

# North Cornwall B-Lines

## Creating Pathways for Pollinators



**Resource Pack for Primary Schools**

**Green Recovery Challenge Fund**

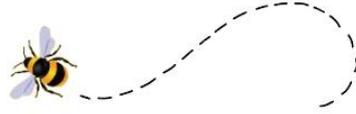


The National Lottery Heritage Fund





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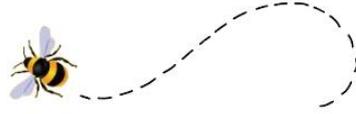


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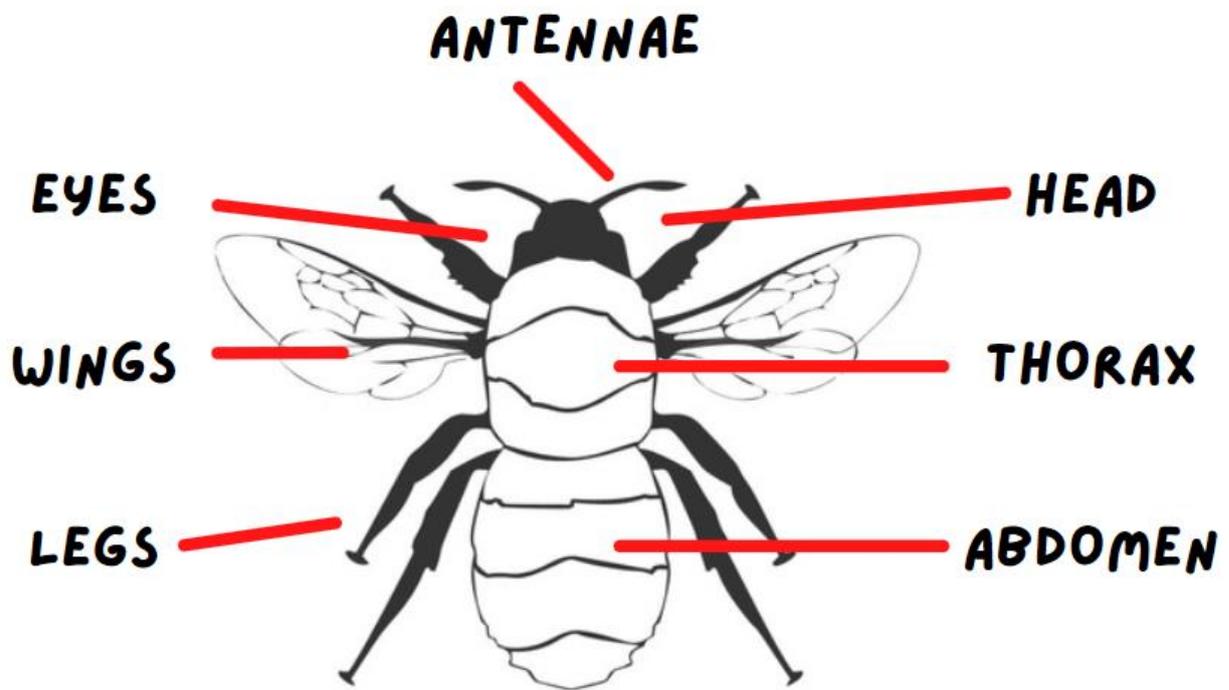
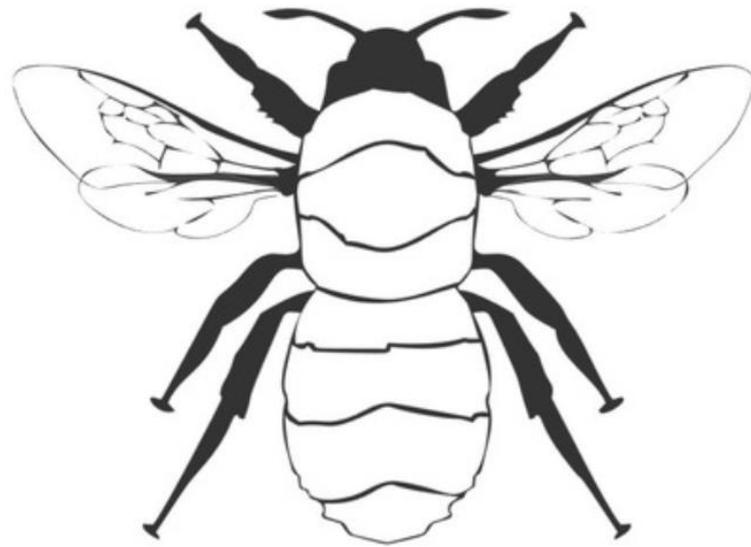


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A stylized illustration of a bee in flight, with a dashed line indicating its path. The bee is positioned above a variety of colorful flowers, including red poppies, yellow daisies, purple thistles, and white daisies. The background is a light green gradient.

## Biodiversity of Bees:





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NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

# BEE DRIVE

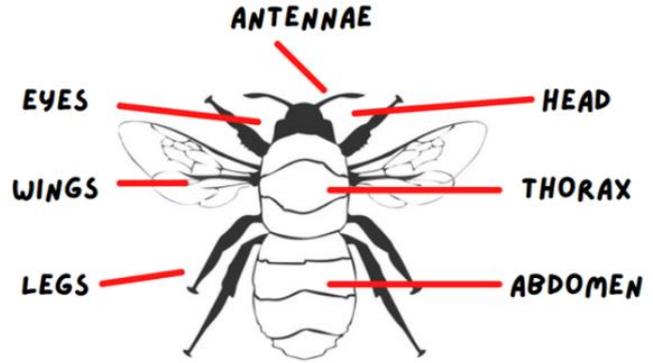
BE THE FIRST TO BUILD YOUR BEE

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NATURAL ENGLAND

### Roll the dice:

- 6. Thorax, Abdomen (x2)
- 5. Head (x1)
- 4. Wings (x4)
- 3. Legs (x6)
- 2. Eyes (x2)
- 1. Antenna (x2)



## RULES

Take it in turns to roll the dice.

To start, you must roll a 6 - choose to draw the thorax or abdomen.

Then, draw the body part relating to the number you roll, as long as it is attached.

For example, even if you roll 'eyes', you cannot go unless you have the head.



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# BUMBLEBEES

COLOUR THESE QUEEN BEES BY NUMBER AND LEARN THE SPECIES.



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**GARDEN BUMBLEBEE**



**TREE BUMBLEBEE**



**BROWN-BANDED CARDER BEE**

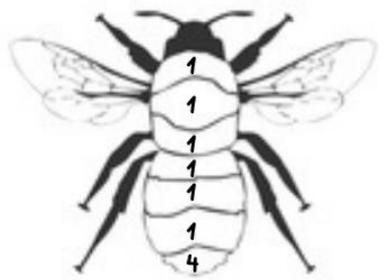
I'm a rare species being helped by B-lines.



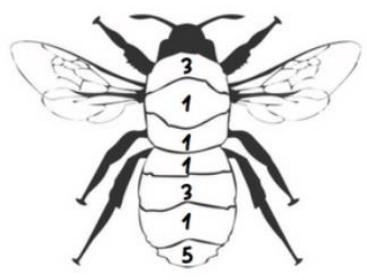
**COMMON CARDER BEE**



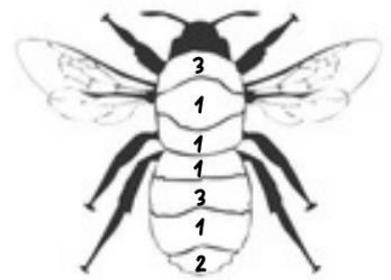
**EARLY BUMBLEBEE**



**RED-TAILED BUMBLEBEE**



**WHITE-TAILED BUMBLEBEE**



**BUFF-TAILED BUMBLEBEE**

## COLOUR ME IN



**BLACK**



**ORANGE**



**YELLOW**



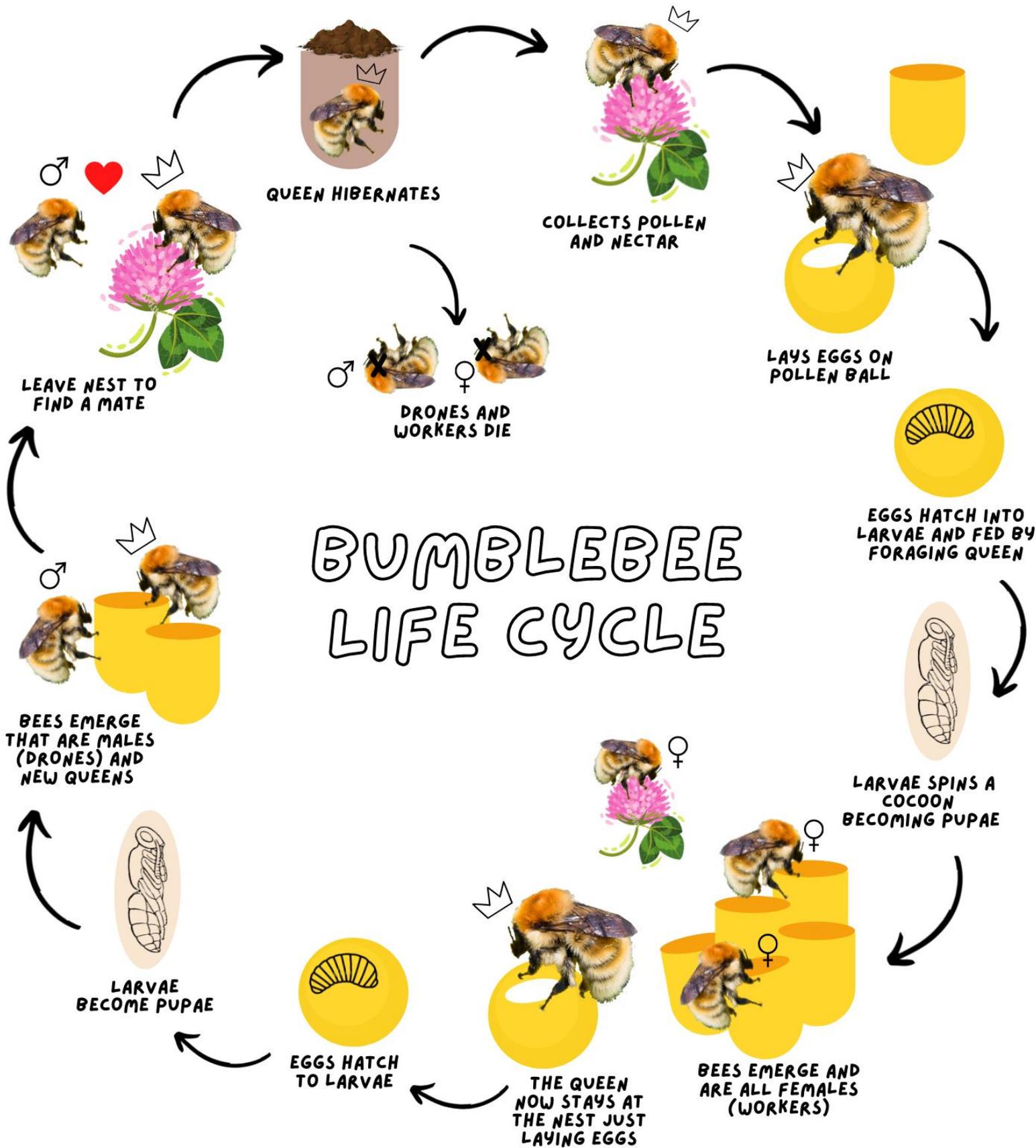
**RED**



**WHITE**



**BROWN**





**Buff-banded Mining Bee**  
(*Andrena simillima*)  
©Paddy Saunders



**Brown-banded Carder Bee**  
(*Bombus humilis*)  
©Will Hawkes



**Large Scabious Mining Bee**  
(*Andrena hattorfiana*)  
©Will Hawkes



**Ashy Mining Bee**  
(*Andrena cineraria*)  
©Scarlett Weston



**Wool Carder Bee**  
(*Anthidium manicatum*)  
©Will Hawkes



**Hairy-footed Flower Bee**  
(*Anthophora plumipes*)  
©Will Hawkes



**Tawny mining bee**  
(*Andrena fulva*)  
©Will Hawkes



**Silvery leafcutter bee**  
(*Megachile leachella*)  
©Scarlett Weston



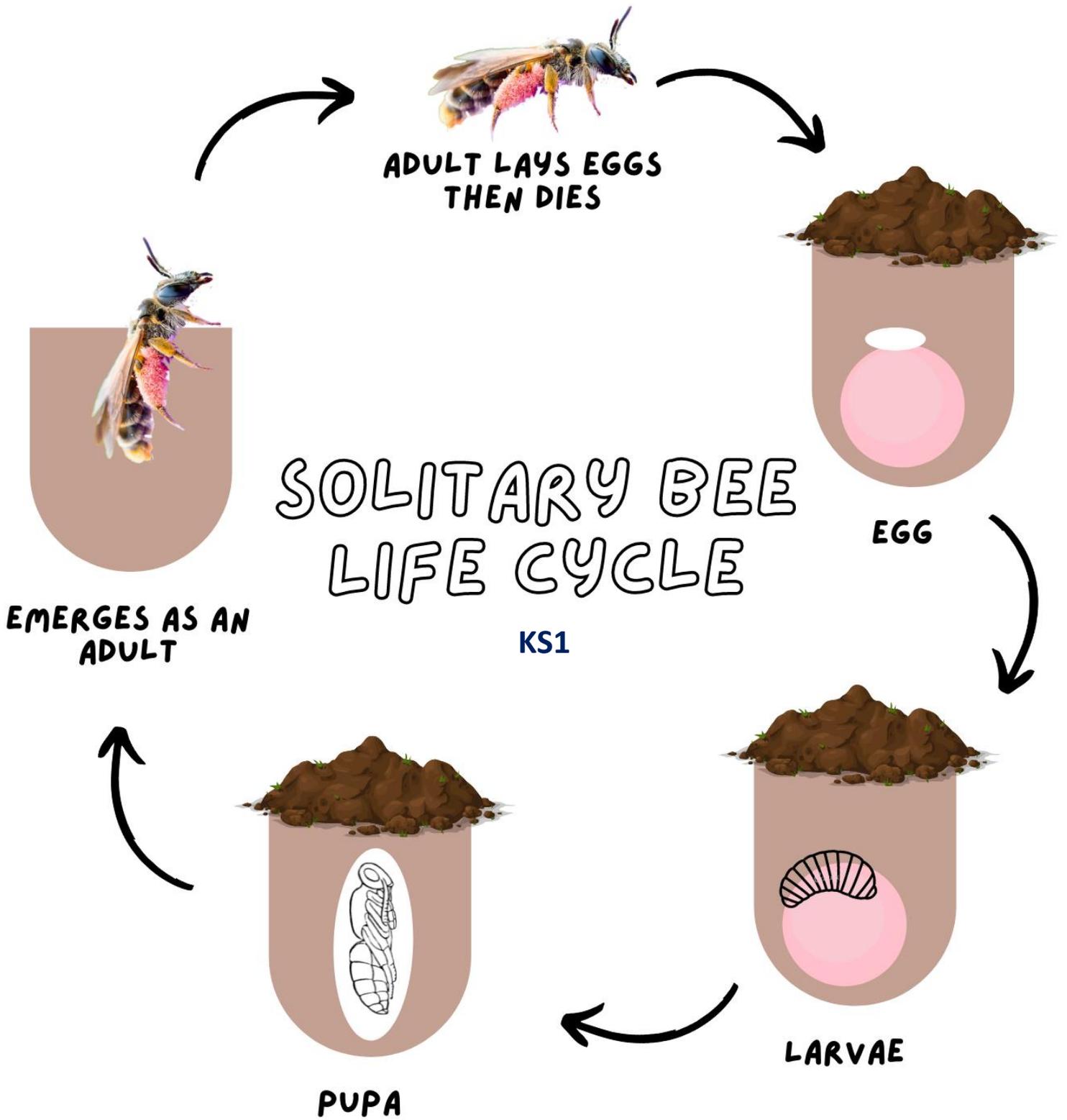
**Pantaloen bee**  
(*Dasypoda hirtipes*)  
©Will Hawkes

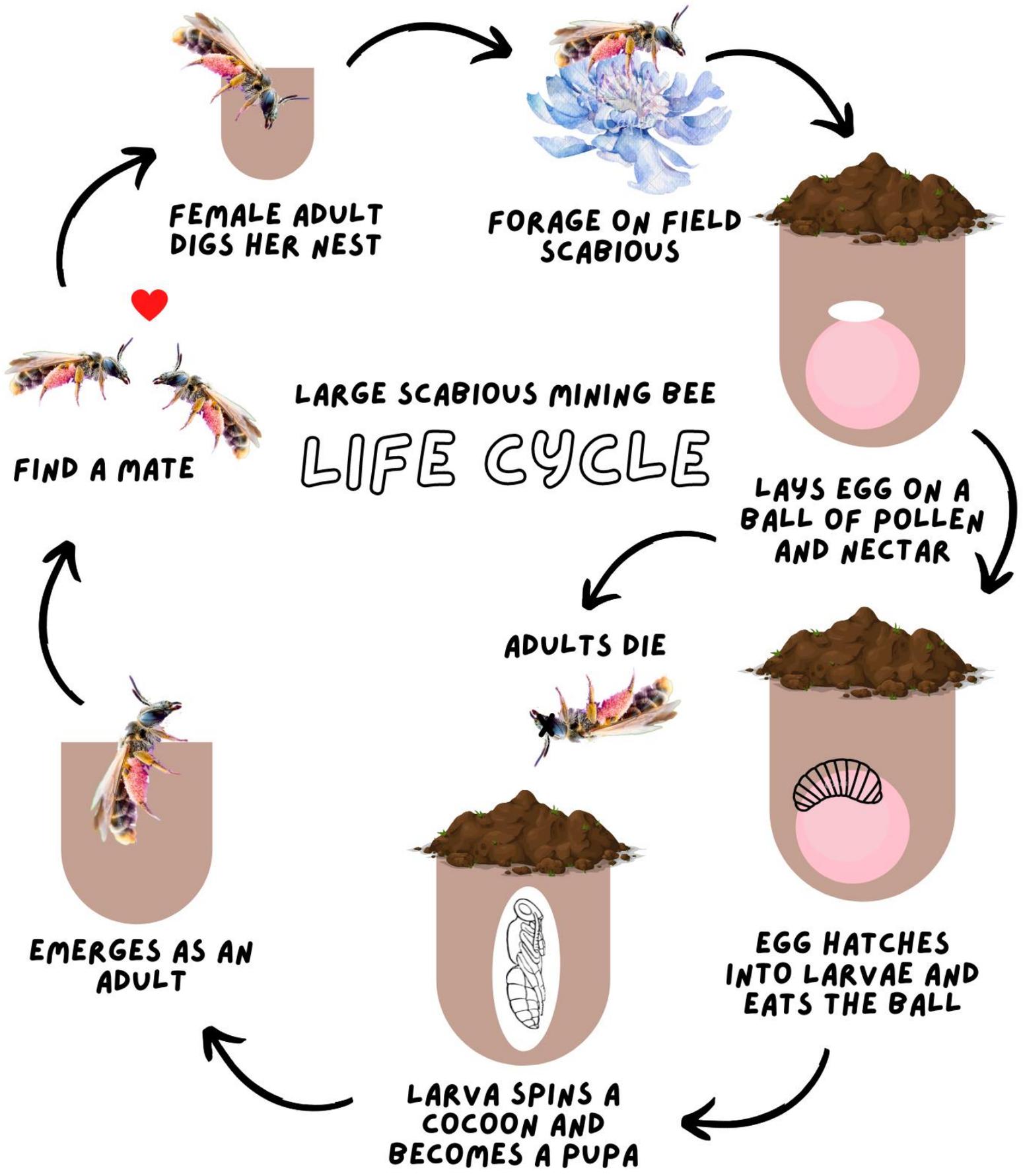


**Armed nomad bee**  
(*Nomada armata*)  
©Steven Falk



**Gold-fringed mason bee**  
(*Osmia aurulenta*)  
©Will Hawkes







NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

# BUMBLEBEE

FILL IN THE BLANK BOXES OF THE BUMBLEBEE'S LIFE CYCLE

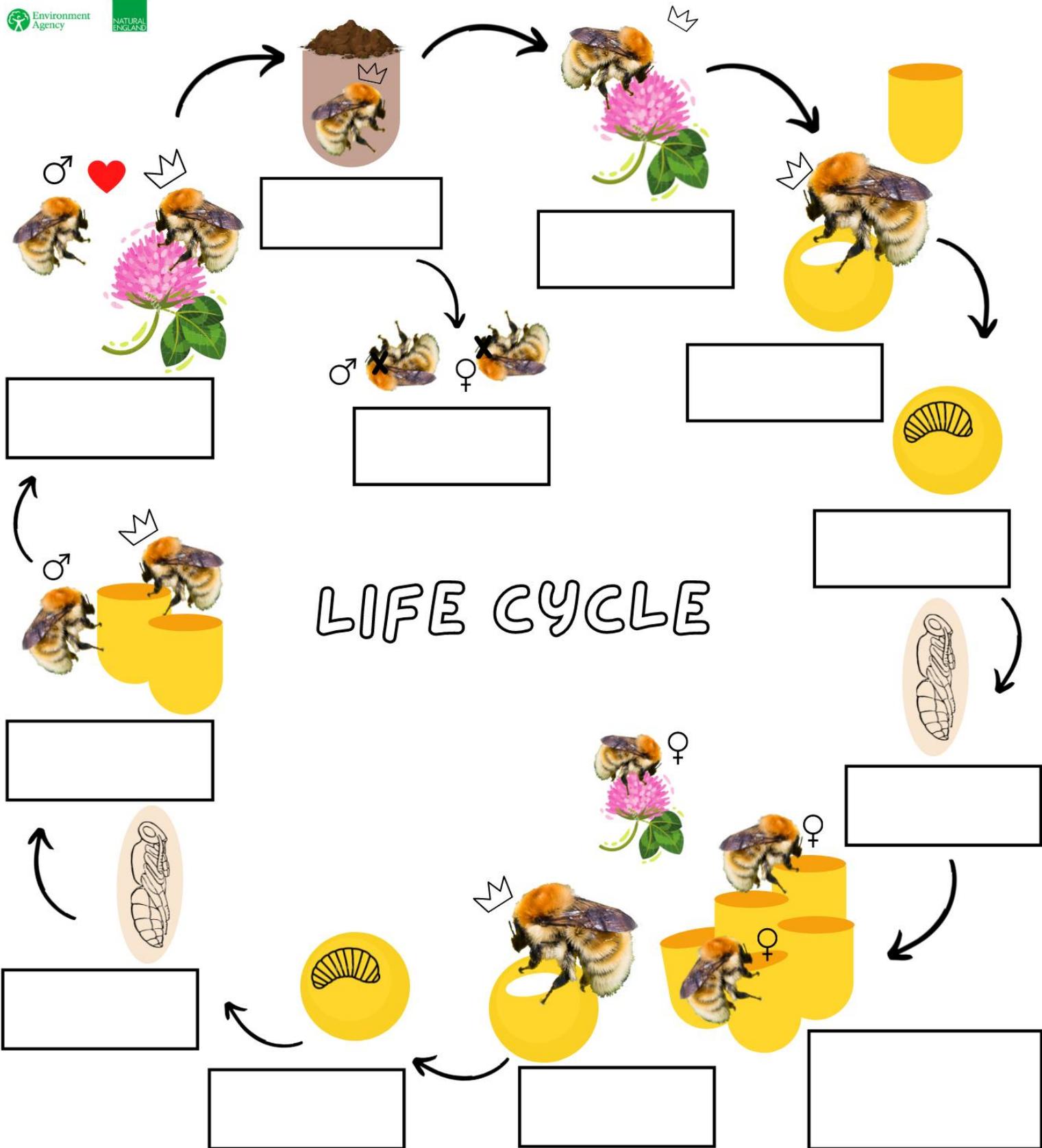
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## LIFE CYCLE

# SOLITARY BEE

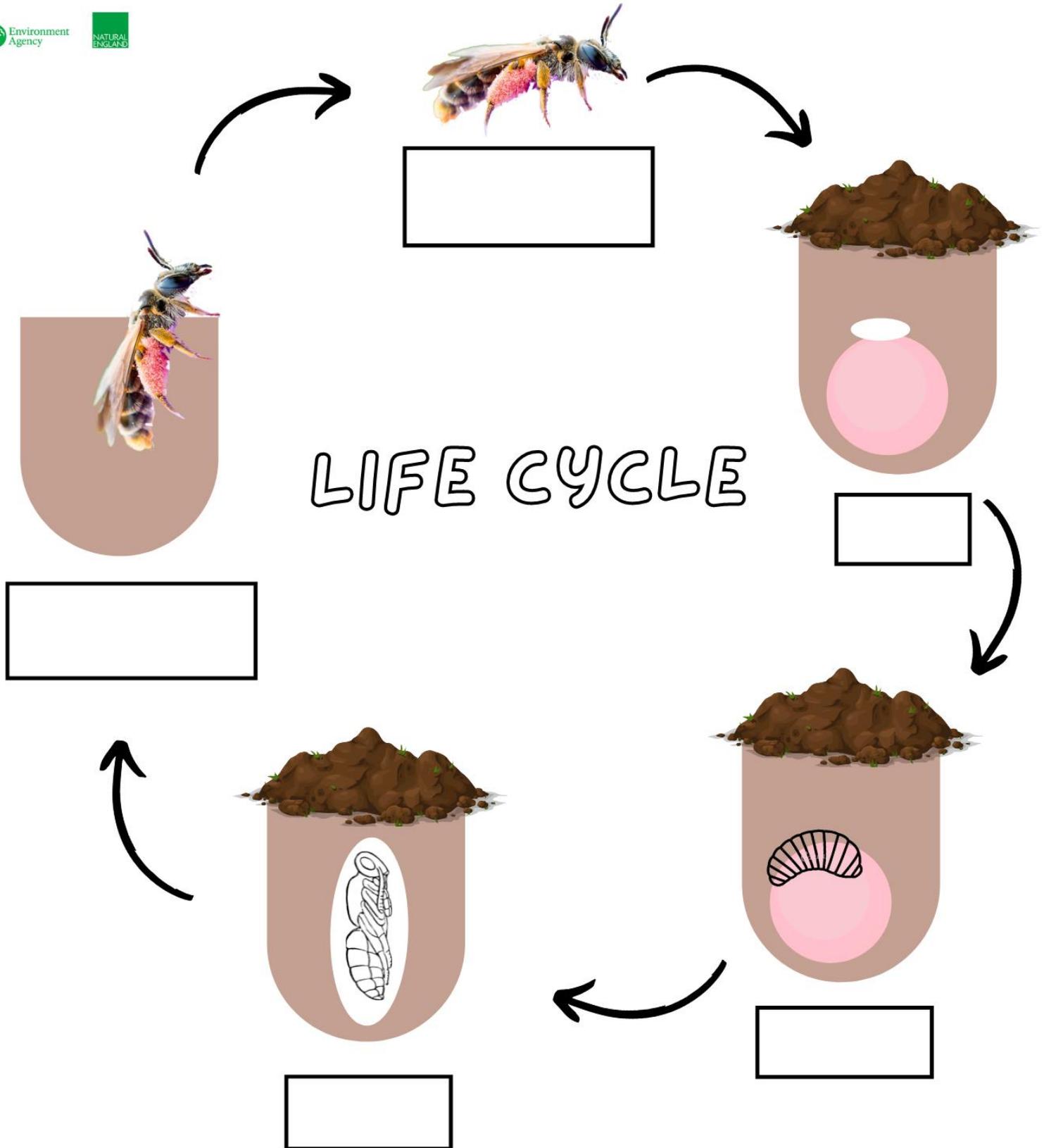
FILL IN THE BLANK BOXES OF THE SOLITARY BEE'S LIFE CYCLE

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# SOLITARY BEE

FILL IN THE BLANK BOXES OF THE LARGE SCABIOUS BEE'S LIFE CYCLE

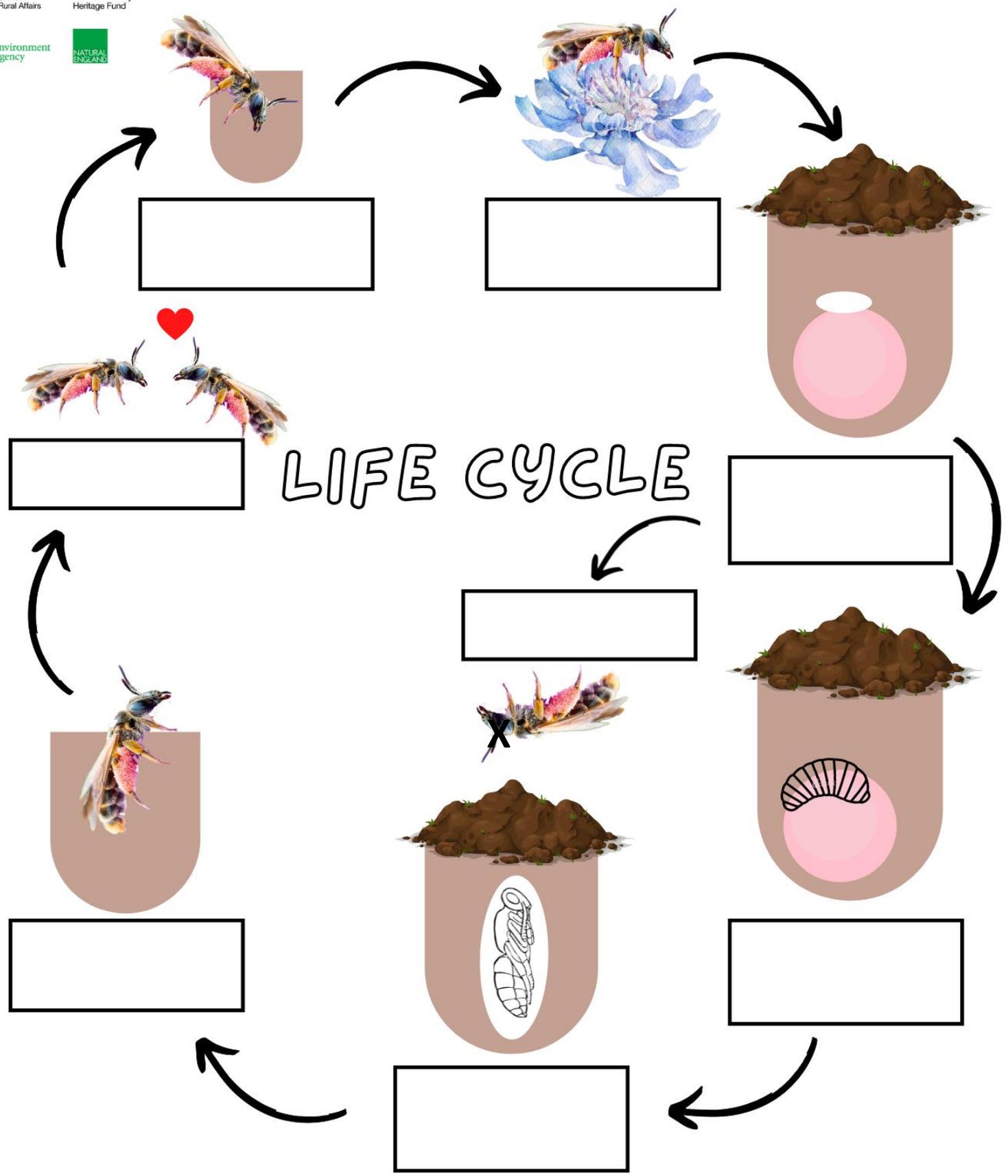
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**Ashy Mining Bee**  
(*Andrena cineraria*)  
©Steven Falk



**Pantaloen Bee**  
(*Dasypoda hirtipes*)  
©Will Hawkes



**A single, dispersed solitary bee nest**  
©Suzanne Burgess



**An aggregation of solitary bee nests**  
©Scarlett Weston



**Silvery Leafcutter Bee**  
(*Megachile leachella*)  
©Scarlett Weston

<https://vimeo.com/433600933>  
[www.youtube.com/watch?v=n09xE5SGq9M](http://www.youtube.com/watch?v=n09xE5SGq9M)



**Wool Carder Bee**  
(*Anthidium manicatum*)

©Will Hawkes

<https://vimeo.com/443854112>

<https://www.youtube.com/watch?v=hPVRw04nvqk>



**Hairy-footed Flower Bee**  
(*Anthophora plumipes*)

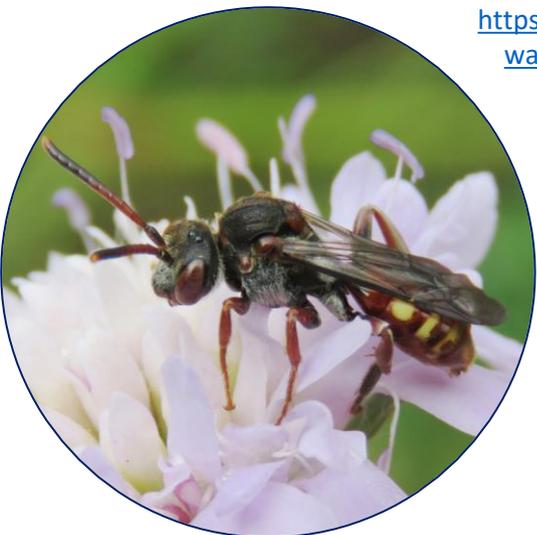
©Steven Falk



**Gold-fringed Mason Bee**  
(*Osmia aurulenta*)

©Scarlett Weston

<https://www.youtube.com/watch?v=5tSvPcSKHMk>



**Armed nomad bee**  
(*Nomada armata*)

©Steven Falk



**Host - Large Scabious Mining Bee**  
(*Andrena hattorfiana*)

©Will Hawkes

<https://www.youtube.com/watch?v=JiTjRv7sJkg&t=34s>

A stylized illustration of a bee with a black and yellow body and white wings, flying from right to left. A dashed line indicates its path. Below the bee is a variety of colorful wildflowers, including red poppies, yellow daisies, purple thistles, and white daisies, all on green stems with leaves.

**Wonderful Wildflowers**



NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

# TONGUE TWISTER

Try saying this over and over again, getting faster each time:

**BUSY BUZZING BUMBLE BEES BUZZED BUSILY.**

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Different species of bee have d\_\_\_\_\_t length tongues.

Some bees have sh\_\_t tongues and some have l\_\_g tongues.

B\_\_\_ use their tongues to drink the sugary nectar from wildf\_\_\_\_s.

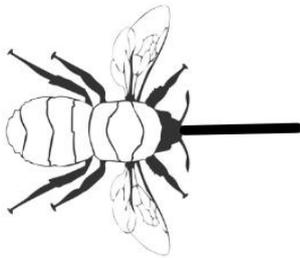
Bees choose which flowers to d\_\_\_k from based on their tongue length.

Some bees can drink from only one plant's flowers.

MEASURE THE BEES TONGUES...

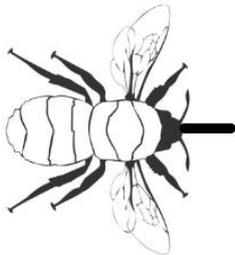
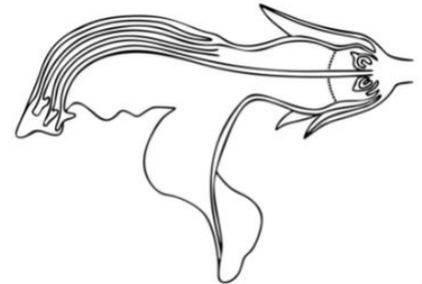


AND MATCH TO THE SAME LENGTH FLOWER.



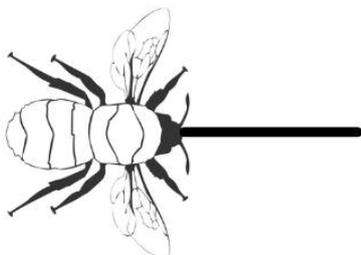
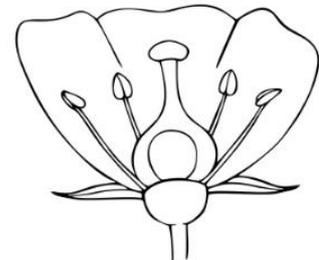
mm

mm



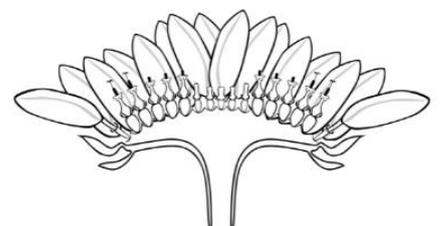
mm

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mm





NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

# WHY DO BEES NEED WILDFLOWERS?



**Bees** feed from the sugary **nectar** and powdery **pollen** of flowers. This gives them the **energy** they need to move and grow. If there were no wildflowers, bees would starve and die.

Different species of bees feed from different **flowers**. For example, Large Scabious Mining Bees only feed from Field **Scabious**.

There used to be lots of wonderful wildflowers growing in our countryside but sadly much of this **habitat** has been lost.

Without enough scabious flowers, the Large Scabious Mining Bees do not have enough food. They are now really **rare**.

Large Scabious Mining Bees still live in **Cornwall** and need more Field Scabious near their home to feed from.

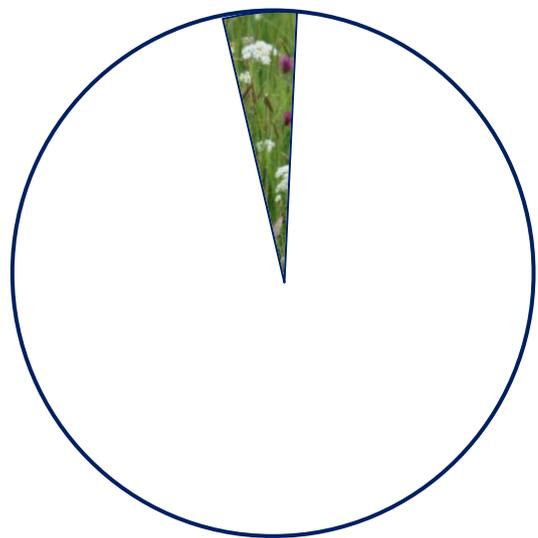
P	O	L	L	E	N	O	F	R
S	B	T	E	C	H	P	F	H
C	O	R	N	W	A	L	L	A
A	Y	A	F	U	B	H	O	B
B	B	R	O	R	I	R	W	I
I	E	E	R	O	I	A	E	T
O	E	N	E	R	G	Y	R	A
U	S	A	N	V	D	E	S	T
S	P	N	E	C	T	A	R	W

## WORDSEARCH

Now you know why bees need wildflowers, find the words in bold above.



**Long Horned Bee**  
(*Eucera longicornis*)  
©Will Hawkes



**Wildflowers**  
©Laura Larkin



**Field Scabious**  
©Will Hawkes



**Bird's-foot Trefoil**  
©Paul Hetherington



**London**  
©Matt Shardlow



**Agricultural fields**  
©Annie Spratt



**Penryn neat lawn**  
©Scarlett Weston



Gardening for bugs  
©Buglife

A central illustration shows a bee in flight, its path indicated by a dashed line. The bee is positioned above a variety of colorful flowers, including red poppies, yellow daisies, purple thistles, and white daisies. The background is a light green gradient.

## Why Pollination is the Bee's Knees





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DATE: \_\_\_\_\_

# BALANCED MEAL

Draw a balanced meal that you love to eat. Include three snacks, one healthy, savoury and sweet. Write out your list of ingredients. Then cross off ingredients dependent on pollinators and redraw your favourite meal without these.

## SHOPPING LIST

**Favourite Meal**

Healthy

Savoury

Sweet

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_

**What is left**

Healthy

Savoury

Sweet

**1 IN 3 MOUTHFULS OF OUR FOOD DEPENDS ON POLLINATORS**

A stylized illustration of a bee with a black and yellow striped body and white wings, flying from right to left. A dashed line indicates its path. Below the bee is a variety of colorful flowers including red poppies, yellow daisies, purple thistles, and white daisies, all on green stems with leaves.

**The Buzz about B-Lines**



NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

# B-LINES

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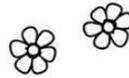
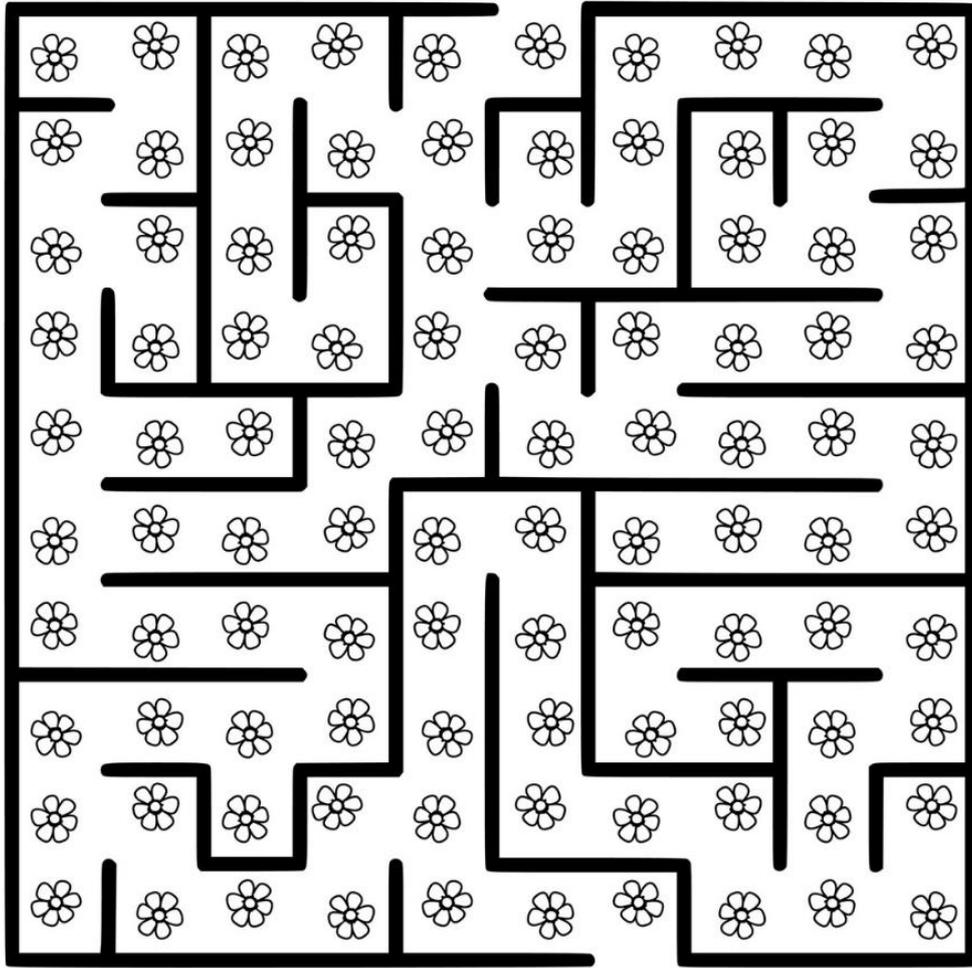
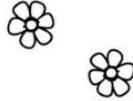
Help the bumblebee by colouring in the wildflowers that connect her habitat.

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## DID YOU KNOW?

You can help save the bees by planting wildflowers in your garden.



**B-Lines Animation**  
©Buglife

<https://www.youtube.com/watch?v=OXUYZdfqq1Q&t=10s>



**B-Lines & The Silly Giants**  
©Buglife

<https://youtu.be/wqg4NDx4T44>



**Get Outdoors**





NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

# GO GET IT!

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What colours, patterns, sounds, textures, smells or words do you associate with bees?

Choose 9 categories, then find as many other things as you can that would also fit into these categories.

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# MINIBEASTS

## IDENTIFICATION LOG SHEET

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Time:

Season:

Location:

Minibeast ID:

Number of legs:

Do they have wings?

Description:

Do they make a sound?

Alone or in a group?

Behaviour:

Drawing:

A central illustration shows a bee in flight, its path indicated by a dashed line. The bee is positioned above a diverse array of flowers, including red poppies, yellow daisies, purple thistles, and other colorful blooms. The scene is set against a light green background.

## Growing Guidance

## Help threatened bees and Sow a mini meadow:

Choose a Spring or Autumn day during a period of warmer weather, when the soil is neither too wet nor too dry.

Wildflowers love sunny, sheltered spots so make sure your patch is not too shaded or exposed.

**Lawn?**  
Mow the lawn very short, remove the cuttings and rake to expose ~50% of the bare ground.

**Flower bed?**  
Weed your flower bed and rake to loosen the soil, providing a level sowing surface.

**Wild area?**  
Clear a patch, digging up the roots of weeds that would outcompete your wildflowers.

**Container?**  
Bigger is better! Add drainage holes and stones along the bottom. Fill with peat-free compost.

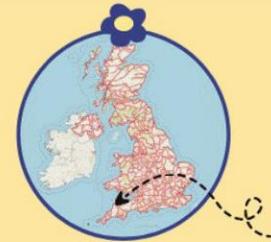
Nettles, docks or thistles thriving? Your soil is likely too nutrient-rich for wildflowers. Remove the top layer ~15cm).

Sprinkle your seeds evenly over the surface but don't bury as they need sunlight to grow.

 Keep watering and watch your wildflowers bloom.



 For use in gardens, do not plant in wider countryside.



B-Lines are a beautiful solution to the loss of pollinator habitat: a UK-wide network of wildflower-rich 'insect pathways'. Please let us know once you have created your mini meadow by adding your area to our B-Lines map.

[www.buglife.org.uk/our-work/b-lines/b-lines-south-of-england/](http://www.buglife.org.uk/our-work/b-lines/b-lines-south-of-england/)

### Get your garden buzzing

Take notice of your new garden visitors and be sure to tag us in any pictures.



### Wonderful wildflowers:

-  Choose bee-friendly flowers, such as Common Knapweed, Red Clover, Birds-foot Trefoils.
-  Use native, local provenance seeds so your flowers are perfect for UK pollinators.
-  Ensure your garden blooms from May-October to provide vital food across seasons.
-  For more ideas, visit: [www.buglife.org.uk/get-involved/gardening-for-bugs/](http://www.buglife.org.uk/get-involved/gardening-for-bugs/)



# Thank you for being part of North Cornwall B-Lines - Creating Pathways for Pollinators



We would like to thank our funders for making this project possible:

**Green Recovery Challenge Fund**



The  
National Lottery  
Heritage Fund



This pack has been produced as part of the North Cornwall B-Lines –  
Creating Pathways for Pollinators by Buglife.

For more information, and to find out about our other projects, visit:  
[www.buglife.org.uk](http://www.buglife.org.uk)



***Saving the small things that run the planet***

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