

North Cornwall B-Lines

Creating Pathways for Pollinators



Resource Pack for Primary Schools

Green Recovery Challenge Fund

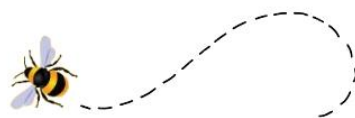


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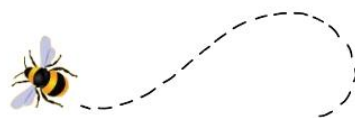


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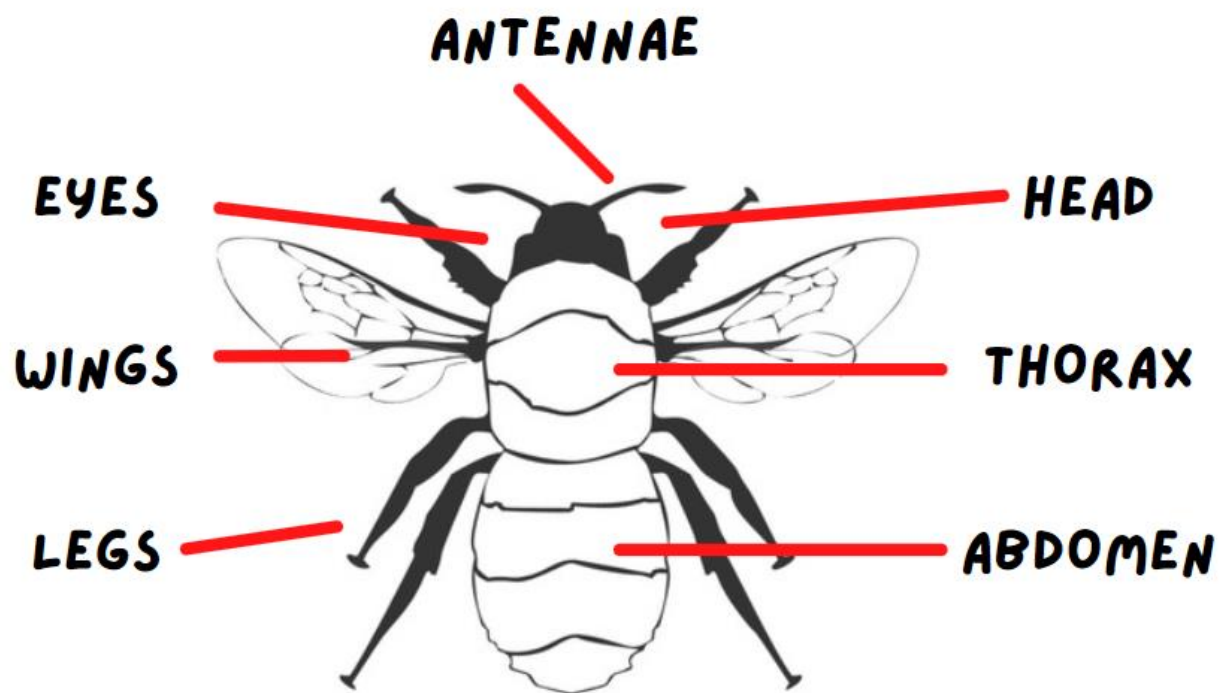
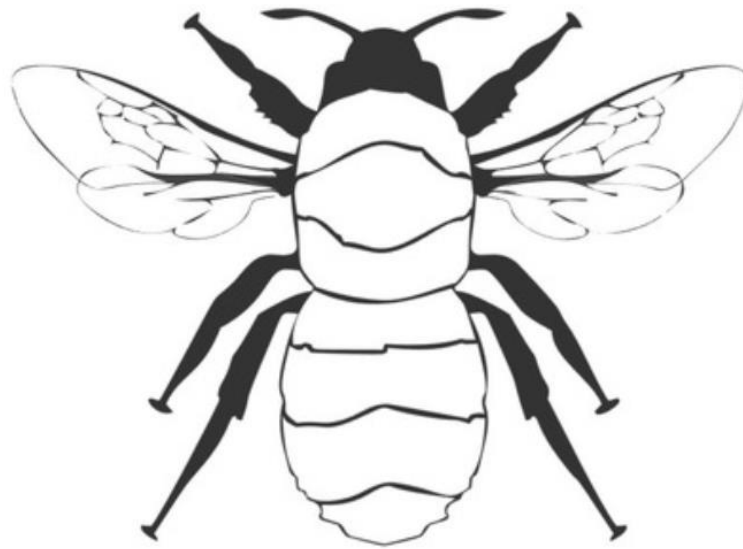


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A small illustration of a bee with a yellow and black striped body and translucent wings, flying towards the right. A dashed line indicates its path. Below the bee is a cluster of various flowers, including red poppies, yellow daisies, and purple bell-shaped flowers on tall stems. The entire scene is set against a light green background.

Biodiversity of Bees:





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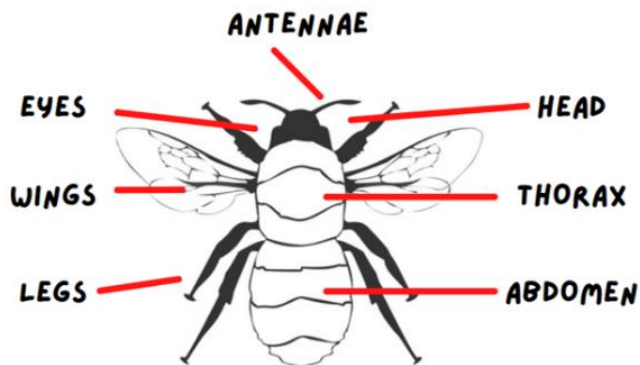
DATE: _____

BEE DRIVE

BE THE FIRST TO BUILD YOUR BEE

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.

NAME: _____ DATE: _____

BUMBLEBEES

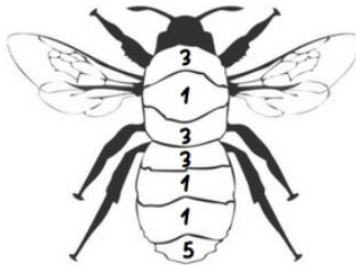
COLOUR THESE QUEEN BEES BY NUMBER AND LEARN THE SPECIES.

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**GARDEN
BUMBLEBEE**



**TREE
BUMBLEBEE**



**BROWN-BANDED
CARDER BEE**

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



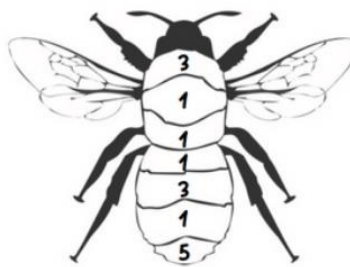
**COMMON
CARDER BEE**



**EARLY
BUMBLEBEE**



**RED-TAILED
BUMBLEBEE**



**WHITE-TAILED
BUMBLEBEE**



**BUFF-TAILED
BUMBLEBEE**

COLOUR ME IN

1

BLACK

2

ORANGE

3

YELLOW

4

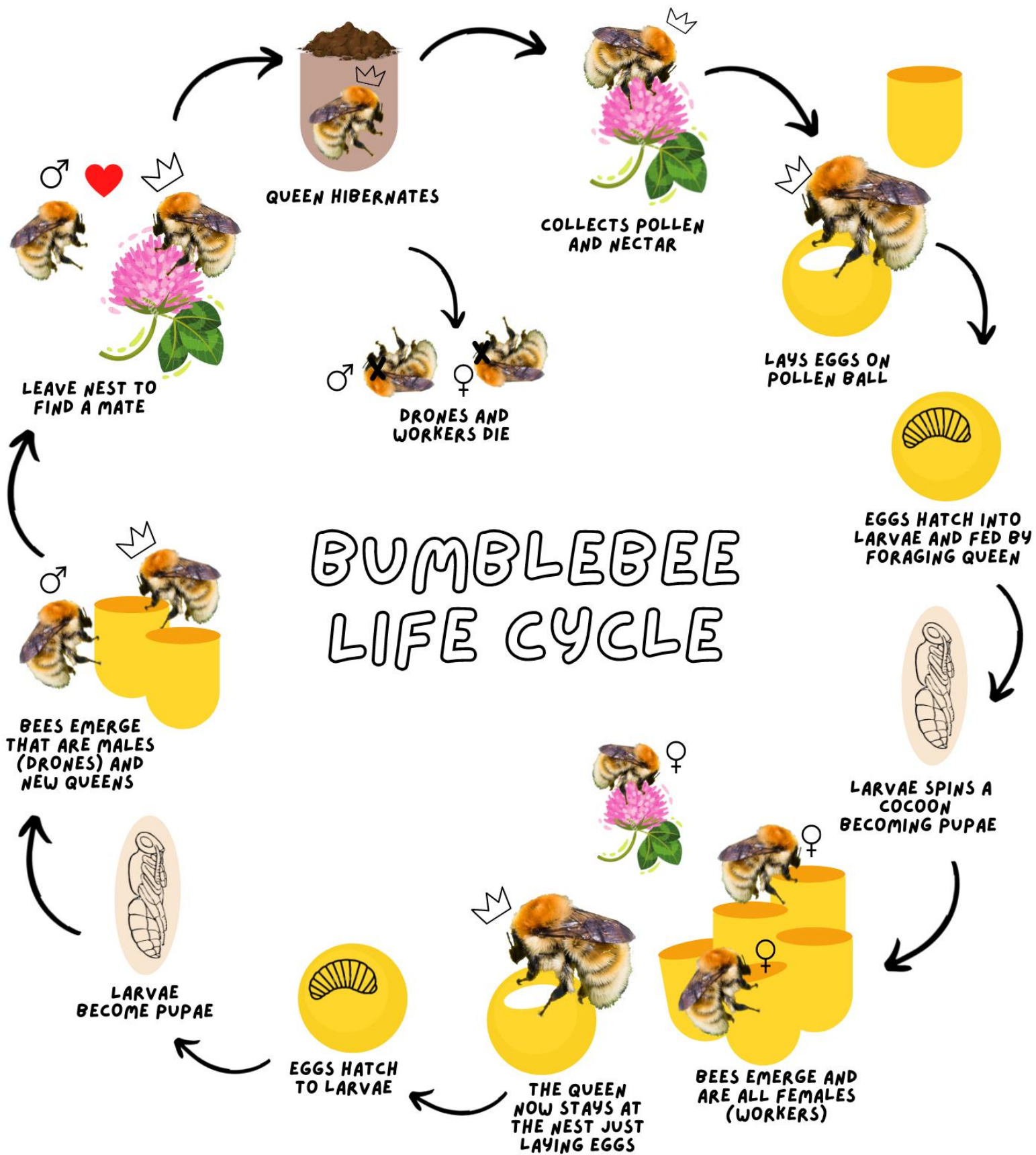
RED

5

WHITE

6

BROWN





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



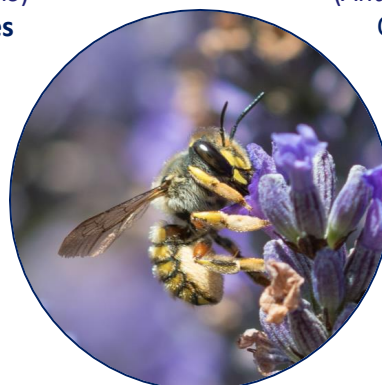
Brown-banded Carder Bee
(*Bombus humilis*)
©Will Hawkes



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



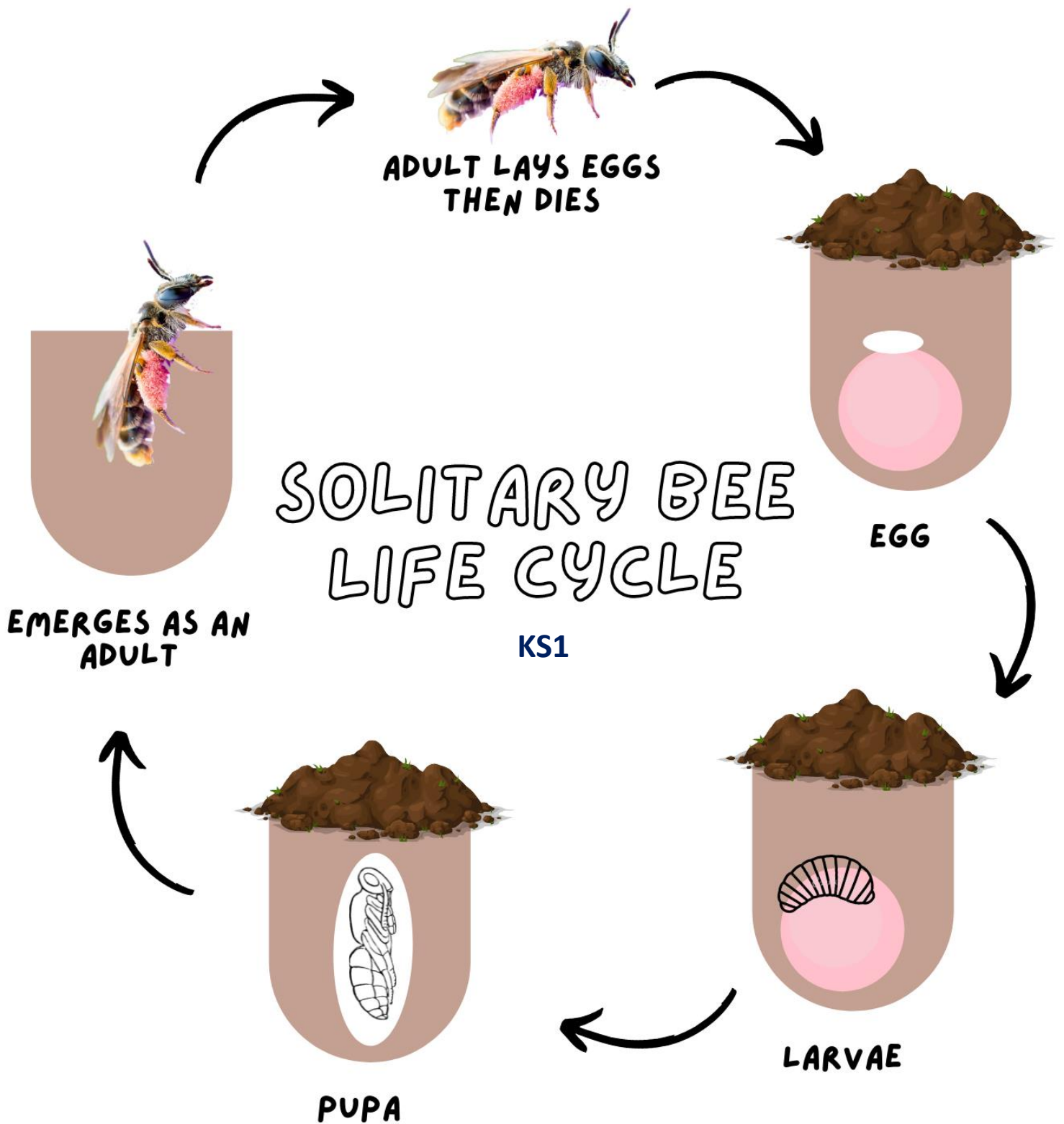
Pantaloön bee
(*Dasypoda hirtipes*)
©Will Hawkes

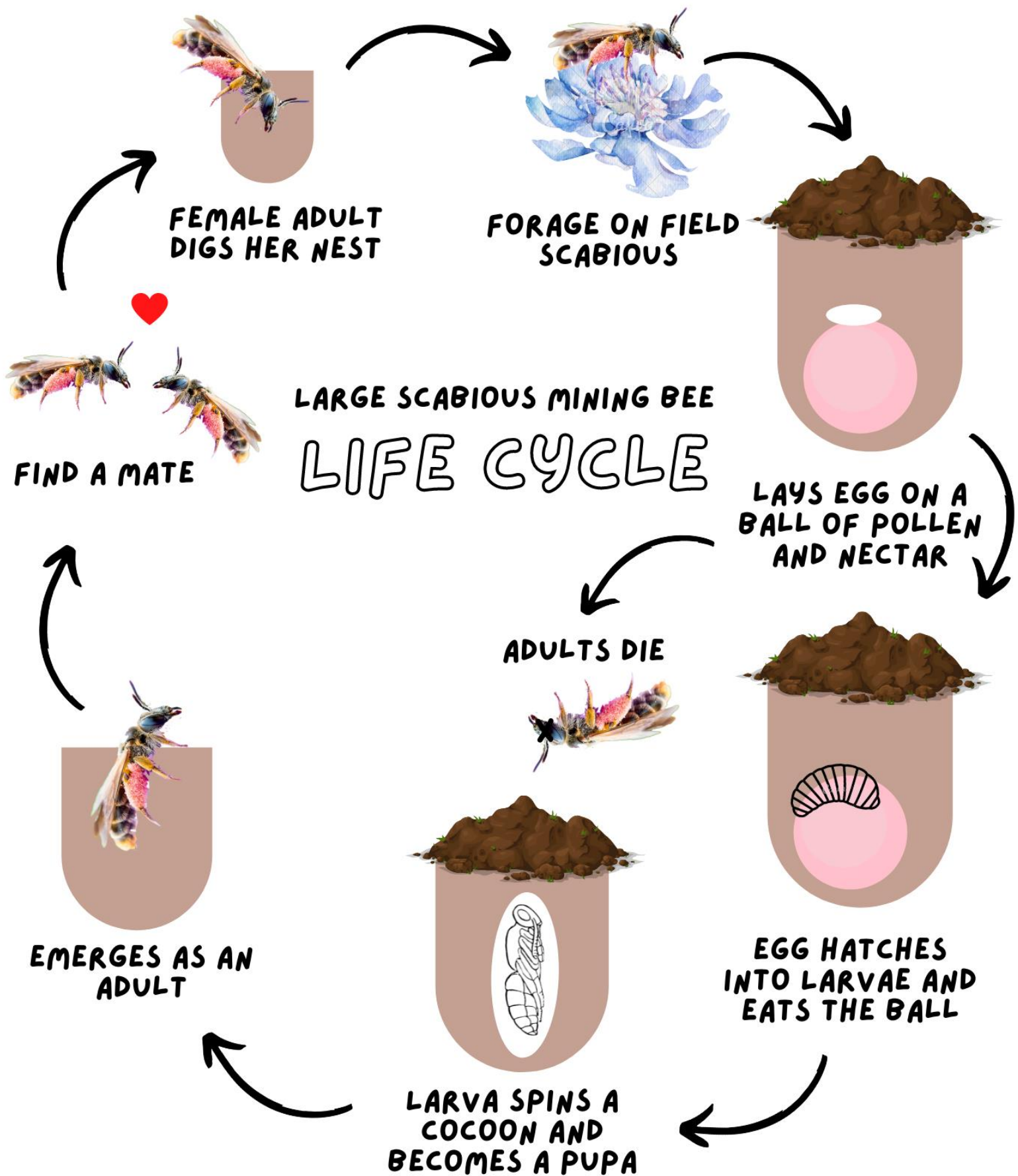


Armed nomad bee
(*Nomada armata*)
©Steven Falk



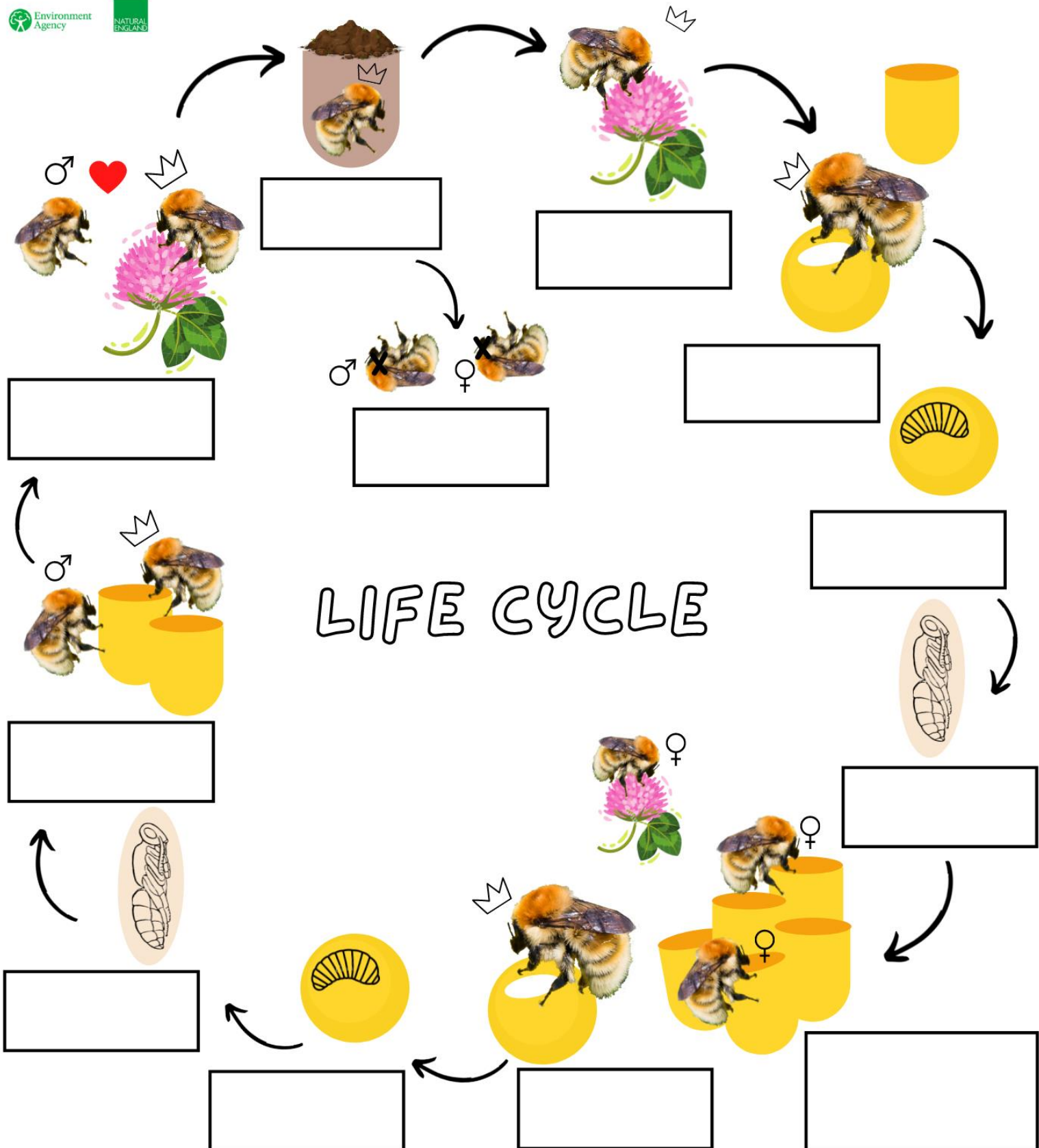
Gold-fringed mason bee
(*Osmia aurulenta*)
©Will Hawkes





BUMBLEBEE

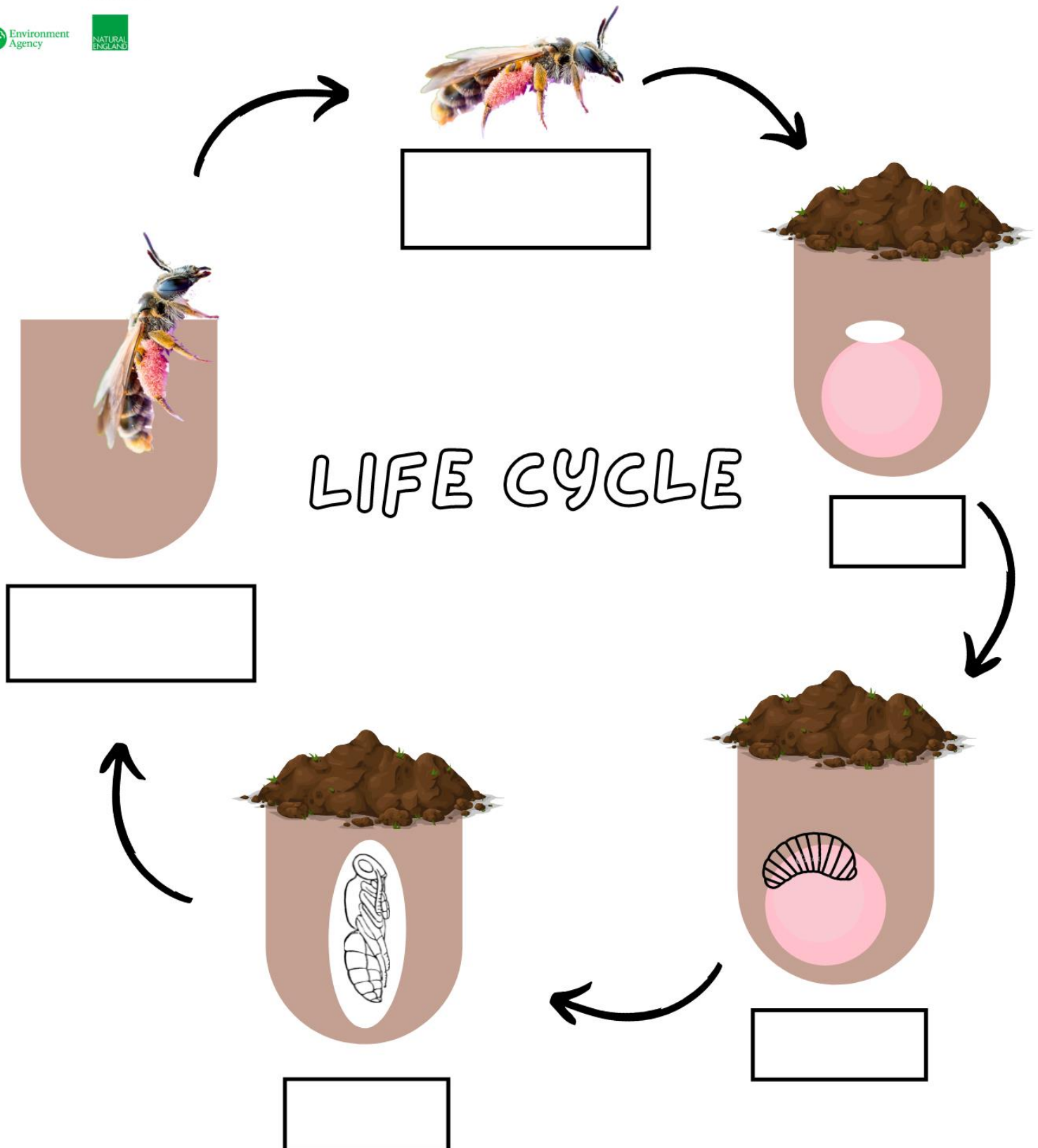
FILL IN THE BLANK BOXES OF THE BUMBLEBEE'S LIFE CYCLE



LIFE CYCLE

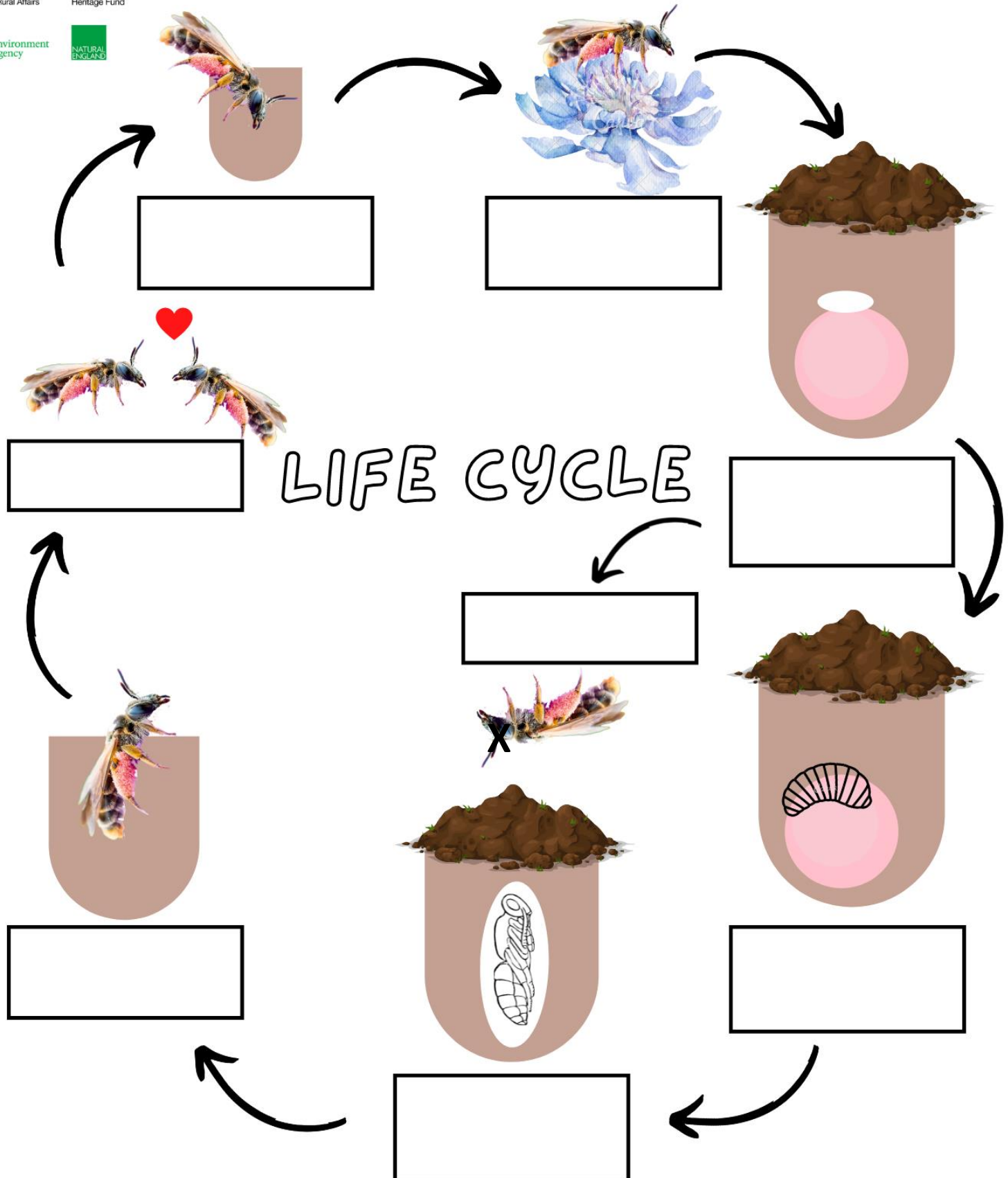
SOLITARY BEE

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



SOLITARY BEE

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





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



Pantaloön 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



Wool Carder Bee
(*Anthidium manicatum*)

©Will Hawkes

<https://vimeo.com/443854112>

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



Hairy-footed Flower Bee
(*Anthophora plumipes*)

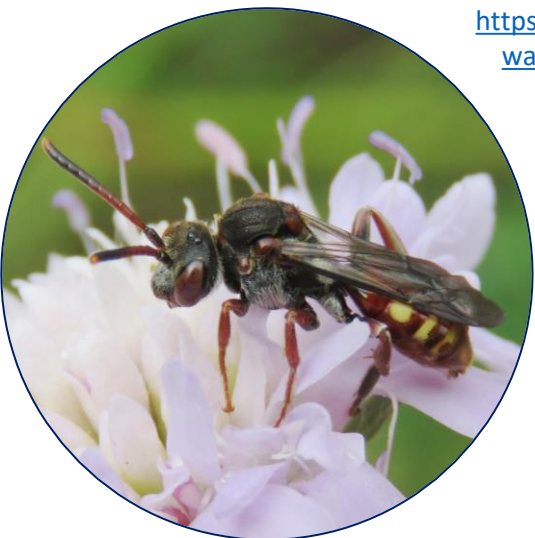
©Steven Falk



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 decorative illustration of various wildflowers, including red poppies, yellow buttercups, purple thistles, and white daisies, with a bee flying above them. The illustration is positioned above a dark blue rectangular box.

Wonderful Wildflowers





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TONGUE TWISTER

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

BUSY BUZZING BUMBLE BEES BUZZED BUSILY.

Different species of bee have d_____t length tongues.

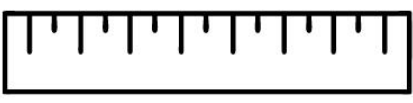
Some bees have sh__t tongues and some have l__g tongues.

B___ use their tongues to drink the sugary nectar from wildf____s.

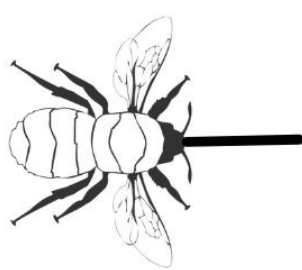
Bees choose which flowers to d___k from based on their tongue length.

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

MEASURE THE BEES
TONGUES...

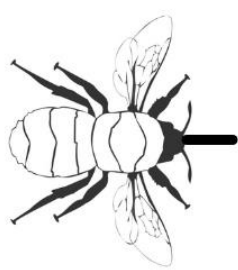
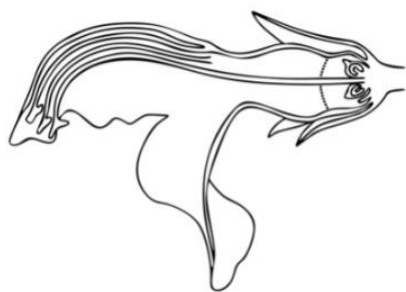


AND MATCH TO THE SAME
LENGTH FLOWER.



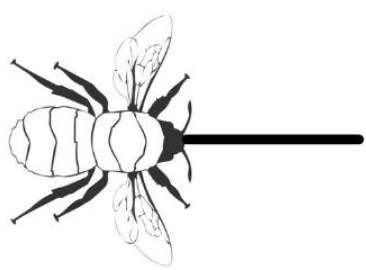
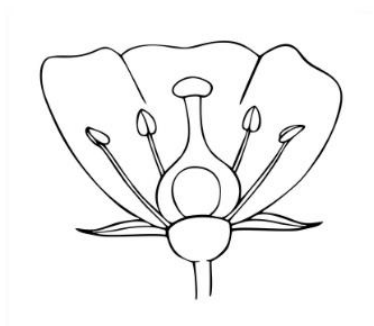
mm

mm



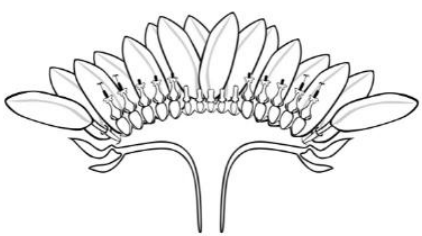
mm

mm



mm

mm





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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

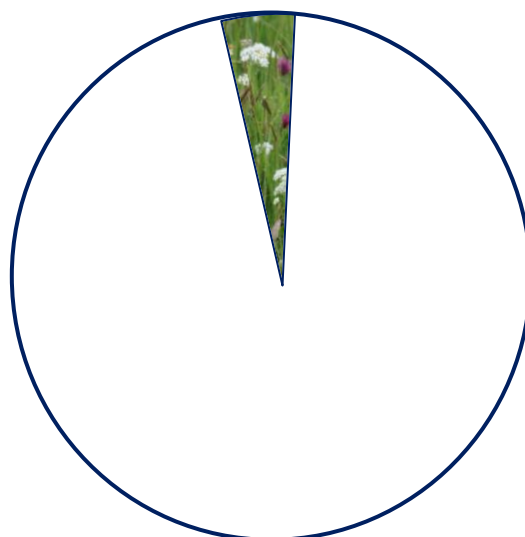
Now you know why bees need wildflowers, find the words in bold above.



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 small illustration of a bee with a yellow and black striped body and translucent wings is shown flying from left to right. A dashed line indicates its path. Below the bee is a row of various colorful flowers, including red poppies, yellow daisies, and purple bell-shaped flowers, all with green foliage.

Why Pollination is the Bee's Knees





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BALANCED MEAL

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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

What is left

Healthy

Savoury

Sweet

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

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

A decorative horizontal border featuring a variety of colorful flowers including red poppies, yellow daisies, purple thistles, and white daisies. A small bee is shown flying above the flowers, with a dashed line indicating its path.

The Buzz about B-Lines



B-LINES

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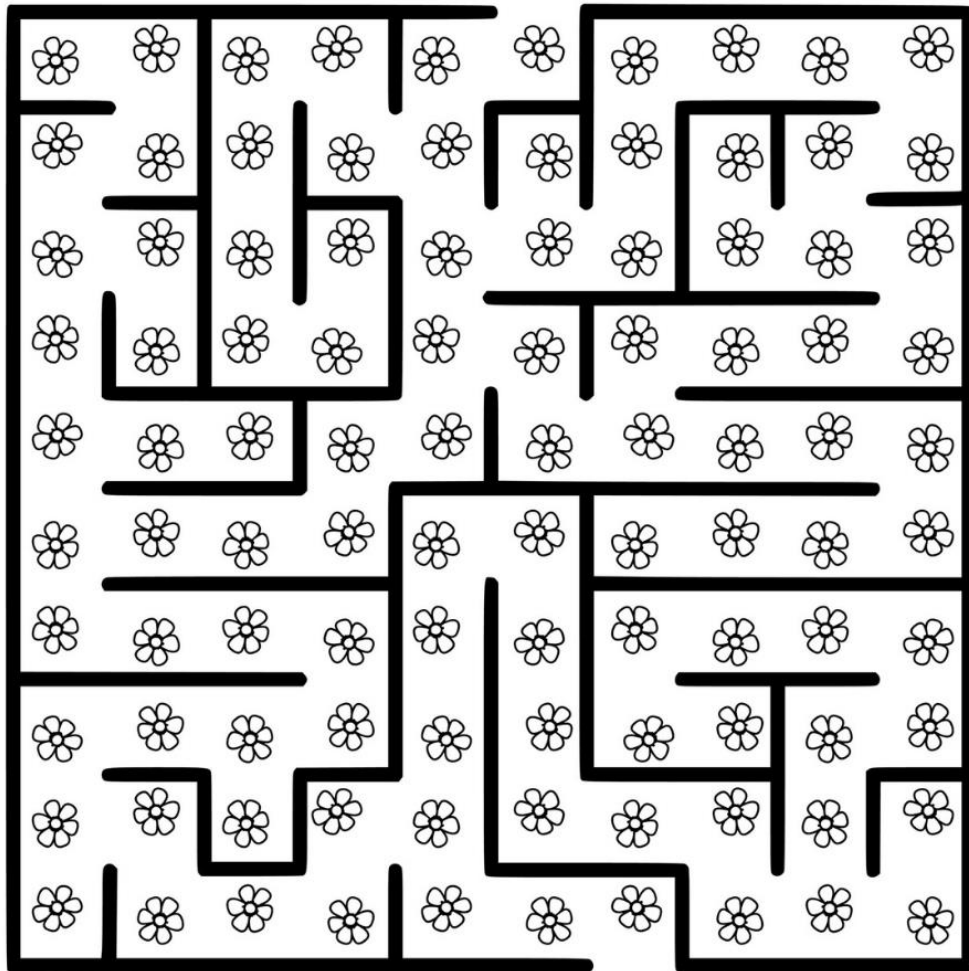
Help the bumblebee by colouring in the wildflowers that connect her habitat.

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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





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GO GET IT!

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 decorative horizontal border featuring a variety of colorful flowers including red poppies, yellow daisies, purple foxgloves, and pink thistles, with a bee flying above them.

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.

Lawn?

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

Wild area?

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

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



Keep watering and watch
your wildflowers bloom.



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

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

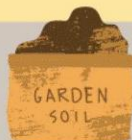
Flower bed?

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

Container?

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

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



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/

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/



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:

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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



Saving the small things that run the planet

Buglife - The Invertebrate Conservation Trust is a company limited by guarantee,
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| www.buglife.org.uk | @buzz_dont_tweet |