

Birds' nests – Marvels of architecture and design

A Teacher Resource Pack for Key Stage 1

Anne Woodfield

(Science Co-ordinator, Moss Park Infant School, Stretford)



Contents Page

Introduction

Background information for teachers

National Curriculum

Wild birds and the law

Health and safety

Pupil activities

- Nest building activity
- Exploring materials activity
- Research activity
- Bird Watch Activity

Class resources

- Worksheets
- Vocabulary
- Glossary

Useful reference materials

Acknowledgements

Resources

PowerPoint presentations

1. Birds' nests – Marvels of architecture and design
2. Garden birds – Identification

Poster – Why do birds build nests?

Why do birds build nests?

Expanding elastic!
There can be 2,000 feathers in the nest. A Long Tailed Tit can fly 600-700 miles collecting the feathers for its nest.
The nest of a Long Tailed Tit
The Long Tailed Tit makes a delicate nest. The nest is made from moss and spider's cocoons silk. Then it is covered with lichen to camouflage it. It is filled with feathers to make it soft and warm. The nest is elastic and expands as the chicks grow inside.

Strong Sticks!
The nest of a Wood Pigeon
The Wood Pigeon uses sticks and twigs to build its nest. The sticks have been laid on top of each other.

Super Soft Moss!
Birds are brilliant builders!
To lay their eggs in and keep them safe
To incubate their eggs
To raise their chicks
For protection from predators
For protection from weather

Association for the Study of Animal Behaviour
The poster was created by Anna Woodfield, Science Coordinator, New Park Infant School, Sleaford.
A 3-D model was provided to Prof. Alan Hurdell, University of Glasgow for study allowing comments to photograph nests in the National Top Invertebrate Collection at the Natural History Museum of the University of Glasgow.
Photography by Anna Woodfield.

The nest of a Scottish Crossbill
The nest of a Scottish Crossbill is made from twigs and moss. It is lined with soft materials such as animal fur and feathers.

Marvellous mud!
The nest of a House Martin
The House Martin uses mud to build its nest. The nest is lined with grass.

Fantastic at fixing!
The nest of the Reed Warbler
The Reed Warbler lives in reed beds. The bird uses the reeds to support its nest.

Building by bending!
The nest of a Whitethroat
The nest of the Whitethroat is made from stalks of grass. The stalks have been bent to make the nest.

Lots of layers!
The nest of a Song Thrush
The Song Thrush uses twigs, moss and grass to make its nest. It lines its nest with a layer of mud.

Birds use all sorts of materials to build their nests.
The materials they use have different properties.
Birds and their amazing nests!

Birds' nests – Marvels of architecture and design

This resource pack, PowerPoint and poster was developed to meet the needs for illustrative materials to help teach two aspects of the Key Stage 1 Science curriculum, properties of materials and adaptation/life processes. The amazing skills demonstrated by birds building their nests seemed the perfect vehicle to achieve this. Hopefully colleagues will find it useful and the materials will stimulate their pupils.



House martins

Aims

- To provide information for teachers about birds and the nests they build.
- To provide activities that will develop children's scientific skills, knowledge and understanding.
- To provide activities that will develop an understanding of the natural world and the animals that live in it.
- To promote the use of school grounds as a teaching and learning resource.
- To encourage children to develop an understanding and respect for the natural world.



Information for teachers

Why do birds build nests?

Children may have the common misconception that birds live in nests. Birds usually only build nests for holding their eggs and rearing chicks.

Birds build nests;

- To lay their eggs in and keep them safe
- To incubate their eggs
- To raise their chicks
- To protect their eggs and chicks from predators
- To protect their eggs and chicks from adverse weather conditions.

For most birds, when a male and female form a breeding pair nest building activities will follow. A nest site is first selected and nest building begins. This can involve both birds as a pair or either sex alone. Different species of birds build different nests. Some nests are very simple constructions, whilst others are more complex.

Interesting Facts

Some birds do not build nests!

Emperor Penguins do not build nests. The male Emperor Penguin incubates a single egg on its warm feet, while the female is away feeding. They do this for 60 days. In this two month period they do not eat. They have a brood patch, which protects the egg from the most severe weather. They do not let the egg touch the freezing ground.

Cuckoos lay their eggs in the nests of other birds. Common hosts include the Dunnock, Meadow Pipit and Reed Warbler, although the nests of other birds have also been used. The female Cuckoo lays her egg in another bird's nest then leaves. The egg of the Cuckoo is usually a similar colour to that of the host species. When the baby Cuckoo hatches, it pushes the other eggs and chicks out of the nest. The host adult birds feed the young Cuckoo as if it was their own chick.

Where do birds build nests?

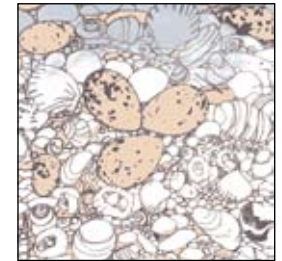
Children have usually seen birds' nests in trees. They might not be aware of other places where birds build their nests.

Nests are built;

- in hedges, bushes and trees
- directly on the ground
- in holes in trees
- in reeds by rivers and lakes
- in tunnels in riverbanks and cliffs
- on cliff ledges
- on and in buildings; on ledges and walls and under the eaves of roofs
- in nesting boxes.

Ground

Some birds build their nests directly on the ground. Often these nests are very simple hollows that birds make in which to lay their eggs. Birds that nest on the ground are vulnerable to predators. Therefore the nests of these birds and their eggs are well-camouflaged to blend in with the habitat.



Oystercatcher nest

The Oystercatcher and Ringed Plover are shoreline birds that lay their eggs in simple scrapes on stones and shingle. The eggs of these birds are well-camouflaged to blend in with sand, pebbles and other material, like shells.

Hedges, bushes, thickets and trees

Many birds make their nests in hedges, bushes, thickets and small trees. The Chiffchaff and the Blackcap are small birds that nest in thickets of bramble. Hedges, bushes and thickets provide protection, from predators and the weather, for both the eggs and the chicks. Blackbirds and Song Thrushes build their nests in bushes or small trees.

Larger birds, such as Crows, Magpies and Wood Pigeons, make their nests in the tops of larger trees. The nests of these larger birds tend to be more visible, especially in late winter and early spring. Rooks nest in colonies (rookeries) at the tops of tall trees.

Holes in trees

Holes in living trees and dead trees are often used as nesting sites. Coal Tits, Blue Tits, and Great Tits are amongst the birds that make their nests in natural holes. Blue Tits will also use nesting boxes. Nuthatches may use mud to reduce the size of the hole. Woodpeckers excavate their own holes in trees to make their nest. Barn Owls and Tawny Owls may also use a hole in a tree for their nest.



Blue tit

Reed Beds

The Bearded Tit and Reed Warbler nest in reeds. The nest of the Reed Warbler is carefully constructed so that the reeds provide the supports for the nest. The nest is well above the water level in the lake.



Coot

The Mute Swan, Coot, Ruddy Duck and Tufted Duck also nest in the reeds at the edge of rivers and lakes. The Great Crested Grebe builds its nest amongst the vegetation in shallow water by slow flowing rivers or lakes. The nest is a large floating platform of plant material.

Tunnels

The Kingfisher nests in a chamber at the end of a tunnel that it excavates in a riverbank. Kingfishers do not line their nest chamber. Sand Martins also excavate tunnels to make their nests. They nest in colonies and make tunnels on exposed faces of riverbanks, quarries and cliffs. They line their nest holes with grass and



Puffins

feathers. Puffins also nest in tunnels that they excavate on cliff tops, although they have been known to nest in old rabbit holes.

Cliffs

Many coastal birds, such as Guillemots and Shags, nest in colonies on cliff ledges. Guillemots do not make a nest, they simply lay their eggs directly on the ledges. The eggs of the Guillemot are a conical shape to prevent them rolling off the edge of a cliff. Shags make their nests from seaweed and other vegetation found floating at sea.



Guillemots

Nests on cliffs are often visible but protection is offered by the colony and the inaccessibility of the cliff ledges themselves.

Buildings

Swallows nest inside barns and other out-buildings. House Martins and Swifts are well known for making their nests under the eaves of roofs. Barn Owls nest in barns and ruins as well as in tree holes. House Sparrows nest in wall cavities, whilst Pigeons in towns and cities nest on ledges on buildings.



House martins



Starling

Interesting facts

Re-using nests

Some birds, such as Eagles, return to their nests and re-use them. The nest of a Golden Eagle is called an eyrie. It is made of sticks and can become very large. When Eagles return to their nests to re-use them, they simply add more sticks to them.



Golden Eagle

Unusual places

Robins are well known for building their nests in unusual places. These places include watering cans, post boxes and street lights.

What materials do birds use to build their nests?

Children will know that birds build nests from twigs and grasses. Birds also use many other materials available to them in their habitat.

These materials include;

- sticks and twigs
- grasses and reeds
- leaves
- mosses and lichens
- seaweed
- mud
- feathers
- bird saliva
- fur and hair from other animals
- plant down and seed heads from grasses and reeds
- cocoon silk and silk from spiders
- man-made materials.

The materials are used:

- to construct the nest
- to hold it together
- for insulation, to quicken nest incubation
- for comfort
- to camouflage the nest.

Nests are often constructed from sticks or twigs. Larger birds tend to use larger sticks and twigs in their nest building. Larger sticks are used at the base of the nest and smaller ones at the top of the nests.

Reeds and grasses are also used in nest construction. Reeds and grass stems can be bent or woven by birds to construct their nests.

Some birds line their nests whilst others do not. Nests can be lined with a variety of materials including fine grass, moss, down from plants, sheep wool, animal hair and feathers. These materials provide warmth for the incubation of eggs and comfort for the parent and chicks.

Mud is used in nest construction. The Swallow and the House Martin use mud to make their nests. Thrushes use mud to line their nest. Blackbirds also use mud when nest building.

Birds use the silk from spider cocoons in their nest building. It can be used as a sticky base to hold material on to the nest site. The Long-tailed Tit uses spider silk ingeniously. The nest is made from lichens, moss and spider silk and is able to expand as the chicks grow inside it.

Often man-made materials are used in nest building. The Red Kite is known for adorning its nest with plastic bags and other man made materials.

Interesting facts

Keeping the pests at bay

Birds' nests have parasites in them. Herbs have been found in the nests of some birds. These contain natural pesticides and are used by birds to help keep their nests clean. Starlings line their nests with leaves that have anti-bacterial properties, these are thought to sanitise their nests.

How do birds build their nests?

Each species of bird builds its own type of nest. Birds do not have to be taught how to build nests, they already have this information. However they generally build better nests with practise. Different birds build their nests in different ways.

Some birds simply use their feet to make a hollow in the ground in which they lay their eggs. Other birds make more complex nests. They use their beaks or feet to carry materials to a nest-building site. They then use their beaks, claws and bodies to build their nests. Some birds are clever weavers and are able to use their beaks to weave materials into their nests. Birds can shape their nests by turning around in them or by using their feet and beaks.

Interesting fact

Clever Construction

Tailor Birds, which live in South East Asia, stitch leaves together to make a nest. They have sharp bills, which they use to pierce holes along the edges of leaves. They thread plant fibre through these holes to stitch the leaves together.

Weaver birds make elaborate woven nests. Their nests vary from species to species. They weave grass and fibres from leaves into complex nests. Weaver birds breed in colonies and build their nests next to each other. The African Sparrow Weaver bird build huge nests in which over 100 pairs of birds can nest. The nests have separate entrances.



Kittiwakes

Different types of nests

Children are usually most familiar with the cup shaped nest but there are other types of nest that children may not be aware of.

Scrapes

A scrape is a very simple type of nest. It is simply a slight hollow scraped in the ground by a bird using its feet or its abdomen. Sometimes the hollow is lined with grass to provide a cushion between the ground and the eggs. Birds that make scrapes include Oystercatcher, Ringed Plover, Lapwing, Curlew, Common Tern, Snowy Owl, Red Grouse, and Black Grouse.



Herring Gull

Platform nests

These are flat nests constructed from twigs. They are often visible in the winter months in the tops of trees. They are made of twigs that have been piled on top of each other. When the twigs are piled upon each other they lock together. This can be demonstrated to the children using twigs picked up on a woodland floor, edge of a sports field, etc. (It is important to ensure children wash their hands after handling materials).

Large birds such as Rooks, Crows and Magpies make these types of nests in trees, as do Eagles, which build them on cliff edges or in trees. Grey Herons build these types of nests in trees. Herons nest in



Heron

colonies called heronries.

Cup nests

These are the type of nests the children are most familiar with. They are shaped like a cup and are made from twigs and grass stems. Other materials such as mud, moss, lichen, feathers and the hair or fur from other animals are also used. They are often sited in the fork of branches in a tree or bush. Many birds make a cup nest, including Blackbirds and Thrushes.



Blackbird

Woven nests

Some birds are very skilful at weaving nests. They use grass or reeds to weave complex nests. The Reed Warbler is a bird that weaves its nest and attaches it to reed stems.



Reed Warbler

Links to the National Curriculum

Teachers can use the activities in the resource pack (pages 12 –17) to deliver elements of the National Curriculum. The activities relate to the National Curriculum Programme of Study for Science Key Stage 1. Links can be made to the National Primary Strategy and other National Curriculum subjects.

Wild birds and the Law

Children should be taught that they should not disturb birds or their nests in the wild. They should watch birds quietly from a distance. Children should also be taught not to touch or take birds' nests and their eggs.

Under the Wildlife and Countryside Act (1981) it is illegal to deliberately take, damage or destroy the nest of any wild bird while it is in use or being built. It is also illegal to take or destroy the egg of any wild bird.

Health and Safety

The handling of birds' nests, eggs and feathers.

Occasionally birds' nests that are no longer in use are brought into school. It should be stressed to children that birds' nests should not be removed whilst they are being built or in use. Any bird's nest found in the wild should be sealed in a plastic bag or container before being observed. Care is needed as nests often contain fleas!

Children also may bring feathers or eggs that they have found in the wild into school. These also should be sealed in a plastic bag or container before being observed. Children must wash their hands carefully after handling these materials.

For information on safety in science see the publication - Be Safe! Health and safety in primary school science and technology, The Association for Science Education, listed in the references on page 30.

Pupil activities

Nest Building Activity

This is a good starting point for work on birds and their nest building. This practical activity engages children and provides a stimulus for further work.

Introducing the Nest Building Activity

Questions for Discussion

- Why do birds make nests?
- Where do birds build nests?
- What materials do birds use to build their nests?
- How do birds build nests?

Task

1. Challenge the children to make a nest out of shredded paper, a few strips of paper (no more than 6 strips per group, preferably 3 or 4) and adhesive tape. The nest should be able to hold 4 to 6 eggs (use mini-eggs). Often a parent bird will be sitting on the eggs too. Use a tennis ball (ca. 60g) as a 'parent' bird to ensure the nest will hold the parent too! The nest is to be built in a 'tree', created by using an up-turned chair on a table. Two or three children in a group works well.

Resources

- Strips of newspaper
- Shredded paper
- Adhesive tape
- String or nylon wool
- Classroom chair
- Chocolate mini-eggs
- Tennis ball
- Cotton wool pad
- Scissors.

Activity

2. Create 'trees' for children to build nests on. Place upturned chairs on tables. Tie string between three of the chair legs to form a triangle to build the nest on. (Allow 2 to 4 children to work together to make the nest).



3. Using the strips of paper, shredded paper and adhesive tape, start to build the nest on the string triangle.

4. Test the nests to see if the nest will support 4 to 6 mini-eggs on a cotton pad.



5. Use a tennis ball (ca. 60g) as a 'parent' bird to ensure the nest will hold the parent too!

6. Observe the different nests made and discuss their construction.

Curriculum Links

Science 1 Scientific enquiry

Ideas and evidence in science 1

Investigative skills 2 a, b, c, d

Obtaining and presenting evidence 2 e, f, g,

Considering evidence and evaluating 2 h, i, j

Science 3 Materials and their properties

Grouping materials 1 a, c, d

Changing materials 2 a

* Health and Safety

Remind children to take care when working with scissors. Children to take special care when using upturned chairs on tables.

Develop this work further by researching the questions for discussion. Use the Power Point presentation 1. Birds' nests – Marvels of architecture and design. Use books and the Internet. This work would make links to other areas of the curriculum, such as ICT and literacy.

Acknowledgements

Many thanks to Prof. Mike Hansell (University of Glasgow) who initially devised the nest building activity.

An article in 5-7 Educator gives details of the above activity and other work linked to this topic.

Birds and Nests by Anne Woodfield and Dr Michael Dockery

5 to 7 Educator, [Vol. 4, Issue. 3](#), 01 Dec 2004,

(A Word version is available from Michael Dockery)

Exploring Materials Activity

This activity allows children to explore the properties of materials used in nest building.

Introducing the Exploring Materials Activity

Questions for discussion

- What materials do birds use to build their nests?
- Why do they choose these materials?
- Why is grass often used in nest building?
- Why are twigs and sticks often used in nest building?
- What properties do mud and clay have when they are wet?
- What properties do mud and clay have when they are dry?

Task

Challenge the children to explore the properties of some selected materials. Children can construct a table to record their results or use the recording sheets provided.

Resources

- A collection of materials that include: - grass stalks, sticks, twigs, moss, leaves, wet clay, feathers (use sterilised feathers from an arts and craft shop)

Allow enough materials for the children to work in groups of 4-6.

- Magnifiers
- Worksheets 1 and 2

Activities

1. Explore the materials
2. Record results. Use either worksheets 1 or 2
3. Discuss findings.

Extension

Relate the properties of the materials to their use.
Record this by using worksheet 3.

Curriculum Links

Science 1 Scientific enquiry

Ideas and evidence in science 1

Investigative skills 2 a, b, c, d

Obtaining and presenting evidence 2 e, f, g,

Considering evidence and evaluating 2 h, i, j

Science 3 Materials and their properties

Grouping materials 1 a, c, d

Changing materials 2 a

* Health and safety

Children must wash their hands carefully after handling the materials.

Demonstrate why birds use grass as a nest lining

Put a few sticks (say 8-10) on a chair. Invite a child to come and sit on them. Is it comfortable? Then add some grass to the top of the sticks. Is it more comfortable now?

Develop this work further by introducing more materials. Investigate materials for different properties, e.g. strength, flexibility, absorbency and insulation.



Shag - adult and chicks at the nest

Research activity

Familiarise the children with common British birds by researching different species of birds and their different habitats.

Questions for Discussion

- What could we use to help us to identify birds?

Use books, posters, charts, PowerPoint and the Internet. Show children photographs or drawings of different species of birds.

- What size is the bird?
- What colour is the bird?
- Does the bird have any special markings?
- What does the bird's beak look like?
- What do the bird's claws look like?
- Where does the bird live?
- What does the bird eat?

Task

Challenge children to label the different parts of a bird. Challenge children to use books and the Internet to research birds and to be able to make comparisons between them.

Resources

- Books
- Posters
- Field Studies Council Identification sheets
- CD Power Point presentation 2 Garden Birds - Identification
- Worksheets 4 and 5
- Internet for research <http://www.rspb.org.uk/>

Activities

1. Label the body parts of a bird, using worksheet 4.
2. Compare different birds using reference materials, using worksheet 5.

Curriculum Links

Science 1 Scientific enquiry

Ideas and evidence in science 1

Investigative skills 2 a, b,

Obtaining and presenting evidence 2 g,

Considering evidence and evaluating 2 h,

Science 2 Life processes and living things

2 a, b, f,

5 a

Further work could be undertaken on how different birds are adapted to their habitats.

Bird Watch Activity

A School bird watch will lead to lots of work that will engage the children. A few preparations will need to be made before the activity can be done.

Establishing a bird feeding site

Questions for Discussion

- How can we encourage birds to come into the school grounds?
- What can we do to help look after birds?
- What do birds eat?
- What do birds drink?
- What could we feed to the birds?

To observe birds successfully a feeding area needs to be established. This should be done several weeks before you plan to have the bird watch. Children will enjoy being involved in establishing the feeding site.

The feeding area should be fairly quiet so birds are not disturbed. It should have some shrubs or trees so birds have protection and feel safe when they feed and have safe areas to retreat to if danger threatens, a cat for example.

For bird feeding you can simply put food on the ground, use a bird table or a bird feeder. Feed the birds with a variety of food; try breadcrumbs, sunflower seeds in their shells, peanuts and bruised apples. You could also try ready mixed bird food. Also provide a birdbath for the birds to drink from and bathe in, but change the water regularly.

Task

Challenge children to design a bird friendly area in the school grounds. Challenge children to make a poster to show how to care for wild birds in the local environment.

Resources

- PowerPoint presentation 2 - Garden Birds - Identification
- Paper, pencils and crayons
- Worksheet 6

Activities

1. To design a bird friendly area in the school grounds: record in drawings and words.
2. To make a poster advising on how to help look after wild birds. Use worksheet 6.

* *Health and Safety*

Some children may be allergic to nuts so be aware that nuts may be in mixed bird food.

Curriculum Links

Science 2 Life processes and living things

2 b, e,

Further activities include making bird cake and designing and making a bird feeder. These activities make links with DT. Some very useful advice is available on the Royal Society for the Protection of Birds web site. (<http://www.rspb.org.uk/>)

Once a bird friendly area is established the children can start observing the birds and their behaviour.

Questions for Discussion

- What can we use to help us identify the birds we see?
- Where will the birds be?
- What different things might the birds be doing?
- What different things will we look for to help us identify a bird?

Task

To take part in a bird watch and to identify birds. Record the results in a tally and use the information to make a graph.

Resources

It would be useful to have:

- an established bird feeding area
- posters/charts/books to help with identification of birds
- tally sheet - worksheet 7
- clipboards/pencils
- binoculars/field glasses if available.

Activities

1. Observe birds that visit the bird feeding area in a specified time.
2. Make a tally of the different species of birds seen over the given time use worksheet 7.
3. Use the information to make a graph.
4. Observe the different behaviour of birds in the bird feeding area; feeding, flying, hopping, preening, etc.
5. Participate in the annual bird count of species seen in school grounds, which is organised each January by the RSPB. (The data collected is forwarded to the RSBP website to help them see the national picture.)

Health and Safety

* Children should only use binoculars with adult supervision. Children should be taught how to use them properly and never use them to look directly at the sun.

Follow-on activities could include writing a report about the bird watch. Use ICT to send results of annual bird watch to RSPB. Make sketches and paintings of birds. Make detailed observational drawings of bird feathers. (Use sterilised feathers, which can be purchased at arts and craft stores.)

Curriculum Links

Science 1 Scientific enquiry

Investigative skills 2 a, b,

Obtaining and presenting evidence 2 f, g,

Considering evidence and evaluating 2 h,

Science 2 Life processes and living things

1 b, c

2 a, b, f, g

5 a



Exploring the properties of materials

Explore some of the materials that birds use to make nests.
Draw the materials. Describe the properties of the materials.

Leaf

Stick

Twig

Moss

Feather

Grass stalk

Exploring the properties of nest building materials

Explore the materials that birds use to make nests.

Record your results in the table below.

Properties	Nest building materials						
	Sticks	Twigs	Grass stalks	Leaves	Moss	Wet clay	Feathers
Hard							
Soft							
Flexible							
Rigid							
Smooth							
Rough							
Sticky							



Materials and their uses

Choose three materials that birds use when nest building. Draw and label the materials.

moss twigs sticks leaves feathers mud grass stalks

Explain why birds use these materials in their nest building.

Birds use

because

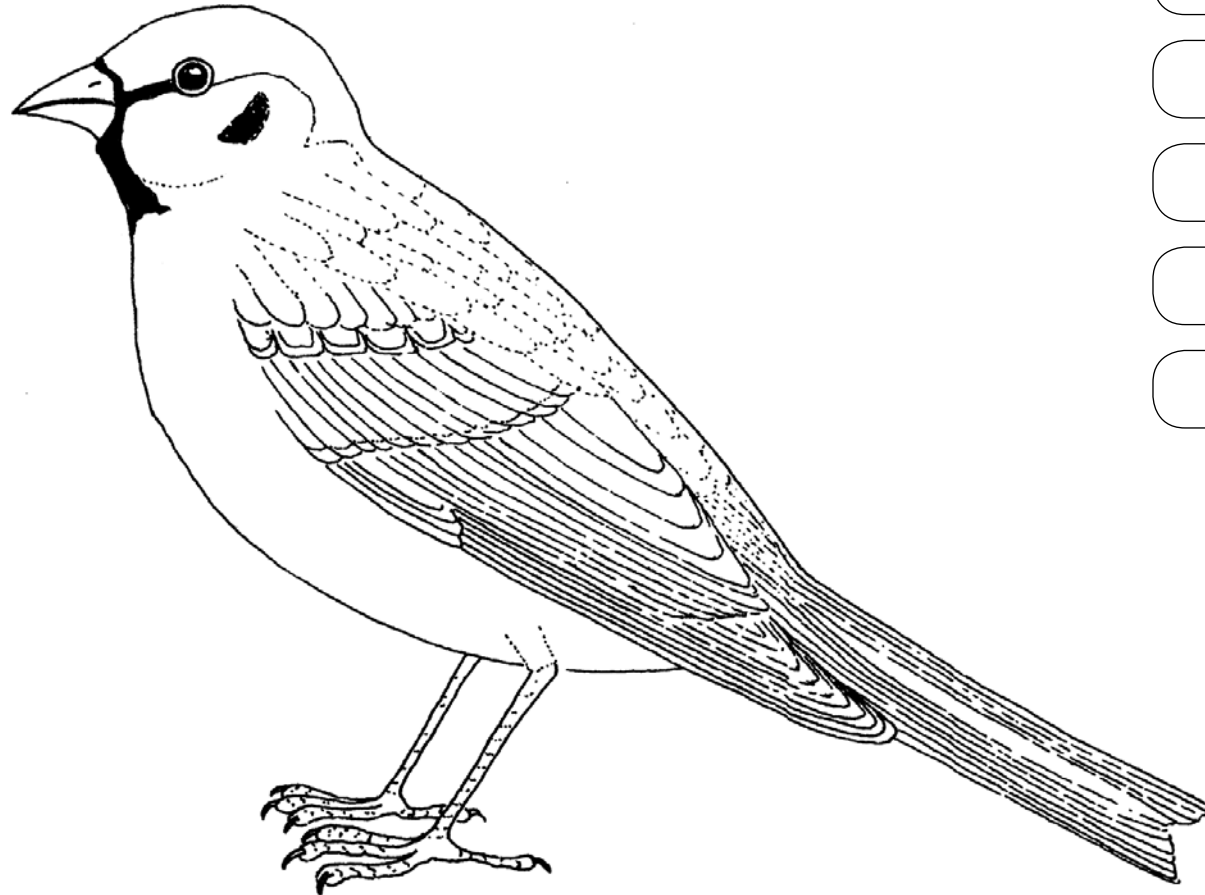
Birds use

because

Birds use

because

Naming the body parts of a bird



foot

wing

head

eye

beak

tail

chest

leg

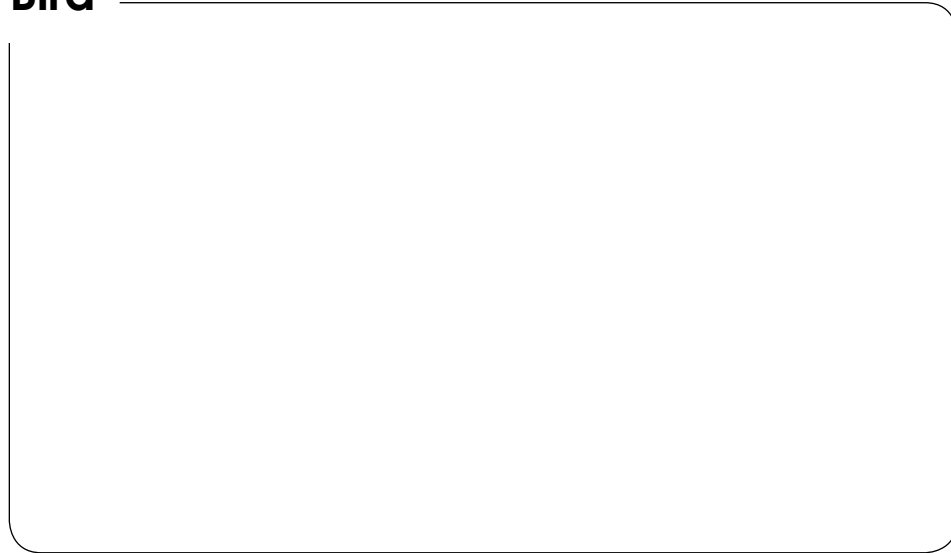
back

claw

Comparing different species of bird

Research two different species of birds. Draw the birds and fill in the facts.

Bird _____



Bird _____



Habitat _____



Food _____



Habitat _____



Food _____



Nest _____



Number of eggs _____



Nest _____



Number of eggs _____



How to help look after wild birds in the garden

Bird watch recording sheet

<i>Bird</i>	<i>Tally</i>	<i>Total</i>
Sparrow		
Blackbird		
Blue tit		
Wood pigeon		
Starling		
Magpie		
Robin		

Making links with literacy

A vocabulary list and a glossary are included in the pack. The vocabulary could be enlarged and displayed in the classroom at the start of the project. Some of the words are challenging but children will come across them when learning about birds.

The glossary gives definitions for words linked to the project. The glossary could be displayed. For a challenge, children could be asked to write their own glossaries.

Vocabulary

bird
tree
nest
branch
egg
build
lay
materials
clutch
twigs
incubate
sticks

hatch
moss
egg tooth
grass
fledged
mud
feather
camouflage
feed
insulate
beak
protect

Glossary

Brood	The number of birds that are hatched at the same time.
Brood Patch	This is a bare patch of skin on a bird's belly. It lets heat from the bird warm its eggs as the bird sits on them.
Camouflage	The colours or patterns that let an animal blend in with its surroundings, so that predators are less likely to notice it.
Clutch	The number of eggs laid in a nest.
Egg	Female birds lay eggs. The eggs provides the chick embryo with the food it needs until it hatches.
Egg tooth	This is a hard tip on the beak of an unhatched bird. It is used to break out of the egg.
Fledged	A young bird has fledged when it has got its feathers and left the nest.
Habitat	This is the place where an animal lives, for example, woodland.
Hatch	When a bird breaks out of its egg in which it has developed.
Incubate	This is when a bird sits on its eggs to keep them warm until they hatch.
Nest	This is a structure built by birds in which to lay their eggs and rear the young.
Nesting Box	This is a box set up for birds to nest in.

Useful reference materials

Collins Bird Guide: The most complete guide to the birds of Britain and Europe

Lars Svensson, Peter J. Grant, Killan Mullarney and Dan Zetterstrom
Collins: New Ed. Edition (2 April 2001)
ISBN-10: 0007113323
ISBN-13: 978-0007113323

RSPB Handbook of British Birds

Peter Holden and Tim Cleaves
Christopher Helm: Second Edition (13 Aug 2006)
ISBN-10: 0713675608
ISBN-13: 978-0713675603

RSPB My First Book of Garden Birds

Mike Unwin and Sarah Whittley
A & C Black (Childrens books) (25 April 2006)
ISBN-10: 0713676787
ISBN-13: 978-0713676785

Be Safe!

Health and safety in primary school science and technology
The Association for Science Education, Third edition, 2001
ISBN 0 86357 324 X

Birds and Nests

Anne Woodfield , Dr Michael Dockery
5 to 7 Educator, [Vol. 4, Issue. 3](#), 01 Dec 2004,
A word version is available from Dr Michael Dockery

Parental behaviour of Blue Tits

Michael Dockery and Tor Yip
A resource for Key Stage 2 but might be useful for Year 2 pupils. It is available to download from the education pages on the ASAB website

'Top 50' garden birds - Identification Guide

Edward Jackson, Andy Simms and Peter Hayman (1999)
Field Studies Council, Publications
E-mail: publications@field-studies-council.org
www.field-studies-council.org

Useful Web sites

The Association for the Study of Animal Behaviour
<http://asab.nottingham.ac.uk/>

Royal Society for the Protection of Birds
<http://www.rspb.org.uk/>

The British Trust for Ornithology
<http://www.bto.org/>

BBC Science and nature
<http://www.bbc.co.uk/nature/animals/birds/>

British Garden Birds
<http://www.garden-birds.co.uk/home.shtml>

Field Studies Council
<http://www.field-studies-council.org>

Acknowledgements

I would like to express my thanks to ASAB for funding the project.

Thanks also due to:

Dr Michael Dockery, (ASAB Education Officer). I am extremely grateful for all of his advice and support at all stages of the project.

Prof. Mike Hansell, (University of Glasgow) who initially devised the nest building activity. I am extremely grateful for his advice and help when photographing the nests in the National Nest Reference Collection at the Hunterian Museum, University of Glasgow.

Judy Evans for the drawing of the Oystercatcher nest.

Linda Gray for the outline of the bird.

Robin Reid for the photograph of the Golden Eagle nest.

Philip Mugridge for permission to use the photograph of the House Martins in their nest.

Mick Hoult kindly provided the other bird photographs.

Frances Farnorth, Head Teacher at Moss Park Infant School, Stretford, Manchester for allowing me the time to embark on the project.

Jenny Acheson, (Deputy Head Teacher) who helped trial material with the children at Moss Park Infant School, Stretford, Manchester.

Mick Hoult for his help and expertise in designing the resource pack.

Melvin Howard for poster design.



Puffin