



Derbyshire
Wildlife Trust

BEE A HERO

BEE THE DIFFERENCE



www.derbyshirewildlifetrust.org.uk

BEE THE DIFFERENCE BEE A HERO



Bumblebees are brilliant, but they need your help! With two UK species already extinct and another eight in serious decline we need you to **bee the difference** and become a **bumblebee hero**!

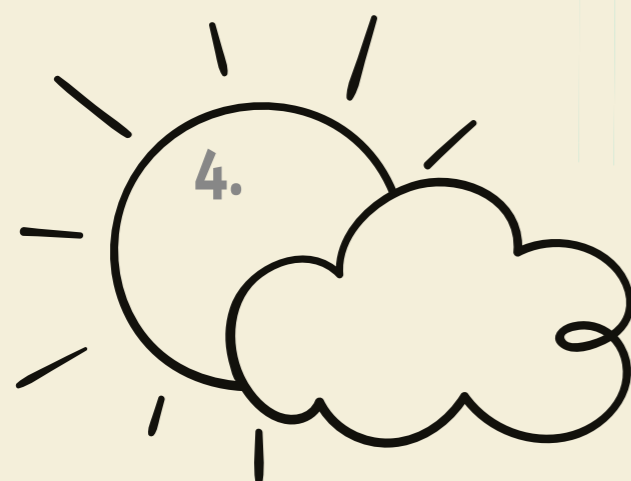
Read on to find out more about these amazing creatures, how they help us and how you can bee a hero and help them.



COLOUR BY NUMBERS

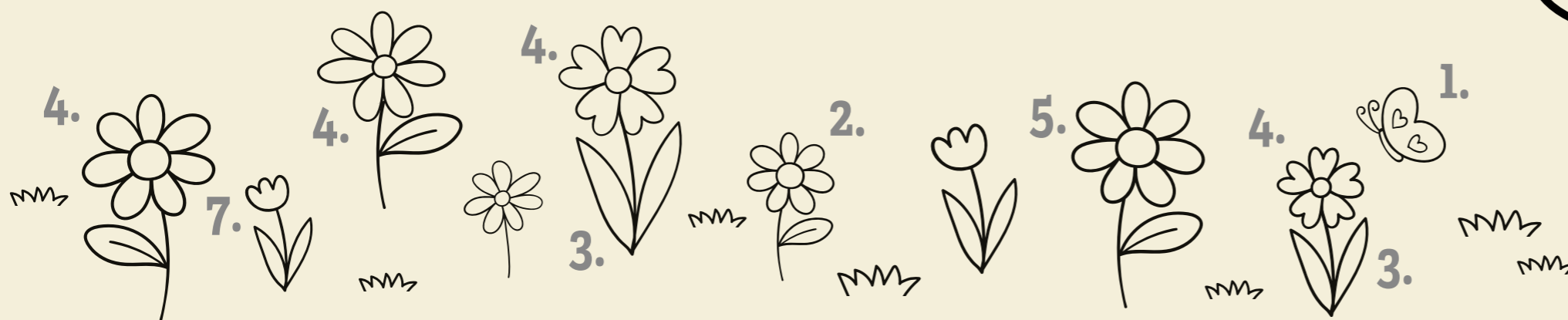
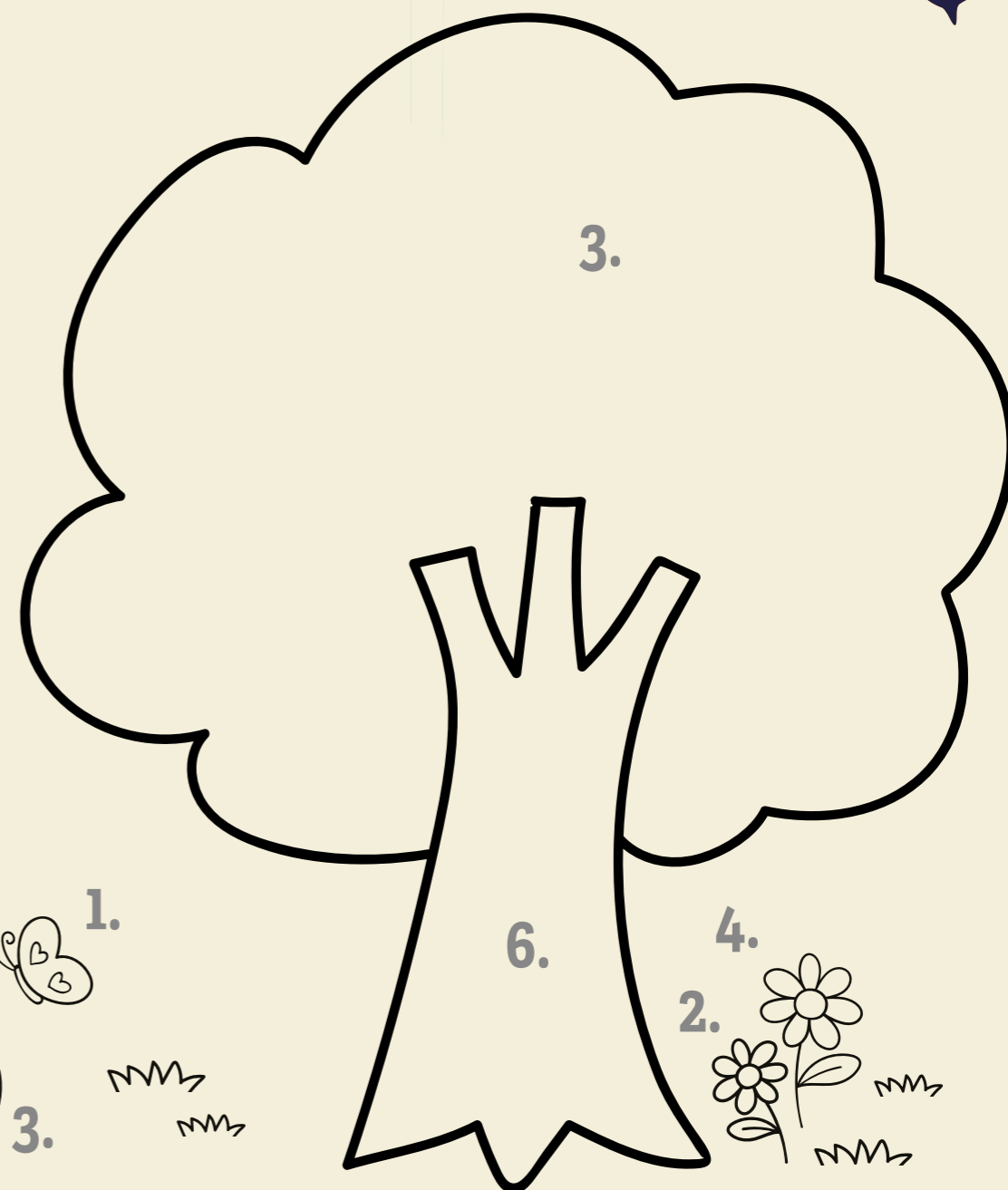
1. I am the colour of the sky
2. I have the same name as a fruit
3. I am the colour of most leaves
4. I am the colour of a flower that follows the sun
5. I am the first colour of the rainbow
6. I am the colour of soil
7. I am the colour of love

COLOUR
ME



1.

3.



BEES AND WASPS

ARE THEY ALL THE SAME?



At first glance bees may all look the same to you – but look closer and you will see there are many different types of bee. In fact, in the UK we have over **250 DIFFERENT TYPES OF BEE.**



HONEY BEES

There is one honeybee species in the UK so they all look the same and have the same length tongues. Most are looked after by bee keepers, they live in hives with up to 60,000 other honey bees and make the delicious honey we love to eat. Honey bees are smaller and slimmer than bumblebees, they will sting to defend their colony but can only do this once as they die afterwards.



fat & furry

BUMBLEBEES

We have 24 species of bumblebee in the UK. These bees are fat and furry, different species have different length tongues and different coloured stripes. They live in the wild in gardens and in the countryside in nests of up to 400 bees, they only collect enough nectar to feed themselves and do not make honey. Bumblebees can sting more than once but they only do it when their nest is threatened. Old names for bumblebees include Humble Bee and Dumble Door. The word bumble 'booming' due to the noise they make as they fly.



SOLITARY BEES

There are over 225 species of solitary bees in the UK. They do not live in colonies, instead each female looks after her own young in burrows in the ground or in plant stems. Like bumblebees, these do not make honey and will only sting as a last resort if their nest is threatened. All of our UK bees feed on nectar and pollen from flowers.



no hair

WASPS

We have 9000 species of wasp in the UK! Wasps have no hair and their colours are more distinct. They form colonies in nests which they build in soil, bark, roof spaces and holes in walls. Wasps eat fruit juice, nectar and other insects and will sting when frightened.



BEES VS WASPS

GAP FILL

Use the words below to fill in the missing blanks:

COLOURS NEST POLLEN STING COLONIES HONEY DIE HAIRIER

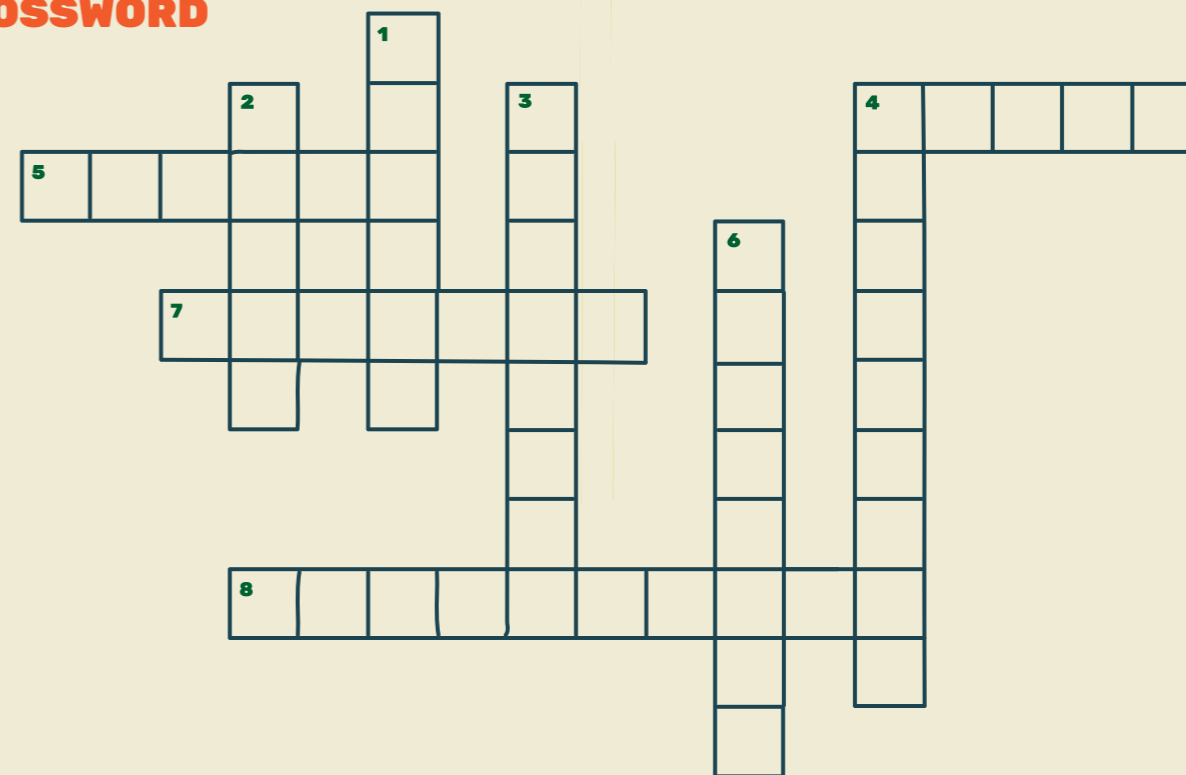
Wasps have distinct They don't when they sting.

Honey bees live in large and make

Bumblebees are fatter and, they eat nectar and

Bumblebees only when the is threatened.

CROSSWORD



ACROSS

4. One difference between bees and wasps is that wasps have no hairs but bumblebees are
5. The sugary liquid bees drink from flowers
7. The name of the group of animals that bees and wasps all belong to
8. As well as nectar and insects, wasps also eat this

DOWN

1. Most honey bees are not wild but are
2. Bees only do this if their nest is threatened
3. How we describe the colours on a wasp
4. An old name for bumblebees
6. The name given to a group of bees living together

BUMBLEBEES FROM TOP TO TAIL

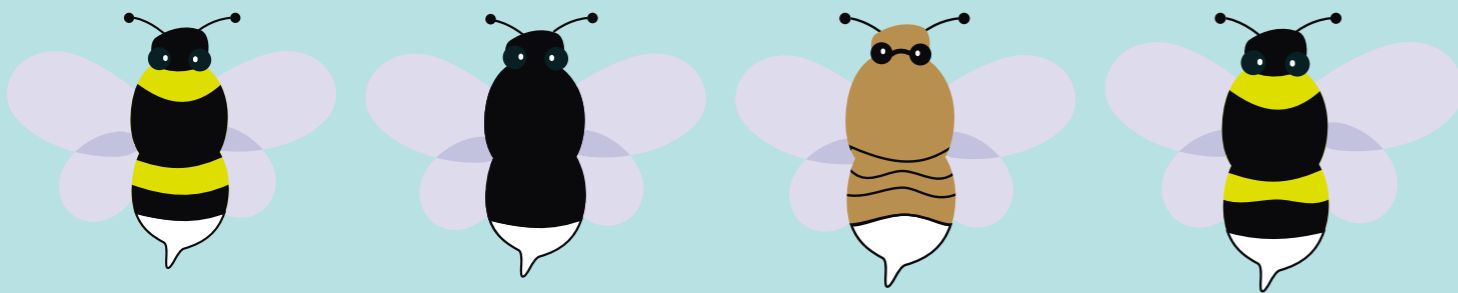


There may be 24 different kinds of bumblebee in the UK but it's easy to tell one type from another as they have different coloured tails and different coloured stripes.

There are four main colours to spot on bumblebee bottoms - blonde, white, red and brown.



BEE BUMS



Use the names of these bumblebees to help you **COLOUR IN** the correct coloured tails:

WHITE TAILED BUMBLEBEE

RED TAILED BUMBLEBEE

CARDER BUMBLEBEE

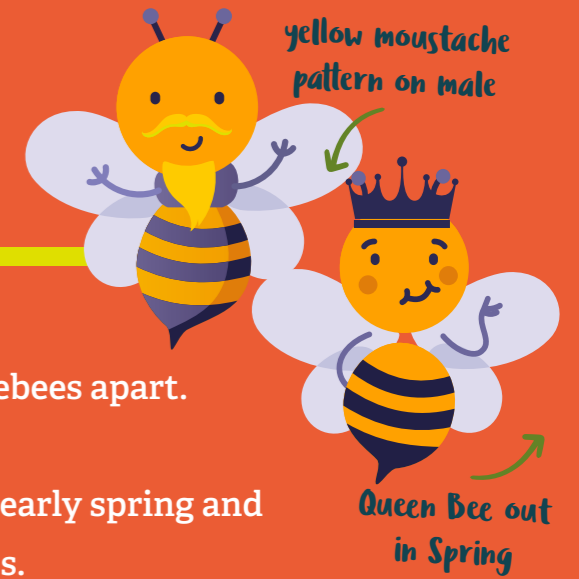
BUFF TAILED BUMBLEBEE



BEE BUMS SPOTTER

Find a patch of flowers outdoors and sit nearby watching out for bumblebees. Look carefully at their patterns - can you spot different coloured bottoms? How many of the four types can you spot?

TELLING MALE & FEMALES APART



It is also possible to tell the male and female bumblebees apart.

The female Queen bees emerge from hibernation in early spring and then lay eggs which hatch out as female worker bees.

The males do not hatch until late summer, this means males are usually only seen in late summer and autumn whereas the females can be seen from early spring until autumn.

When you spot a bumblebee, look carefully at the back legs. If you see a clump of pollen on the legs, the bee will be female as males do not collect pollen. You can also spot males as they have a yellow pattern on their faces that looks like a moustache or beard!



BEE CODE BREAKER

Use the chart below to help you crack the code and read what this message says:

20,8,5,18,5 1,18,5 Twenty Four 11,9,14,4,19 15,6
2,21,13,2,12,5,4,5,5 9,14 20,8,5 21,11

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M

14	15	16	17	18	19	20	21	22	23	24	25	26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z

.....

WHERE WOULD WE BE WITHOUT BEES?

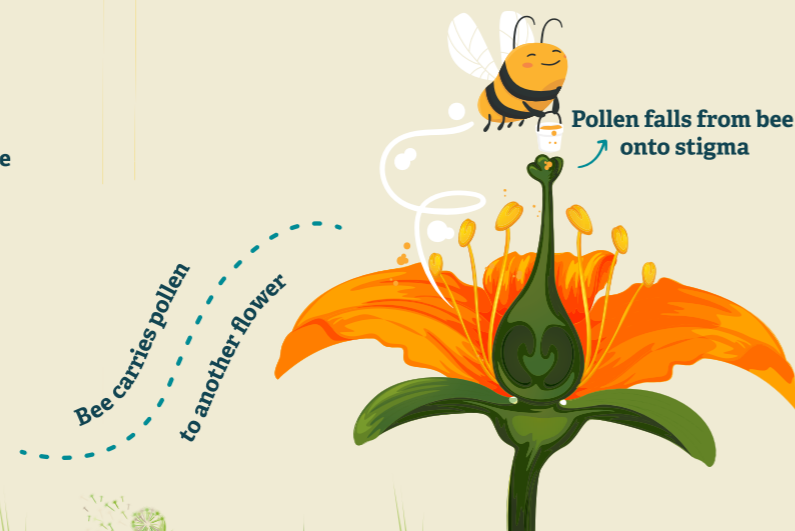
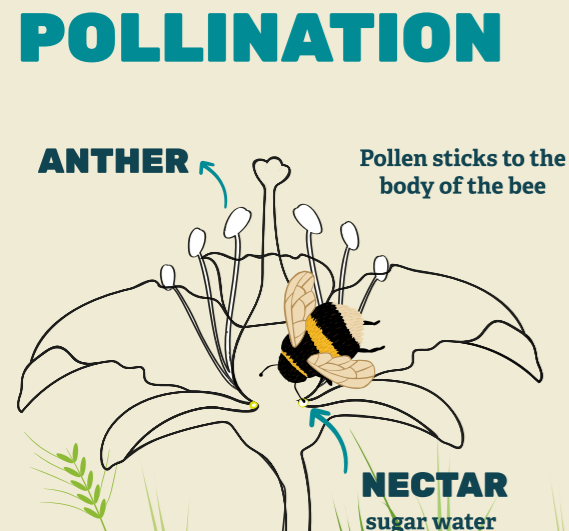


Bumblebees feed on the nectar and pollen that is made inside flowers. Nectar is a sugary drink that gives the bees energy, pollen is full of protein which helps the bees, and their grubs, grow stronger.

Pollen is made on the anthers (male parts) of the flower. It is very sticky, so when a bee is feeding on the flower some of the pollen sticks to its hairs. The bee then visits another flower and some of this pollen rubs off onto the stigma (female part). This pollen travels down the stigma and fertilises the egg cells to make seeds. This is called pollination.

By moving pollen from flower to flower bumblebees help the plants to make seeds so that new plants can grow. Many of the flowers they pollinate produce the food we eat, for example tomatoes, potatoes or strawberries. In fact, one third of the food we eat relies on insects to pollinate it, so without bees we would be without many of our favourite foods.

Colour the flower in THE PROCESS OF POLLINATION



WORD SCRAMBLE

Unscramble the words in **RED** to reveal the answers:

Bumblebees feed on **CENRAT** and **LOPLNE** Nectar is a **URYSGA**drink that gives bees energy. Pollen is full of protein which helps the bees grow **TGREONSR**..... .

CAN YOU TAKE ACTION AND MAKE SURE YOUR GARDEN PROVIDES FOOD FOR BEES?

BUMBLEBEES ARE IN DECLINE

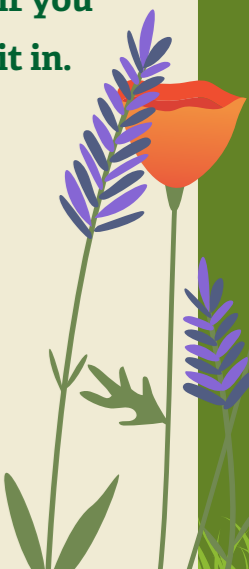
Unfortunately this means there are fewer of them than there used to be and two species have completely disappeared from this country.

Britain has lost **97%** of its meadows since World War 2. In other words, for every 100 meadows we had in the 1940's, there are now only 3 left. Without meadow flowers to feed on, and with urban areas becoming less green, our bumblebees are struggling and need your help to survive! **Read on to find out how you can help...**



FLOWER POWER

Find a patch of flowers and watch it for a while to see which the bees seem to like. If you look carefully at the flower after the bee has left it see if you can spot any pollen. Draw a picture of the flower and remember to colour it in.



BUMBLEBEE FUN FACTS



BEES DON'T HAVE EARS, WHICH MEANS THEY CAN'T HEAR YOU.

If one flies away as you get near its more likely to be due to your shadow.

Challenge: Try and sneak up close to a bumblebee for a really good look at it, remember you don't need to be quite, just avoid your shadow falling on it.

BUMBLEBEES HAVE SMELLY FEET!

This is useful as other bees can tell when one has fed from a flower due to the smell they leave behind. This stops them wasting time looking for nectar in an empty flower.



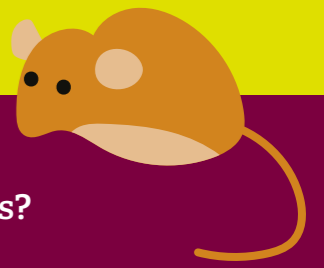
Challenge: Sit near some flowers and watch out for bumblebees. See if you can spot any bees flying away from flowers without landing on them - has a bee been on it before and left a smelly footprint?

BUMBLEBEES HAVE 4 WINGS THAT CAN BEAT UP TO 240 TIMES PER SECOND!

Challenge: Stretch your arms out wide like wings then time yourself for 10 seconds and see how many times you can flap your 'wings'. Divide this number by 10 to see how many flaps you can manage in 1 second.

BUMBLEBEES NEST IN OLD MOUSE HOLES.

They have an unusual way of finding them. Bees can see different colours to us - they cannot see red light but they can see ultra violet. When mice or voles run around they leave a trail of wee which is coloured ultra violet so the bees can see the trails left behind and use them to locate the old holes.



Challenge: Find a patch of long grass and hunt around carefully. Can you find any signs of mouse holes that might be used by bees? Where do you think they would like to live?

DIFFERENT SPECIES OF BUMBLEBEES HAVE DIFFERENT LENGTH TONGUES. Some are long and some are short so different bees like to feed on different flowers. The garden bumblebee has a tongue so long that if we were the same we would be able to lick between our toes without bending over.



Challenge: find a stick that is long enough to touch your toes without you bending over. Measure the length of your arm and the stick. This is how long your tongue would be if you were a garden bumblebee!

BEE A BUMBLEBEE HERO

Bees do so much for us but what can we do to help them? Here are our top tips for helping our fabulous bumblebees – its really very easy and everyone can do something to help them.

01. GO POTTY



Put simply - bees need flowers - when out foraging bees need to feed at least every 45 minutes, so we need more flowers, everywhere. It doesn't matter if you have a large garden or a window sill, grab a pot and plant a flower. For ideas on what flowers to plant and what pots to use visit our page here: www.derbyshirewildlifetrust.org.uk/go-potty



02. GET CLEVER WITH PLANTING

Aim for plants that flower throughout the bumblebee season. Queen bees need flowers early in spring when they come out of hibernation and in autumn to feed up ready for hibernation. So if you have space, choose plants that flower March - October so you can feed the bees all year round.



03. GROW DON'T MOW



In spring avoid cutting grass and let it grow a bit longer. The dandelions, clover and other flowers that will appear are important food for the early queens to feed on until the rest of the garden blooms. To join in with us, visit our website www.derbyshirewildlifetrust.org.uk/grow-dont-mow



04. GO SIMPLE

Choose flowers that have simple shapes as these tend to be native flowers. Many modern 'designed' flowers have no pollen in them or it is very hard to access.

For loads of advice on what to plant, visit www.bumblebeeconservation.org/gardeningadvice



05. GO WILD

Leave a small part of your garden to grow wild, let the grass and flowers grow longer and taller to encourage homes for bees.



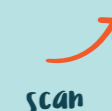
06. SHARE

Tell others how important bees are and how to care for them – encouraging others to care is just as important as helping them yourself. You could even grow some flowers from seed and then give them to friends and family as presents.



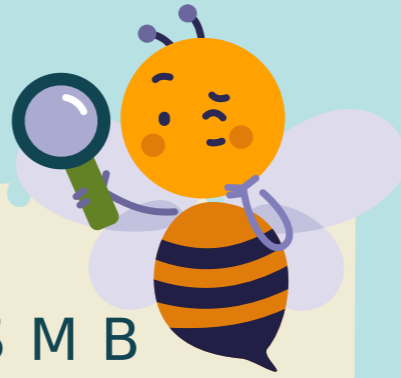
If you would like to learn more about bees, visit the wonderful website from The Bumblebee Conservation Trust, you will find information, activities and help with identifying bees.

www.bumblebeeconservation.org





BEE WORDSEARCH



H G G F J T O M A T O E S M B
 X I B I E P X A V N M R G C U
 H F B T X H Q F E U B U E P G
 M F L E X L A V E N D E R O L
 S O O R Q S C A P M E A T E
 P X I K W N U C L V C V N A N
 G G P Q E E A E C O U H I T E
 U L O W Z O R T E M V H U O C
 Z O L N D Z A S I N V E M E T
 E V L Z F B F G U O B Y R E A
 S E E B Y O S T U Q N E V I R
 T D N B U M B L E B E E E B C
 I D R A D F W R K X T I X T T
 N U X F J C D B D Q Q D Q U P
 G A V J M W O R K E R B E E M

Can you find these 15 words in the jumbled up letters above?

- | | | |
|-----------|------------|-------------|
| Potato | Bugle | Lavender |
| Geranium | Nectar | Hibernation |
| Bumblebee | Worker Bee | Sting |
| Pollen | Fox Glove | Flowers |
| Queen Bee | Tomatoes | Clover |

SOLUTIONS

Colour by Numbers

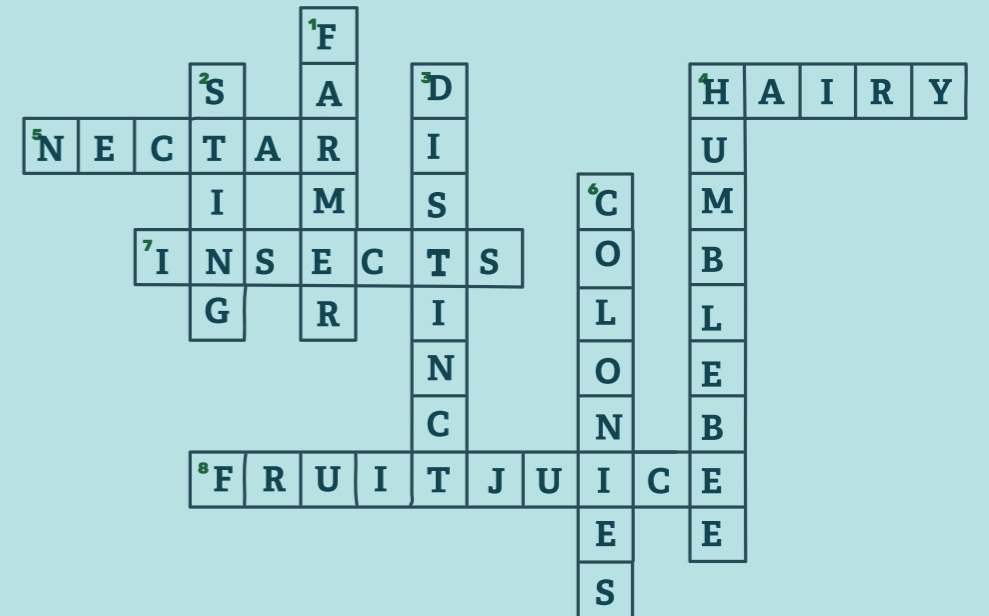
1= Blue, 2 = Orange, 3= Green, 4= Yellow, 5 = Red, 6 = Brown, 7 = Pink

Bees Vs Wasps Gap Fill

Wasps have distinct colours. They don't die when they sting. Honey bees live in large colonies and make honey. Bumblebees are fatter and hairier, they eat nectar and pollen. Bumblebees only sting when the nest is threatened.

Bees Vs Wasps

Crossword



Bee Bums!

White tailed bumblebee - White; Red tailed bumblebee - Red; Carder Bumblebee - Brown; Buff tailed bumblebee - Blonde

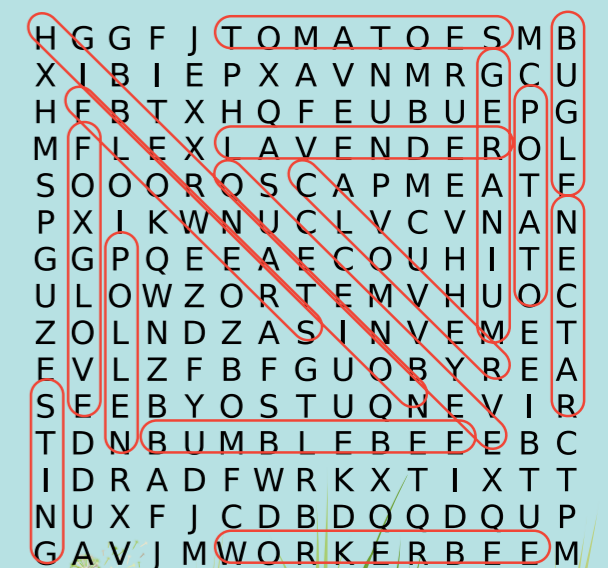
Bee Code Breaker

There are 24 kinds of bumblebee in the UK

Word Scramble

Bumblebees feed on nectar and pollen. Nectar is a sugary drink that gives bees energy. Pollen is full of protein which helps the bees grow stronger.

Bee Wordsearch





This booklet has been produced thanks to funding from...

WONDERFUL ON TAP



Proudly supporting youth social action



Department for Digital, Culture Media & Sport



COMMUNITY FUND



Derbyshire
Wildlife Trust

www.derbyshirewildlifetrust.org.uk