Mallard

Art: 1a, 5a
Aims: To understand that male and female birds can look different because of adaptation.

Visit a local pond with your class. You should see a variety of waterfowl such as coot, moorhen, canada goose, swan and if you are really lucky you may see a heron or a kingfisher. Start by observing all the birds present - in the water around the banks and maybe on nearby land too.

The male mallard is called a drake. He has a very colourful head. The colours of his head are green, light green, yellow and purple. The drake needs to be bright and colourful to make himself more attractive so that he can find a mate. The female mallard is brown and light brown. She has a light blue stripe on her wing. She doesn't need bright colours - just camouflage for when she is sitting on her eggs so that predators cannot see her. The drake moults in the summer and from July to September he is almost identical to the female.

The male and female mallards have different quacks. Listen closely and see if the class can hear these differences. The male whistles and grunts during courtship.

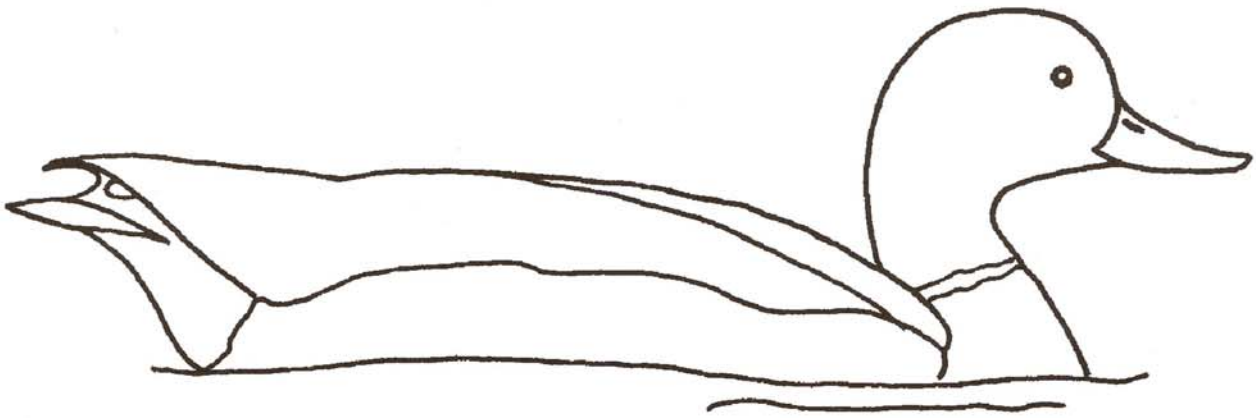
The mallard is the most common dabbling duck in Great Britain. Discuss what you think dabbling means and look for any signs of this behaviour. The bird dabbles at the surface of the water using its beak to filter out vegetation from the water. Some mallards may be upending so they can reach food in deeper water. Look for birds exhibiting this behaviour with their tails in the air.

Contrary to popular belief white bread isn't good for ducks. Their natural food consists of seeds, buds and stems of water plants, aquatic insects and their larvae and even frogs. Can the children see any of the duck's food in the water? Back at class produce a poster display of the mallard's food with the mallard in the centre and it's food all around.

Many of the birds you observe will have different shaped beaks. This is because the birds have adapted to the habitats they live in and the foods they eat. Look for insect eaters with thin beaks, seed eaters with strong fat beaks for cracking hard shells, dabbling ducks with flat beaks or even meat eaters with strong hooked beaks. If you have no luck seeing these birds in the wild then use a reference book to compare beaks and also colours, feet, camouflage, shapes and sizes.

Mallard

Using the correct colours, colour in the male and female mallards below.



Water Feet

Science: Life processes and living things 1a, 5b, c.
Aims: To look closely at adaptation of water birds.

You are likely to see two different kinds of feet at your pond. These are shown on the children's worksheet. One is webbed, which you will see on mallards and other ducks such as tufted duck, teal and widgeon. Swans and geese also have webbed feet. The other type of foot you may see is semi-webbed. Species with semi-webbed feet are coot, great crested grebe and little grebe. You may also see a moorhen whose feet have no webbing but have long toes, spread out for walking over soft ground and aquatic vegetation.

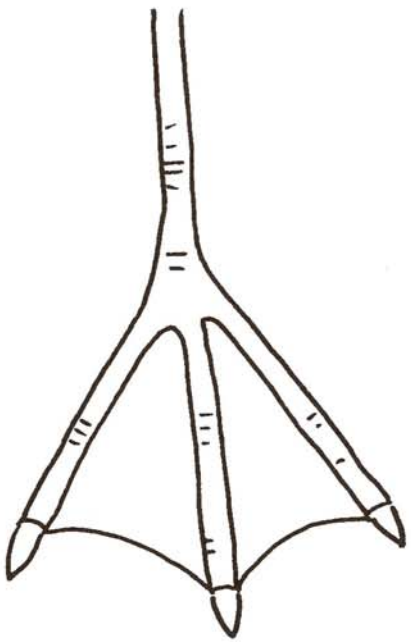
The moorhen and coot look very similar. They are both round black birds with green legs and feet. However the moorhen has red on its forehead and bill (with a yellow tip). The moorhen has white undertail coverts and the tail is constantly flicked up when the bird is swimming. The coot has a white forehead and bill.

Webs between the toes increase the area of a foot which enables the foot to move more water when paddling and therefore swim stronger.

A bird's legs are more efficient as paddles if they are placed towards the rear of the body. But this makes the legs less efficient on land as they are too far from the birds centre of gravity - this is why ducks and geese waddle on land.

Water Feet

Can you see a bird with feet like this?



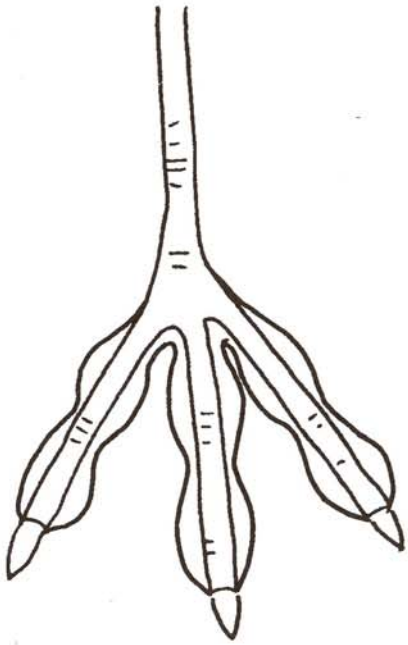
1. What kind of bird is it?

2. What is the bird doing?

3. For what is it using it's feet?

4. Why does it have feet like this?

Can you see a bird with feet like this?



1. What kind of bird is it?

2. What is the bird doing?

3. For what is it using it's feet?

4. Why does it have feet like this?

Blackbird

Science: Life processes and living things 1a, 5a
Aims: An understanding of the difficulties of wild animals finding food and that seasonal variations cause fluctuations in the availability of food.

In Great Britain there are very many blackbirds. The male blackbird is jet black with a bright yellow beak. Females and juveniles are brown with a brown beak.

Blackbirds eat lots of different types of food.

Did you have to go far to find all the food?

Try doing this scavenger hunt for blackbird food in two or three different habitats. Can the children find all the food a blackbird needs for one day in just one habitat? Can one habitat provide all the bird's food?

Do you think it is difficult for a blackbird to find all its food in one day?

The blackbird spends most of the daylight hours looking for food.

In which season will it be hardest for the blackbird to find ? WINTER
Why?

Long cold winters will cause a decline in blackbird numbers. The ground may be covered with snow or hard with frost, insects hibernate out of reach and fruit has rotted away or been eaten up. Most birds will lay eggs in early spring so that when they hatch out there is a plentiful food supply - caterpillars, worms etc. As the chicks mature through summer and autumn there are lots of insects, fruit, seeds and nuts about so they can fatten up in time for the hard winter.

Interesting facts

Did you know that blackbirds listen for worms? The bird stands with its head to one side whilst listening for worms. Can you observe any blackbirds displaying this behaviour? Ask the children to put their head to the ground and listen for worms. Do they think blackbirds have stronger or weaker hearing than humans?

You may be lucky and hear a blackbird singing in the middle of the night. This is because the street lamps fool the bird into thinking it is daytime. The blackbird will spread its wings and tail on the ground in the sunshine. It is believed that this unusual behaviour keeps down the number of parasites on the feathers.

Comparisons

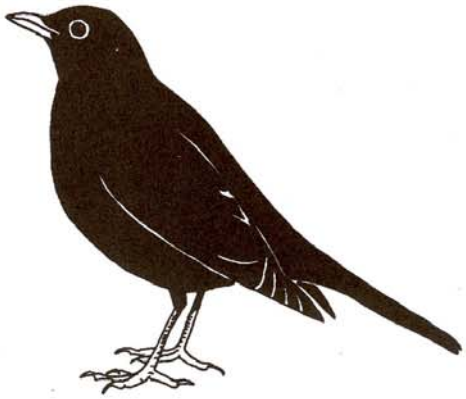
Compare the blackbird's beak, feet and diet to that of the mallard studied earlier. Make another poster display of what the blackbird eats and contrast it with that of the mallard. Make a third poster display entitled 'my food' so the children can compare their diet with that of a bird and also how much easier it is for children to find food to eat in winter. You may be able to make, or already have, bird feeders so that in winter you can attract birds close to the classroom window and continue observing feet, beaks, behaviour and adaptions.

Forestkeepers

Blackbird

A blackbird can eat all this in one day:

- snail
- berry
- two different seeds
- flying insect
- caterpillar
- fallen apple
- spider
- earthworm
- beetle
- nut
- millipede



Search around the ground to see if you can find all the food on the list.

Did you have to go far to find all the food?

Do you think it is difficult for a blackbird to find all its food in one day?

In which season will it be hardest for the blackbird to find food?

Spring Summer

Autumn Winter

Why?

Flightpaths and Movements

Science: Scientific Enquiry 1a • Life processes and living things 1a, c, 4a
Aims: To understand that there are many different features to consider when identifying wildlife. To observe wildlife and make notes of movements as well as features.

It is difficult to be completely prepared for the birds which you may see on your visit to a site as they are easily scared by a class of children. These two worksheets could be used when watching water birds, or in an urban park where birds are less disturbed by human presence.

Flight paths

The way a bird flies can help you to identify it, as flight paths are like aerial signatures.

Small birds that fly with an undulating or bobbing flight are likely to be wagtails, finches or possibly woodpeckers. Birds racing round at speed and swooping but never landing will be swallows, swifts or martins. Large birds in a V-formation which fly with strong, slow wing flaps are ducks, geese or swans. Other large birds with a flappy flight will be members of the crow family such as rooks or jackdaws. Kestrels hover alone. Birds that wheel and soar high in the sky are usually birds of prey - maybe buzzards or red kite.

In the library get the children to look up the wing size and shape of birds. Is this linked to the way they fly? Look at the shape of an aeroplanes wing - are there any similarities/differences?

Movements

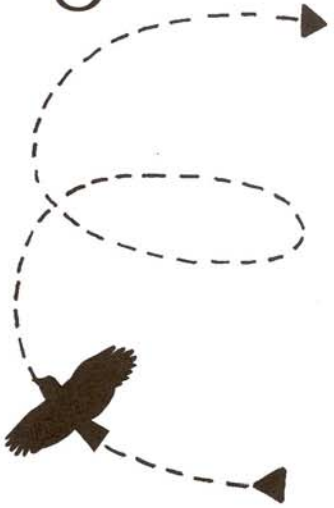
The characteristic movements of a bird can help with identification. They are often called a bird's 'jizz'.

Very few birds walk - those that do include game birds such as pheasant and partridge who spend much time walking across fields looking for food. Birds that spend a lot of time swimming will have their feet set far back on their bodies to aid paddling (like the mallard). Out of water swimming birds tend to waddle. Small birds like tits and warblers flit around the leaves in the tree canopy. Tits often hang upside down. Warblers are slender birds which seldom stay still.

Waders - these birds eat aquatic creatures and fish. They need to be able to move very slowly and gently in the water, e.g. herons which stand motionless watching for fish. Any bird that eats food from the ground needs to be able to run - often to catch fast moving prey. Blackbirds and thrushes move over a lawn in a series of hops and pounces to catch quick moving insects like spiders. Some birds (woodpeckers, nuthatches and treecreepers) have adapted to a life of climbing. Their feet tend to be large with strong claws so the bird can cling firmly to the bark.

Flight Paths

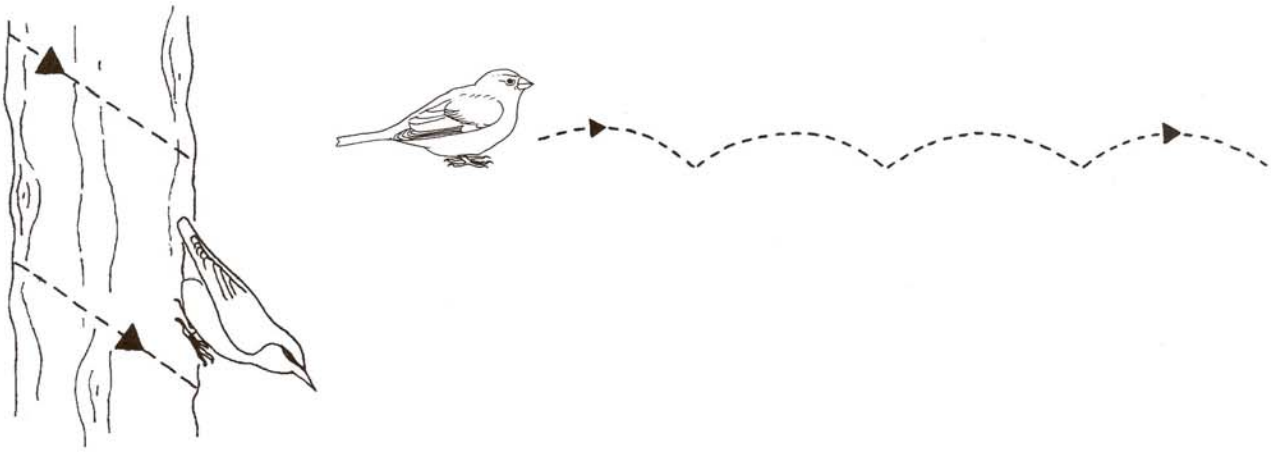
The way a bird flies can help you identify it as flight paths are like aerial signatures. Below are sketches of the flight path of a great spotted woodpecker (bobbing) and a buzzard (soaring and wheeling).



Watch for two other birds in flight and draw their flight paths in the space below. If possible identify the birds

Movements

The way some birds move is so characteristic it is often possible to identify it straight away with no other clues.
Below are sketches of the movements of a sparrow (hopping) and a nuthatch (spiralling down a tree).



Watch two birds and sketch their movements.
See if this can help you to identify them.