

all about ...

Great yellow bumblebee



Bumblebees

Honey bee



Bumblebees are brightly coloured bees that are quite big and very hairy! They are slightly different from Honey bees which are smaller, browner and less hairy.



Bumblebee

THE BUMBLEBEE FLYING MACHINE

Bumble bees beat their wings up to 200 times a second. They can fly at over 20km/hour. Faster than most people can run.

The name bumblebee comes from the buzzing sound made by their wings. They don't just flap their wings up and down, look at the photo below, what has happened to the wings here?



Different sorts of bumblebees have differently coloured bodies. Can you spot the differences in the photographs on this page?

There are 17 different sorts of bumblebees in Scotland

FLOWERS NEED BUMBLE BEES

Bees are very important for flowers. Bees get dusted with pollen when they visit a flower and when they visit the next similar flower some of the pollen rubs off onto the seed-making part of the flower. This is called pollination and it lets the flowers make seeds for the next year. This is important for garden flowers and also for farmer's crops like runner beans, raspberries and oil seed rape.

One of the rarest is the Great Yellow Bumblebee

AND BUMBLEBEES NEED FLOWERS

Bumblebees eat pollen and drink nectar from flowers. They also carry nectar and pollen back to their nests to feed the young bee grubs.

They carry nectar back in their **honey stomachs**, and comb pollen off their bodies and carry the pollen in bristly **pollen baskets** on their back legs.

They can carry over half their own weight in pollen and nectar and still fly!

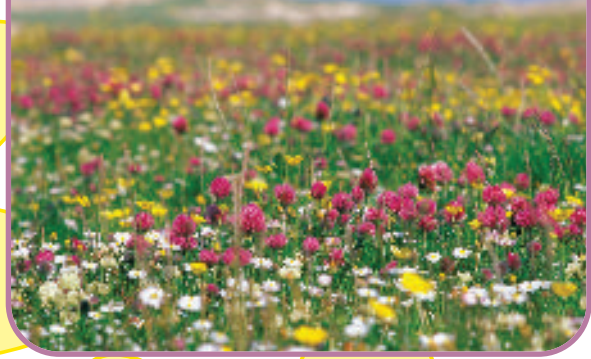
Bumblebees

HONEY BEES AND BUMBLEBEES

Honey bee colonies live for year after year in the same hive and store lots of honey so that the whole colony can survive the winter.

Bumblebees do things very differently! Only the queen bumblebee survives the winter. She hibernates in a hole in the ground. In the spring she builds a new nest in a grassy tussock or an abandoned burrow, and then she starts a new colony.

Lots of flowers with nectar - a great place for the rare Great yellow bumblebee



THE STING !!

(bees are very unlikely to sting you - unless you hurt THEM!)

BUMBLEBEES

- Only female bees have stings
- They can remove their sting from an enemy
- They can sting more than once

HONEY BEES

- Only female bees have stings
- They cannot take out their sting
- They die after stinging an enemy
- They are more likely to sting you than a Bumblebee, but still very unlikely to!

WHO STEALS THE HONEY?

Although bumblebees only store a small amount of honey for their grubs, much less than honey bees, their nests are still raided by **badgers** and **pine martens**.

In the days when hay was cut by hand with a special cutting tool called a scythe, workers often used to stop and search for Bumblebees' nests amongst the grass roots, eat the honey comb and then could use the attack of the bees as an excuse for a break from the hard work!

THE WARM UP

Insects need to be warm to fly as their wings cannot beat fast enough when they are cold.

Bumblebees are hairier than **Honey bees** which keeps them warmer and so they can fly on colder days than honey bees. Sometimes you can find a sleepy, sluggish bumble bee on a flower head, early in the morning or late at night. These are bees which got caught out by the cold or wet weather and couldn't fly home. Once the sun comes out and warms them up, they can fly away.



LOOK AT THE BACK OF THE POSTER

There is: An outdoor activity
More information about bees

DRAMA and MUSIC

- Divide children into 3 groups, honey bees, flowers and beekeepers
- “The Honey Bees” group could wear something in yellow and wrap black crepe paper round their middles
- “The Flowers” group could have crepe paper made into large flowers fastened to a cardboard band around their heads
- “The beekeepers group” could have pieces of net curtain over their heads with gloves on their hands with cardboard boxes painted to represent “hives”
- **Movement activity** – Honey bees and flowers – use “Flight of the Bumblebee” music by Rimsky-Korsakov if available or children could make the relevant sounds depending on which group they are in, while the “beekeepers” collect the honey with the “honey bees” buzzing around them.



WRITING ACTIVITY

In groups have the children write a simple acrostic poem for a HONEY BEE or BUMBLEBEE. Have a brainstorm of the words which could be used for each letter before they start, Children can illustrate their poem.



JIGSAW ACTIVITY

make colour photocopy of poster
glue to card
cut up into large sections
children re-assemble the jigsaw using
the poster to help

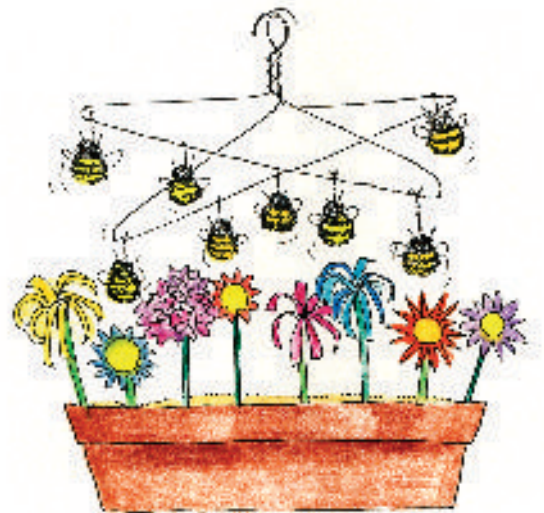
ART ACTIVITY

Make pom-pom bees out of black
and yellow wool

Make tissue paper flowers to
represent flowers on sticks

Put the flowers on sticks into a
window box container filled with
sand

Suspend the bees from 2 crossed
metal coat hangers above the
flowers



Here is an acrostic poem

THE BUSY BEE

Have you heard? Buzzzzzz

Over there on the flower

Nectar being gathered

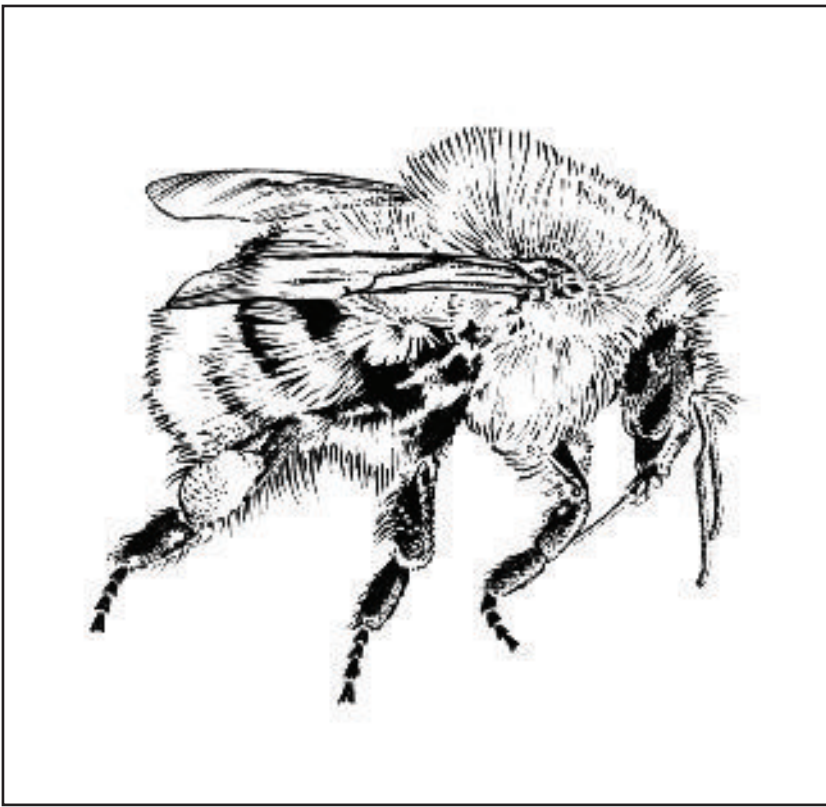
Energetic little bee

You are so busy!

Buzz, buzz, buzz

Energy from your honey spread

Every day on my toast



This drawing can be photocopied and enlarged then coloured in

PARTS OF A BEE

Photocopy and enlarge the bumblebee drawing and have the pupils label it with these words written onto cards:

wing

leg

bristle

pollen basket

antenna

eye

tongue

hairy body

stripe

HONEY TASTING AND VISIT FROM APIARIST

Listen to soundtrack from inside a hive at www.greentreks.org (then click on education; resources; nature; swarmbustin'; the honey; hear the swarm)

Show the children an actual honey comb

Have a honey tasting session

- check for allergies first and obtain permission slips.

Contact www.scottishbeekeepers.org.uk/contacts/html/local to arrange a visit from a local apiarist, who could bring pictures of honey bees and hives, and show the equipment used to harvest the honey.

Show other things made from honey
eg beeswax, candles, royal jelly cream/tablets

FOR FURTHER INFORMATION AND IMAGES

www.scottishbeekeepers.org.uk

www.snh.org.uk/scottish/species/invertebrates/bombus.asp

www.bumblebeeconservationtrust.co.uk

www.ukbap.org.uk/UKPlans

www.rspb.org.uk/ourwork/conservation/biodiversity/keyspecies/invertebrates/bumblebee/about.asp

www.snh.org.uk/speciesactionframework

www.arkive.org/species/ARK/invertebrates_terrestrial_and_freshwater/Apis_mellifera

Acknowledgements: Written by Liz Balharry and Pat Thornton,
The Educational Resource Partnership, Inverness. www.educationalresourcepartnership.co.uk

Illustrated by Merrill MacWilliam and John Tasker

Photography by Laurie Campbell, N A Callow/NHPA, Steve Hopkin/ardea.com, Alastair Shay/OSF and Lorne Gill/SNH

Also many thanks to all those who helped in the development of this fact sheet, in particular Murdo MacDonald, John Crossley, the teachers involved in this project, Highland Council Ranger Service, and SNH specialists.

WHAT'S THE DIFFERENCE?

Read the information on page 2 to the children (or provide them with copies to read). See if they can find or remember at least six differences between BUMBLEBEES and HONEY BEES.

Answers to "WHAT'S THE DIFFERENCE"

(bumblebees are hairier than honey bees;
bumblebees can fly in colder weather than
honey bees; bumblebees can sting more than
honey bees; bumblebee colonies store less honey;
only queen bumblebees survive the winter).



There is a poster to go with this factsheet and other posters and factsheets in the 'All About' series. Download the poster from www.snh.org.uk/pdfs/education/poster/p-bee.pdf or contact SNH, Battleby, Redgorton, Perth, PH1 3EW