

# 1 Fact Sheet: About Bumblebees

At the Bumblebee Conservation Trust, we are passionate about saving bees. Here is why.

## Save our bees

Bumblebees are among the most loved and familiar of garden insects. The sight and sound of them buzzing from flower to flower is an essential part of summertime, but sadly these fat, furry little creatures are struggling to survive.



At the time of writing, 24 bumblebee species are found in the UK, but unfortunately, in the last 80 years, two UK species have become extinct and others have declined sharply. In our modern world of paved gardens and intensive farming, our bumblebees find themselves hungry and homeless. The reason for this is simple and clearly visible: there are now far fewer flowers to provide bees with the pollen and nectar that they need to survive. But all is not lost – you can take action today to help save these hardworking pollinators. This fact sheet explains how.

## What's so different about the bumblebee?

To most people, bees are instantly recognisable but there are distinct differences between the appearance and lives of bumblebees and honeybees. Bumblebees are larger and hairier than their cousins which makes them perfectly suited for colder climates. Bumblebee nests are small and they do not store large quantities of honey, so their extra furry coat allows them to venture out on cold days to collect pollen and nectar when honeybees stay inside.

## Don't 'bee' confused

Don't confuse bumblebees with wasps. Bumblebees do not swarm and are not aggressive. Only female bumblebees can sting and they will only do so if they feel very threatened. Bumblebees will never interrupt your picnic or steal your sandwiches!



## Buzz pollination

Only bumblebees are capable of buzz pollination. This is when the bee grabs the flower and produces a high-pitched buzz. This releases pollen that would otherwise stay trapped inside. Key ingredients in our diet such as tomatoes are pollinated in this way. Many other common foods such as beans and peas would also be harder to produce and much more expensive without British bumblebees.

### **Did you know that bumblebees have smelly feet?**

Well they do and they're quite useful! After feeding, they leave a scent on the flower which lets other bumblebees know to avoid wasting energy landing – the flower will contain very little nectar or pollen.

### **Things you can do to help**

Bumblebees help pollinate plants in more than one million acres of British gardens and the flowers they find can be a lifeline for them. No matter how small your garden, you can help to save the sound of summer by providing lots of bee-friendly flowers throughout the year. By 'bee-friendly' we mean flowers that are rich in pollen and nectar. Many ornamental plants that are commonly found in British gardens, such as pansies and begonias, are of no value to wildlife. These decorative and colourful flowers often produce little pollen or nectar. However, there are hundreds of beautiful flowers that do offer these rewards, including foxgloves, lavender, geraniums, herbs and wild roses that you can add to your garden.

### **Why not try planting these?**



### **Energy drink for bees**

If you find a stranded or sleepy bumblebee, you can help to boost its energy levels with a simple sugar and water mix. Mix equal parts white sugar and warm water then pour into a small container or sponge. Place both the bee and the artificial nectar near to some flowers.



### **Act now**

You can also help by supporting our work to conserve bumblebee habitats and raise public awareness. There are various ways to show your support including volunteering, fundraising and becoming a member of the Bumblebee Conservation Trust. For more information on all of the above, including access to our Bee Kind gardening web page, visit: [www.bumblebeeconservation.org](http://www.bumblebeeconservation.org)

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1. What is the name of the organisation that produced this fact sheet about bumblebees?

\_\_\_\_\_

1 mark

2. Look at the section headed: **Save our bees.**

Complete the table below with **one** piece of evidence from the leaflet to support each statement.

	Evidence
The Bumblebee Conservation Trust is worried about bees.	
The leaflet makes readers feel hopeful for bumblebees.	

2 marks

3. *In our modern world of paved gardens and intensive farming, our bumblebees find themselves hungry and homeless.*

This suggests that...

Tick **one**.

farming has helped bees.

paved gardens are attractive.

bees are good at finding their way.

bees have only started struggling recently.

1 mark

4. Look at the section headed: **What's so different about the bumblebee?**

The text refers to the bumblebees' *cousins*.

Who are their *cousins*?

\_\_\_\_\_

1 mark

5. Which section of the leaflet is written to inform readers that they are unlikely to be stung by bumblebees?

Write the name of the section:

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1 mark

6. In what way is *buzz pollination* more useful than other forms of pollination?

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1 mark

7. Look at page 2.

Why is it important for bumblebees to leave a smelly scent on some flowers?

Tick **one**.

so that others avoid it

because it smells better than nectar

so others know it has pollen

because bees give flowers their scent

1 mark

8. Look at the section headed: ***Things you can do to help.***

**Find** and **copy one** word that shows how essential flowers are to bees.

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1 mark

9. Look at page 2.

(a) Tick one box in each row to show whether each of the following flowers is **bee-friendly** or **not bee-friendly**.

	Bee-friendly	Not bee-friendly
lavender		
pansy		
herbs		
wild rose		

1 mark

(b) Explain why the flowers that are not bee-friendly do not attract bees.

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1 mark

10. Look at the section headed: ***Energy drink for bees.***

These instructions suggest that the reader...

Tick **one**.

enjoys preparing food.

has lots of energy.

is willing to handle bees.

is skilled at gardening.

1 mark

11. Using information from the text, tick one box in each row to show whether each statement is **true** or **false**.

	True	False
Wasps can be aggressive.		
Male bumblebees sometimes sting.		
Bumblebees only go outside when it is warm.		
You need a big garden to help bumblebees.		

2 marks

12. Look at the whole text.

Complete the table below to show what the text says you can do to help bumblebees.

Help for all bumblebees	Help for a weak bumblebee
1. _____ _____	1. _____ _____
2. _____ _____	

2 marks

13. Give **one** example of the use of humour in the fact sheet.

\_\_\_\_\_

1 mark

14. Bumblebees are very important to the human race.

Give **two** ways they are important.

1. \_\_\_\_\_

2. \_\_\_\_\_

2 marks

## Mark schemes

2

1. **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for:

- *Bumblebee Conservation Trust.*

**Do not accept** responses which give part of the name only, e.g.

- *Bumblebee Trust*
- *Conservation Trust*
- *www.bumblebeeconservation.org.*

**1 mark**

2. **Content domain:** 2d – make inferences from the text / explain and justify inferences with evidence from the text

**Award 1 mark** for reference to any of the following, up to a maximum of **2 marks**:

	Evidence
The Bumblebee Conservation Trust is worried about bees.	<ol style="list-style-type: none"> <li>1. bumblebees are <i>struggling to survive</i>, e.g.               <ul style="list-style-type: none"> <li>• <i>bumblebees are endangered</i></li> <li>• <i>there are now far fewer flowers to provide bees with the pollen and nectar.</i></li> </ul> </li> <li>2. bumblebees are finding <i>themselves hungry and homeless</i>, e.g.               <ul style="list-style-type: none"> <li>• <i>because they don't have a home and they are going hungry.</i></li> </ul> </li> <li>3. two UK species having become <i>extinct</i>, e.g.               <ul style="list-style-type: none"> <li>• <i>bees are slowly going extinct.</i></li> </ul> </li> <li>4. bumblebee numbers having <i>declined sharply</i>, e.g.               <ul style="list-style-type: none"> <li>• <i>population of bees is declining</i></li> <li>• <i>there is less and less of them.</i></li> </ul> </li> </ol> <p><b>Do not accept</b> reference to the Bumblebee Conservation Trust asking for our help.</p>
The leaflet makes readers feel hopeful for bumblebees.	<ol style="list-style-type: none"> <li>5. all not being lost</li> <li>6. we can take action today to help save them, e.g.               <ul style="list-style-type: none"> <li>• <i>you can take action today</i></li> <li>• <i>we can help to save these hardworking pollinators.</i></li> </ul> </li> </ol> <p><b>Do not accept</b> general comments about help, e.g.</p> <ul style="list-style-type: none"> <li>• <i>you can help.</i></li> </ul>

3. **Content domain:** 2b – make inferences from the text / explain and justify inferences with evidence from the text

**Award 1 mark** for:

- farming has helped bees.
- paved gardens are attractive.
- bees are good at finding their way.
- bees have only started struggling recently.

**1 mark**

4. **Content domain:** 2a – give / explain the meaning of words in context

**Award 1 mark** for reference to honeybees, e.g.

- *the honeybee.*

**1 mark**

5. **Content domain:** 2c – summarise main ideas from more than one paragraph

**Award 1 mark** for:

- *Don't 'bee' confused.*

**1 mark**

6. **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for reference to either of the following:

1. it releases pollen that would otherwise stay inside the flower, e.g.

- *because it releases trapped pollen that they wouldn't have been able to get out*
- *it makes a buzz that gets more pollen than other bees do*
- *it helps release more pollen.*

2. key produce is more expensive / harder to get without it, e.g.

- *it makes some vegetables we eat easier to produce and sell a lot cheaper*
- *it means we can buy more common foods cheaper*
- *it would be harder to grow beans.*

**1 mark**

7. **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for:

- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| so that others avoid it               | <input checked="" type="checkbox"/> |
| because it smells better than nectar  | <input type="checkbox"/>            |
| so others know it has pollen          | <input type="checkbox"/>            |
| because bees give flowers their scent | <input type="checkbox"/>            |

**1 mark**

8. **Content domain:** 2a – give the meanings of words in context

**Award 1 mark** for:

- *lifeline.*

**1 mark**

9. (a) **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for all four correct:

	Bee-friendly	Not bee-friendly
lavender	✓	
pansy		✓
herbs	✓	
wild rose	✓	

- (b) **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for reference to insufficient production of pollen / nectar / food, e.g.

- *it is because they don't have much pollen*
- *they don't have as much pollen and nectar as they need*
- *they are not rich in pollen.*

**Also accept** reference to flowers that are not bee-friendly having no / little value, e.g.

- *because they are no value to the wildlife.*

**1 mark**

10. **Content domain:** 2d – make inferences from the text / explain and justify inferences with evidence from the text

**Award 1 mark** for:

- enjoys preparing food .
- has lots of energy.
- is willing to handle bees.
- is skilled at gardening.

**1 mark**

11. **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for **three** correct or **2 marks** for **all four** correct:

	True	False
Wasps can be aggressive.	✓	
Male bumblebees sometimes sting.		✓
Bumblebees only go outside when it is warm.		✓
You need a big garden to help bumblebees.		✓

**Up to 2 marks**

12. **Content domain:** 2b – retrieve and record information / identify key details from fiction and non-fiction

**Award 1 mark** for reference to any **two** acceptable points from *Help for all bumblebees*, or for **one** acceptable point from *Help for all bumblebees* and **one** acceptable point from *Help for a weak bumblebee*.

**Award 2 marks** for reference to any **two** acceptable points from *Help for all bumblebees* and any **one** acceptable point from *Help for a weak bumblebee*.

Please note that there are **two** ways to achieve the award of **1 mark** for this question.

<b>Help for all bumblebees</b>
<p><b>Acceptable points:</b></p> <ol style="list-style-type: none"><li>1. plant bee-friendly flowers</li><li>2. support the work of the Bumblebee Conservation Trust</li><li>3. raise public awareness</li><li>4. conserve bumblebee habitats</li><li>5. replace flowers which are not bee-friendly</li><li>6. remove paved gardens</li><li>7. stop intensive farming</li></ol> <p><b>Do not accept</b> reference to bee-friendly flowers with no reference to human action.</p>
<b>Help for a weak bumblebee</b>
<ol style="list-style-type: none"><li>8. give it a sugar and water mix</li><li>9. move it close to flowers</li></ol> <p><b>Do not accept</b> reference to a sugar and water mix with no reference to human action.</p>

**Up to 2 marks**

13. **Content domain:** 2g – identify / explain how meaning is enhanced through choice of words and phrases

**Award 1 mark** for reference to any of the following:

1. either of the 'bee' puns in the factsheet, e.g.
  - *Don't 'bee' confused*
  - *bee kind.*
2. interrupt your picnic or steal your sandwiches, e.g.
  - *bumblebees will never interrupt your picnic and steal your sandwiches!*
  - *bumblebees stealing sandwiches are funny.*

3. smelly feet, e.g.
  - *it says that bumblebees having smelly feet is useful.*
4. energy drink, e.g.
  - *energy drink for bees.*
5. fat, furry (little creatures), e.g.
  - *these fat furry creatures.*

**1 mark**

14. **Content domain:** 2d – make inferences from the text / explain and justify inferences with evidence from the text

**Award 1 mark** for reference to any of the following, up to a maximum of **2 marks**:

1. pollination / buzz pollination / support plant reproduction, e.g.
  - *pollinate our flowers*
  - *only they can use buzz pollination*
  - *they help regenerate plants.*
2. they support the production of food, e.g.
  - *make producing food easier*
  - *peas and beans would be more expensive*
  - *they help us grow food.*
3. survival of plant species, e.g.
  - *without them all plants would die*
  - *they keep plants alive*
  - *they help flowers survive.*
4. bees supporting farmers / gardeners, e.g.
  - *they help out farmers.*
5. bees being much loved, e.g.
  - *they are an essential part of summertime.*

**Do not accept** reference to honey alone.

**Up to 2 marks**