

Worksheet 1 WHAT BIRD IS THAT?

When we study birds, it is usually important to know what sort of bird we are looking at. Birds differ from each other in many ways, such as size, shape, colour and pattern, and also in their actions.

Find a bird and work through the questions, then see if you can tell what bird it is. It will be easier to answer the questions if you choose a bird that is quite close to you and which is staying fairly still.

SIZE

This can be difficult to judge. The easiest way is to compare your bird with other birds that you know, such as sparrows and pigeons.

- Do you think your bird is
- sparrow-sized
 - bigger than a sparrow but smaller than a pigeon
 - about pigeon-sized
 - much larger than a pigeon

SHAPE

Look at different parts of the bird – beak, neck, tail, legs and feet.

- Is its beak
- long and dagger-shaped
 - flattened, like a duck-bill
 - short and thick
 - short and fairly thin



- Is its neck
- very long
 - quite long
 - short

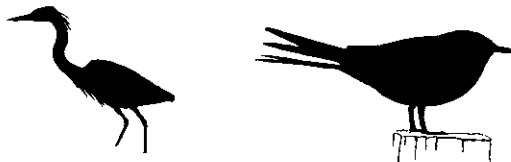


- Is its tail
- long
 - medium
 - short



Is its tail forked **yes/no**

Can you see its legs and feet? If so



- Are its legs
- long
 - short

Are its feet webbed? **yes/no**



Some birds have extra feathers sticking out of their head, to form a crest or tuft.

Does your bird have a crest? **yes/no**



Worksheet 1 WHAT BIRD IS THAT? (continued)

COLOUR AND PATTERN

The colour and pattern of the bird are very important. Most birds are mostly one colour (often black, white, grey or brown), with patches or patterns of other colours. The colours of the beak and legs are often particularly important.

What is the main colour of your bird black white grey brown

What other colours can you see?

Where are these other colours?

What colour is its beak?

What colour are its legs?

ACTIONS

What a bird is doing can give useful clues to what it is.

Is your bird on the ground in the water in the air

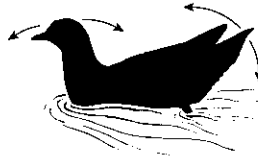
If it is in the water, is it swimming wading

Does it ever dive beneath the water? **yes/no**

Some birds do unusual things which help you recognise them.

For example, Cormorants often stand still for a long time with their wings spread out to dry.

Moorhens bob their heads and tails back and forward when they swim, like a clockwork toy.



Kestrels often hang in the air in one place, beating their wings very fast. This is called hovering.



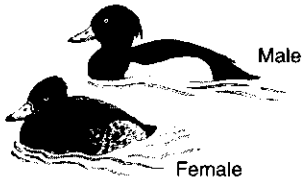
Is your bird doing any of these things?

Is it doing something else you think is unusual?

Now you have answered all the questions, see if you can use the keys provided to find out what kind of bird you have been watching. When you think you know what it is, look at the picture of that bird to see if the picture looks like your bird.

Did you know: There are more than 9,700 different kinds of birds in the world, and over 500 of them have been seen wild in Britain.

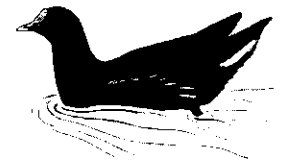
ILLUSTRATIONS FOR WORKSHEET 1



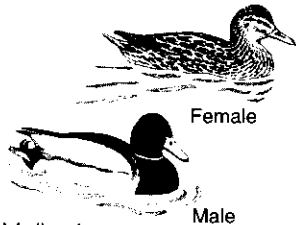
Tufted Duck



Goldfinch



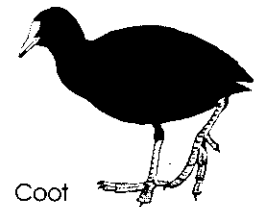
Moorhen



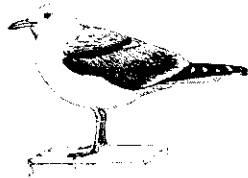
Mallard



Pied Wagtail



Coot



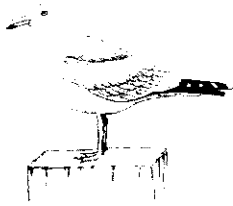
Common Gull



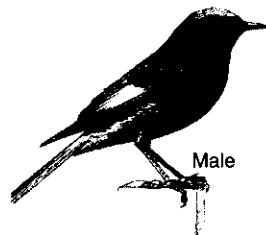
Grey Wagtail



Kestrel



Herring Gull



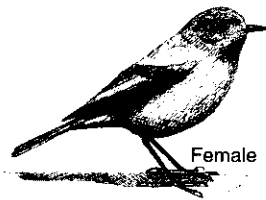
Male



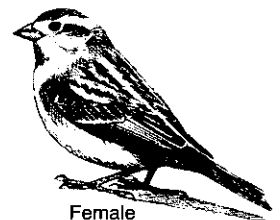
Male



Lesser Black-backed Gull



Female



Female

Black Redstart

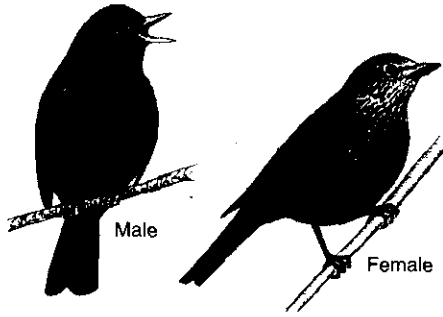
House Sparrow



Canada Goose



Carrion Crow



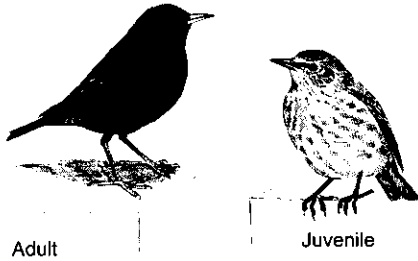
Male

Female

Blackbird



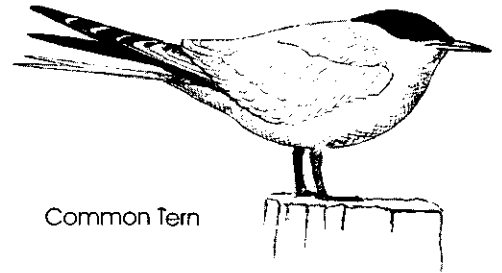
Cormorant



Adult

Juvenile

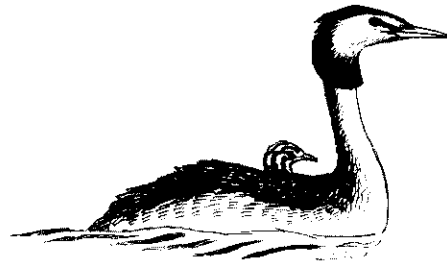
Starling



Common Tern



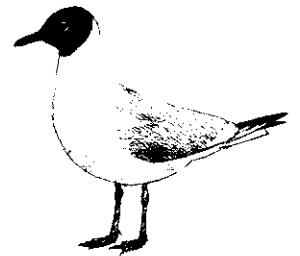
Wood Pigeon



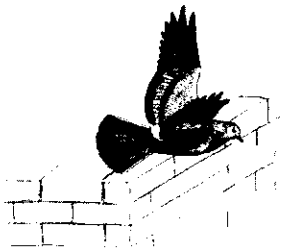
Great Crested Grebe
carrying chick (Summer)



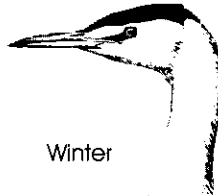
Black-headed
Gull (Winter)



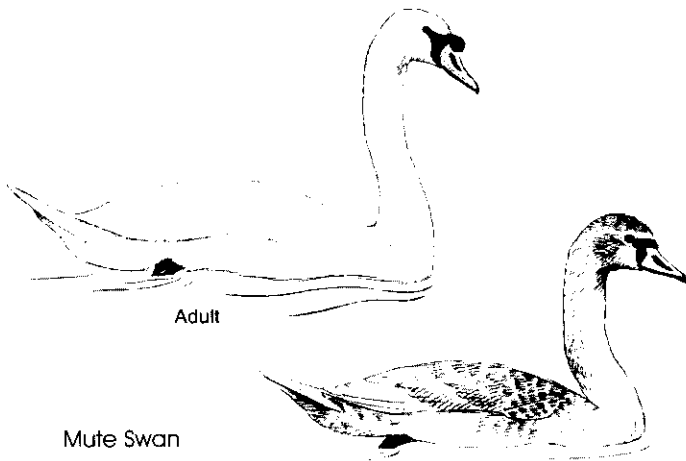
Black-headed Gull (Summer)



Feral Pigeon



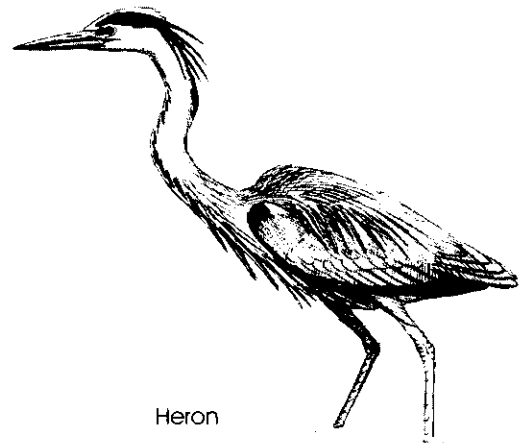
Winter



Adult

Mute Swan

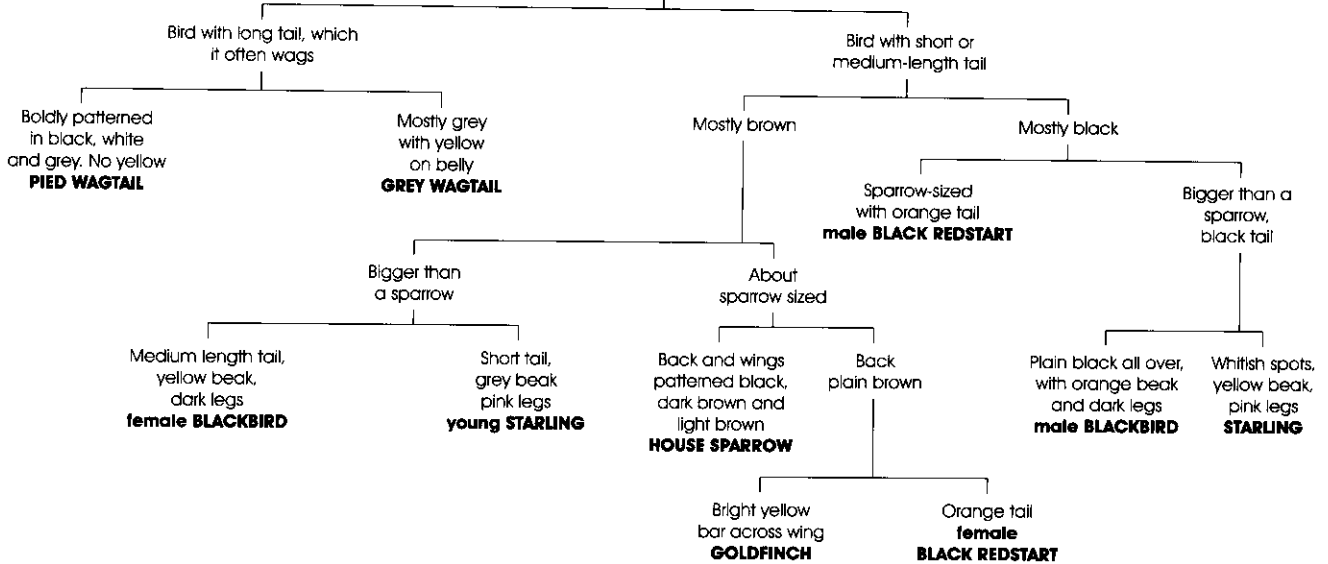
Immature



Heron

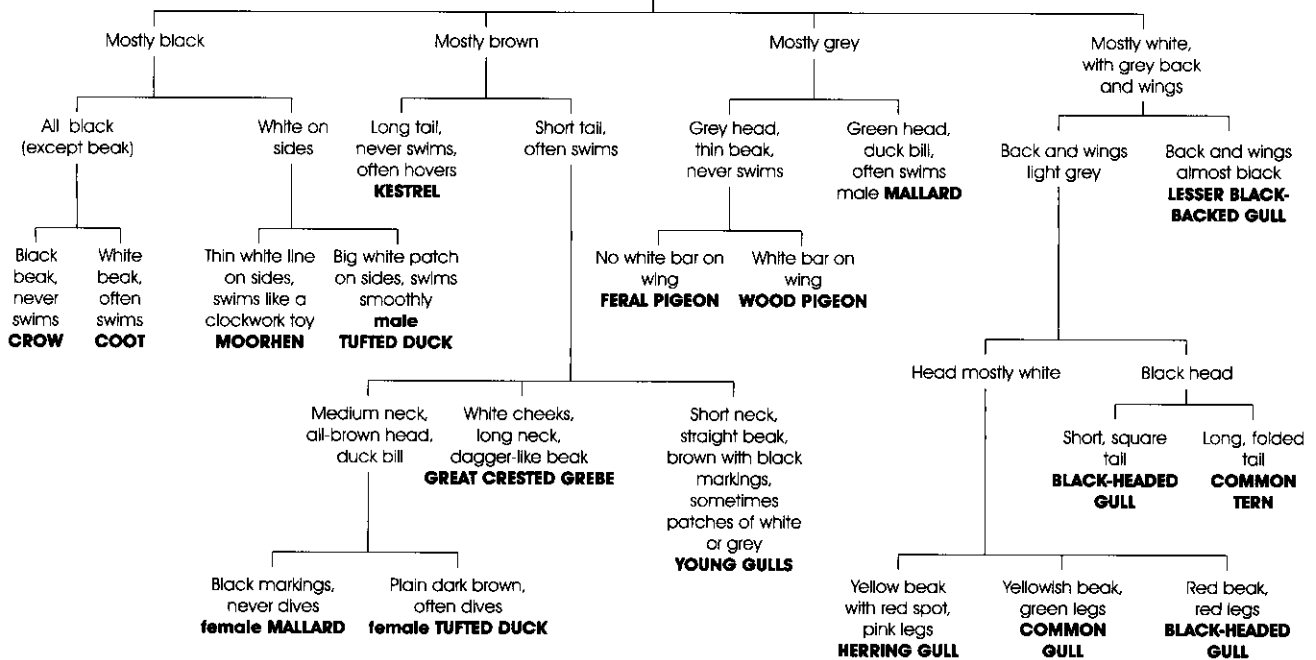
Keys for Worksheet 1

BIRDS SPARROW-SIZED OR A BIT BIGGER (but still much smaller than a pigeon)

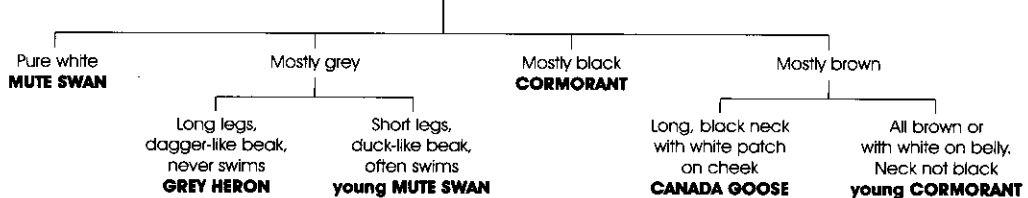


NOTE: NONE OF THESE BIRDS EVER SWIMS

BIRDS ABOUT THE SIZE OF A PIGEON, OR A BIT BIGGER



VERY BIG BIRDS (much larger than a pigeon)



Worksheet 2 A LOOK AT GULLS AND TERNS

Gulls and terns all look rather alike, but by looking closely at their heads, beaks, feet and tails, the different kinds can easily be told apart. Find a white bird with a grey back and wings, and answer the questions below (it will be easier to see what you need if you choose a gull or tern that is on the ground rather than one which is flying).

Has your gull or tern any black on its head? **yes/no**

If so, is its head all black?

or does it have a black "cap"?

or just a black spot behind its eye?

What colour is its beak?

What colour are its legs and feet?

Is its back light grey or almost black?

Is its tail long and forked?

or short and square?

NOW LOOK AT THE DRAWINGS TO SEE WHAT SORT OF GULL OR TERN IT IS

COMMON TERN

BLACK-HEADED GULL
(Summer) (Winter)

COMMON GULL

HERRING GULL

LESSER BLACK-BACKED GULL

Did you know: the Arctic Tern flies 30,000 kilometres every year between its nesting grounds in Scotland and its winter home in the Antarctic, the longest migration of any bird.

Worksheet 3 WHAT DO BIRDS LIKE?

There are more birds in some places than others.

Can you think of some reasons why this is so?

Look at the dock you are visiting.

Are there buildings all around it, **yes/no** or is there some open space? **yes/no**

Are there any trees or bushes nearby? trees bushes

Are there reeds or other plants growing at the edge of the water? **yes/no**

Are there rafts or islands in the water for birds to sit on? **yes/no**

Are there lots of people around the edges of the water? **yes/no**

Can people get to all the edges of the water? **yes/no**

Are there boats on the water? **yes/no**

Think about your answers to the questions above.

What will birds like about this dock?

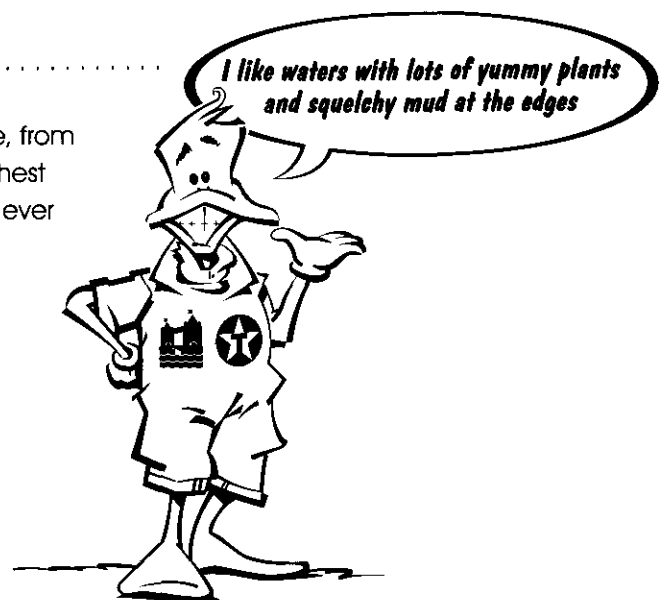
What will birds NOT like about the dock?

Try to count how many birds there are on and around the dock.

How many birds can you see?

Are they all the same type, or are there lots of different types? Guess how many types of birds you think there are on this dock.

Did you know: Birds can adapt to live just about anywhere, from the Poles to the tropics, in the driest deserts and on the highest mountains. Some birds spend many years out at sea, only ever coming to land to nest.



Worksheet 4 SEASONAL BIRDS

Some birds stay in one place all year round, while others travel long distances between their summer and winter homes. This travel is called MIGRATION.

Why do you think some birds fly south in the winter?

The table below shows counts of six birds on one of the Docks made at different times of year.

	January Winter	April Spring	June Summer	September Autumn
Mallard	15	13	14	16
Common Tern	0	10	4	18
Black-headed Gull	27	25	0	30
Coot	6	7	6	5
Common Gull	5	2	0	6
Black Redstart	2	2	6	6

Can you draw a bar graph for each bird to show how its numbers vary through the year. (Perhaps you can use your class computer.)

Look carefully at your bar graphs to answer the questions.

Do the Mallards in the London Docks migrate? **yes/no**

Do Common Terns migrate? **yes/no**

Where do you think they might spend the winter? (Have a guess, then ask your teacher.)

Do Black-headed Gulls migrate? **yes/no**

Do they nest in the Docks? **yes/no**

Where do you think they go to nest? (Have a guess, then ask your teacher.)

.....

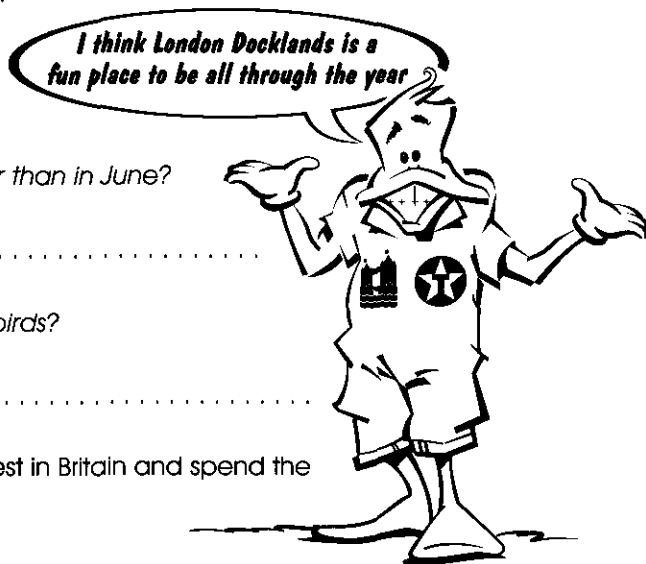
Why do you think there are 4 more Black Redstarts in September than in June?

.....

Which are the best times of year to see lots of different kinds of birds?

.....

Did you know: Swallows, which are no bigger than a sparrow, nest in Britain and spend the winter 9,000 kilometres away in South Africa.



Worksheet 5 THE STORY OF GREAT CRESTED GREBES

Great Crested Grebes are often present in the Docks in winter, and they also occasionally breed here; they will probably breed at East India Dock Basin once this has been made into a nature reserve by LDDC.

Today there are thousands of Great Crested Grebes in Britain, but they almost went extinct in the middle of last century – there were less than 100 left. They were killed just for their feathers, which were used to decorate hats! The birds were also sometimes stuffed and put on display in people's homes in glass cages – ugh! Then killing them was banned.

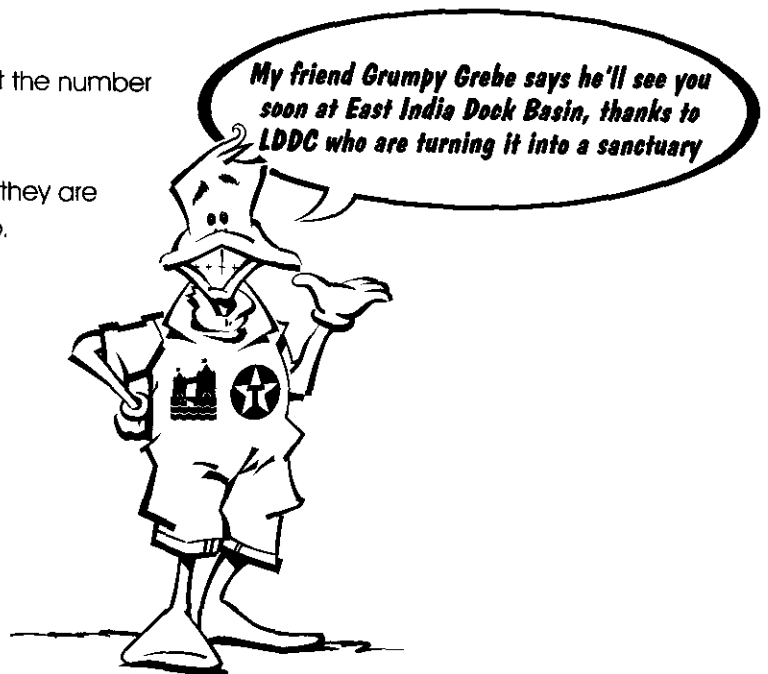
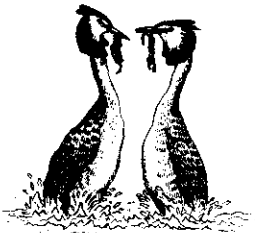
Another thing which has helped Great Crested Grebes was a big increase this century in the habitat they like. Sand and gravel is used for building houses, roads etc. and this has to be dug out of the ground, leaving enormous holes. These fill up with water to make a lake – just the thing for a Great Crested Grebe!

Here are some figures to show how the number of these birds has increased. The figures given are the numbers of pairs of Great Crested Grebes breeding within 20 miles of central London:

year	number of pairs
1890	0
1962	50
1966	63
1972	90
1981	124
1983	190
1985	210
1987	216
1991	211
1992	216

Make a bar graph of these figures, and guess what the number will be this year.

Great Crested Grebes have special displays when they are courting. Here are some examples of what they do.



Did you know: Great Crested Grebes carry their babies on their backs.

Worksheet 6 BIRD RAFTS IN THE DOCKS

Like people, birds need both food and a home – a safe place – to bring up a family.

The docks contain plenty of fish for fish-eating birds to eat, but until recently few fish-eating birds bred in London Docklands. *Can you think why?*

There are about a dozen rafts in the Docks. The diagram below shows rafts specially made for terns to nest on. Make a model of it. While you are making the model think about the following questions.

Why is there a raised edge round the sides?

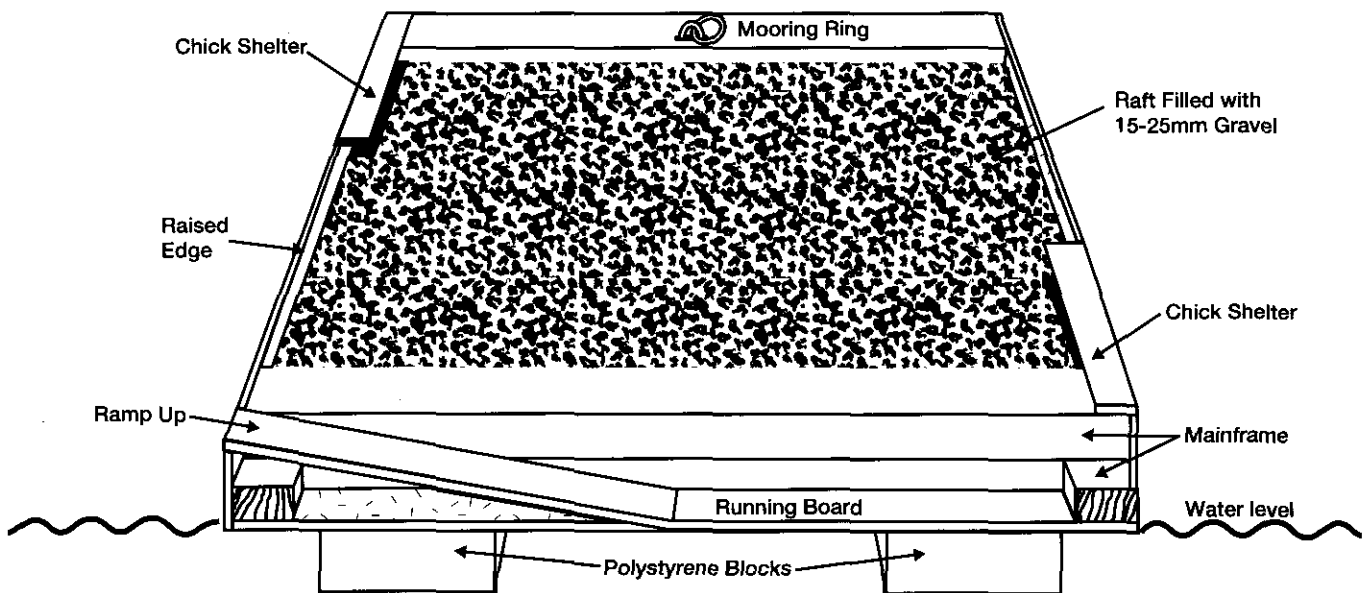
What is the ramp for?

What is the polystyrene for?

Can you guess what kind of place terns naturally choose to nest at the seaside?

What extra features would you like if you lived on the raft?

Did you know: the terns on the rafts in Docklands are the only nesting terns in central London.



Worksheet 7 ART AND COLOURS

Look at the poster. What colours can you find on the birds illustrated? Draw the parts of the bird alongside the colour:

Black

White

Grey

Brown

Green

Yellow

Orange

Blue

Pink

Red

Which birds would look the same in black and white as in colour?

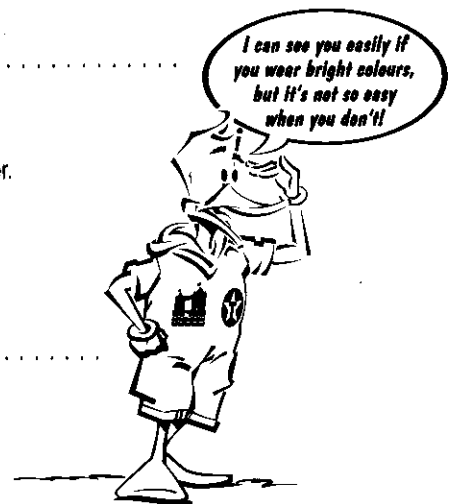
Why do you think some birds are dull brown?

Make your own "fantasy bird": copy a body, a neck, a head, a bill, a tail, 2 legs and 2 wings using examples from any of the birds on the poster.

Then cut them out and stick them together to make a funny bird.
Try to make your bird as colourful as possible!

What are you going to call your bird?

Did you know: some birds are red almost all over.



Worksheet 8 FLYING (outdoor worksheet)

Taking off

An aircraft has to go very fast before it takes off – that's what runways are for.

In the same way, a bird's wings work by air flowing past them.

Birds have different ways of "taking off".
Some birds jump off branches or other high places.

Did you see a bird take off like this? **yes/no**

Where did it take off from?

Do you know what kind of bird it was?

Birds on water need a different way of getting into the air. Some birds get up speed by "running along" the top of the water on their big, webbed feet.

Did you see one do this? **yes/no**

Do you know what bird it was?

Some water birds manage to get into the air without running along on top of the water. They "jump" into the air to take off.

Did you see a water bird take off without running on top of the water? **yes/no**

Do you know what bird it was?

Flying

Do birds need to flap their wings all the time to keep up in the air? **yes/no**

Did you see a bird glide? Did you see a bird hover? Do you know what kinds of birds they were?

Do all birds flap their wings at the same rate? **yes/no**

Do some flap slowly and others faster? **yes/no**

Can you count how fast a bird flaps its wings?

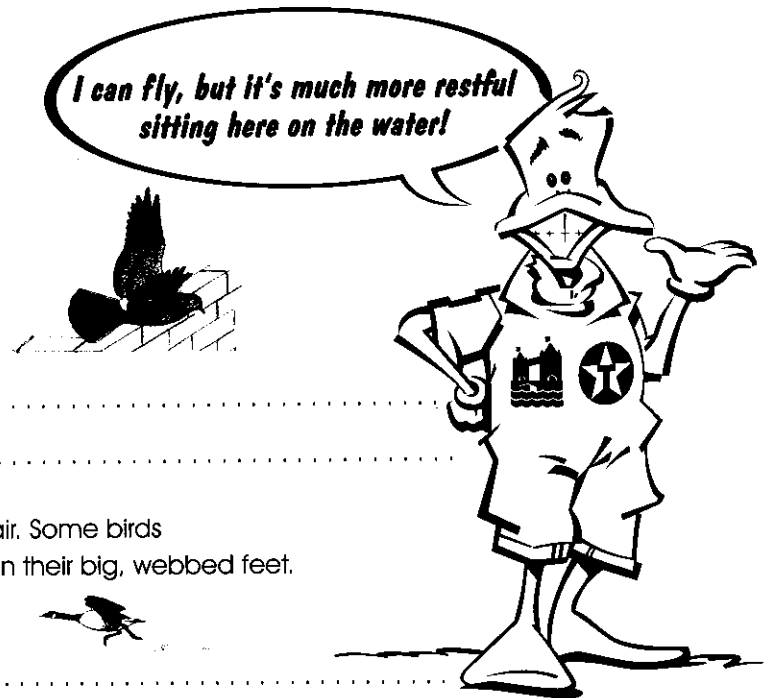
How fast do birds flap

Some birds fly so fast you can't count! Can you see a bird flying slowly? If you can, get a friend to help you find out how many times a second it flaps its wings. One person must count out 2 seconds. It takes about 2 seconds to say "Docklands One Docklands Two" quickly! At the same time the other person must watch the bird and try to count the number of wingbeats.

How many times did it flap its wings?

Divide this number by 2 to work out the number of wingbeats a second.

Did you know: Ducks can fly at 40 to 50 miles an hour when they are migrating – that's faster than the speed limit for cars in towns!

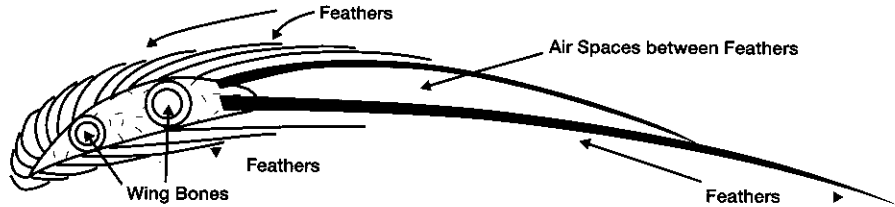


Worksheet 9 FLYING (indoor worksheet)

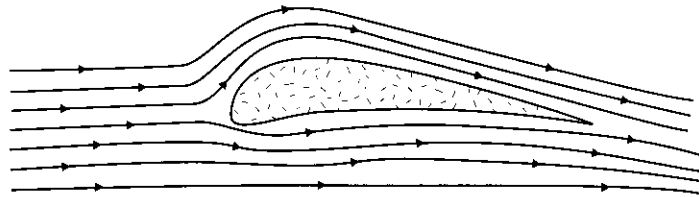
What happens when you drop something?

Why can birds fly but people can't?

A bird's wing is shaped like this:



When it moves through the air, air going over the top of the wing has to go further than air going beneath.



So the air over the top of the wing has to go faster than the air going below. This creates "lift", pushing the bird upwards.

This "lift" pushing upwards stops the bird falling down to the ground.

An aircraft wing works in the same way.

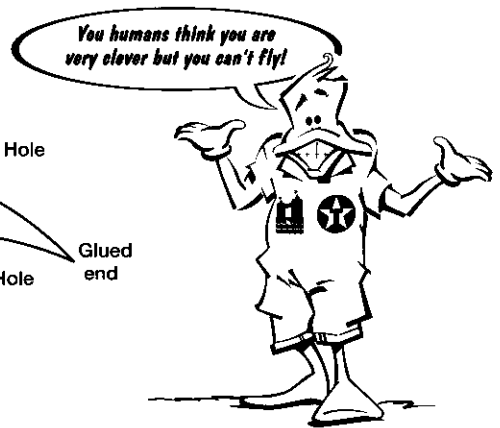
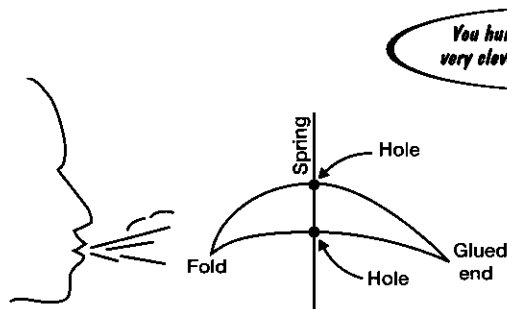
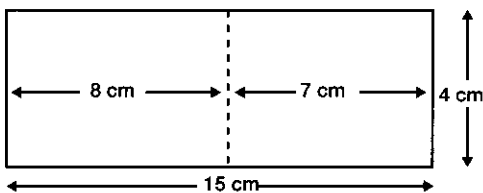
Can all birds fly? Why not?

Making "wings" from paper

Make a "wing" from a piece of paper. You will need a piece of thin paper, glue, Sellotape, and a length of smooth string or thread.

See how the wing goes up the thread when you blow from the front.

It should go down again when you stop.



Did you know: most birds can fly higher than Canary Wharf.

Worksheet 10 FEATHERS

Why do people wear clothes?

Why do birds have feathers?

Look at a feather. *Is it light?*

Yes – if it was heavy the bird wouldn't be able to fly with all its feathers on!



Try dipping it in water. The water runs straight off again!

*Do you have any clothes like this, that don't let the water in? **yes/no***

The feathers of water birds have to be extra water-proof.



Try putting your fingers through the feather.

Then you can make it all smooth again – like magic!

It is just as if the feather is made of lots of zip fasteners, which you can zip up and unzip.



*Is a jumper made of the same material as a mac or raincoat? **yes/no***

A mac is thin but doesn't let the water through.

A jumper is all fluffy and soft. This makes it warm.



Birds have fluffy warm feathers too, under their outer feathers.

These small fluffy feathers are called "down".

Down feathers are sometimes used to fill the quilts you sleep under on your bed. The warmest down comes from ducks that live in very cold places.

You may see some kinds of ducks if you visit the docks.

Feathers can be of all sorts of colours.

The commonest are grey, brown, black and white.

Look for different colours on the birds when you visit the docks.

See if you can find feathers to stick here. A good place to look is in parks and near trees. It is a good idea to wash the feathers and your hands after picking them up, as they may be dirty from lying on the ground.



Did you know: A Sparrow has more than a thousand feathers.

Worksheet 11 WHO'S BOSS?

Arguments

Have you ever quarrelled with anyone? Who was it with? – mum, dad, brother, sister, schoolmate?

What was it about?

Birds have squabbles too. Birds' quarrels are usually about the most basic needs of life – food and safety. They "compete" for food and places to nest, and they defend themselves and their young from danger.

Try throwing some bread to hungry gulls or sparrows. What happens? Who wins?

Do the birds actually touch each other when they fight?

What happens if a bigger bird comes along?

Danger and defence

We are lucky – we are not likely to get eaten up by another animal; but birds aren't so lucky. Young birds get eaten if the parents don't defend them. They can be eaten by some bigger birds, and by mammals such as foxes and rats. Even adult birds can be eaten sometimes.

The rafts in the docks are very popular with birds. Can you think why?

Can you see a bird defending its young on a raft? How do they do it?

What do they use for "weapons"?

Some baby birds can swim even when they are very small, so the parents need to keep them safe in the water. If you can see a young family, make a drawing of it.



Did you know: The famous bird photographer Eric Hosking was attacked by an owl when he got too close to its nest. He lost the sight of one eye. (When he wrote his life story, he called it "An Eye for a Bird"!)

BIRD WATCHING SITES IN LONDON DOCKLANDS

