Activity 1: Why do birds behave the way they do?

Curriculum Focus – English and Science

Key curriculum Links

English-

- En2 Reading
    - Reading for information 2A, B

Science-

- Sc2 Life processes and living things
    - Life processes 1B
    - Humans and other animals 2G

Read the following passage and answer the questions listed.

Why do birds behave the way they do?

The behaviour of a bird might be difficult for us to understand or interpret, but other birds of the same species will recognise every movement and sound as meaning something specific. By studying bird behaviours we can gain an insight into their lives, the study of birds is called ornithology.

Birds communicate with one another by singing, moving and displaying bright feathers. Communication amongst birds is vital, in the same way that it is for humans. They need to be able to warn one another of danger, they have to be able to spot potential predators and they need to be able to attract a mate.

The two main reasons for a bird's song are to warn others of danger and to attract a mate. So what we might interpret as a happy bird song may in actual fact be a harsh warning call for danger.

The shape and colour of bird's feathers also help them to communicate normally during courtship. For example male peacocks have very long brightly coloured tail feathers that they can lift up behind them to attract a mate, the more patterned the feathers the more attractive they will be to the females.

Finally the way a bird moves can mean a number of things to its companions. Many birds perform special dances to attract a mate or to defend its territory. The best performer is often the winner.

Next time you watch birds in your garden or your school grounds try to guess what their calls and movements might mean.

Questions

1. Why is it important for birds to communicate with one another?
2. List two reasons why birds sing.
3. Apart from singing what else do birds use to communicate?
4. What is the study of birds called?
5. Why are feathers attractive to other birds?

Activity 2: Descriptive Writing

Curriculum Focus – English and Science

Key Curriculum Links

English-

- En2 Reading
    - Reading for information 2A, B, C
    - Non fiction and non literary text 7B
- En3 Writing
    - Composition 1A, C, F

Science-

- Sc2 Life processes and living things
    - Living things in their environment 5A, B
    - Humans and other animals 2G
    - Life processes 1B, C

Mystery Kenning

Now you know why birds perform strange dances and sing different songs try to write a poem or a Kenning describing the actions of one of your favourite garden birds. It might help to watch the birds in your garden before writing your poem.

A kenning is a poetic way of describing something that tells you what it is, but does not tell you the name for the thing you are describing. The following kenning is about a common garden bird. See if you can guess what it might be, then try and write your own Kenning. You may need to do some research about your chosen bird to find out more information that you could include in your kenning about.

MYSTERY KENNING

A hedge rustler
A glossy berry eater
A worm eater
A melody singer
A jet black flyer
Who am I?

Activity 2A: Words from the birds

Curriculum focus - English and science

Key curriculum links
English-

- En2 Reading
  - Reading or information 2B, C
  - Literature 3F
  - Non fiction and non literary 7A, B
- En3 Writing
  - Composition 1A, B, C, F

Science-

- Sc2 Life processes and living things
  - Life processes 1B, C
  - Living things in their environment 5A
  - Humans and other animals 2B, E, F, G

This is an opportunity for pupils to use factual information to practise imaginative writing. Ask them to write the diary of a hedgerow bird, weaving facts about the bird into an imaginative setting.

The children will need to use books to do some research about blackbirds or other hedgerow dwellers. Alternatively, see below for information about blackbirds and other hedgerow birds.

Hedgerow birds

Blackbird
Food: insects and worms in the summer, berries in the winter.
Finding a mate: the male sings a loud, fluting song to attract a female, usually between March and June.
The nest: grass, straw, and moss, plastered with mud, lined with fine grass. It will usually be found a little way up in hedges and small trees.
Eggs: usually 3 - 5, bluey-green, with brown speckles.

Fledglings: brown and speckled (easy to confuse with a song thrush)
Other facts: the hedge provides food, shelter and a nesting site. If it has trees along it, male blackbirds use them as song posts from which to sing to attract a mate.
Blackbirds enjoy sunbathing and will sometimes lie on the ground with their wings out to catch the sunshine.

Yellowhammer
Finding a mate: the male has a lemon-yellow head and sings to attract a mate into his territory.
The nest: usually quite bulky, made of grass or straw, and low down in a bush, or possibly a clump of grass.
Eggs 3- 5 pale eggs, with patterns like scribbling on them. Some people call yellowhammers 'scribbling larks' for this reason. Yellowhammers protect their territories with great energy.
Food: yellowhammers almost always feed on the ground. In winter they may form flocks, often with other small birds..
Song: this is the bird you will hear on hot summer days when all other birds have stopped singing. Its song sounds like 'little bit of bread and no cheese'.

Song Thrush
The nest: grasses, straw and moss, lined with mud. In a hedge, bush or tree, among ivy and occasionally on a bank or building.
Eggs: 4-5 blue, spotted with black.
Food: mainly found on the ground. Insects, worms, snails, fruit and berries. It will break open snail shells against a stone or concrete. Few other birds do this., although blackbirds will wait for thrushes to get the snail out of the shell, then steal the food.
Other facts: song thrushes tend to sit on high song posts. You can recognise their song because it is loud and melodious and has lots of repeated little tunes.

Words from the birds!

Diary of a Blackbird

Today I was disturbed by such an appalling commotion! I had been watching some fat wood pigeons thundering about in a sycamore in a ridiculously hysterical fashion when a loud thrashing behind me made me shoot up into the air.
A huge metal monster was advancing on me, actually chewing the hedgerow! Well, I did not believe it. The hedgehogs from the stump at the end were grumbling about 'hedge cutters', and giving the little ones such dire warnings about 'old uncle Cyril' and what happened when hedge cutters moved in – I don't know what to expect. Everything seems quiet now; so I think I'll consult the wren in the old tree fork. She seems to know everything.

Activity
Write other entries for the diary. Do some research about the topics below so that you can write another entry. Look in books your teacher provides, as well as encyclopaedia, CD ROMs and the Internet. Don't forget you can carry on with your research at home!

Other areas you could research about your chosen hedgerow bird:

Finding a mate
Making a nest
Laying eggs
Hatching and fledging of young birds
Food
Any other unusual facts about birds.

Activity 3: Why migrate?

Curriculum Focus – English, science and geography

Key Curriculum Links
English-

- En2 Reading
    - Reading for information 2A, C

Science-

- Sc2 Life processes and living things
    - Life processes 1B
    - Humans and other animals 2B

Geography-

- Geographical enquiry and skills 2C
- Breadth of study 6B

Migration is the movement from one country to another. Some birds migrate every year; this is a very important aspect of bird behaviour because if they did not migrate they would not be able to survive. They move to find new and more abundant sources of food and a more desirable climate.

Our Long-Distance Visitors

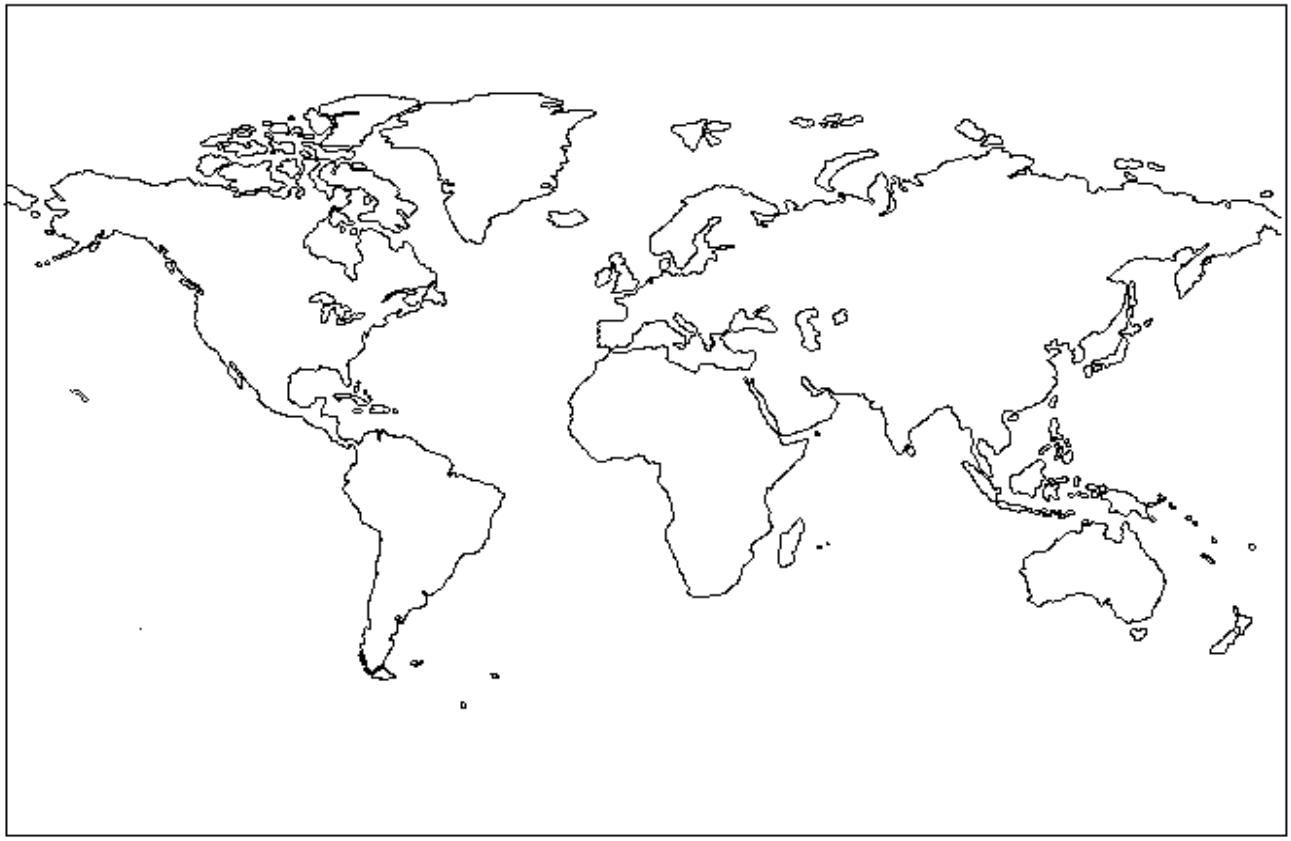
Not all birds that live in our hedgerows stay in the United Kingdom all year round:

- In autumn, whitethroats and willow warblers leave the UK and migrate to tropical West Africa. Blackcaps fly to North and Central Africa (south of the Sahara desert). These three birds are summer visitors to the UK. They leave our shores once autumn sets in.

- In winter, some birds migrate to the UK from elsewhere. Redwings migrate from northern Scandinavia, Siberia and Iceland, fieldfares from central Russia and bramblings from Scandinavia and Siberia. These birds are winter visitors.

Mark the locations mentioned above on the map given. You may need an atlas. Add major continents and oceans.
In red, mark the routes you think the UK summer visitors might take on migration. Do the same for the UK winter visitors, in blue. Think about the following before you mark on the routes.

1. Do you think birds are likely to take the longest or shortest routes across the sea?
2. Why do you think UK summer visitors leave in the autumn?
3. Why do we get certain bird species visiting the UK in our winters?



Activity 4: Display and courtship

Curriculum Focus – Art and design and geography

Key Curriculum Links
Art and Design-

- Exploring and developing ideas 1A, B
- Investigating and making art 2A, B, C
- Knowledge and understanding 4A, B
- Breadth of study 5A, B, C, D

Geography-

- Geographical enquiry and skills 1C, 2D
- Knowledge and understanding of places 3B, C, E
- Breadth of study 6B

Many birds have bright feathers, wattles and crests that they use to attract a mate or to deter predators. These ornamental features are also attractive to humans who like to incorporate such features in the design of clothes, ceremonial headdresses and decorative displays. The feathers of very colourful birds such as parrots are difficult to find just lying on the forest floor so when the need is great the birds are often killed just for their feathers. When this need exceeds the number of birds it can have dramatic effects on the population.

Many tribes in the Amazon Rainforest use feathers to decorate ceremonial headdresses. Research one of these tribes and discuss the effect that they have on the birds and other animals they exploit. Think of some alternative materials that tribes men and women could use to reduce the damage being done to the local wildlife.

Try and make your own ceremonial headwear using a variety of materials.

Activity 5: Changes in behaviour due to habitat destruction.

Curriculum Focus – Science and Geography

Key Curriculum Skills-

Science-

- Sc2 Life processes and living things
    - Life processes 1B, C
    - Living things in their environment 5B, C

Geography-

- Knowledge and understanding of places 3C
- Geographical enquiry and skills 1A, C, D 2A, C
- Environmental enquiry and sustainable development 5A, B

All animals rely upon certain natural and man made resources to survive, if these resources begin to disappear so will the animals that depend upon them, this also leads to a change in bird behaviour. For example Barn Owls choose to nest and live in barns, but with changes in agricultural practices where by barns are converted into housing or destroyed to create more free land the owls have limited nesting sites available to them. Unfortunately as they attempt to adapt to these changes their numbers decline as a consequence.

Below you will find a picture of a farm in the 1950's alongside it is another picture of the same farm except it is now 2003. Compare the two pictures to find out what has changed over time and answer Questions 1 – 4.

1950

2003

1. List the changes that have occurred on the farm between 1950 and 2003?

2. Do you think the same animals would be living around the farm today as those that would have lived there in 1950?

3. Why do you think the farm had to make the changes that you have listed?

4. How would these changes have affected the wildlife in the area?

Extension: Research a threatened British bird population in more depth, find out why their numbers have declined and if their behaviour has changed as a consequence.

Activity 6: Sensitive senses

Curriculum Focus – Science and Drama

Key Curriculum Links
Science-

- Sc2 Life processes and living things
    - Life processes 1B
    - Humans and other animals 2A, G

English-

- En1 Speaking and listening
    - Drama 4C

Birds that are awake during the night are described as being nocturnal, their daily activities are carried out in darkness instead of during the daylight hours.

So, how do they locate their food, nesting sites and other essential items used for survival? The answer, via highly developed senses.

Activity: Owl and Mouse
Aims:
To learn more about owl's biology, especially their highly adapted hearing through an interactive game.

Materials:

- A blindfold
- An open area to play in

Background information:
Owls have highly developed hearing. Owl's ears are placed asymmetrically on their heads, one slightly higher than the other. This increases their ability to distinguish sounds, which direction they are coming from and the distance they are from the owl. This is particularly helpful for nocturnal owls such as the barn owl, which is said to have better hearing than any other animal and can even hear a human heartbeat!

Method:

1. Ask the students to stand in a circle. The students represent the forest so they should plant their feet like trees in the ground and not move or make a sound.
2. Choose on student to be the owl. This student is blindfolded and must stand in the middle of the circle.
3. Choose one or two students to be mice. They are not blindfolded but are also in the middle of the circle.
4. Explain that the goal is for the owl to catch a mouse using only sound. The owl says "owl". Every time the owl says this, the mouse must respond with "mouse". The owl must find the mouse by listening to where its voice is coming from.
5. Once the owl catches the mouse, pick a new owl and mouse and play the game again. Ensure to tell the children that this is strictly a walking game!
   (The 'trees' are there as a buffer to keep the owl contained and from bumping into anything that could cause injury)

Discussion:

- Ask the students if they think they would survive if they had to catch real mice for food in the dark. Do they think that the owl is better adapted for this food source?

Activity 7: Economical feeding

Curriculum Focus – Maths, Geography and Science

Key Curriculum Skills
Maths-

- Breadth of study 1A, G

Science-

- Sc2 Life processes and living things
  - Life processes 1B, C
  - Humans and other animals 2B

Putting yourself in the position of a bird trying to feed economically is a useful means of understanding how and why it behaves the way it does. The small robin the diagram has to make an important decision, he has to decide which tree to go and feed at, tree number 1,2 or 3.

Using this information below pretend that you are the Robin and decide which tree you would visit for food, REMEMBER THAT YOUR PRIMARY CONCERN IS TO GAIN AS MUCH NUTRITION AS POSSIBLE FOR AS LITTLE EFFORT. Explain why you have chosen your tree.

- He knows that he needs to eat as much as possible but at the same time needs to conserve as much energy as he can. Although flying helps him to reach any tree he likes it uses large amounts of energy, between 10 – 15 times more energy than walking to the tree would use.

- The flesh of fruit is not as nutritious as insects or seeds but its advantage is that most fruits are easier to gather. In winter a bird can save a lot of energy if it can find a fruit tree then eat as much as possible and then perch nearby until it next needs to feed.

- Having to eat lots of small berries is also time consuming and can take up a lot of a birds energy, it is far more economic to eat from one large apple.

- Some birds will try and defend their very own fruit tree preventing any other birds from feeding. The effort defending it is well worth it as the bird will always have a constant supply of food. However the effort it would take an outsider to take over the tree would not be worth it especially when there are other fruit trees close by.

Activity 8: How do birds use the school surroundings?

Curriculum focus - Science and geography

Key curriculum links
Science-

- Sc2 Life processes and living things
  - Life processes 1B, C
  - Humans and other animals 2B, F, G
  - Living things in their environments 5A, B, C

Geography-

- Geographical enquiry and skills 1A, B, C, 2B, E
- Knowledge and understanding of patterns and processes 4A
- Knowledge and understanding of environmental change 5B

The following activity is a simple locality study, based on the school grounds. Some practical work is involved.

Learning objectives
Children can learn to respond to simple questions about where things are in the environment, and to make observations about features.

Background to the activity
In this activity, children will define the different zones and areas that make up the school site and record them on a colour-coded plan. They will then make observations about the ways in which two areas are used by people and birds. This activity will give students the oppurtunity to link human behaviour with bird behaviour, how our behaviour might efect that of the birds and also any similarities in overall behaviours.

Record all sensible activities undertaken by people, however small in scale. In a playground there may be activities such as playing games, running, jumping and so on, but also eating snacks, sitting, talking, being

quiet, feeling afraid. Ideas which are suggested should be evaluated by the children and recorded.

Bird activities may include feeding, bathing, drinking, preening, singing, sheltering from the weather, being with other birds (flocking), being aggressive and loafing (doing nothing). Birds spend the majority of their time loafing, which you need to remember when doing the survey.

The outcomes offer many possibilities for comparing those sites which are most important for human activities and those most important for birds.

- Are there any areas of common interest?
- Are there any conflicts?
- Are the birds making the most of what there is, or are they actively encouraged?

The exterior of the school buildings may be seen as an area of the site if children can cope with this idea.
In encouraging discussion, teachers should have in mind the needs and activities of birds on the site. Birds need to feed and they might do this on the ground, on plants and in trees, or in the air. They need water for drinking and bathing. They may collect this in a variety of locations. Birds also take dust baths. Shelter is essential for roosting, for refuge from cats and aerial predators, for protection from weather and for nesting.

Basic Activity
Materials needed
A schoolplan
Colours
Copies of simple recording sheets.

Introduction
Show the children a clear and simple school site plan. If possible, use a

large master plan to identify areas and add drawings of any significant features. Give the children their own copy.

Activity

Walk the site to reinforce understanding of the areas of the plan and colour each area.

Give out the recording sheet, either to a group leader or to each child. Choose two of the school areas for entering on the sheet and write down their names. On large school sites, groups might choose different areas.

In groups or as a whole class, discuss and record the uses of each area by people and birds.

Write the activities in the correct columns and boxes on the sheet. Show children how to total the numbers of activities in each box and how to complete the final two columns.

Summary

What did the children see the birds doing on the school site?

What were they most commonly doing?

How do they use the site in ways that are similar to and different from human beings?

How do birds use the school surroundings?

Name:

1. Find to places around the school used by children and birds. Write the names of the places in the boxes.
2. Visit each place and write down all the things children do there and all the things the birds do.

Places in your school.	How do people use this place?	How do birds use this place?	Tick who uses this place most		Tick if suitable for birds.
			Birds:	People:	
	Total number of uses:	Total number of uses:			

	Total number of uses:	Total number of uses:	Birds:	People:	

1. What activity do birds do most?
2. What do birds do least?
3. Which activities do both people and birds do?