Geography Frowledge & understanding of patces Knowledge & understanding of patces Knowledge & understanding of anticromental change and sustainable development GCA Units - KS 1 and 2 Geography Hanoung the environment Mathematics - KS 1 and 2 Using and applying number Using and applying number Using and applying shape, space and measures Handling data Using and applying shape, space and measures Handling data Callaborative working, negotiation, taking and sharing resonshility. 	 Have a "hands on" knowledge of the life processes and living things (plants and animals) found in the woodland. Experience Experience collection/observation/sorting/ identification and classification of plants and animals. Increase knowledge of bio-diversity in the area local to their working. Gain a greater understanding of the energy flow through the woodland including soil making, life cycles, food webs, interdependence and adaptation. Understand that their actions will have consequences and a careful approach should be adopted to environmental welfare. Develop an understanding of the diversity (Agenda 21) and how their actions can impact on the environment. Using mathematical language to communicate ideas and results. Presenting information in a clear and organised way, recording results in diagrams, graphs and charts and drawing conclusions. 	Hoops, clipboard, pencils, paper, woodland plant identification guide, rope, measure, Recording sheets

Page	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
	Cocktail Souvenirs	 Science - KS 1 and 2 Materials and Their Properties Materials and Their Properties Scating and using materials C- Sorting and using materials C- Sorting and using materials C- Sorting and using materials C- Characteristics of materials C- Sorting and using materials Vocabulary extension, describing, adjectives, communication, speaking and listening Mart - KS 1 and 2 Recording from first-hand observation, represent and communicate observations. Investigating qualities and possibilities of materials, OCA Units - KS 1 and 2 Art 1A - Ourselves 1B - Investigating materials 2B - Mother Nature, designer 6C - A sense of place 9 - Visiting a museum, gallery or site 	 Understand how we learn about our environment through our senses. Develop awareness of the richness of the environment. Identify and record a variety of features and aspects of the environment. Increase awareness of the qualities of materials. Linking vocabulary with features found in the local environment. Collect and describe natural materials, using a wider range of adjectives, adverbs, similes and phrases. 	Plastic cups, small sticks, a little water
	Prickly Tickly	 Science - KS 1 and 2 Materials and Their Properties Materials and Their Properties QCA Units - KS 1 and 2 - Science 1C - Sorting and using materials 3C - Characteristics of materials 3C - Characteristics 3C - Characte	 Linking vocabulary with features found in the local environment. Collect and describe natural materials, using a wider range of adjectives, adverbs, opposites, similes and phrases. Understand how we learn about our environment through our senses. 	blindfolds, natural found objects
Coll	Colliers Wood	poo	© Comm	© Community Action for Wildlife 2005

Page	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
	Prickly Tickly Cont	 Art – KS 1 and 2 Recording from first-hand observations. Investigating qualities and possibilities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. QCA Units – KS 1 and 2 Art 1A - Ourselves IB - Investigating materials 28 - Mother Nature, designer 28 - Mother Nature, designer 28 - Nother Nature, designer 38 - Investigating pattern 4A - Viewpoints 6C - A sense of place 9 - Visiting a museum, gallery or site PSHE Collaborative working, negotiation, taking and sharing responsibility 	 Develop awareness of the richness of the environment. Identify and record a variety of features and aspects of the environment. Increase awareness of the qualities of materials. Improve observation and concentration skills. Working co-operatively. 	
	StainedArt -Glass• RecGlass• RecWindows• Inveand• Inveone of a• textKind• Knoand• knoin din d	 Art – KS 1 and 2 Recording from first-hand observation, represent and communicate observations. Investigating qualities and possibilities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. Knowledge and understanding of the work, roles and purposes of artists, craftspeople and designers in different times and cultures. 	 Develop awareness of the richness of the environment. Increase awareness of the qualities of materials. Improve observation and concentration skills. Understand how we learn about our environment through our senses. Explore ways of framing images – frame and record an interesting viewpoint. 	Cards with windows cut out, recording materials, fallen leaves
			© Commu	© Community Action for Wildlife 2005

Se	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
	Stained Glass Windows and One of a Kind Cont	QCA Units – KS 1 and 2 Art 1B – Investigating materials 2A – Picture this 2B – Mother Nature, designer 3B – Investigating pattern 4A - Viewpoints 6C – A sense of place 9 – Visiting a museum, gallery or site	 Identify and record a variety of features and aspects of the environment. Develop sketches from observations. 	
	Making Friends	 Art - KS 1 and 2 Recording from first-hand observations. Recording from first-hand observations. Investigating qualities and possibilities of materials, visual and tactile elements, pattern and texture, line, shape, form and space. OCA Units - KS 1 and 2 Art IB - Investigating materials 2A - Picture this 2A - Picture this 2B - Mother Nature, designer 3B - Investigating pattern 4A - Viewpoints 6C - A sense of place 9 - Visiting a museum, gallery or site PSHE Collaborative working, negotiation, taking and sharing responsibility 	 Develop awareness of the richness of the environment. Increase awareness of the qualities of materials. Improve observation and concentration skills. Understand how we learn about our environment through our senses. Explore ways of framing images – frame and record an interesting viewpoint. Identify and record a variety of features and aspects of the environment. Develop sketches from observations. Working co-operatively, caring for one another, understanding other points of view. 	Blindfolds
	IELS W	000	© Comm	© Community Action for Wildlife 2005

	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
La Co	Colour Palette	 Art - KS 1 and 2 Recording from first-hand observation, represent and communicate observations. Investigating qualities and possibilities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. Knowledge and understanding of the work, roles and purposes of artists, craftspeople and designers in different times and cultures. QCA Units - KS 1 and 2 Art 1B - Investigating materials 2A - Picture this 2A - Picture this 2B - Mother Nature, designer 3B - Investigating pattern 4A - Viewpoints 6C - A sense of place 9 - Visiting a museum, gallery or site 	 Develop awareness of the richness of the environment and the colour to be found there. Understand how we learn about our environment through our senses. Increase awareness of the qualities of natural materials. Improve selection, observation and concentration skills Identify parts they like and say what they found interesting about colour/patterns they have created. Identify similarities and differences between their own and others' work. Exploring art techniques, visual and tactile qualities of natural materials. Identify and describe objects and their properties. 	Range of natural materials in woodland etc. Bags for collection
5 Č	Colour Check	 Art – KS 1 and 2 Recording from first-hand observation, represent and communicate observations. Investigating qualities and possibilities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. Knowledge and understanding of the work, roles and purposes of artists, craftspeople and designers in different times and cultures. QCA Units – KS 1 and 2 Art 1B – Investigating materials 	 Develop awareness of the richness of the environment and the colour to be found there. Understand how we learn about our environment through our senses. Increase awareness of the qualities of natural materials. Improve selection, observation and concentration skills Identify parts they like and say what they found interesting about colours they have created. 	Colour cards sticky cards
Ø	Colliers Wood	Doo	© Comm	© Community Action for Wildlife 2005

Page	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
	Colour Check Cont	2A – Picture this 2B – Mother Nature, designer 6C – A sense of place 9 – Visiting a museum, gallery or site	 Identify similarities and differences between their own and others' work. Exploring art techniques, visual qualities of natural materials. Identify and describe objects and their properties. 	
	Magic Camera	 Art – KS 1 and 2 Recording from first-hand observation, represent and communicate observations. Investigating qualities and possibilities of materials, visual and tactile elements, colour pattern and texture, line and tone, shape, form and space. Knowledge and understanding of the work, roles and purposes of artists, craftspeople and designers in different times and cultures. QCA Units – KS 1 and 2 Art 1B – Investigating materials 2A – Picture this 2A – Picture this 2B – Mother Nature, designer 3B – Investigating pattern 4A - Viewpoints 6C – A sense of place 9 – Visiting a museum, gallery or site PSHE Collaborative working, negotiation, taking and sharing responsibility 	 Develop awareness of the richness of the environment through pattern, texture, colour, shape, line and form. Understand how we learn about our environment through our senses. Working co-operatively. Communication, speaking and listening skills. Increased awareness of the qualities of materials. Improve selection, observation and concentration skills. Explore ways of framing images – frame and record an interesting viewpoint. Identify and describe objects and their properties. Develop sketches from observations. 	A whistle
Coll	Colliers Wood	poo	© Comm	© Community Action for Wildlife 2005

^o age ,	Activity	Page Activity National Curriculum and QCA Units Supported by this Activity	Learning Outcomes	Resources Needed
	Outlines	 Science - KS 1 and 2 Life Processes and Living Things Materials and Their Properties Materials and Their Properties OCA Units - KS 1 and 2 - Science 1A - Ourselves 1C - Sorting and using materials 2B - Plants and animals in the local environment 2C - Variation 3C - Characteristics of materials 6A - Interdependence and adaptation 6A - Interdependence and possibilities of materials, visual and tactile elements, colour pattern and twisual and tactile elements, colour pattern and tactile elements, dot and space. OCA Units	 Understand how plants and animals have adapted to their surroundings and the reasons for those adaptations Develop awareness of the richness of the environment and the shapes, forms and lines found in it. Increased awareness of the qualities of materials. Inprove selection, observation and concentration skills. Understand how we learn about our environment through our senses and aspects of the environment. Develop sketches from observations Explore ways of framing images – frame and record an interesting viewpoint Communication, speaking and listening skills. Exploring art techniques, visual and tactile qualities of natural materials. 	Recording materials, outlines check list
Collie	Colliers Wood	poo		Community, Article for Milleling

Safety in Groups Guidelines

Planning and managing groups on sites. Guidelines for organisers and leaders.

Introduction

This booklet is aimed at ensuring the highest possible safety standards for schools and other groups visiting Colliers Wood. Colliers Wood is maintained by Broxtowe Borough Council. By describing the standards of safety which visiting schools are recommended to provide for their pupils, it provides a quality assurance document for governors, head teachers, teachers, parents and pupils alike.

As the safety of visiting Colliers Wood is the joint responsibility of the visiting schools and other groups and agencies responsible for the management of sites (e.g. Broxtowe Borough Council), this document makes clear the responsibilities of, and provides codes of practice for, all groups of staff/adults/leaders.

The document follows the recommendations and requirements of the LEA's "Educational Visits Policy For Nottinghamshire Schools" and the Education Department Circulars in relation to specific outdoor activities. It is expected that all visits and activities taking place at this site will follow the recommendations of these documents.

In following the codes of practice, all concerned need to appreciate that no document of this nature can cover every possible set of circumstances. Safe educational experiences ultimately rely on the common sense and good judgement of teachers and other adults, while working within their own experience and capabilities. All visiting teachers and leaders should have access to and be familiar with these codes of practice.

These guidelines cover: Stages of planning and delivery PRE PLANNING BEFORE THE ACTIVITY DURING THE ACTIVITY AFTER THE ACTIVITY

And consider key aspects of: ORGANISATION AND DELIVERY STAFF AND RESOURCES COMMUNICATION HEALTH AND SAFETY PARTICIPANTS RISK ASSESSMENT INFORMATION, ADMINISTRATION AND PROMOTION

Activity planning

1. Assess the purpose, nature and extent of the activity.

- The location, and route, activities on site and resources needed.
- How it will be managed What staff and resources? What ratio of staff to children?
- Who is leading the activity? What leader/facilitator skills are needed? Do they have relevant training? This will depend on the nature and scope Essentially a trained first aider with a Certificate of Qualification in First Aid (to at least basic emergency level), and first aid kit.
- Are there any agreements or special requirements needed from sites or others? E.g. booking, letter of agreement, special leaders, a site risk assessment.
- Will any additional tools or specialist skills be required?

2. Establish Health and Safety arrangements

- Consult Risk Assessment for Colliers Wood (available from Durban House Heritage Centre) and carry out risk assessment for your group/activities, including the journey.
- Accident, emergency and communication arrangements. An emergency communication system must be set up between the visiting group, the school and the parents.
- What First Aid provision is available and is it clearly marked and accessible?
- Radio or mobile telephone communication procedure. These should include provisions for abandoning the activity if the weather deteriorates or if any other unexpected problem arises during the activity.

3. Set the parameters for the participants:

- Maximum number of participants
- What clothing is required?
- What footwear is required?
- What level of fitness is required and have any relevant medical conditions been disclosed to teacher/leader?
- Are special skills required?
- Is any additional equipment required?

4. Information, administration and promotion arrangements

- What information is or can be made available to potential participants? This may depend on the way in which the activity is promoted. Information needs to be provided which will enable potential participants (via organiser) to make choices about whether to become involved, to ensure that they are properly prepared (the leader must be aware of any relevant medical conditions of participants) and to make the most of the learning opportunities available.
- How can information be provided? Via a leaflet, poster or by inviting participants to telephone the leader.
- Establish an appropriate booking system, if required.

Before the activity

Safety Responsibilities

1. Safety responsibilities of Broxtowe Borough Council at Colliers Wood

Take overall responsibility for the management of health and safety of all areas in their operational control, including risk assessment, fire safety etc. and communicating this to visiting groups.

2. Safety responsibilities of Durban House Heritage Centre

The centre is responsible for:

• Ensuring, so far as is reasonably practicable, the safety and health provisions and procedures affecting cleaning are adhered to, including the storage of materials and disposal of waste.

3. Safety responsibilities of visiting schools

Through the management of the teacher leading the visit and the school's own Educational Visits Co-ordinator, the visiting school is responsible for:

- Ensuring the leader of the visit, and other visiting staff if possible, visit the site prior to the visit. If no visit takes place, then the leader of the visit must assess the site and needs to brief other staff thoroughly.
- Ensuring that all visits take place within the policies, guidelines and Codes of Practice provided by their LEA and Colliers Wood.

4. General emergency procedure

- All leaders in charge of a group should be prepared for and ready to deal with any emergency which may arise. Groups are advised to have a mobile phone with them when visiting Colliers Wood.
- Take charge of the situation. Ensure safety and well being of the whole group. Make sure all members of the party are accounted for.
- Establish who is injured or ill and the extent of injuries or illness. Give emergency aid if necessary (to sustain breathing and circulation and prevent bleeding).
- If the situation is urgent or life threatening, telephone 999 and ask for the required services, giving your name, location, number of casualties and an assessment of injuries/illness. Ask for immediate medical advice if necessary.
- Once any urgent situation has been dealt with, take time to reflect and decide the best course of action. Inform the centre staff, if you have not already done so, and share the problem.
- Ensure any pupil taken to hospital is accompanied by an adult.
- Prevent access to telephones, including mobile phones by anyone other than group leaders, to ensure information about the event is managed appropriately. Contact the head teacher giving clear details of the situation. The head teacher should contact parents and the chairman of school governors.
- Ensure that other pupils are cared for, that they understand what has happened and are distanced from the situation if appropriate. Be aware that others in the party, adults and pupils, you included, may be suffering from shock.
- In the event of a serious incident the head teacher should contact the Education Department, the Health and Safety Executive and Broxtowe Borough Council.

Re-assess activity

Check Risk Assessment for Changes

- Is there any work going on in the vicinity of the planned activity?
- Is the route safe and free of hazards? Have hazards been guarded against?
- Ensure that accident, emergency (see section "General Emergency Procedure") and communication arrangements are planned and understood by all.
- Is appropriate First Aid available?
- Details of the activity (including time leaving, route, destination, return time, mobile phone numbers, number in party and name of guide) should be left with a responsible person.
- On assembly the organiser must ensure that the participants meet all the criteria which have been set:
 - Is everyone's name on the register?
 - Are they wearing the appropriate clothing?
 - Are they wearing the appropriate footwear?
 - Do they appear to meet the fitness requirements?
 - Do they have the appropriate skills?
 - Are they the correct age?
 - Has the maximum number been exceeded?
 - Where vehicles, bicycles or equipment are provided by participants, do they appear to be safe and suitable for the planned activity?
 - If the leader/organiser, the participants or the equipment do not meet these requirements, the activity should not be allowed to go ahead.

Introductory talk

• Check that everyone can hear you.

- Essential at the start of every new project or activity to inform participants about:
 - Why they are doing the activity their contribution, social improvements, quality of life, improving access, sharing good practice, country code etc.
 - What to expect may be length and type of activity, equipment needed (refer to risk assessment).
 - What is expected of them how you need them to work as a team, what skills they need to employ, what sort of behaviour is acceptable, arrangements and supervision for "free time" and break times.
 - Gives key information in relation to the activity and their safety what to do in the event of an emergency or accident, first aid and communication arrangements, lets them know how to use equipment, defines limits and boundaries of area being used etc.

You might also need to include:

TOUR OF WHOLE SITE AREA – site management and care, tasks required. EQUIPMENT DEMONSTRATION – name and use for each, safety information. Pair experienced volunteers with newcomers if you can – show good practice. INFORMATION FOR PUBLIC ON SITE ABOUT THE ACTIVITY.

During the activity

- It is important that the leader/organiser is free to keep an overview of the activity and is not tied to one particular group or area.
- The organiser should, depending on the nature of the activity, ensure that the party stays together and should make regular checks to ensure that all participants are present and well. One person should be nominated to stay at the back of the group to ensure that nobody falls behind. Regular head counts should also be taken.
- The leader must ensure suitable behaviour and supervision of pupils at all times.
- If the weather deteriorates or if there are any other unexpected problems the organiser must have regard to the pre-arranged emergency procedures and decide the appropriate course of action and communicate this to the participants.
- Ensure good working practices pair experienced with non experienced adults, make sure everyone has something to do at the start, set realistic targets, rotate jobs if possible, delegate wherever possible, give praise, keep work site tidy, keep equipment in one place, try to call people by their names (wear labels if you need to), draw on volunteers skills.
- Respond to differing levels of ability, fitness and challenge ask them about their interests, be aware that some adults have phobias, including insects, spiders, long grass, water etc.
- Following any accident, illness or 'near miss' incidents, record these back at school. These should also be reported to The Health & Safety Officer, Broxtowe Borough Council, Foster Ave, Beeston, Nottingham NG9 1AB.

After the activity

- Allow time for clearing up if needed, and check the area is left tidy and undisturbed.
- Thank everyone for taking part and check everyone is there a formal head-count is essential.
- Evaluate the safety arrangements and if appropriate amend the procedure or implement change for the next event. Return any evaluation sheets to Durban House.
- At the end of every visit, the whole programme should be reviewed and any lessons learned taken on board for any future visits.
- Ensure relevant and adequate follow-up work to consolidate learning in a variety of styles.

More safety information

A risk assessment for Colliers Wood is available from Durban House Heritage Centre.

British Standards Institute www.bci-global.com/Corporate/BritishStandards

> Health and Safety Executive www.hse.gov.uk

BTCV – a range of useful information on volunteers www.btcv.org.uk

> Council for Environmental Education www.cee.org.uk

Department for Education and Science www.dfes.gov.uk

Institute for Leisure and Amenity Management www.ilam.org.uk

> Institute for Public Rights of Way www.iprow.org.uk

RoSPA (Royal Society for the Prevention of Accidents) Useful information on water safety www.rospa.com

> Visitor Safety in the Countryside Group www.vscg.co.uk

> > Walking for Health Initiative www.whi.org.uk



Standard First Aid Kit

Vary, normally for 10-12, usually contain:

Guidance card

20 sterile adhesive dressings

2 sterile eye pads

6 triangular bandages

6 safety pins

6 medicated, unsterilised dressings

2 large, sterile, unmedicated dressings

3 extra large, sterile, unmedicated dressings

Disposable fine elastic gloves

Plastic mouth resuscitation unit

900ml of sterile water or saline

Recommended Welfare kit

Additional useful equipment

Mobile phones

Wet wipes – general cleaning

1 pair scissors

10 safety pins

Needle and thread

Pencil and paper

Toilet roll/sanitary towel

Cotton wool

30 plasters (hypoallergenic only)

10p/20p pieces

Set of spare clothes

Towels (when working in or near water)

Mints or sweets

Blanket/sheet

Whistle

Torch

Basic Principles for Safety

Who is the qualified First Aider? Make sure everyone knows who they are.

Make sure that you and participants have plenty of drinking water, especially in hot weather.

Long trousers are more appropriate in woodland.

Always wear strong shoes, boots or Wellington boots.

Wear a hat for warmth or shade from hot sun.

Only carry as much equipment as you can comfortably manage.

Supplementary notes

Education and groups and insurance

Be aware of the LEA Guidelines and Polices on school visits and that the LEA's position regarding insurance is clear to schools. Need to check with your organisation's Head for private/independent schools. Arrange an insurance policy for an amount acceptable to your organisation.

There are new guidelines in circulation from Department for Education and Science - see website www.dfes.gov.uk

Always discuss the visit and activities with your school's Educational Visits Co-ordinator and plan it well with their help.

Children and vulnerable adults

As a volunteer, group or task leader, you take on a position of responsibility with regards to children (Children Act) and are therefore required to obtain Disclosure by the Criminal Records Bureau (CRB). This is a checking process against a national registered database of offenders and information held by departments - Home Office, Health, Education and Employment. Where this is required it will be carried out by employer or project organiser.

Follow your group's/school's policy on checking volunteers with CRB.

Health and Safety At Work Act (HASWA)

Any organisation will have responsibility under the Health and Safety At Work Act (HASWA) to ensure, so far as is reasonably practicable, that those engaging in these types of activities are not exposed to risks to their health and safety from the activities. Check with those in charge of your organisation and act appropriately.

Participants and clothing/equipment

Where the organiser believes that a participant is inadequately prepared for the activity, they should make this clear to the person concerned or their guardian. If possible, any warning should be given in the presence of witnesses, and recorded in writing. At all times, the organiser must conduct themselves politely and make it clear that in their opinion the person is not properly equipped or that the planned activity may not be suitable for that person. Where the participants are adults, they should make it clear that if the person insists on participating, that they do so at their own risk. Ensure that adult volunteers are not placed in a vulnerable position themselves, for example, pair helpers when distant from other groups.



Supplementary notes continued

The Disability Discrimination Act (DDA)

The Disability Discrimination Act was passed in 1995 to ensure that disabled people are treated in a fair and equal way.

The act places duties on providers of goods, facilities and services.

- The duties on service providers are being introduced in three stages:
 - It is unlawful for service providers to treat disabled people less favourably for a reason related to their disability;
 - Service providers have to make "reasonable adjustments" for disabled people, such as providing extra help or making changes to the way they provide their services; and
 - Service providers will also have to make "reasonable adjustments" to the physical features of their premises to overcome physical barriers to access.
- The Act makes it unlawful for a service provider to discriminate against a disabled person:
 - By refusing to provide (or deliberately not providing) any service which it provides (or is prepared to provide) to members of the public; or
 - In the standard of service which it provides to the disabled person or the manner in which it provides it; or
 - In the terms on which it provides a service to the disabled person.

The act does not place any duty on providing for elderly people who do not have a disability or for families with small children or other people who may be restricted in their use of the countryside. However, the benefits of an accessible, inclusive environment for disabled people would also benefit other user groups.



Colliers Wood Site Emergency Plan (Events)

Instructions to Leaders

In the event of an accident the Project Leader shall call the appropriate emergency services and direct them to the site using the information given below.

The second nominated person shall proceed to the nearest access point and await the arrival / direct the emergency services to the accident scene.

Site Name / Address

Colliers Wood, Engine Lane, Moorgreen, Notts. Tel: 0115 9177777 (Broxtowe Borough Council)

Directions to Site

From Nuthall, Kimberley, Watnall

Take the B600 Watnall Road towards, Eastwood and Brinsley. You are entering Moorgreen when you pass St Mary's, Greasley. Bear right at the Horse & Groom public house and continue to the bottom of the hill. Turn left into Engine Lane. (Colliers Wood is sign posted.) Entrance to car park is on the left.

From Hucknall

Take the B6009 Watnall Road/Long Lane towards Kimberley. At the T junction in Watnall turn right onto B600. Follow Nuthall/Kimberley/Watnall directions from this point.

From Selston, Somercotes

Take Nottingham Road towards Nottingham. Pass by Underwood and Brinsley until Moorgreen Reservoir is on your left. Immediately after, turn right into Engine Lane which is marked by winding wheel entrance features.

From the centre of Eastwood

Pass by Morrisons Supermarket, bearing left at the traffic lights onto the A608 Mansfield Road. Towards the bottom of the hill turn right into Greenhills Road. Durban House Heritage Centre is at this junction. Continue along this road whose name changes to Lower Beauvale and then Engine Lane to pass the site on your right. The car park entrance is on the right prior to the junction with the B600. Please note that there is a 2m height barrier at the end of Lower Beauvale and another at the site entrance road.

From the centre of Eastwood avoiding the height restriction barrier

Take Nottingham Road towards Kimberley. At Hill Top turn left into Dovecote Road (B6010). Continue to the end of this road to reach Moorgreen at the Horse & Groom public house. Turn left and then take the next left into Engine Lane. There is ample on-road parking for vehicles that cannot pass under the 2m height barrier at the car park entrance.



Colliers Wood Site Emergency Plan (Events)

Entrance Points

Vehicle entrance is off Engine Lane. Further pedestrian entrances are from Moorgreen village adjacent to Holydene Nursery and Mill Road.

Local Information

Accident and emergency hospital: Ilkeston Community Hospital, Heanor Rd, Ilkeston, DE7 8LN. Tel: 0115 9305522

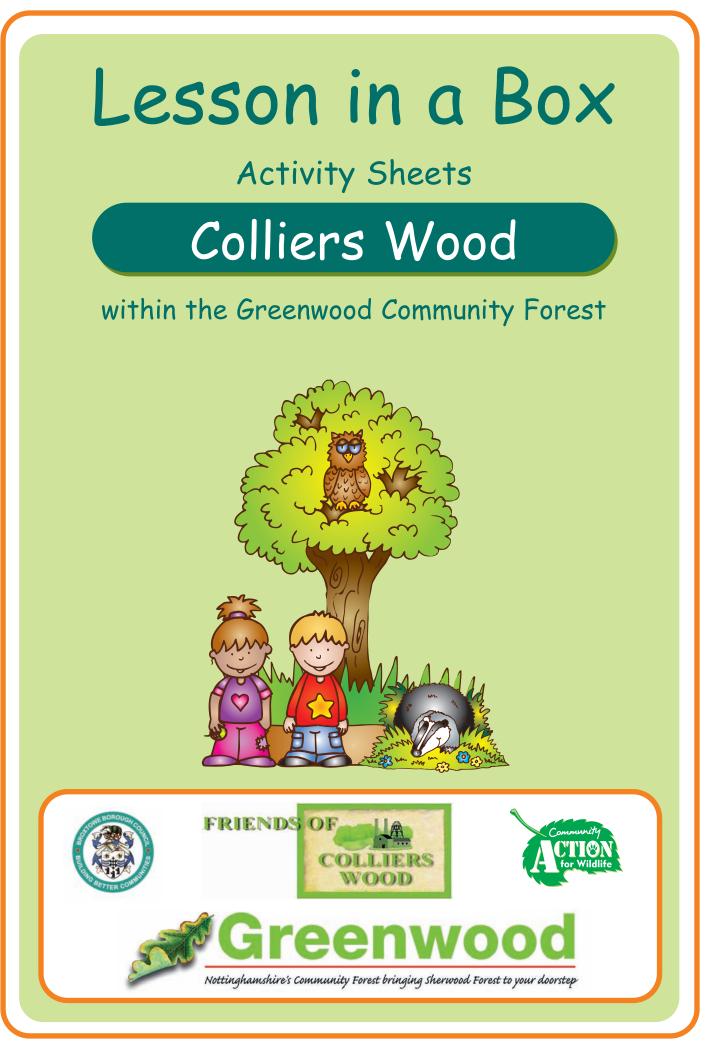
Police station: Eastwood Police Station, Nottingham Rd Tel: 0115 9400999

Fire: In emergency dial 999





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Mini-beast Safari

Mini-beast Safari is a set of activities designed to raise awareness of the wonderful world of small creatures. The suggested activity list is for guidance only and you may pick and mix the activities to fit your needs.

The Camp

Setting the scene and introducing the activities You will need: A pleasant spot to set up base near to a pond and some trees, something to sit on if it is damp and a whistle.

How to do it:



1. Tell the group:

- You are going to go on safari to view mini-beasts. You will be visiting the "Invertebrata National Park" and looking at 3 different mini-beast reserves. The park is known as the "Invertebrata" as mini-beasts belong to a family known as the Invertebrates. This means that they have no backbones.
- Mini-beasts tend to be shy and retiring. If you have to take the roof off one of their homes to see them, make sure you put it back afterwards.
- Mini-beasts are delicate and easily hurt and should be handled with care. One or two mini-beasts may nip. However, most of them only tickle and none of them kill people (in this country!!) Please use post where possible.
- The spot you are in is "The Camp" and you should report back to Camp after all activities and whenever you hear the whistle.
- You are now going on a tour of the Invertebrata National Park.

2. The work area

• Take them on a tour of the boundary of the area they are to work in.

Talk about:

- The Invertebrata National Park may seem small to them but to a mini-beast it is infinitely large.
- They will be looking at 3 reserves in the park (or less if needed):
 Reserve 1 the pond Reserve 2 The ground and Reserve 3 the trees
- Safety issues see Safety in Groups Guidelines
- Water safety management
- Hygiene of sharing pooters
- Collecting mini beasts use lids, not hands where possible
- Do not put hands near to mouths

Fishing

Pond dipping and identifying pond mini-beasts

Each small group will need: A net, white tray, magnifying glass, clip board, pencils, Freshwater Name Trail Guide and **mini-beast record sheets**. This activity should take place at the pond. Refer to the suggested lesson plan for a more

in depth activity.

How to do it:

1. Introduce the activity

- Remind the group about water safety.
- Divide the group up into pairs or threes.
- Half fill each white tray with water.

2. Fishing Boat

- In pairs or threes work as Fishermen on a fishing boat.
- Hand out the trays to the Fishermen.
- Take it in turns in the team to sweep the net in one direction through surface water.
- Have a go and then...

3. Swap roles

• The second Fisherman should sweep the net a little deeper through the water taking care not to touch the bottom and empty the net into the tray.

4. Mini-beasts can then be recorded by:

- The under 7s counting the different types of mini-beast.
- 7-11 year olds using the tick list.
- the 11s and over using the Freshwater Trail Guide and record sheet.

5. An adult should empty out the trays by lowering gently. Rinse the nets in the pond

Talk about:

- The differences between the mini-beasts found in the different reserves.
- Water safety
- How polluted the pond might be (see pollution guide).

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Suggested lesson plan for the study of a pond ecosystem

Use in conjunction with the "Fishing" activity sheet

The pond provides a wide range of learning opportunities. This section contains an in depth explanation of the pond ecosystem and suggested lesson plan for a half day field study focusing on sampling and identification.

The pond is an excellent resource, rich in a range of organisms particularly, from March to October.

Aim

To study the ecosystem of a pond

Objectives

- To show the range of organisms that inhabit freshwater
- To understand how organisms fill different niches and are adapted to their environments
- To understand how feeding relationships operate

Values and attributes

• To encourage care and respect for living things

Introduction

What would you expect to find in the pond?

• Many organisms are extremely small but fascinating, so you need to look very carefully.

How will you find out?

- You will need to sample refer to the "Fishing" activity sheet.
- Within the pond there are different places for creatures to live or "zones". Try to sample all the different zones surface, amongst weed, open water and along the bottom, but don't stir up mud or you will not see anything.
- To help focus pupils on observing organisms, discuss the special problems associated with living water. They will find this easier to do if using themselves as reference points e.g. if you had to live under water what would you have problems with?

The main areas are:

- Getting oxygen
- Moving
- · Finding food and avoid being caught



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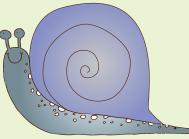
Suggested lesson plan for the study of a pond ecosystem

Getting oxygen

Strictly speaking, not all animals breathe – breathing involves lungs, but all animals do need oxygen. Mammals and birds breathe –fish and insects do not but still have to have ways of getting oxygen.

What happens to us when we go under water? How do we cope with getting oxygen under water? We could:

- Take a deep breath and come back to the surface to get more. Some creatures do this. Water beetles visit the surface at intervals to collect fresh air. Whales do too but you will not find any in our pond. Insects do not have lungs so the oxygen can enter the body in different places e.g. Midge larvae have breathing tubes and spend time suspended on the surface.
- Take a supply of air down with you like a diver with air cylinders. Snails and beetles do this.



Movement

Water is a denser medium than air. It is more difficult to move through water than air but water supports you. How do we move through water?

• Adopt a streamline shape - so we swim, moving horizontally through

the water presenting a smaller surface area to the water – less restrictive than moving vertically. Top competitive swimmers remove body hair to improve streamlining. Most water creatures are streamlined. Water beetles particularly have smoother outlines compared to land beetles.

• Use our limbs to push against the water. We maximise area to push back with by wearing flippers. This

makes leg movements more effective. Frogs and some newts have webbed feet. Many water insects have limbs which are shaped or fringed with hairs for more effective propulsion.

- Use boats streamlined and using oars with blades to push water back. Several creatures have boat-like shapes and many have specialised oar-like legs to help push them through the water.
- Pushing water out behind helps to propel craft forward. Dragonfly larvae use this method to move rapidly forward in a series of spurts. Water is squeezed out of the abdomen shooting the insect forward during this method of movement its legs are tucked in to improve streamlining.

Suggested lesson plan for the study of a pond ecosystem

Getting food and avoid being caught

As top carnivores we do not have a great problem with this. Possible strategies are:

- Hide Prey can seek refuge in the weeds or the mud. This is common. Note that organisms you collect in trays will seek shelter under whatever bits of weed are available. Likewise predators can lurk in mud and dart out as prey approaches.
- Camouflage
- Speed to avoid predators
- Several have special mouthparts and adapted legs to help them grab and eat prey. Dragonfly nymphs are notable for their special mouthparts, normally tucked under the head which can shoot out and grasp prey – a fearsome weapon.

Collect organisms

Refer to the "Fishing" Activity Sheets and collect organisms from the pond.

Ask pupils to use magnifying glasses for observation and identification sheets to try to find out:

• What the organisms are

(Hint: creatures with 6 legs will be insects or insect larvae. However, not all insect larvae have legs)

- How the organisms get their oxygen
- What they might feed on (mouthparts may give a clue)
- How they move

Pupils could be given 1 or 2 organisms to investigate and then share what they find out with the rest of the group.

Look at the pollution guide to see if the pond is polluted or clean

How is the pond habitat different from a stream?

- Organisms living in running water have an additional problem in avoiding being washed away. Also it is more difficult for plants to become anchored and there is less vegetation to either hide amongst or provide food.
- The water is running so the oxygen content is higher.
- If you were investigating a stream you would need to look carefully to spot organisms. Nymphs of various species of mayflies which require high oxygen content are common.

Microhike

An ant's view of the world

Each pair/three will need: A piece of string about 2m long, a magnifying glass and some mini-flags

How to do it:

1. Introduce the activity by saying:

• You are going for a hike in the reserve known as 'The Ground'. This is by far the largest reserve you will visit and you will only have chance to explore a very small part of it. However, on the way you will see some spectacular views and if you are lucky, spot some interesting mini-beasts. The string is the route you have to follow and the magnifying glass is to help you look at the scenery and spot mini-beasts.

2. Give out the equipment

- The string is for laying on the ground to mark a route.
- The magnifying glass is for looking closer.
- The flags are for marking interesting features on the way.

3. Exploring the ground

- Tell the group to find an interesting looking spot to lay their string on the ground.
- Next they should lie down on their stomachs at one end of the string and slowly crawl along the string looking through the magnifying glass with their eyes no more than a few centimetres off the ground.
- They should use the mini-flags to mark interesting features on the way.

- What they saw along the route what do their flags mark?
- Was the scenery beautiful?
- Did they spot any mini-beasts?





Under 7s

Looking at the creatures at our feet

Each small group will need: Two or three small pots, a magnifying glass, a pooter

How to do it:

1. Introduce the activity by saying:

• Mini-beasts are shy and retiring and don't like to be seen by people. They tend to hide away in places where there is good cover such as under stones and logs.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot. (Be aware that creatures of different species could eat each other).
- The pooter is for sucking up smaller mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look.

3. Exploring the ground

- Give 20 minutes to explore "The Ground".
- See how many mini-beasts they can find.
- They are allowed to collect one of each type of mini-beast but must carefully put back any stones or logs that they move.

4. Return to Camp

• After 20 minutes blow the whistle as a signal for them to return to the Camp.

5. Counting Favourites

• How many different mini-beasts they have found and to decide which is their favourite mini-beast.

6. Finally, they should carefully return all the mini-beasts to where they were found

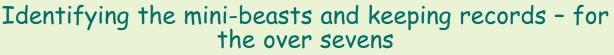
Please return all magnifying glasses to the box - these can easily start a fire in hot dry conditions.

- How many different mini-beasts each group has found?
- Where the best places were to find mini-beasts, and why?
- Which was the group's favourite mini-beast and why?
- Once used please wipe pooter tubes and return to box.



Trophies

7s & over



Each small group will need: The same equipment as for mini-beast hunting, Woodland Trail Guide, pencils, a clip board and **mini-beast record sheets**.

How to do it:

1. Introduce the activity by saying:

• In times gone by, people used to kill any animals they thought were interesting and have them stuffed to hang on the wall or mounted with pins in display boxes. Today we know that it is better to let the animals live and record what they look like in words and pictures.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot.
- The pooter is for sucking up tiny mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look .

3. Record the minibeasts

- They should record the details of each mini-beast on the **mini-beast record sheet** and attempt to identify them using the keys.
- There is a simple key for children aged 7-11. Older children should use the Woodland Trail Guide.

2000

4. Finally, they should carefully return all the mini-beasts to where they were found.

Talk about:

- How many different mini-beasts each group has found.
- Where the best places were to find mini-beasts.
- Which was the group's favourite mini-beast and why?
- How easy was it to identify them using the guides?
- Once used please wipe pooter tubes and return to box.

Colliers Wood

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Tree beating

Looking at the creatures that live in trees

You will need: A large white sheet, a tree with branches in easy reach. Each pair or three will need: A pooter, a magnifying glass, mini-beast record sheets, clip board, pencils and the Woodland Trail Guide.

How to do it:

1. Introduce the activity by saying:

- There are many mini-beasts hiding in the tree.
- The best way of looking for them would be to examine each part of the tree with a magnifying glass as this would disturb the mini-beasts the least. Unfortunately there is not time to do that so instead you are going to get them out by giving a branch a shake.
- They must be ready to pounce on anything that falls out onto the white sheet.

2. Give out the equipment

- The pots are for collecting larger mini-beasts in they should collect no more than 3 or four per pot.
- The pooter is for sucking up smaller mini-beasts they suck through the shorter pipe with the covered end and place the longer pipe with the open end over the insect.
- The magnifying glass is for taking a closer look.

3. Get ready

- Stand the group around the tree and place the sheet under a tree.
- Shake the branch when the group are ready to pounce.

4. Collect the beasts

• Using the pots and pooters.

5. Repeat under a different branch

6. Mini-beasts can be recorded by:

- The under 7s counting the different types of mini-beast.
- 7-11 year olds using the mini-beast dial.
- the 11s and over using the Woodland Trail Guide and mini-beast record sheet.

7. Finally, make sure the mini-beasts are released close to the tree

Talk about:

• What they could find and whether they could identify them.

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<u>Colliers Wood</u>

High in the Sky

Looking at the world from a different angle. Each person will need: A mirror

How to do it:

- 1. Introduce the activity by saying:
- Many mini-beasts that live in trees can fly at some stage in their life.
- You are going to see what it feels like to fly by going on a mirror walk.

2. Form a line

• Stand the group in a line with one hand on the shoulder of the person in front and with the mirror just under their chins.

3. Using the mirrors

- They need to take big high steps to avoid tripping practice this first!
- Tell them to look in their mirrors as you lead them through the trees this gives a feeling of flying.

4. What's in a tree?

• Stop under a tree and ask if they can spot anything interesting in the tree using the mirror (they are not allowed to look up).

5. Share your find with the group

• If someone finds something, the rest of the group should see if they can see it by changing the angle of their mirrors.

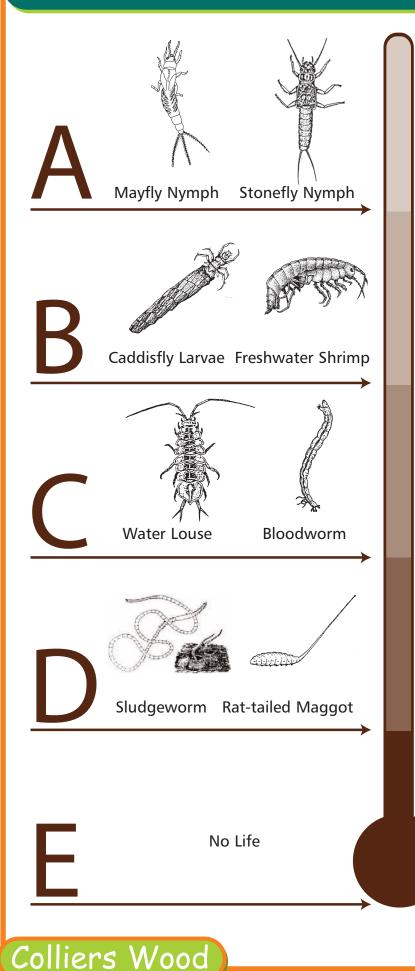
Talk about:

- What it felt like.
- Whether they spotted any flying mini- beasts.
- Where such beasts might live up and down a tree.

Follow up idea

• Draw the view in your mirror and develop drawings, paintings, collages etc back at school.

Pollution Guide



If you find these organisms there is NO POLLUTION

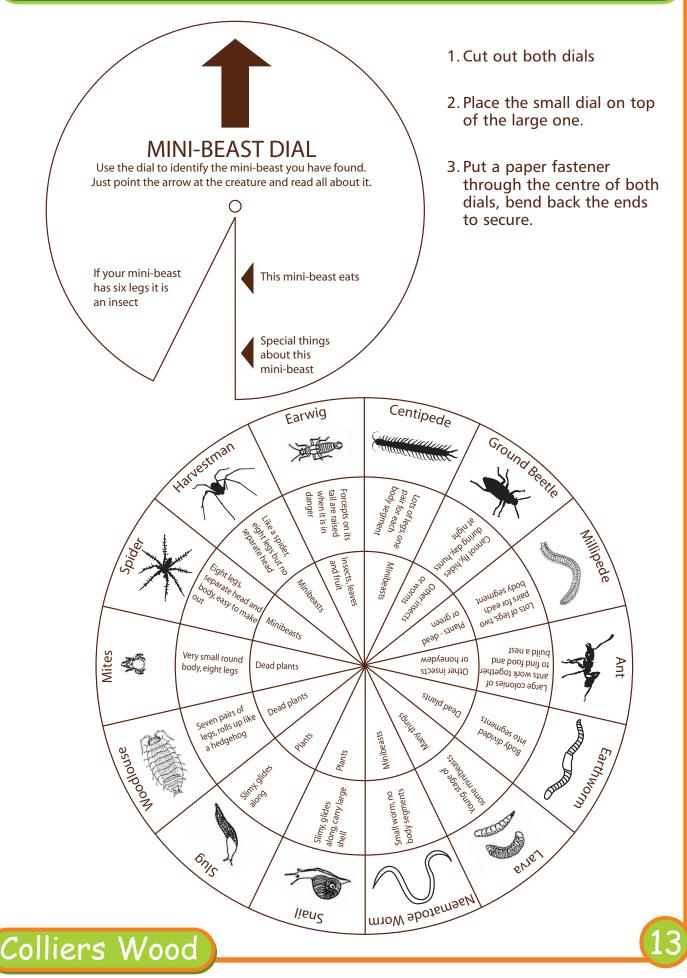
If you find these organisms but none from group A then there is SLIGHT POLLUTION

If you find these organisms but none from A or B then there is MEDIUM POLLUTION

If you find these organisms but none from A , B or C then there is A LOT OF POLLUTION

If you find no organisms at all then the water is VERY POLLUTED

Make your own mini-beast dial



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Mini-beast Record Sheet

For activities: Trophies, Tree beating, Fishing

Description	Mini-beast 1	Mini-beast 2	Mini-beast 3	Mini-beast 4
Number of legs				
Number of body parts				
Number of wings				
How long is it?				
How wide is it?				
What colour is it?				
How does it move?				
Where was it found?				
What is it?				



Drawing Mini-beasts

For activities: Trophies, Tree beating, Fishing

Mini-beast 1 Mini-beast 3	Mini-beast 2
Mini-beast 3	
Wini-beast 3	
Wini-heast 3	
	Mini-beast 4

Follow up ideas

Write a report

Use your notes to write a report about one of your mini-beasts for the rest of your class to read. Plan your report carefully before starting to write it. What will you include? Why? Illustrate your report. You could make all the reports into a class book to go in your

school library.

Worm home

Make up names

Make up suitable names for your mini-beasts which describe them well (eg. "armour-plated scuttler" for a woodlouse). Cut the top off a large plastic pop bottle. Fill it with layers of sand and soil. Add a few worms. Place leaves on the surface and cover the top of the bottle with net. Look daily to see what happens to the leaves and layers. After a week, return the worms to the place you found them.

Washing up bowl pond

Arrange a few stones and water plants in a washing up bowl. Carefully fill the pond with tap water. Put it outside in a sheltered spot. Visit daily and record any mini-beasts you see.

Visit: www.buglife.org.uk

to find out more about mini-beasts

Investigating Habitats

Investigating Habitats is a set of activities designed to enable people to improve nature observation and recording skills. The suggested activity list is for guidance only and you may pick and combine the activities to fit your needs. The activities are suitable for a wide range of ages

Setting up headquarters

Setting the scene and introducing the activities You will need: A pleasant spot to set up base, close to several habitats and hedgerows, something to sit on if it is damp, a whistle.

How to do it:

1. Tell the group:

- The spot they are in is Record Headquarters and they should report their findings to HQ after each investigation or whenever they hear the whistle.
- They are going to record some vital statistics about plant life and habitats around them.
- Discuss what they consider to be trees, which are shrubs and which are plants.
- You are now going to take them on a tour of the study area you are going to investigate in more detail.

2. The work area

• Take them on a tour of the boundary of the area they are to work in.

- Safety issues see Safety in Groups Guidelines
- The equipment they will use
- Looking after the area and the plants and animals found there.



Surveying the Area

Quadrat Survey

A quadrat is normally a square frame or PE hoop, which is thrown at random in order to investigate plant species growing within a certain area. Choose several different habitats, eg: beneath the tree canopies of different trees; woodland/heathland; water meadows/mown grass round lakes

Each small group will need: A hoop, clipboard, pencil, paper and Woodland Plant Identification Guide.

How to do it:

1. Introduce the activity by saying:

• In the last 40 years, in Britain, we have lost 95% of our wild flower meadows, 50% of our ancient woodlands and 50% of our fens and wet valleys.

2. Give out the equipment

3. Survey the chosen area:

• Tell the group to throw their hoop onto one of the areas named above. Wherever it falls, inspect just what is growing within the area covered – ignore everything else.

4. Compare the different areas

- You can then compare two or three different areas.
- You could pick one or two species to look out for (e.g. clover), or you could look at the percentage ground cover of different types of plants (using identification guides to help you.) Use squared paper with quadrats drawn to scale – colour in the area represented by each plant when you get back to school and make a key. Your results could be shown as a pie chart.
- You may want to make 10 throws, then record the different species identified within each quadrat. Count the number of times the same species is recorded in one location. Show your results as a bar chart.

Talk about:

- Which areas encourage biodiversity?
- Which do not?
- What could be done to increase the variety of life in these areas?

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Surveying the Area

Transect Survey (Footpaths)

You will need: A long rope, tape measure, clipboard, pencil, Transect recording sheet

How to do it:

1. Introduce the activity by saying:

• Footpaths become wider and wider as people walk along the edges of the path. This tramples the plants growing there and often causes soil to be washed away from paths in heavy rain. Always keep carefully to paths to avoid scarring the countryside.





• Investigate a footpath through an area of woods. Stretch a long rope between two points on the ground. Record what is growing at 50cm intervals, measure the height of each plant you have found and record your findings on the transect recording sheet on page 21.

- What effects do you think trampling has on the vegetation?
- How could this be avoided?
- Can regeneration take place near to paths? (New plants and trees growing naturally under the older plants.)
- Role play the discussions which might take place between a landowner, conservationists and walkers who are planning a new footpath across a mature woodland area.





Exploring a Hedgerow

You will need: Clipboard, paper, pencils, tape measure, Woodland Plant ID Guide, FSC Tree Guide

How to do it:

1. Introduce the activity by saying:

• Hedges can provide valuable corridors and routes for animals and birds, linking scattered wildlife habitats together. In the last 40 years we have lost 160,000 km of hedges – enough to go round the earth six times.

2. Draw a plan of where the hedge runs.

• What is the function of the hedge? (To mark a boundary, contain stock, a windbreak?)

3. Measure the hedge

• Make a note of how high the hedge is and how wide it is at the bottom. Measure the shadow cast by the hedge. Does one side get more sun than the other? Does this affect the vegetation on each side?

4. Make a list

- Note how many shrubs there are in the hedge and how many plants are growing under or up it. Use the identification sheets to identify the plants and shrubs. Are there any fruits on the shrubs? How are they dispersed?
- Measure a 10m length of the hedge and walk along it to see which is the most common shrub or tree.

5. Look for evidence of animal, bird or mini-beast homes in and under the hedge.

6. Dating a hedge

• It is possible to estimate the age of an old hedge by counting the number of different kinds of trees and shrubs in a 30m stretch. As a very rough guide, you can say that there is one species for every 100 years of the hedge's life. Max Hooper discovered this simple rule after the study of hundreds of old hedges in Britain. It is best to count the species in several 30m stretches if possible, and average the results. Look for large stumps in the hedge to prove that it is old rather than recently planted with lots of species.

30 metres

Talk about:

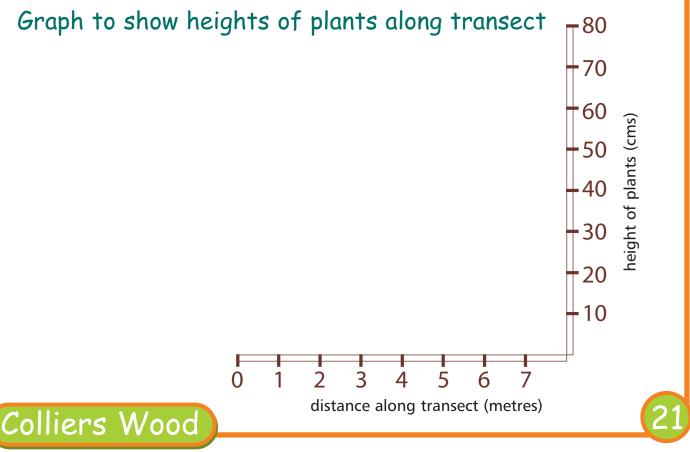
- The many hedgerows that have been destroyed during this century. Why do you think this has happened?
- How good is the hedge as a habitat for wildlife
- How could it be improved to encourage greater biodiversity?

Collie<u>rs Wooc</u>

Transect recording sheet

Line Transect

Distance	Plant you have found there	Height of plant



New Country

New Country is a series of activities designed to encourage people to use all their senses and to look at the world in different ways. You can pick and choose which activities you do in each section. This activity is suitable for all ages

Setting up base camp

Setting the scene and introducing the activities

You will need: A pleasant spot to set up base, something to sit on if it is damp, a whistle

How to do it:

1. Tell the group:

- They are explorers.
- Imagine you have arrived in a new country that has never been explored before.
- Your sponsors back home have asked you to give a detailed report of the new country.
- The report has to include information collected using some very special and delicate scientific equipment.
- The special and delicate scientific equipment includes:
 - Eyes: These are sensitive to light and record information about shape and colour.
 - Ears: These are sensitive to sounds and record information about volume and pitch.
 - Noses: These are sensitive to chemicals in the air.
 - **Tongues:** These are sensitive to chemicals in solids and liquids, but we will not use our sense of taste today!
 - **Skin:** This is a large and quite bulky piece of equipment that is sensitive to touch and temperature.
 - **Brains:** These are by far the most important pieces of equipment as they are used to understand and store the information collected using the other pieces of equipment.
- The spot you are in is the "Base Camp" and you should report back to the "Base Camp" after all activities and whenever you hear the whistle. You are now going to go on a tour of the country you are later going to explore in detail.

2. Take them on a tour of the boundary of the area they are to work in.

Talk about:

- Safety issues see Safety in Groups Guidelines
- We will be doing some quick checks on the "equipment" before we start

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Cocktail Souvenirs

Making smells

Each person will need: A plastic cup, a stick and some water. It is best to do this activity after lunch and make sure the groups can clean their hands immediately afterwards.

How to do it:

1. Tell the group that smells can often bring back memories of a place.

- Get them to think about how their home smells when they get back from holiday, their school on the first day of term etc.
- They are going to make a "smelly cocktail" as a souvenir of today.

2. Cocktail cups

- Give each person a plastic cup with a little water in. They are to create a smelly cocktail by collecting small amounts of anything that smells interesting and crushing it in the water using a stick.
- They can collect leaves and things off the ground.
- Some things may need 'scrunching' to let the scent escape bark or leaves for example.
- But no berries, mushrooms, prickly plants and no dog mess!!!

3. Sharing the smell

- Think of a name for your cocktail how does it make you feel.
- Sit in a circle and share the smell with the other members of the group.
- Do this as a carousel all pots moving clockwise on a click take a fresh breath between pots!
- Or let the adult helpers do the smell testing moving round the inside of the circle and asking names and checking smells.
- Think of adjectives to describe each perfume you smell. Use these words to write a poem.

4. Before going home empty the pots and give the cocktail to a growing plant!

Talk about

- Different smells that make up the countryside smell not just one big smell
- How the cocktails are good plant food and will breakdown to become fertiliser just as it actually happens

Follow up idea

Colliers Wood

• Make posters for your smelly cocktails with a name and description as if you were selling it.



Prickly Tickly

Using touch to explore the natural world Each pair will need: A blindfold

How to do it:

1. Search for Opposites

- Tell one of the pair they are to search for natural objects that are a pair of opposites eg: prickly and tickly, hard and soft etc. Agree the opposites secretly.
- The other half of the pair is blindfolded and sits or stands in a circle with hands cupped behind. The first child searches around for objects that match the pair of opposites.

2. Return to the circle

• When the first child has found their objects they should place the items separately in their partners cupped hands. The partner has to guess what the secret words are by feeling the things in their hands.

3. Swap Roles

• The pair should then swap over with two new secret words.

Remember to return all your natural objects to the woodland before you leave.

Follow up ideas

- Do the activity back at school, or in another location. Can you find the same or different opposites?
- Use the found objects to make an "opposites" collage.



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Stained Glass Windows

Investigating pattern, colour and texture and the structure of leaves. You will need: Card window shapes of various sizes with holes for windows

How to do it:

1. Searching for materials

- Find yourself a special leaf, preferably large, flat and from the ground.
- Place your leaf on the window and stand in a circle.

2. Hold your window up to the light

- Take note of the position of the sun. (Never look into the sun; stand with the sun behind you).
- Examine your leaf carefully looking at the colours, patterns of veins, holes, etc.

3. Looking through the window

 Once everyone has looked at his or her own leaf pass it to the person on your right to view.

One of Kind

Investigating the unique qualities of each leaf

1. Find a leaf

- Everyone finds a leaf and spends a minute studying it carefully looking for the features that make it unique and recognisable, colours, patterns of veins, holes etc.
- One person should spread all the leaves out in the middle of the circle while everyone turns their backs.

2. Is your leaf unique?

• Everyone turns round again to face the centre of the circle and takes turns to find his or her own leaf again.

3. Swap roles

• Do the same thing again but swap your leaf with a partner before placing the leaf in the circle. Try to find your partner's leaf.

Making Friends

Using the senses of touch and smell

You will need: A flat area with trees Each pair will need: A blindfold

How to do it:

1. Meet the inhabitants

• Tell the group that they are going to meet some of the inhabitants of a new country.

2. Divide the group into pairs

- One person is the Explorer and is blindfolded. The other is the Guide.
- The role of the Guide is to safely direct the blindfolded Explorer to a tree telling them where and when to be careful with their steps (holding one elbow is a good way).
- Explorers should lift their feet quite high and step down firmly
- Tell the Guide to gently turn the Explorer round a few times. Then, after making sure that they are not dizzy, lead them to a nearby tree.

3. Exploring the tree

- Use hands and noses to explore the base of the tree, the trunk and up as far as they can reach
- When they feel that they know the tree, the Guide should spin the explorer round, in the same way as before, and lead them back to the place where they started.

4. Finding the tree

- The blindfold should then be removed and the Explorer should try to see if they can find the tree again.
- When they do, they should give the tree a hug.

5. The Explorer and Guide should swap roles

- How did they recognise their tree?
- Was it easy or difficult?





The Colour Palette

Exploring the wonderful world of colour

You will need: a bag to collect things in, a clipboard, pencil, crayons and paper.

How to do it:

1. Nature is full of colour.

- See how many different coloured objects that you can find in 10 minutes.
- If the colour cannot be collected it could be marked using crayons.

2. Exhibit your colours

• Make an exhibition of your objects putting them in the same order as the colours of the rainbow:

red, orange, yellow, green, blue, indigo and violet.

3. Write a rhyme

- Make up a rhyme to help you to remember the order of the colours of the rainbow.
- Try writing out part of your rhyme under your rainbow using natural objects.

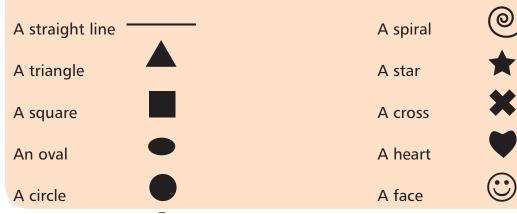
Outlines

Exploring shape

You will need: your eyes and the outlines check list.

How to do it:

1. See if you can find natural objects with the following shapes:



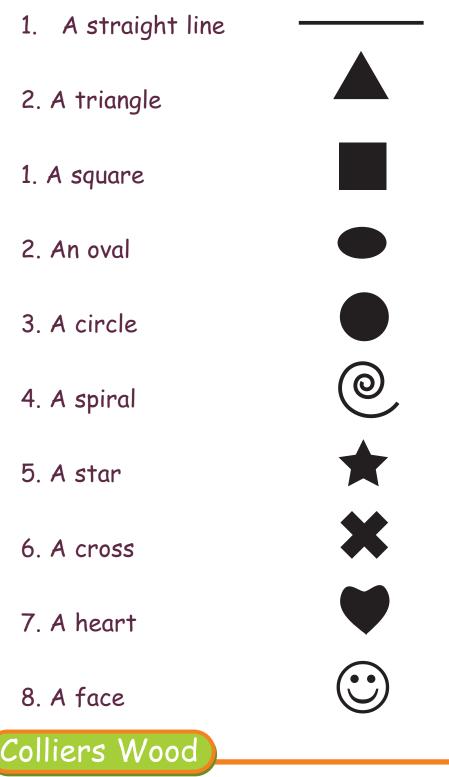
2. Exhibit your finds

 Frame your exhibition using, for example, stones or weaving together bits of twig and wood.

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Outlines check list

See if you can find the following shapes. The shapes may be found anywhere, for example as parts of trees, stones and flowers. Either collect the object and exhibit it in your room at Nature's Gallery or make a note of where you found it and show a friend.



28

Colour Check

Each person will need: Colour card index, sticky cards.

How to do it:

1. Ask everyone to look around them and tell you what colours they can see

- Which colour can they see most of? (usually green and brown).
- Get them to think about if there is just one green or many different shades.

2. Collecting shades of green

- Give them a sticky card.
- Collect as many shades of green on their colour card index.
- Pick small amounts from plants or from the ground.
- Stay away from plants with berries or that can prickle.

3. How many shades have they collected?

- Put the sticky cards on the ground and compare all the colours.
- You may want to use the colour card index to swatch check colours!

4. Cover the cards with the tape to keep them safe

5. Repeat this with shades of brown, bright colours or light colours

- There are lots of different shades of green.
- How artists have used colour to paint the natural world. Look for many shades of one colour in a painting.
- Why plants are green they have a special agent helping them called "Chlorophyll" that takes out energy from light to make plant food and also reflects back the colour green!





Magic Cameras

Sharing great pictures

To view the natural world as a whole can be overwhelming, and it is difficult to see the small details that make each area unique. The idea of this activity is that children focus their attention on one small part of their surroundings and scrutinise it closely. You will need: A whistle.

How to do it:

1. Explore the Country

- Tell the group that they have ten minutes to explore the 'country' on their own and find 3 beautiful places or things to show a friend.
- They must return to base camp when the whistle is blown.
- Divide the group into pairs.
- One person is the Photographer and the other the Camera.

2. The Photographer

• Stands behind the Camera and places their hands on the Camera's shoulders.

3. The Camera

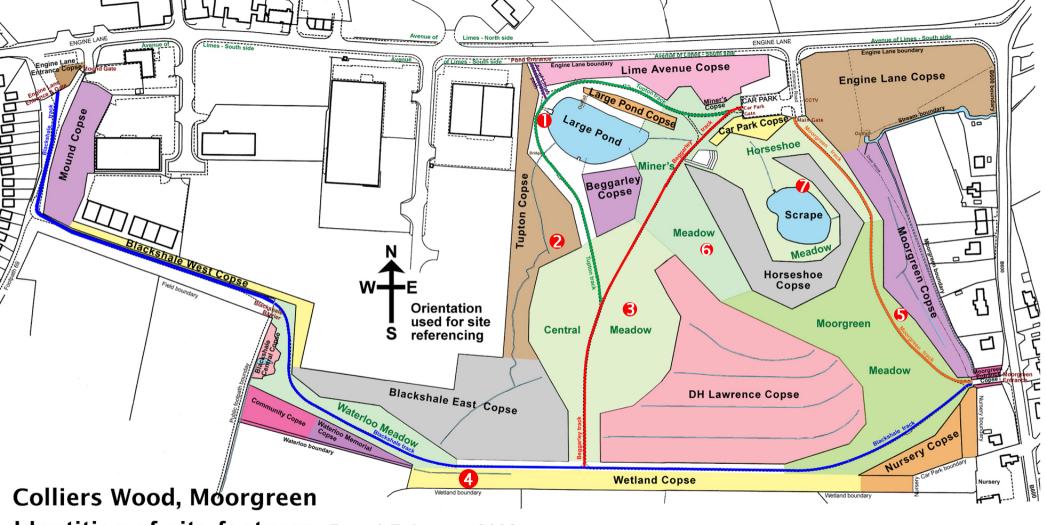
- Shuts their eyes (shutters) and the Photographer guides the Camera to something interesting.
- To take a photograph the Photographer taps the Camera once on the shoulder (eyes open) and then, ten seconds later, taps twice (eyes closed).
- Alternatively they can cover the Camera's eyes with their hands from behind and open the shutter by opening their hands briefly.

4. The Photographer

• Takes 3 photos of different places and then swaps places with the Camera.

- The "photographs" they have taken and why.
- How a camera works.





Identities of site features. Rev. 1 February 2008