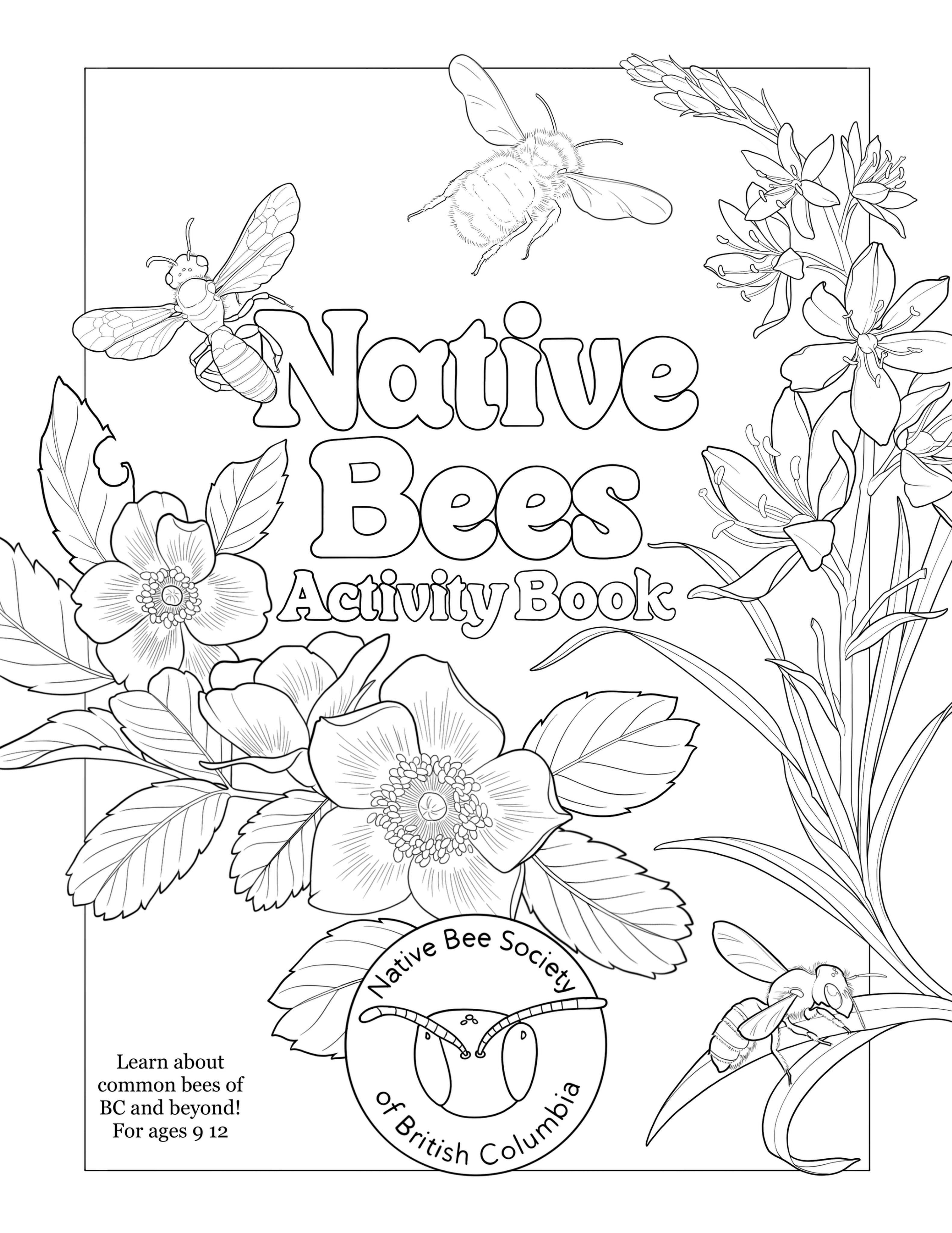
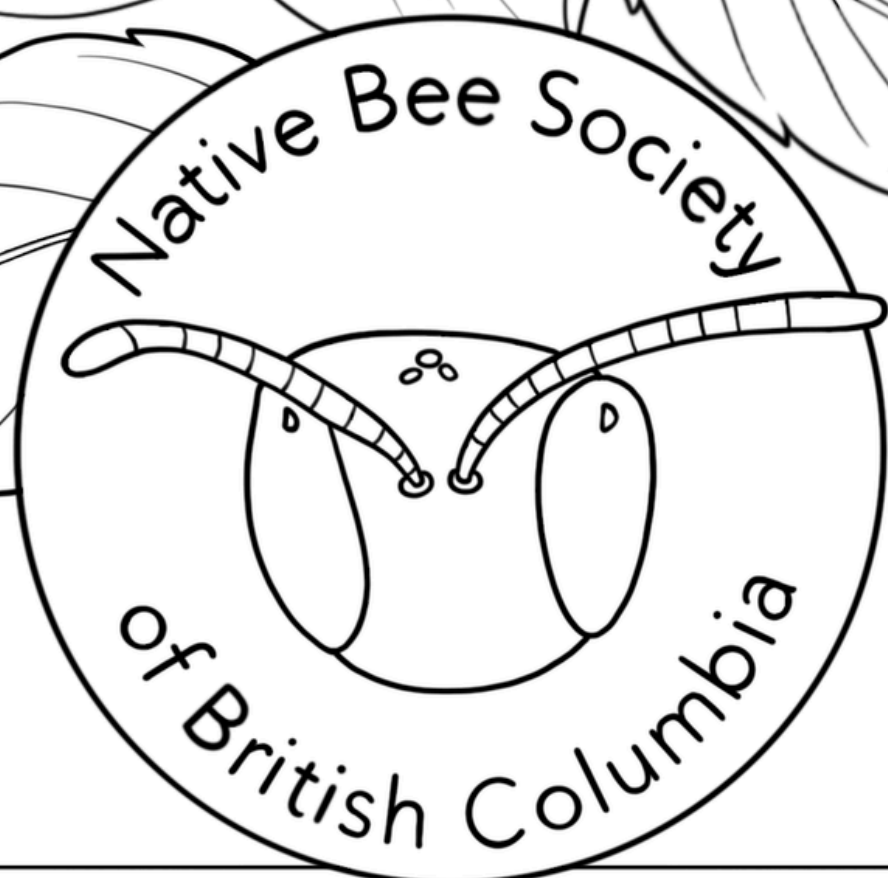


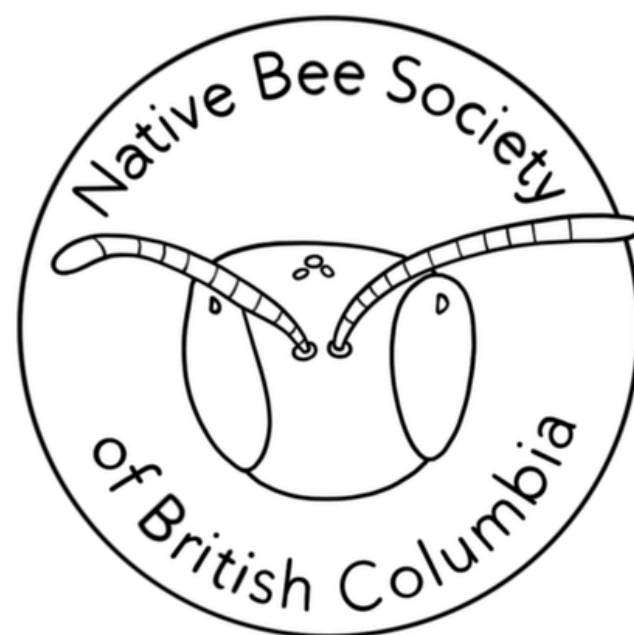


Native Bees

Activity Book



Learn about
common bees of
BC and beyond!
For ages 9-12



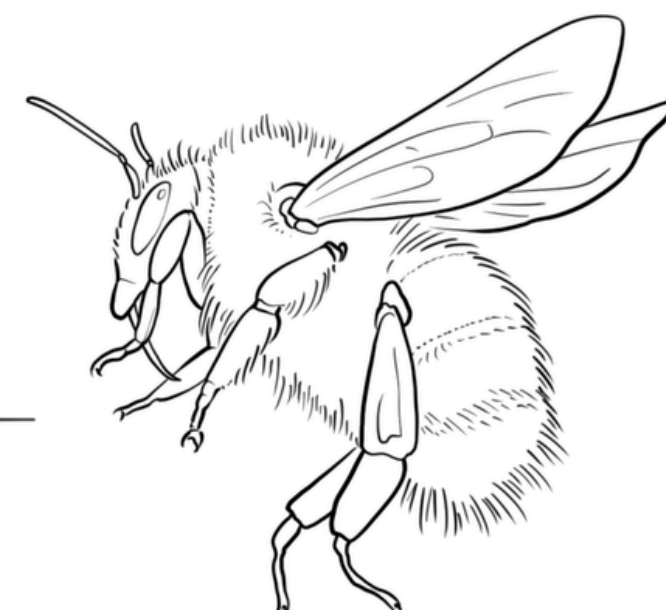
This book belongs to:

Name

Age

Favourite Pollinator

If lost please return to



GLOSSARY

You may encounter some unfamiliar words in this book; we're here to help! If you find anything confusing, hopefully this list has the answer for you.

ABDOMEN (noun) – the rear section of the bee

AGGREGATION (noun) – a large collection of nest sites closely packed together, usually in the ground

ANTHER (noun) – the part of a flower stamen that contains pollen

COMMUNAL (adjective) – a nest site that has only one entrance, but many solitary occupants with their own individual nests inside

CORBICULA (noun) – flat plate surrounded by a row of curved hairs for packing pollen into - usually on the hind leg of a bee

FILAMENT (noun) – the slender part of a stamen that supports the anther

FORAGE (verb) – the behaviour of a bee collecting pollen and nectar or (noun) the plants visited by bees / the collected pollen and nectar

FRASS (noun) – the excrement (poop) of insects

GENUS (noun) – a taxonomic word that describes a group of bees that are closely related (plural: genera)

GENERALIST (adjective) – a bee that will collect pollen from a diversity of different flowers

KLEPTOPARASITE (noun) – a species that relies on the pollen collected by another species to feed its offspring

MANDIBLES (noun) – the cutting mouthparts of a bee

OCELLI (noun) – three simple eyes on the top of the head of a bee, located above the antennae and between the compound eyes (singular: ocellus)

OVARY (noun) – the hollow base inside the pistil containing one or more ovules

OVULE (noun) – the part of the ovary that becomes the seed following fertilization

PISTIL (noun) – the female organs of a flower made up of the stigma and ovary

POLLEN (noun) – small, protein-rich particles containing half the genetic information needed to create a seed; produced by the anthers, transported by bees, and used to feed their young

POLLEN PROVISION (noun) – collected pollen (and nectar) placed by a bee in the nest for the larvae to eat as they grow

POLLINATION (noun) – the transfer of pollen of one plant to the reproductive parts of another plant of the same species; some plants self pollinate

SCOPA (noun) – the specialized hairs on a bee for carrying pollen

SEPAL (noun) – typically green and leaflike, this part of the plant holds the base of the petals and protects a bud before it blooms

SPECIALIST (adjective) – a type of bee that uses the pollen of only a small group of plants to feed its larvae

SOCIAL (adjective) – bees that live in a family group with a queen and workers, like bumblebees

SOLITARY (adjective) – bees that live and nest alone

STAMEN (noun) – the male reproductive organ of a flower, typically made up of a pollen-containing anther and a filament

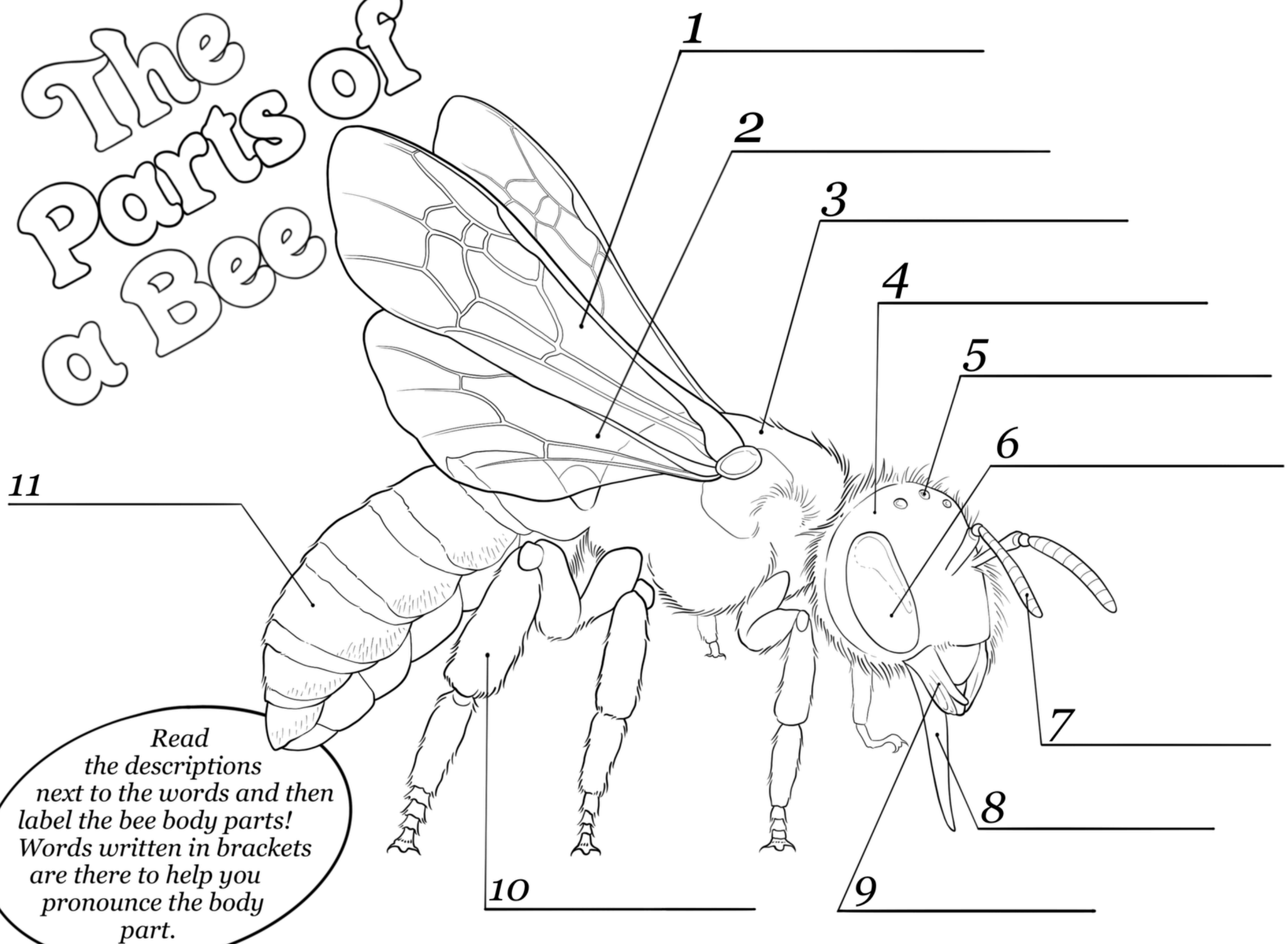
STIGMA (noun) – the part of a pistil that receives pollen, resulting in the creation of a seed

TARSAL SEGMENTS (noun) – the last 5 segments of a bee's leg

TAXONOMY (noun) – the system by which we organize different types of living things

THORAX (noun) – the middle segment of the bee, where the wings and legs attach

The Parts of a Bee



OCELLI (oh-cell-eye) - Three small eyes that form a triangle near the top of a bee's head. These eyes are specialized to help them avoid predators, keep track of the time of day, and act like a compass to help them navigate.

COMPOUND EYES - The 2 large obvious eyes on the head of a bee. These eyes see shapes and all sorts of colours because bees see in ultraviolet. For example they can't see red, but they can see amazing purples that our eyes can't see!

ANTENNAE - Between the eyes near the front of the bee's head, these straight and thin organs act like a bee's nose and ears. They can sense taste and smell, and even interpret sound!

HEAD - Part of the bee that has their eyes, mandibles, and adorable face!

THORAX - The large middle section of a bee. All the legs and wings attach to the thorax.

ABDOMEN - The third large body segment of a bee is the abdomen. For female bees this is where their stinger is. When observing bees you will see their abdomen moving in and out like an accordion; this does not mean it's going to sting you! Bee bodies are amazingly different from ours, and that is the way bees move air through their bodies to breathe.

LEGS - Bees have tibias and femurs like us, but their legs are very different from ours! Unlike us, bees can taste with their feet!

TONGUE - Bee tongues are made of many parts that fit together to make a tube to move nectar into the body. Bees stick their tongues out while they're feeding on flowers, and then fold them up under their heads while flying!

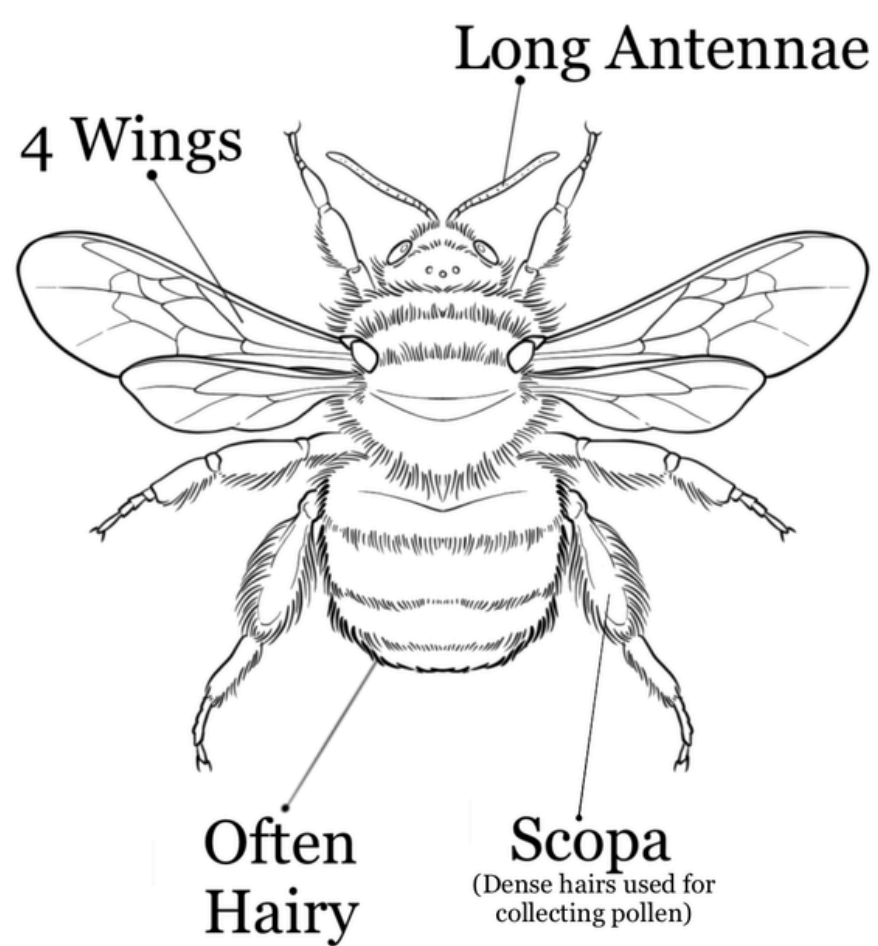
MANDIBLES - Similar to our teeth, mandibles attach to the face and are used for cool jobs like cutting and shaping materials such as mud or leaves for nesting.

FOREWINGS - This set of two wings are the larger wings closer to the bee's head.

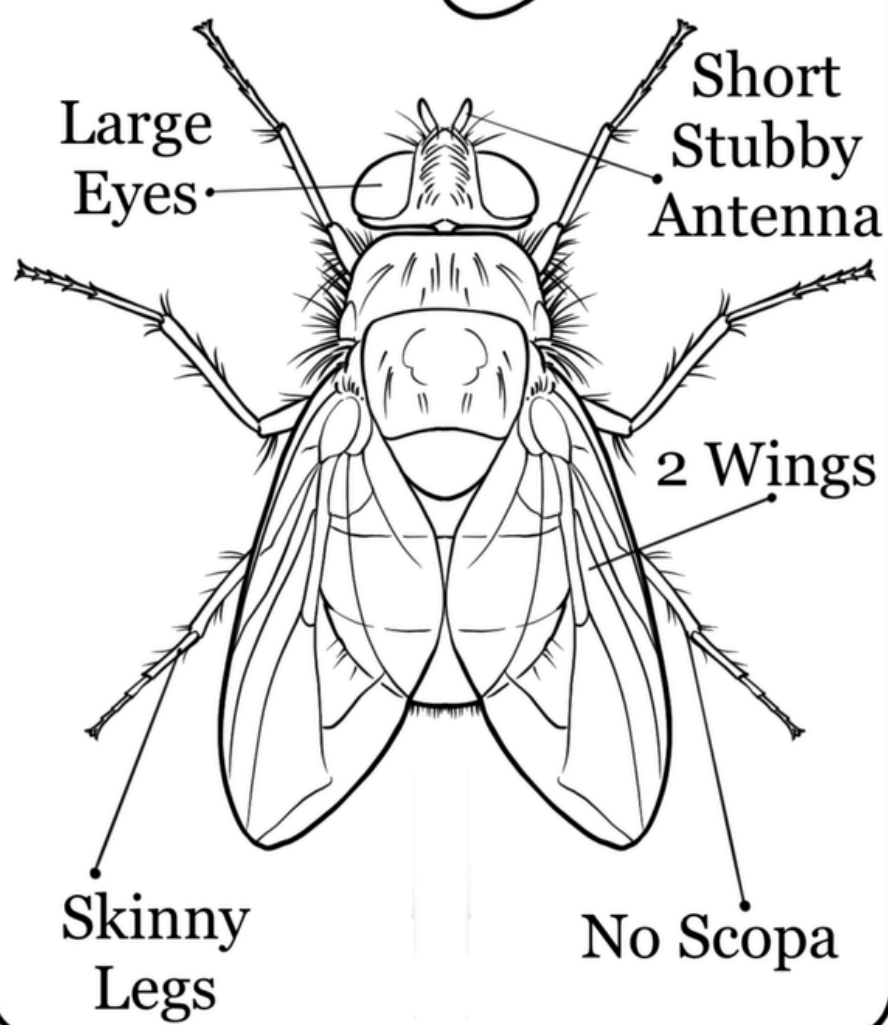
HINDWINGS - This set of two wings are the smaller wings that are closer to the bee's abdomen.

1. Forewings 2. Hindwings 3. Thorax 4. Head 5. Compound Eye 6. Ocelli 7. Antennae 8. Tongue 9. Mandibles 10. Legs 11. Abdomen

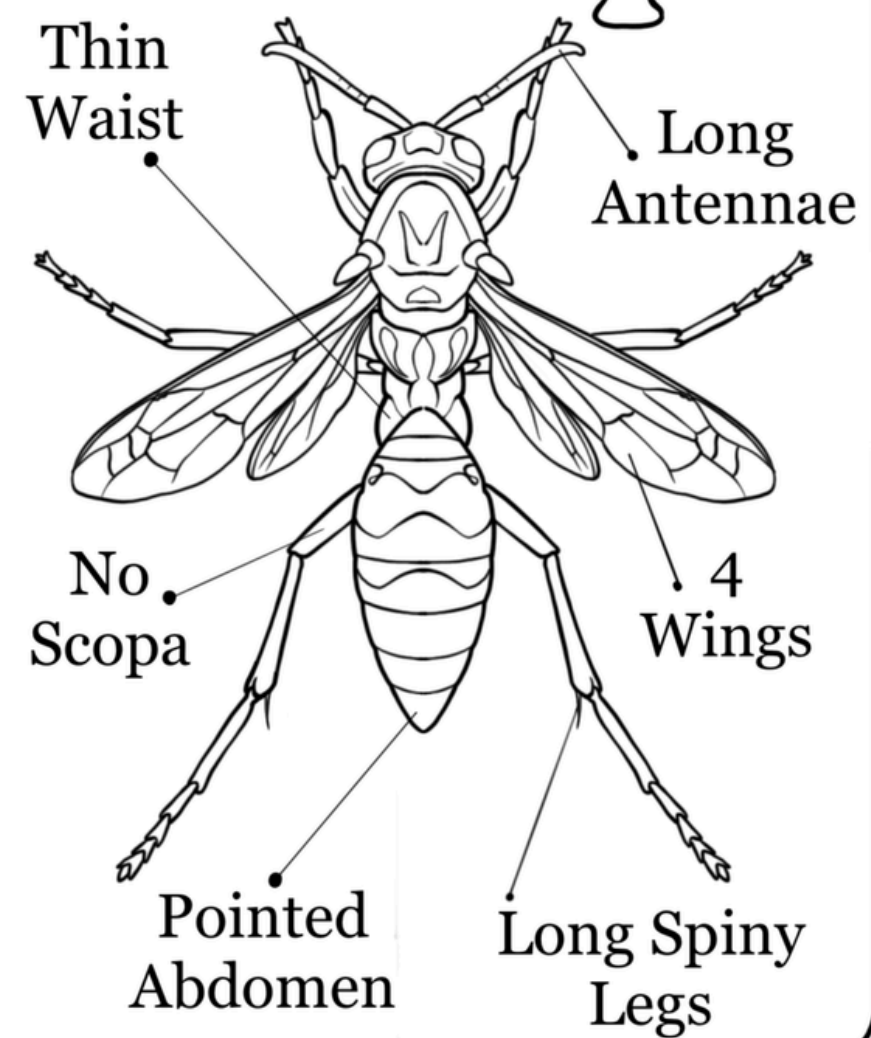
Bee



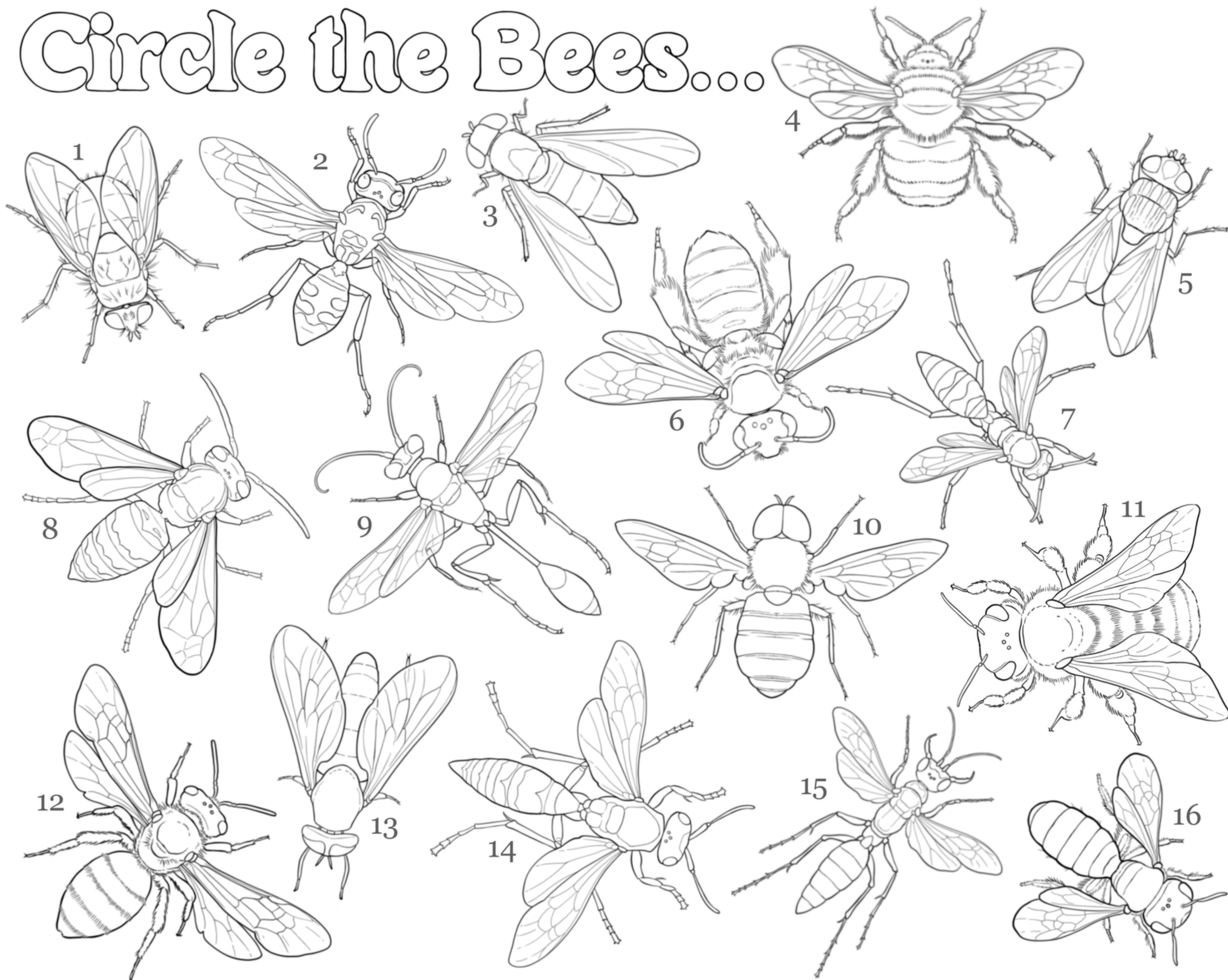
Fly



Wasp

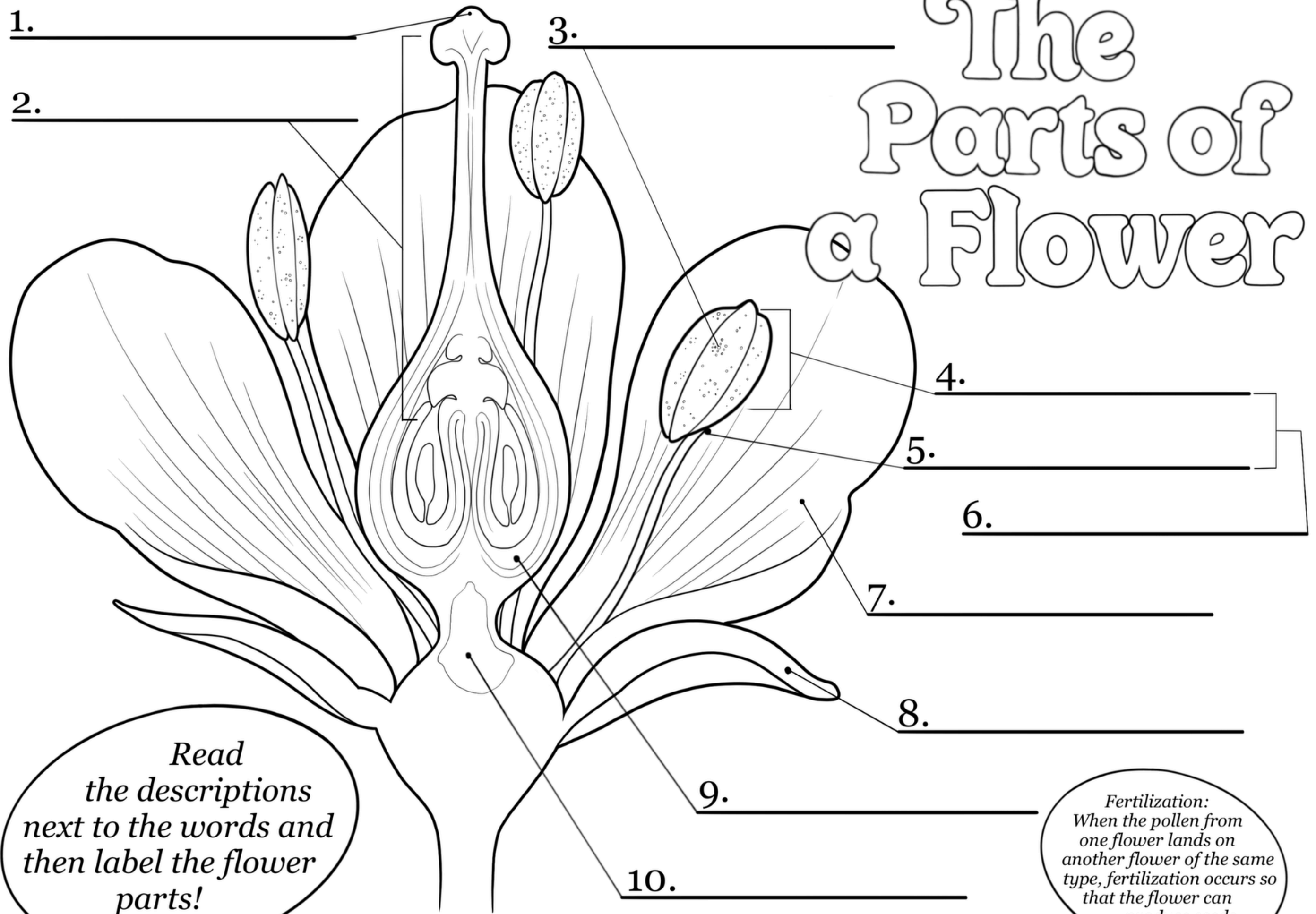


Circle the Bees...



1. Fly, 2. Wasp, 3. Fly, 4. Bee, 5. Fly, 6. Bee, 7. Wasp, 8. Wasp, 9. Wasp, 10. Fly, 11. Bee, 12. Bee, 13. Fly, 14. Wasp, 15. Wasp, 16. Bee

The Parts of a Flower



PETAL - Often the most colourful part of the flower, petals can be a rainbow of colours and attract pollinators to the flower.

STIGMA - The usually sticky tip of a flower's pistil that catches pollen grains during fertilization. It sits above the ovary and can move the pollen down to join the ovaries and start a seed.

SEPAL - The leaf-like parts of the flower that are underneath the petals when they are open.

FILAMENT - Connects to the anther and holds the pollen at an ideal position that makes it accessible to pollinators.

ANTHER - Produces and holds the pollen of the flower.

STAMEN - The filament and anther together make the stamen of the flower. This is the part of the flower that has pollen.

OVARY - When pollen from another plant reaches the ovary the flower will begin making seeds and/or fruit.

PISTIL - The part of the flower where reproduction happens. The pistil includes the ovaries and stigma.

POLLEN - A protein-rich and often powder-like substance made by flowers. Pollen has half the information needed to make a seed. Flowers use it in reproduction, and bees use it to feed their young!

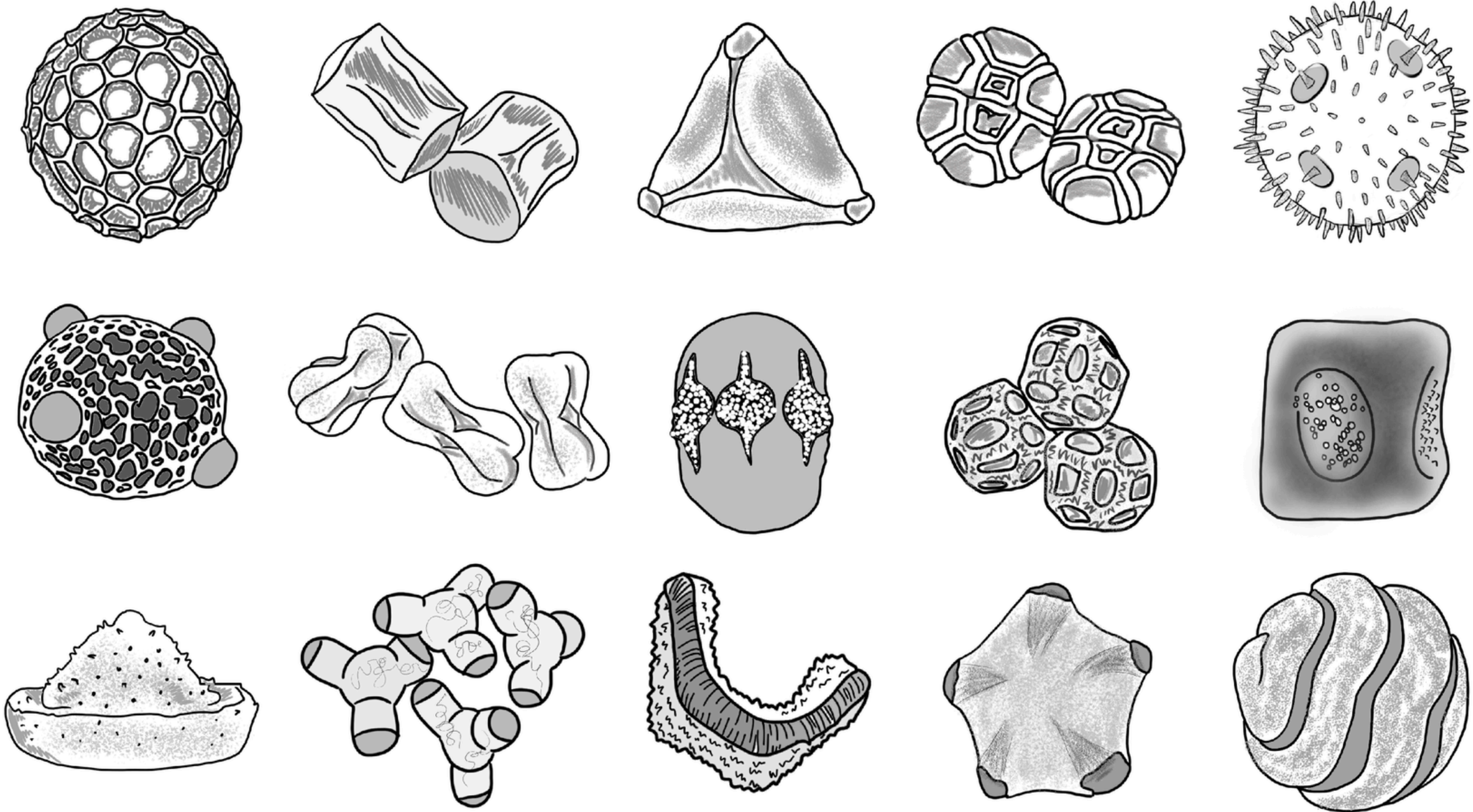
NECTARIES - Glands located beneath the ovary that make nectar.

1. Stigma 2. Pistil 3. Pollen 4. Anther 5. Filament 6. Stamen 7. Petal 8. Sepal 9. Ovary 10. Nectaries

Collecting Pollen

Pollen is as diverse as the bees that collect it and the flowers that provide it. Pollen comes in a wild variety of shapes and sizes from large stalked sticky pollinia to tiny dust-like particles too small to see with the naked eye. Bees have special hairs on their bodies called “Scopa” to help them collect and carry pollen back to their nests to feed their young.

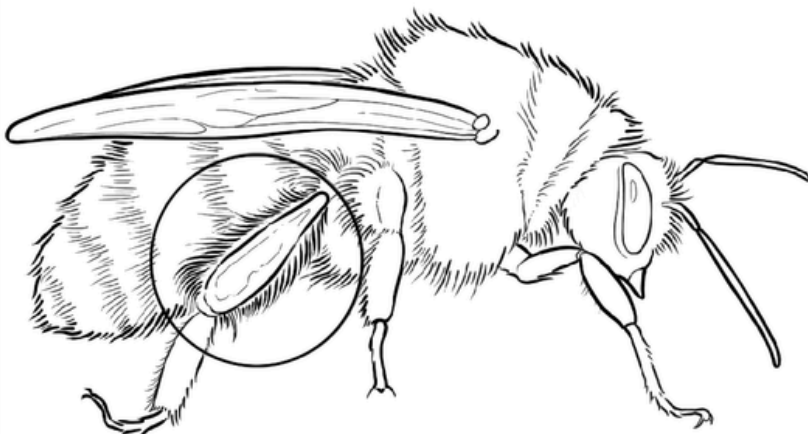
Fun fact:
Pollen is naturally negatively charged and since bees are positively charged they attract pollen onto their bodies with static electricity!



Different Types of Scopa

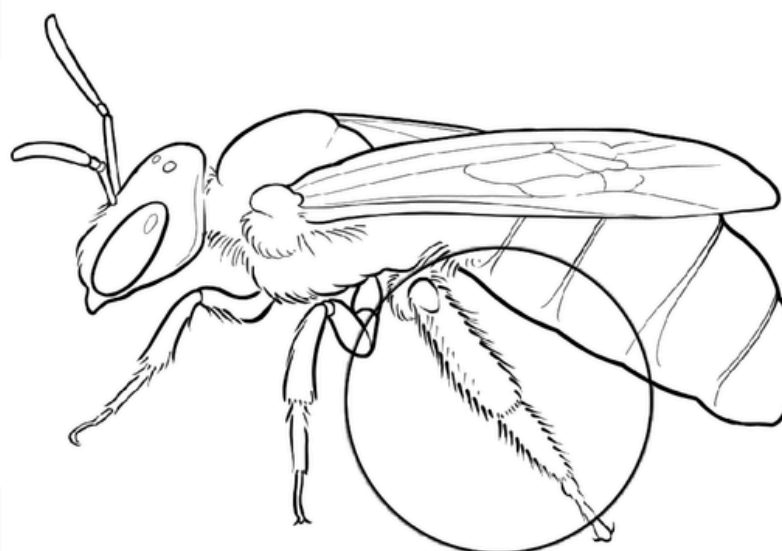
Different kinds of bees have different kinds of Scopa to help them collect all the amazing shapes and sizes of pollen grains.

Pollen Basket Scopa - “Corbicula”



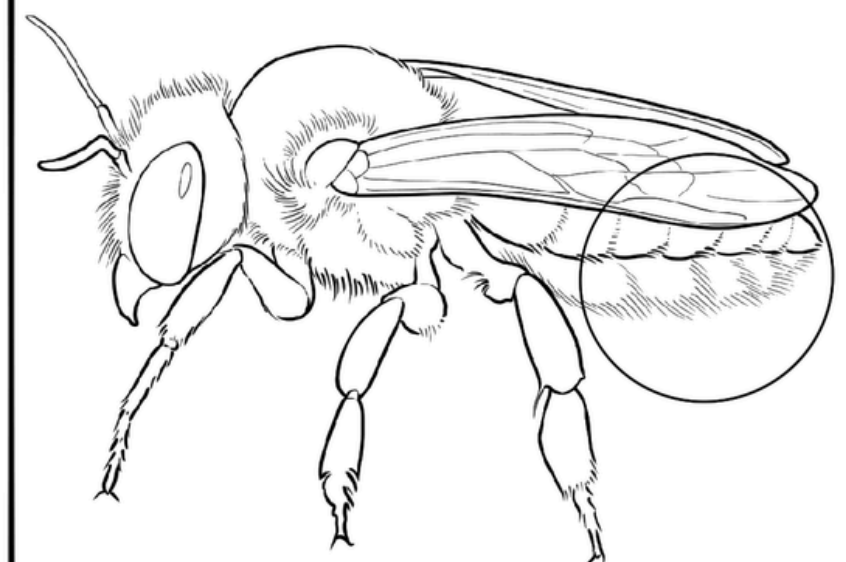
A special smooth spot on the hind legs of female worker honeybees and bumblebees that's surrounded by hairs - like a basket!

Leg Scopa



The majority of bees carry collected pollen on their hind legs, either down on their tibia and/or high up on their femur.

Belly Scopa



Some bees, like Leafcutter and Mason bees, have stiff scopal hairs for collecting pollen on their bellies!

1

Draw your plant here

Smear your pollen here

2

Draw your plant here

Smear your pollen here

3

Draw your plant here

Smear your pollen here

4

Draw your plant here

Smear your pollen here

5

Draw your plant here

Smear your pollen here

Pollen Press

Plant pollen comes in a range of amazing colours from vibrant yellows to deep purples! On this page you will experiment with pressing pollen to leave colourful marks on the paper.

Find flowers you would like to draw. In each section draw the plant including the flower, stem and leaves. Below that, take the pollen from the flower and smear it on the page. This is a good way to learn about plants you see often and the pollen they offer to our pollinator pals!

Be curious and observant when drawing your plant.

Are the leaves oval or more circular? Are the edges of the leaf jagged or smooth? Does the flower have many layers of petals, or just a few? Do the petals have notches or colour patterns on them?

Learning to focus on these details will help you identify and learn plants throughout your adventures!

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

Word Search

NEST - A space where bees live, raise their young, and store food. Nests can be built in the ground, inside plant stems, or in cavities.

SCOPA - Special hairs on bees that help them collect pollen to bring back to their nest.

POLLEN - A grainy substance produced by flowers that provides proteins and other nutrients to pollinators. Bees use it to feed their young.

POLLINATION - The process of transferring pollen from one plant to another plant of the same species to create seeds for future plants.

ANTENNA - A part of a bee's body - extending from the head - that is used to sense things in their environment.

NECTAR - A sugary substance created by flowers to attract pollinators. Some pollinators use nectar as an energy source.

SOLITARY - A type of bee who works alone, with each female building her own nest and raising her own young.

EUSOCIAL - A type of bee species that works collectively with their sisters and Queen to build a nest and take care of the brood (developing bees.)

CUCKOO BEE - A type of bee that doesn't build its own nest or collect pollen. Instead, it sneaks into other bees' nests and lays its eggs, letting the host bee raise its young on their stored food. A Cuckoo bee is also known as a Kleptoparasite.

NATIVE BEE - A species of bee that is indigenous to an area and not introduced or invasive.

COLONY - A grouping of eusocial bees working together to raise developing bees and build their nest.

INVASIVE - A non-native plant or animal that has a negative impact on the environment it is introduced to.

BUMBLEBEE - A type of social bee that is very fluffy and large. B.C. has over 35 species of bumblebees!

HONEYBEE - A type of eusocial bee that is used in agriculture to pollinate crops and produce honey. Although they are very common in B.C., they are from Europe and not native to North America.

Citizen Science

We often think of scientists as people in lab coats, but every day people can make a huge difference in the world of science! Citizen scientists are people, just like you, who gather information about the environment to learn more about it. Put on your scientist hat and head outside to look at flowers for bees!

1

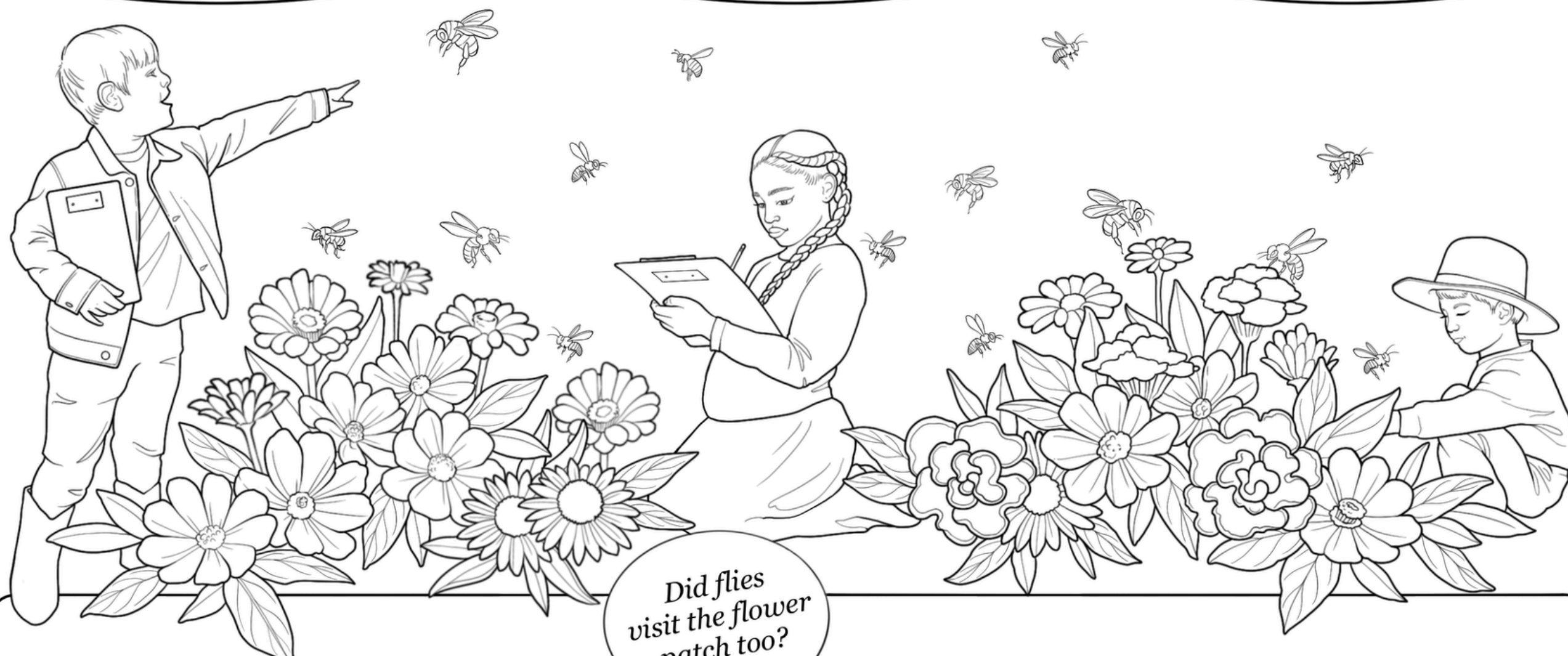
Find your first patch of flowers and fill out the information below. After five minutes write down how many pollinators you saw.

2

Find your second patch of flowers and fill out the information below. After five minutes write down how many pollinators you saw.

3

After you have visited two patches, make observations about how they were the same or different.



Flower Patch #1

Date/time:

Location:

Describe the flower patch (name of the flower if you know it, the colours of the flowers, the size of the flower patch):

How many bees did you see in five minutes?:

Observations about the flower patch and the pollinators:

Flower Patch #2

Date/time:

Location:

Describe the flower patch (name of the flower if you know it, the colours of the flowers, the size of the flower patch):

How many bees did you see in five minutes?:

Observations about the flower patch and the pollinators:

Did flies visit the flower patch too?

Did the same types of bees visit both patches?

Were there more bees or wasps visiting the flowers?

What were the similarities and differences between the flower patches?

Was one flower patch busier than the other?

Ceratina

Can you believe this is even a bee?
It's tiny, shiny, and not really fuzzy at all!
These Small Carpenter Bees chew their
nests out of soft materials inside plant stems
called pith - like blackberry canes.
These bees sometimes have a social
structure where there is a mother bee and
many daughter bees taking care of the nest.
They collect pollen and nectar from a
variety of plants, bringing it back to their
nests. Then they deposit a little ball of
pollen and an egg in the deepest nest
cell and work their way upward
from the bottom. She will mix
saliva with the pith to seal
in the eggs, then start
all over again.

Male Ceratina bees
have been seen protecting
the entrance by blocking it
with their bums!

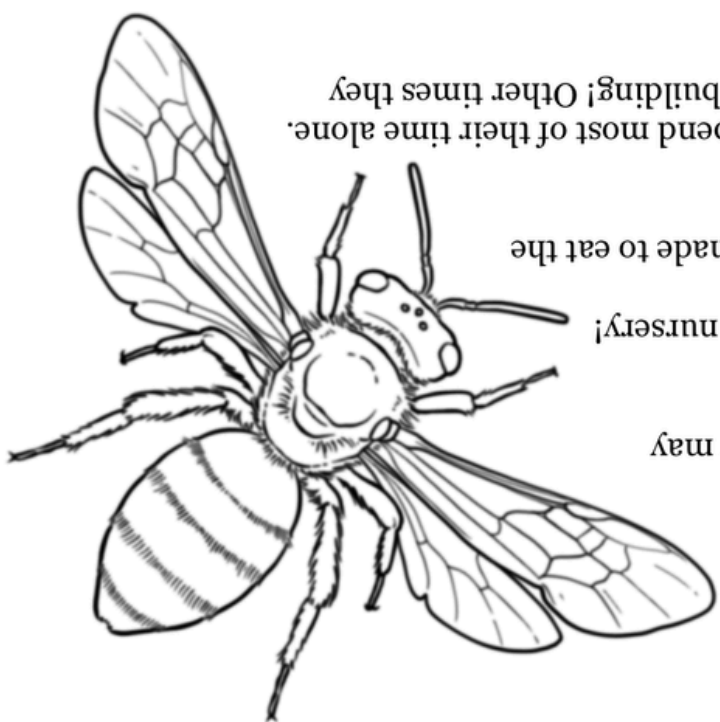
Ceratina on Cinqufoil flower

True or False

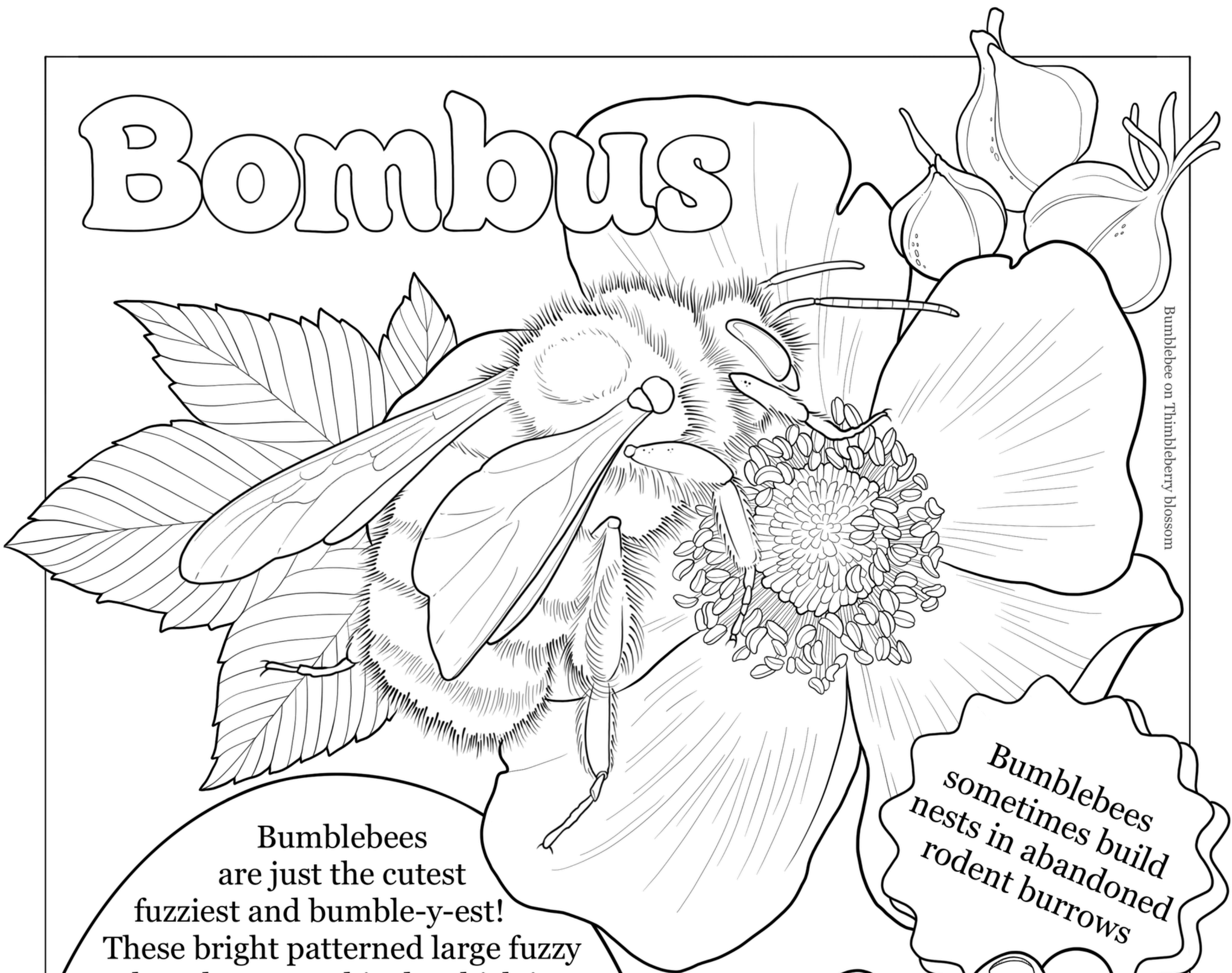
Circle your answer

1. Solitary bees lay about one egg per day T or F
2. Bees breathe through their butts T or F
3. All flowers are the same to bees T or F
4. Some leafcutter bees wrap their babies in leaves that they collect T or F
5. Some bees feed their babies poisonous pollen T or F
6. All bees live in hives buzzing with hundreds of bees T or F
7. Some bees live in hollowed out plant stems or holes T or F
8. Only female bees are capable of stinging T or F
9. Instead of getting their own food, some bees steal from other bees T or F
10. Bees see the same colours as we do T or F
11. Bees have five eyes T or F
12. Only female bees pollinate T or F
13. Bees use nectar for energy and pollen for protein T or F

1. TRUE Solitary bees are single moms! They are super busy building their nests, collecting pollen and nectar, and watching out for sneaky Cuckoo Bees. They can often only lay one egg per day, although some can lay more. Bees breathe through spiracles (holes) in their middle thoracic and last abdominal segments.
3. FALSE While lots of bees will use pollen and nectar from many flowers, some specialist bees are super picky eaters! They may only collect pollen from one kind of flower.
4. TRUE Leafcutter bees use leaves and flower petals to line their nest cells, making for a very cool and sometimes colorful nursery!
5. TRUE The death camas mining bee collects pollen from a poisonous plant, and her babies love it! If other species were made to eat the same pollen, their babies would die.
6. FALSE Social bees live in colonies with hundreds and sometimes thousands of bees! But solitary bees are different and spend most of their time alone. Sometimes they will have their own nest while sharing a nest entrance with other bees - sort of like an apartment building! Other times they make their nest away from others, like a nice house out in the countryside.
7. TRUE Some bees do live in stems and holes and are cavity nesters (no you won't find them in your teeth!) But the majority of bees (an awesome 70%) make their nests in the ground!
8. TRUE Only female bees have stingers, but don't worry - they only sting when they're very frightened! It is uncommon for bees, especially wild bees, to sting so don't be afraid.
9. TRUE Instead of preparing her own nest, a cuckoo bee will follow another bee home and do a sneak attack - laying her egg in the other bees nest! Hungry from the attack, she might even make a snack out of the other bee's larvae!
10. FALSE Bees see a different colour scale than we do. They see in ultraviolet which means they can see vibrant violets that we can not see and they are unable to see the colour red that we see!
11. TRUE Bees have two large compound eyes and three small ocelli eyes - that's five eyes! The large compound eyes see all the wild colours that we can't see. The ocelli eyes see shadows and light which helps bees see sneaky predators.
12. FALSE Both male and female bees are capable of pollinating. Female bees do the majority of pollination as they are looking for pollen and nectar for themselves and their offspring, whereas males typically visit flowers to feed themselves and accidentally pollinate in the process.
13. TRUE Nectar has carbohydrates for bees - similar to our bread or sugary treats! Pollen provides bees with protein just like we get from food like meat or tofu.



Bombus



Bumblebee on Thimbleberry blossom

Bumblebees
sometimes build
nests in abandoned
rodent burrows

Bumblebees
are just the cutest
fuzziest and bumble-y-est!
These bright patterned large fuzzy
bees have a corbicula which is
a flat plate on their hind leg surrounded
by a row of hairs - like a basket! They
pack their corbicula with a mix of pollen
and nectar until it feels doughy.

Bumblebees are social - they have a
Queen who starts the nest all by herself
after spending a cold winter alone. The
Queen collects pollen and nectar, builds
some little wax pots, lays some eggs and
keeps them warm with her body. She
does not leave the nest after her first
daughters are born. Things get a little
easier for her once her daughters
can go collect pollen and nectar
to feed and care for their new
baby sisters. Talk about a
stay at home
mom!



Bumblebee Nest



Nomada

Nope!

There's no way this is a bee, right? It sure is! Nomada bees are wasp-like, and often brightly coloured with little hair. They are what's called a Kleptoparasite, or Cuckoo bee! Instead of collecting pollen and building their own nest, they will follow another bee home to her nest. Then they'll wait until the other bee leaves again and sneak inside to lay their own eggs. They will only visit flowers to drink nectar, and sometimes for a nice place to sleep!

A Kleptoparasite is an animal that steals food collected by another animal!

Nope!

Finish



Follow the Andrena back to her nest



Nomada bee on Orange Honeysuckle

**Pacific Bleeding Heart
(*Dicentra formosa*)**

Light pink to deep purple petals
with small yellow petals in the centre.

**Fireweed
(*Chamerion
angustifolium*)**

Outer petals are bright purple or
pink, while inner spear-like petals are
deep pink.

**Graceful Cinquefoil
(*Potentilla gracilis*)**

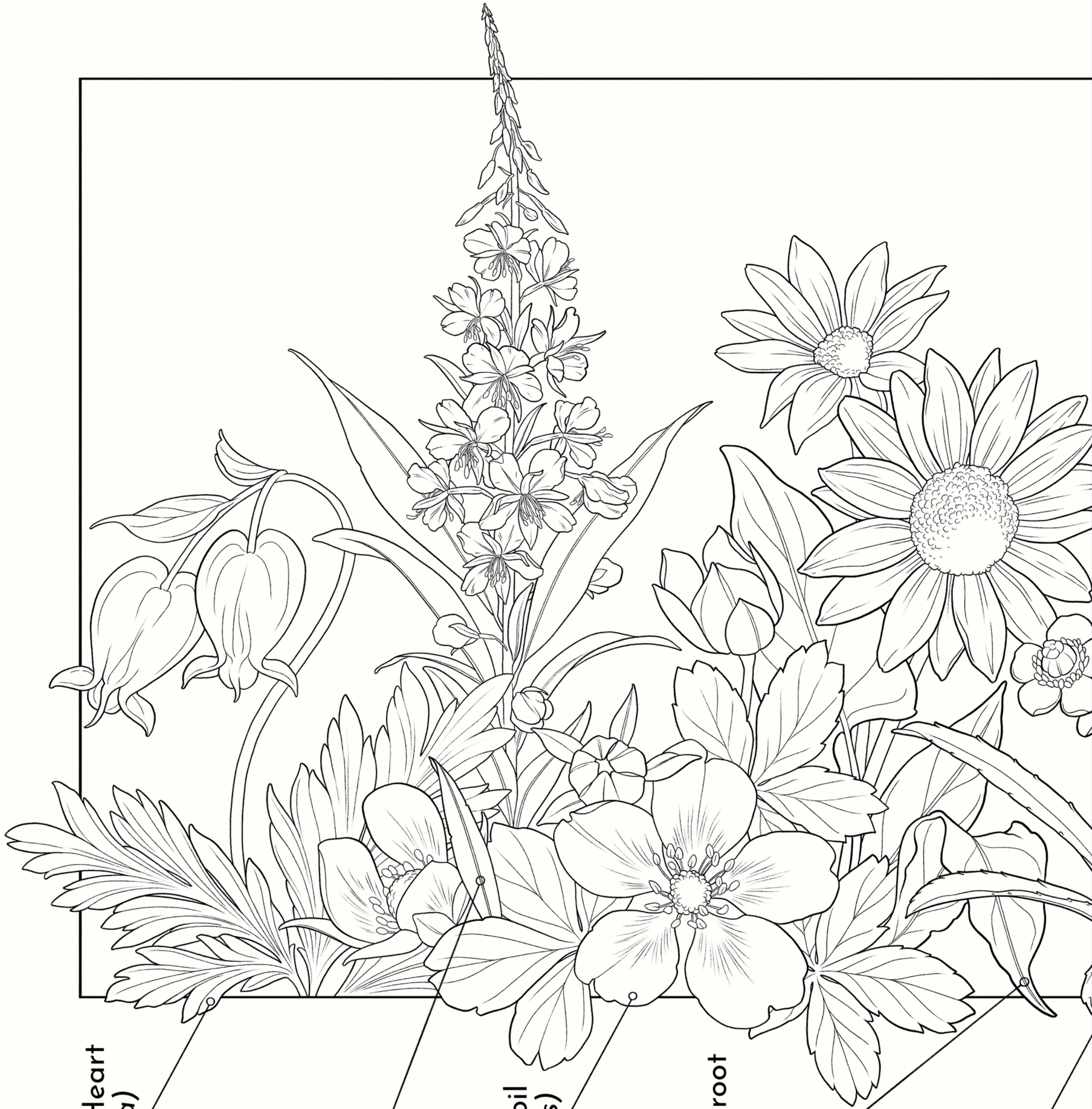
The petals are a cheerful yellow with
orange at the base and in the centres.

**Arrowleaf Balsamroot
(*Balsamorhiza
sagittata*)**

Deep yellow petals with rich
orange centres.

**Pipsissewa
(*Chimaphila
umbellata*)**

White petals with light
pink in the middle. Dark
purple pollen with green centres.





Western Paintbrush
(*Castilleja*)

Outer petals are reddish orange, and the stamens poking out are bright greenish yellow.

Nootka Rose
(*Rosa nutkana*)

Petals are pink with white at the base. The centres are yellow.

Common Camas
(*Camassia quamash*)

Deep purple with hues of indigo blue, lime green centres and bright orange pollen.

Satinflower
(*Olsynium douglasii*)

Violet petals with orange pollen.

Woodland Strawberry
(*Fragaria vesca*)

White to light pink petals with yellow centres.

Hairy Gumweed
(*Grindelia hirsutula*)

Dark yellow petals. Yellowish orange with a ring of reddish brown surrounding the centres.

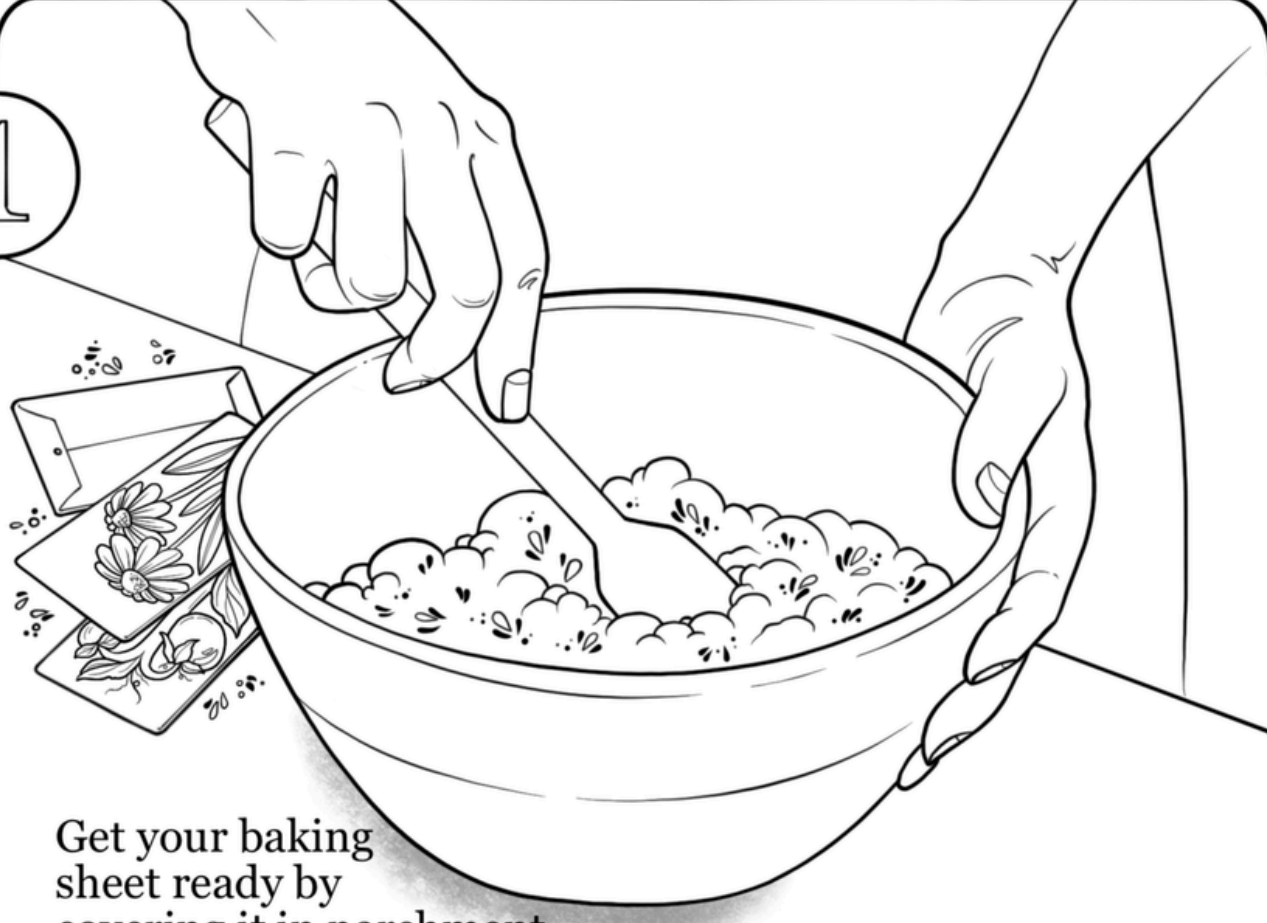
Seed Bombs

Making seed bombs is a great way to help pollinators! Seed bombs are ready to explode into beautiful flowers when the weather is just right. You can use seeds you already have, or go on an adventure to purchase special seeds. Using vegetable seeds is an awesome way to eat local. Planting native seeds has a huge benefit to the ecosystem you are living in by supporting species that rely on these plants for food and habitat. Whatever you choose - thanks for being a nature-hero!

Materials Needed:

- 1/3 cup of natural clay (Kaolin or Bentonite Clay work best)
- 1 cup Soil
- 1/2 cup Water
- 1/4 cup Seeds
- A Large Mixing Bowl
- A Cookie Tray
- A Sheet of Parchment Paper
- A Spoon

1



Get your baking sheet ready by covering it in parchment paper, and put aside for later. Dump your seeds and soil into the large mixing bowl and mix together well.

2



Add clay and continue to mix.

Pour in the water slowly, mixing just a little in at a time.

You don't want to make seed soup, so mix well and stop when it feels similar to cookie dough.

3



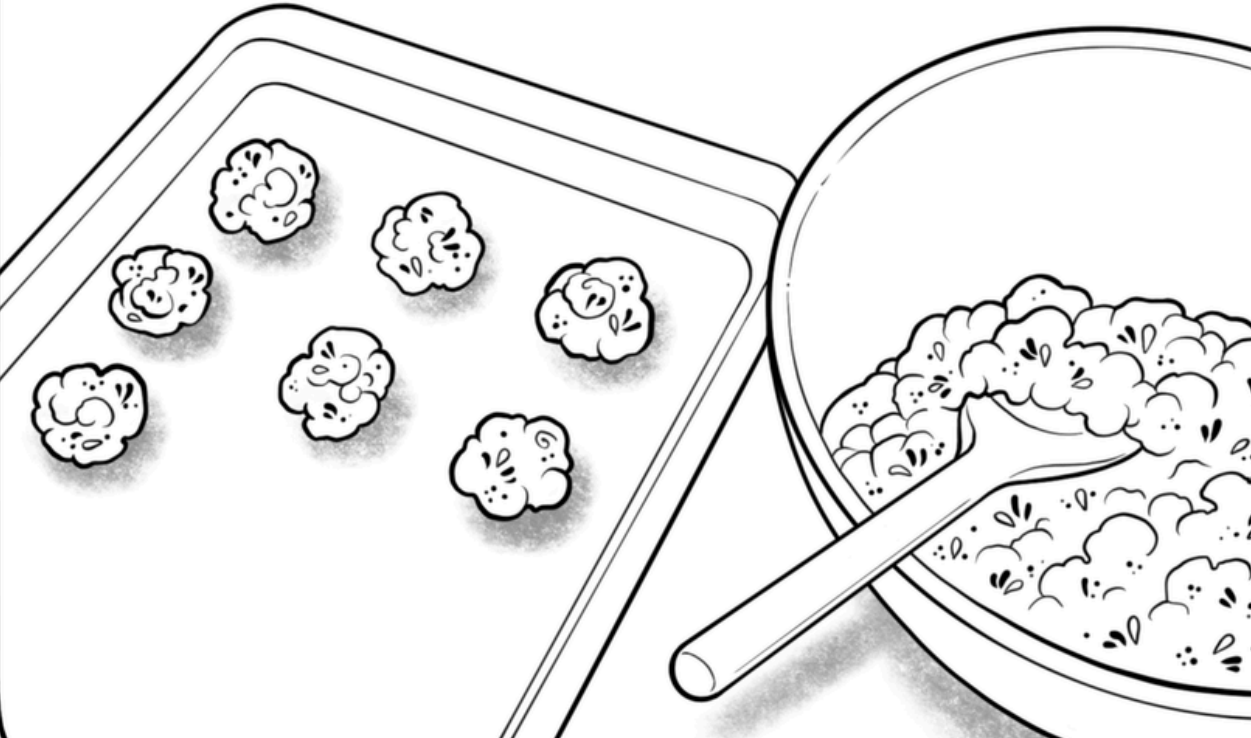
Use your spoon to scoop out the mixture, and, using your hands, form the mixture into a ball about the size of a really big bumblebee!

Once you are happy with the shape, place it on the parchment paper.

4

Make sure your seed bombs are placed a few inches apart so they have room to dry out completely before their adventure of being planted. Repeat this step until all the mixture is gone.

Wait 24 - 48 hours to dry completely.



5



Now that your seed bombs are dry, store them in a dry dark place until you are ready to plant them.

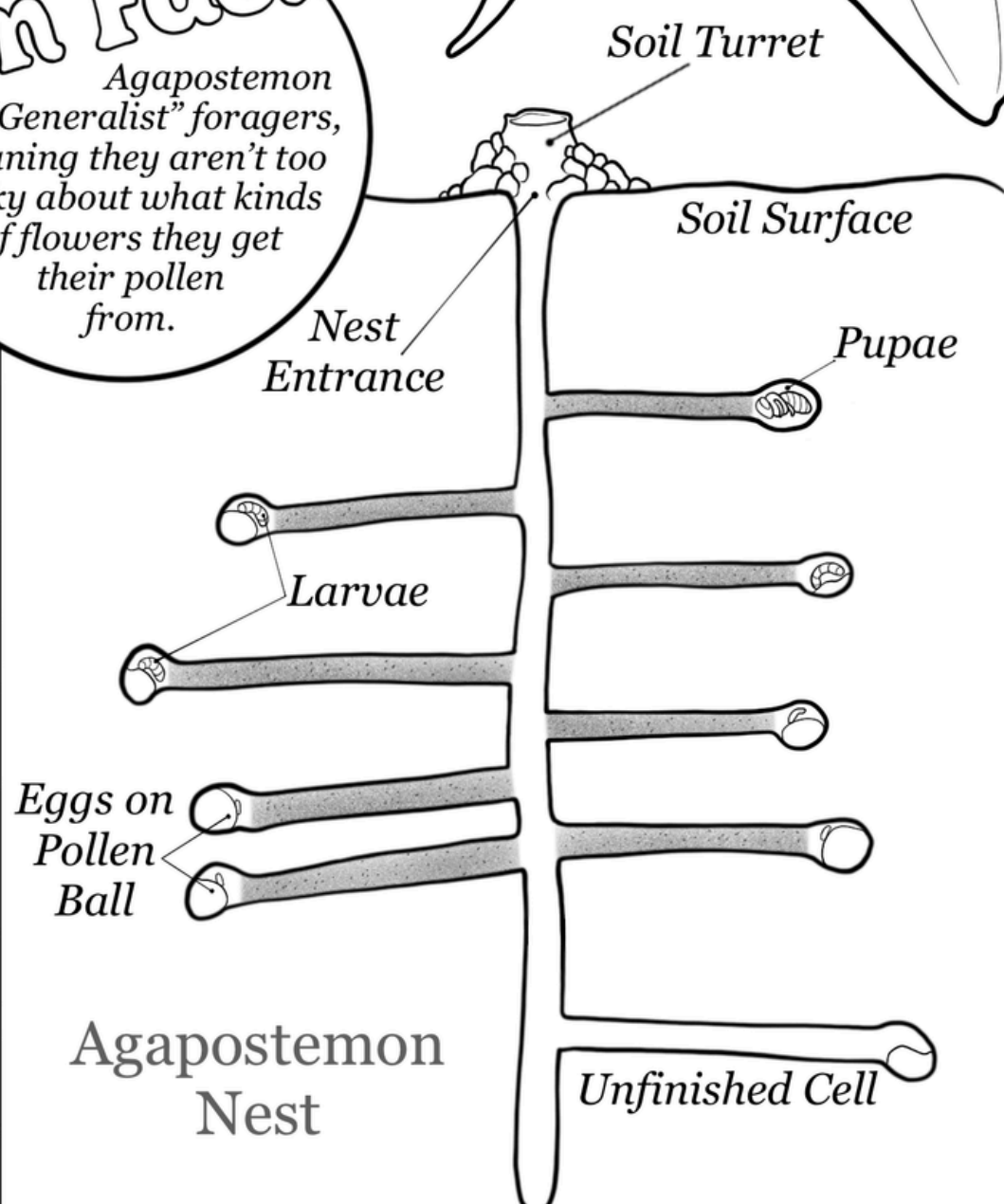
If you are ready now, dig a hole about as deep as your thumb and drop your seed bomb in. Cover with soil and come back often to see your seed bomb grow. You can plant it in your garden, or a pot of soil!

Agapostemon

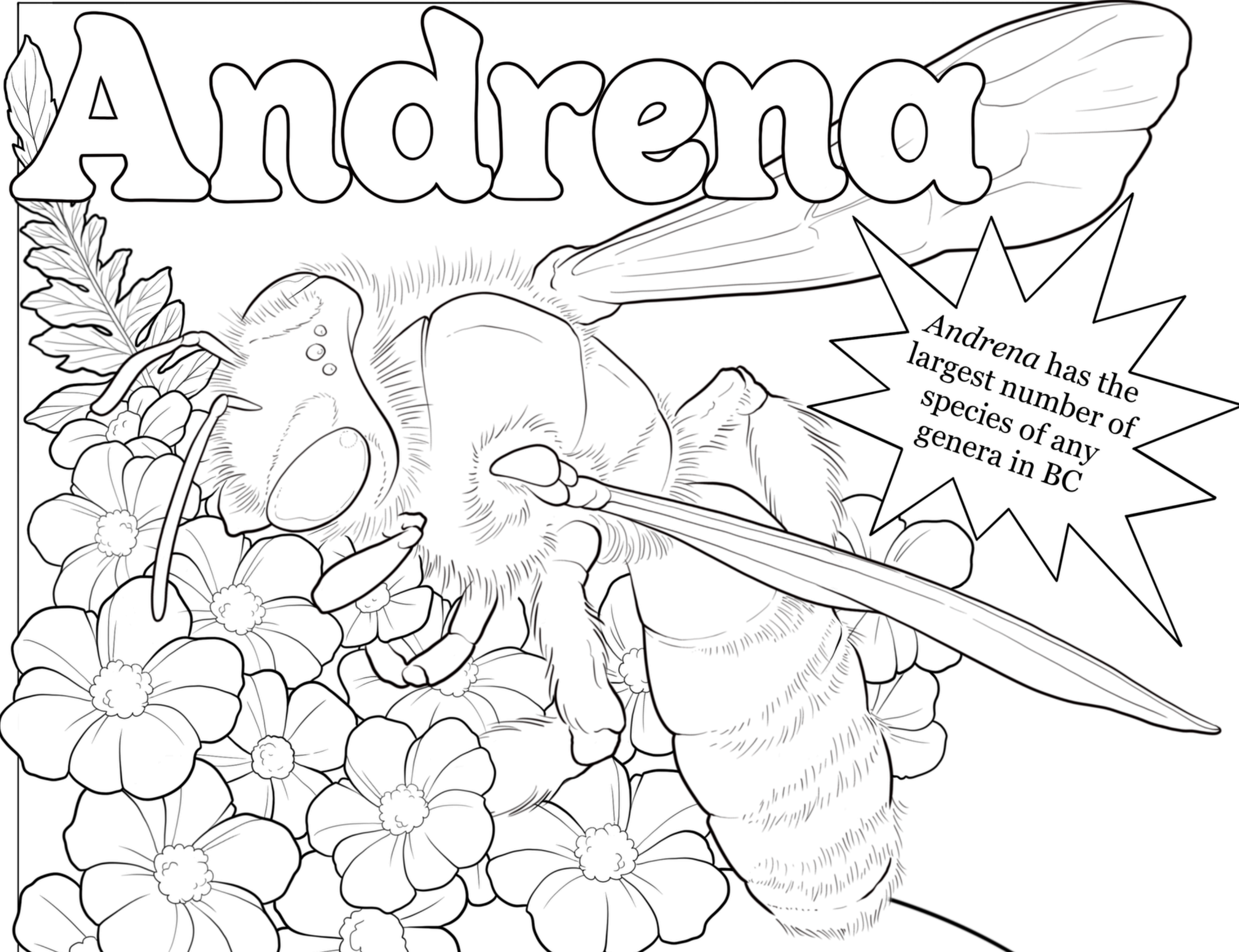
Wow, what was that bright green blur flying past? It's *Agapostemon*, the greenest, shiniest bee around. These Striped Sweat Bees use their hairy legs to collect pollen to feed their young. Sometimes they nest in a community alongside other Sweat Bees, each with their own entrance - like an apartment building! The mother digs a long tunnel into sandy soil, making individual rooms for her babies. After provisioning each room with a pollen ball and a single egg, she seals off the room to keep her egg safe. *Agapostemon* is a Solitary Bee because the female nests alone and does not return to the sealed rooms to care for the growing young.

Fun Fact!

Agapostemon are "Generalist" foragers, meaning they aren't too picky about what kinds of flowers they get their pollen from.



Andrena

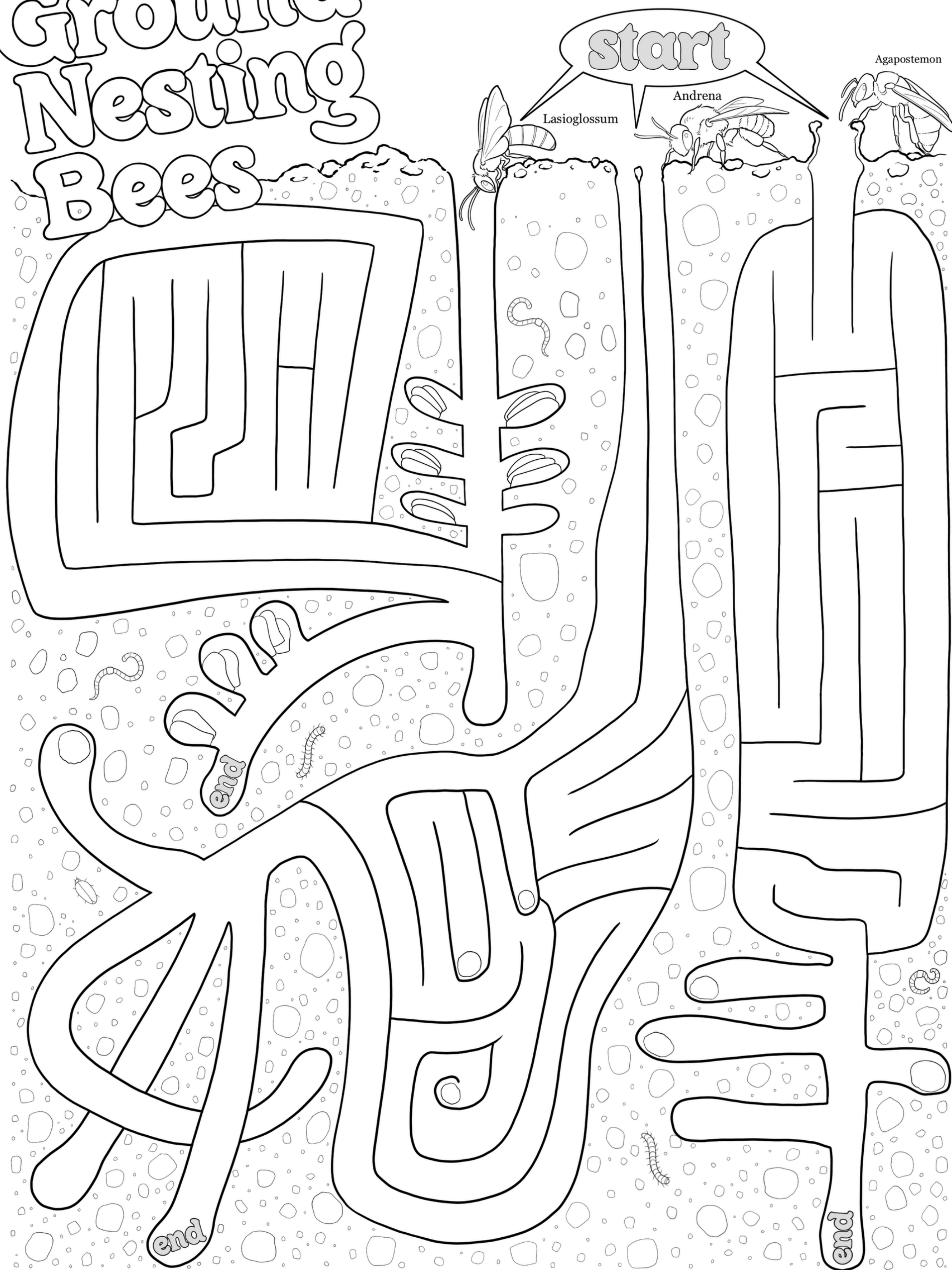


*Andrena has the
largest number of
species of any
genera in BC*

What's that humming
sound? It's an *Andrena* aggregation!
These bees are often found nesting in enormous
groups called aggregations where hundreds of
bees nest close together, but each mother bee has
a separate entrance to her own nest. *Andrena* are
shiny and often fuzzy and have pollen packed
tightly on their back legs and close to their
bodies. This bee genus is so diverse, with
many specialists that rely on just one
small group or one single species of plant
to feed their babies! They're some of
our earliest bees in the
Spring.

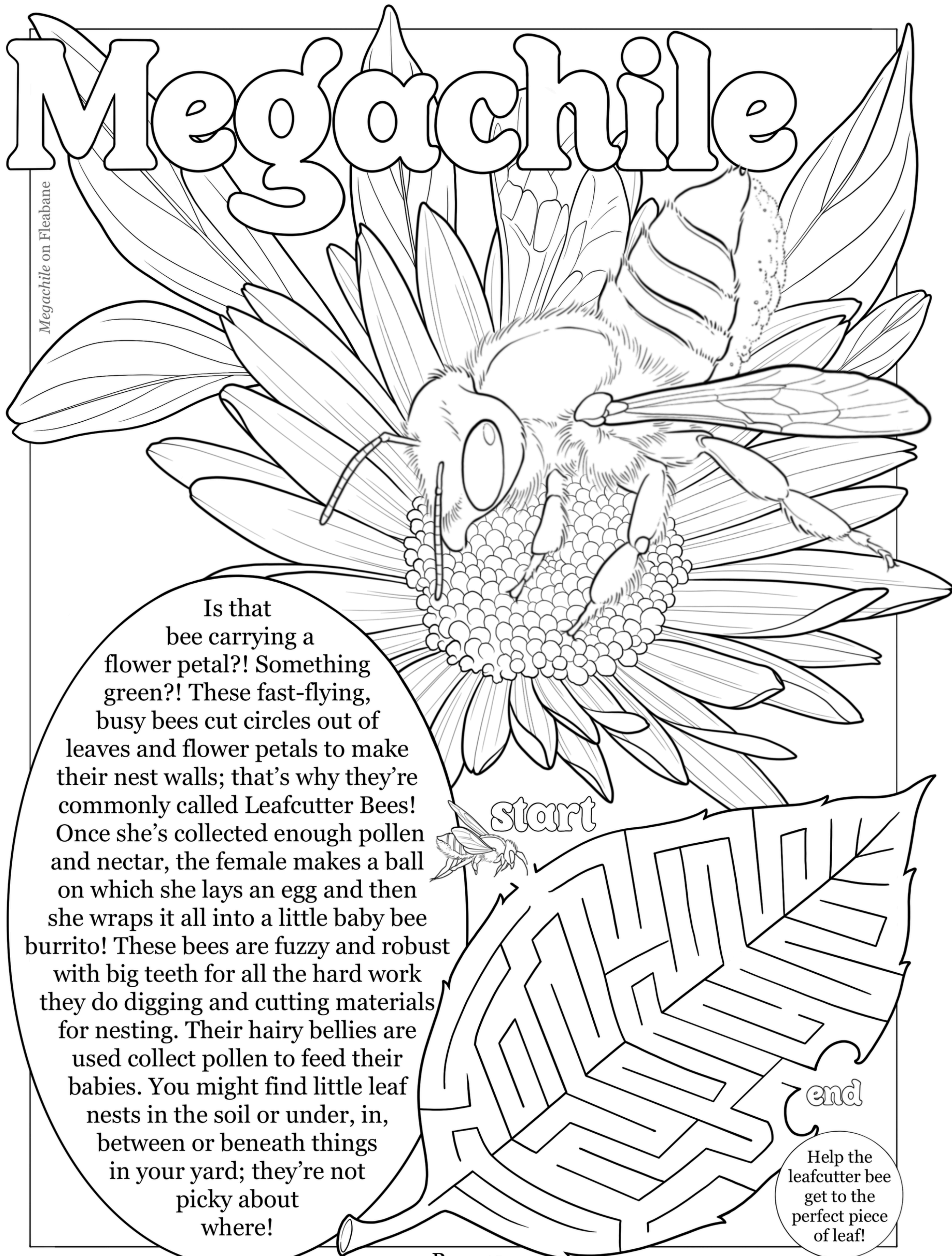
Ground Nesting Bees

Help these three types of ground-nesting bees bring the pollen back from their foraging trips to their nest!



Megachile

Megachile on Fleabane

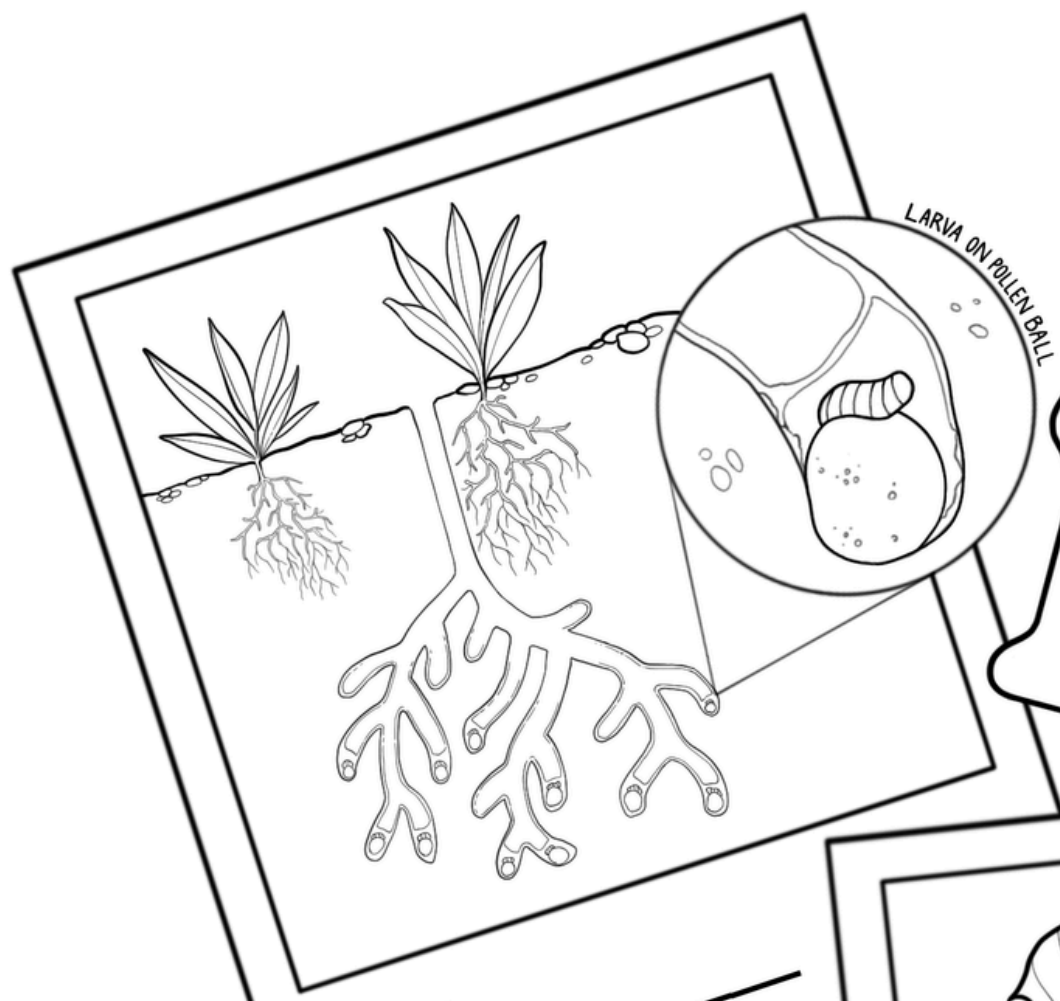


Is that bee carrying a flower petal?! Something green?! These fast-flying, busy bees cut circles out of leaves and flower petals to make their nest walls; that's why they're commonly called Leafcutter Bees! Once she's collected enough pollen and nectar, the female makes a ball on which she lays an egg and then she wraps it all into a little baby bee burrito! These bees are fuzzy and robust with big teeth for all the hard work they do digging and cutting materials for nesting. Their hairy bellies are used collect pollen to feed their babies. You might find little leaf nests in the soil or under, in, between or beneath things in your yard; they're not picky about where!

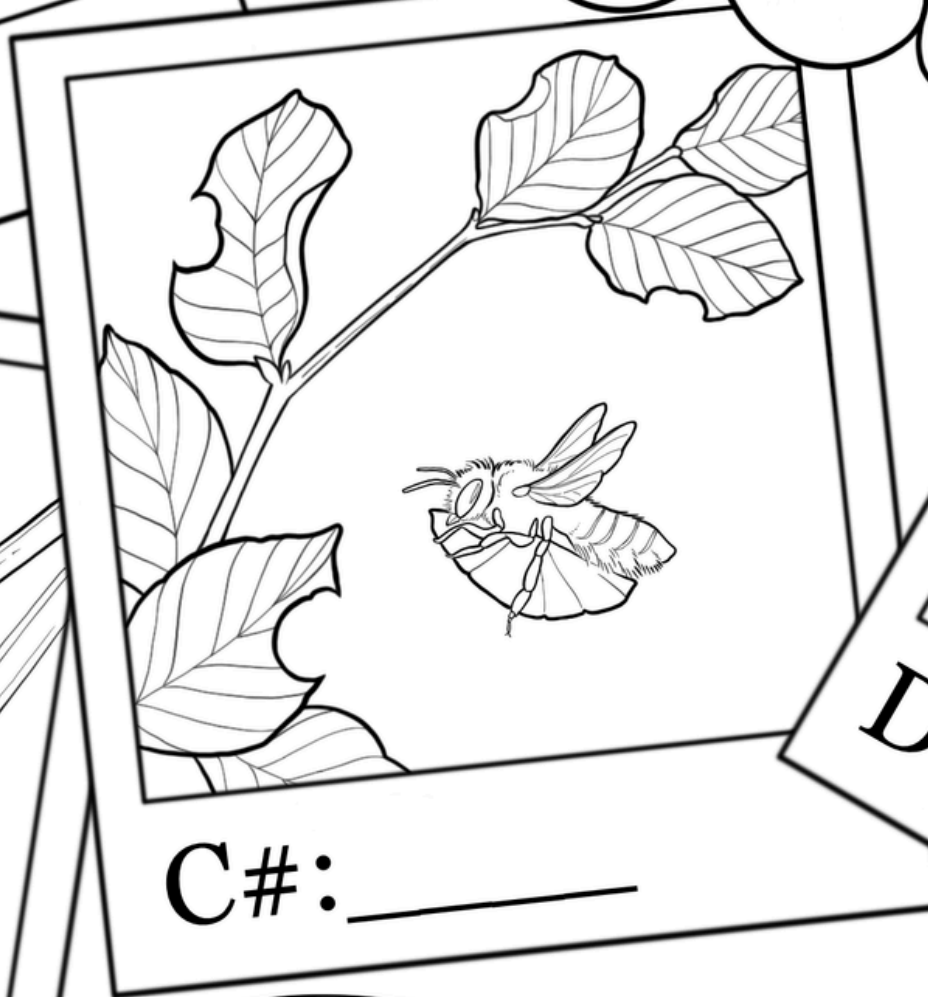
Help the leafcutter bee get to the perfect piece of leaf!

Here's a small variety of different nest types built by common bees of BC!

Nesting Bees



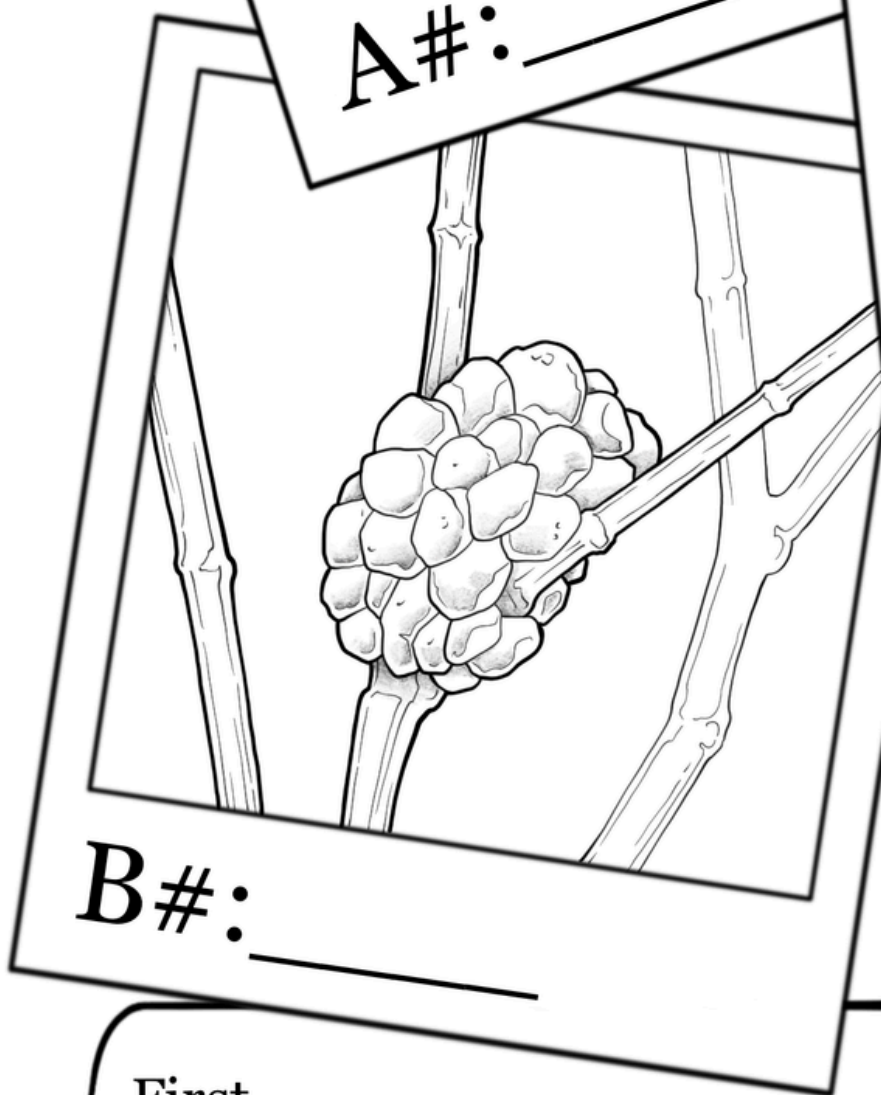
A#: _____



C#: _____



D#: _____



B#: _____

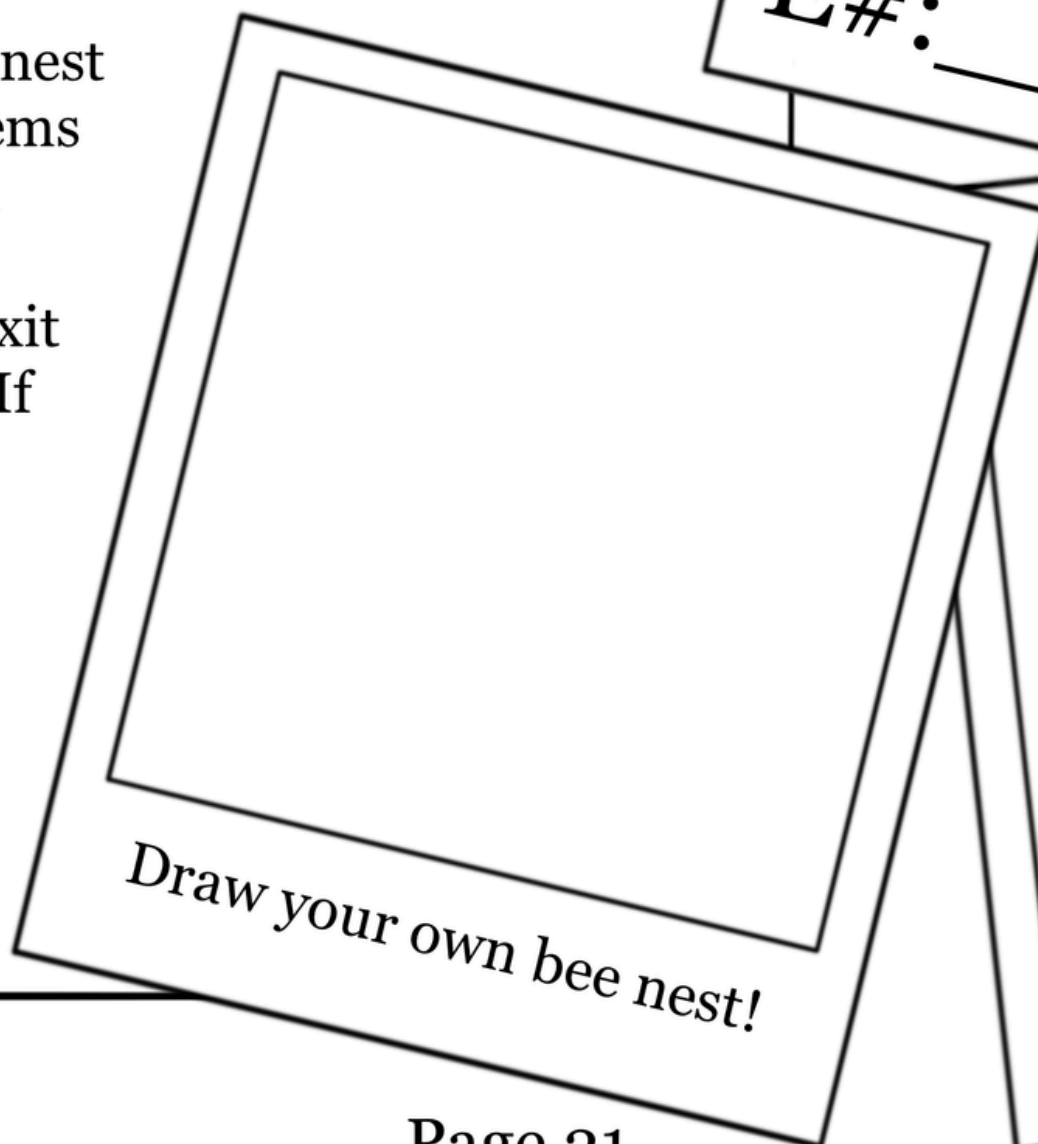
Try looking at the Genera pages to learn more about bee nesting!

First, match the labels to the pictures!

- 1 - Pebble Bees make nests out of resin and pebbles; nests are often built stuck to small branches (rare).
- 2 - Leafcutter Bees line nests with leaves and flower petals that they cut into circles.
- 3 - Bumblebees sometimes make nests in abandoned burrows and bird nests.
- 4 - Carpenter bees chew their nest tunnels into the dead pithy stems of some plants, like raspberry.
- 5 - Many bees use dead trees for nesting in, most utilizing exit holes of wood-boring insects. If the wood is soft enough some chew their own tunnels.
- 6 - Most bees nest in tunnels they dig in the soil, sometimes beginning at the base of a plant where the soil is soft.



E#: _____



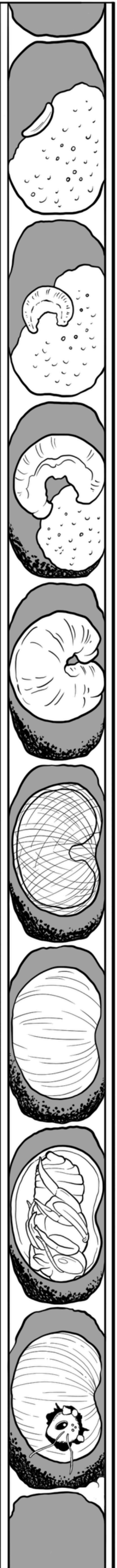
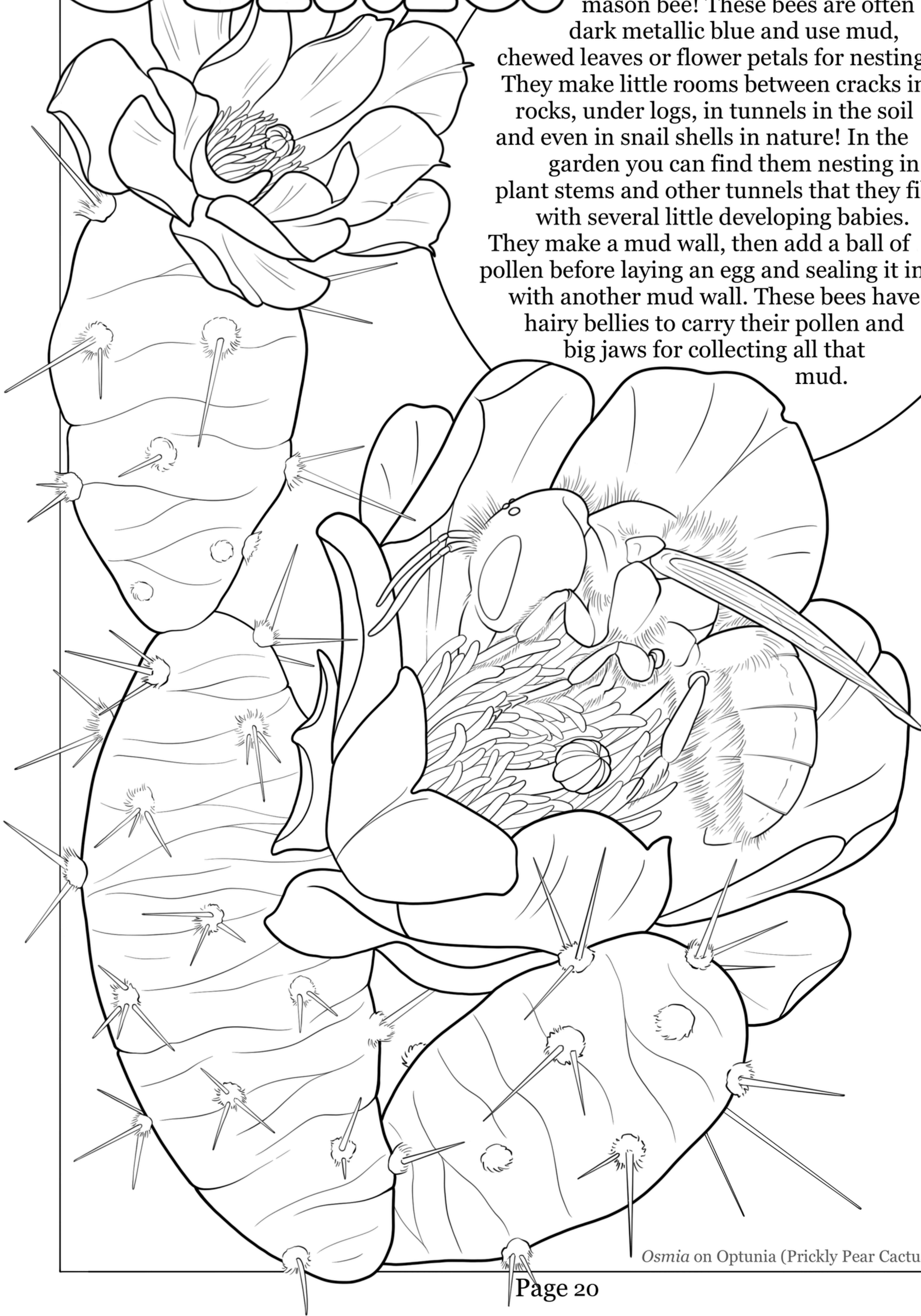
F#: _____

A-6, B-1, C-2, D-5, E-4, F-3

Draw your own bee nest!

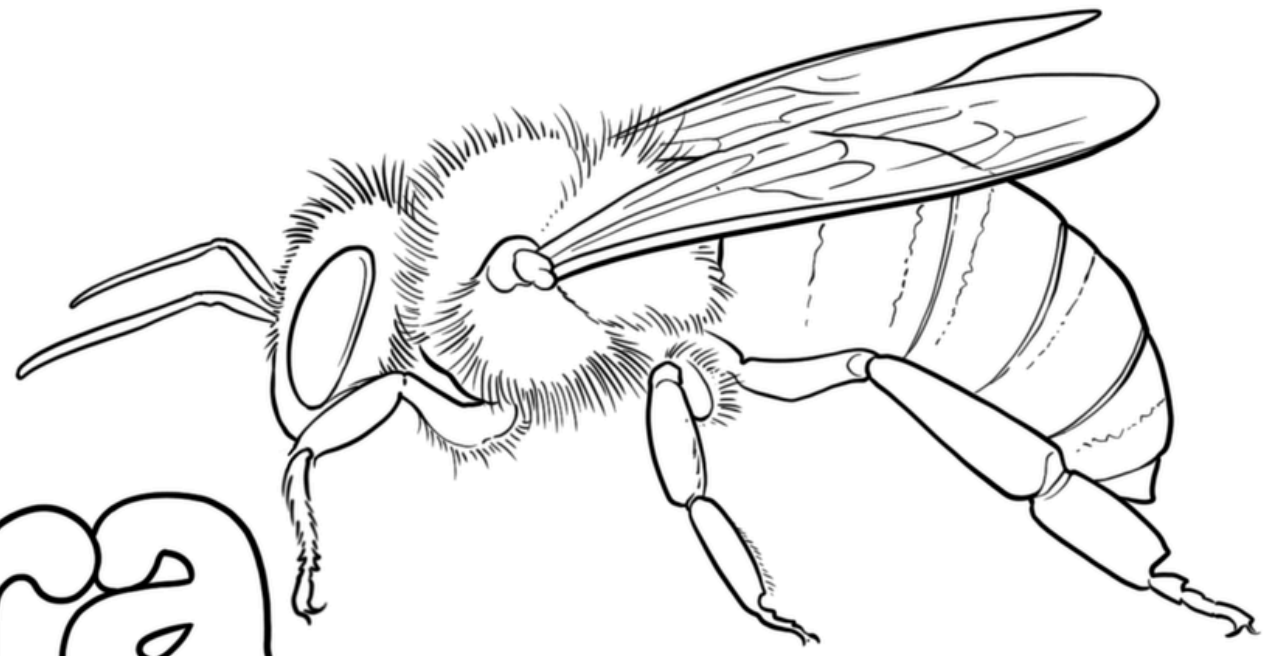
Osmia

Ever see a bee climb in the little holes in your window? That was probably a mason bee! These bees are often dark metallic blue and use mud, chewed leaves or flower petals for nesting. They make little rooms between cracks in rocks, under logs, in tunnels in the soil and even in snail shells in nature! In the garden you can find them nesting in plant stems and other tunnels that they fill with several little developing babies. They make a mud wall, then add a ball of pollen before laying an egg and sealing it in with another mud wall. These bees have hairy bellies to carry their pollen and big jaws for collecting all that mud.



Osmia on *Optunia* (Prickly Pear Cactus)

Apis mellifera



These medium-sized bees are also known as European Honeybees. They are found everywhere in the world except for Antarctica! In their native habitat these highly social bees live in trees, but in many parts of the world they live in hive boxes and are cared for by beekeepers. Worker bees (female bees) collectively, with the help of their sisters, build hexagonal beeswax cells into honeycombs. These cells store everything the hive needs, including pollen, honey, and even eggs and larvae!

Spot the Queen



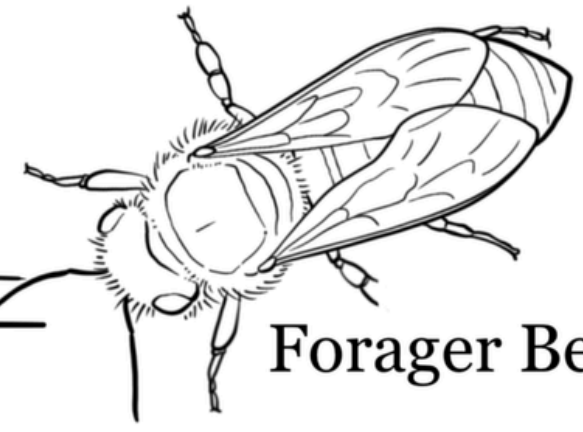
The Queen has a huge abdomen and can lay up to 1,500 eggs each day.

The males in the hive are called drones. They have a rounded abdomen with no stinger, and their two compound eyes touch.

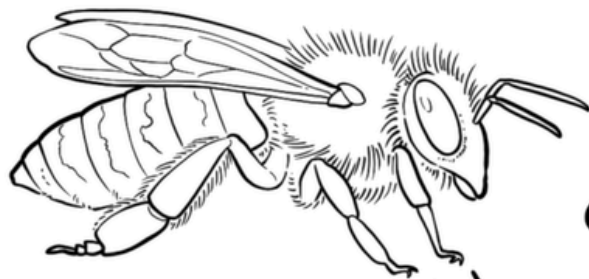
Most of the hive is made up of female worker bees. They perform nearly all the jobs needed to keep the hive thriving. They are easy to spot with their pointed abdomens and compound eyes that don't touch.

Honeybee Jobs

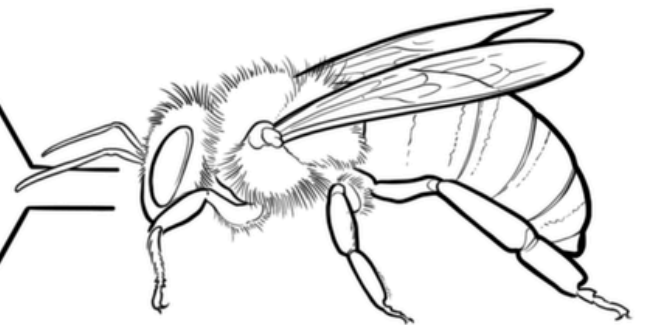
Help the
Worker Bees
get to their
Job site!



Forager Bee



Nurse Bee



Receiver Bee



Cleaner Bee



Queen's Attendant



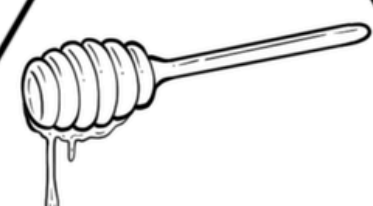
Foragers collect nectar
and pollen from
flowers and bring
it back to the
hive



Cleaner Bees clean
cells of frass and
debris



Nurse Bees care
for the larvae by
feeding them
Royal Jelly



Receiver Bees take
nectar from Foragers
and bring it
inside the
hive



The Queen's
Attendants groom
and feed the
Queen

Honeybee

True or False

Circle your answer



1. In a honeybee colony, a bee can only be a drone, worker or queen.

T or F
2. Honeybee colonies need lots of healthy bees to survive. To keep populations high the queen bee can lay up to 1,500 eggs per day.

T or F
3. Both drones and worker bees can sting.

T or F
4. Honeybees use sap from trees to make beeswax.

T or F
5. Honeybees are native to B.C.

T or F
6. Honeybees dance to communicate.

T or F
7. Honeybees smell like bananas when they're mad.

T or F

1. TRUE

Honeybees are born in one of the three roles and will remain in their role for their whole life.
2. TRUE

Unlike native bees that lay one egg per day on average, honeybees can lay thousands! This is why honeybees need so many flowers - they have so many mouths to feed.
3. FALSE

Only the female worker bees can sting. When honeybees sting they die, so they use it as a last resort and will usually buzz loudly or bump into you to warn you before stinging.
4. FALSE

Worker bees make beeswax from glands in their abdomen!
5. FALSE

Honeybees are originally from warm and dry climates. Honeybees need Beekeepers to manage them to increase their chances of surviving the Winter.
6. TRUE

Honeybees use the waggle dance to create a map of where good food sources are. They have lots of dances and even have one where one bee will shake another bee to get the bee's attention!
7. TRUE

Honeybees emit an alarm pheromone when they are stressed which smells like bananas! Pheromones are chemicals released to communicate a message to another living thing. When honeybees release the alarm pheromone it means they sense danger and want the whole hive to be aware.



Draw a Bee

Now is your chance to use all of your bee knowledge to

create your own bee! Will your bee have scopa hair to carry pollen, or will it be a Kleptoparasitic bee? Will it be a large or a tiny bee? Will it have large jaws to help make its nest, or does it nest in existing cavities?

Three Body Segments

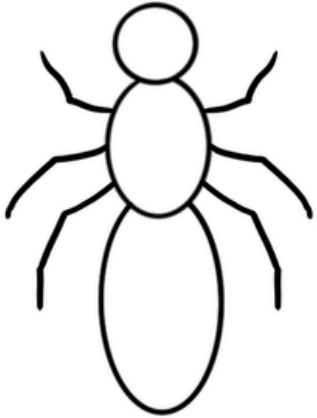
Head

Thorax

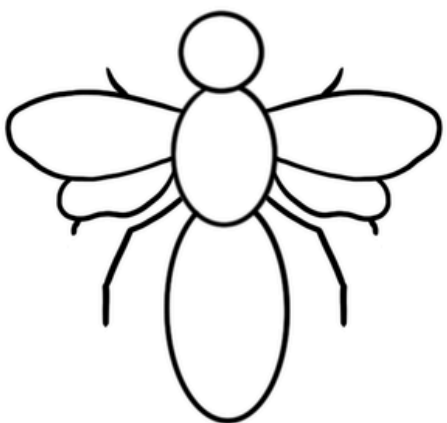
Abdomen



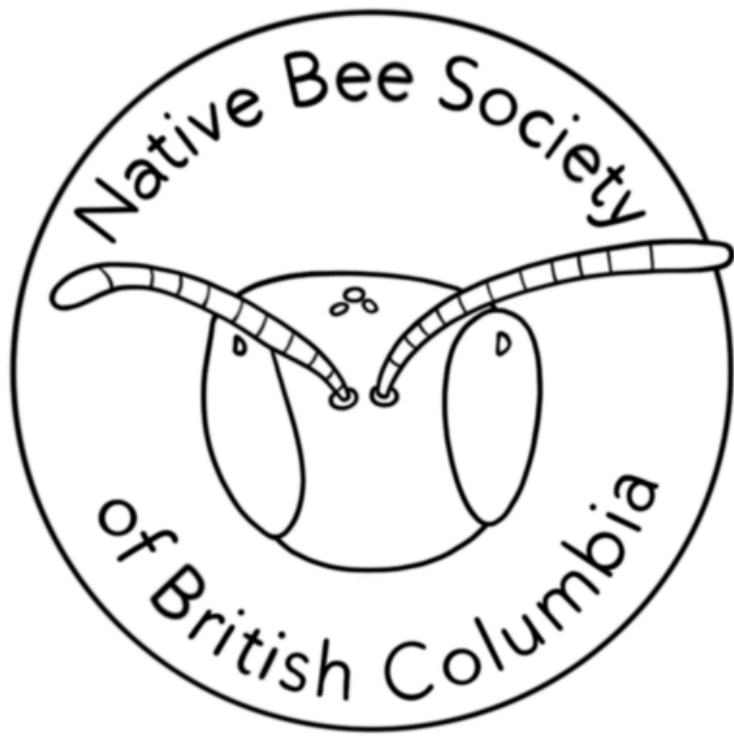
Six Legs



Four Wings



Now that you've drawn your bee, write about what makes it special! Does it fly super fast? Is it a rainbow of colours? Does it produce its own nesting material, or gather materials like leaves? Is it solitary or social?



The Native Bee Society of BC is a registered Non-Profit established in 2019. We are a collective of native bee researchers, artists, land managers, conservation practitioners, and enthusiasts working to promote the conservation of native bees in British Columbia.

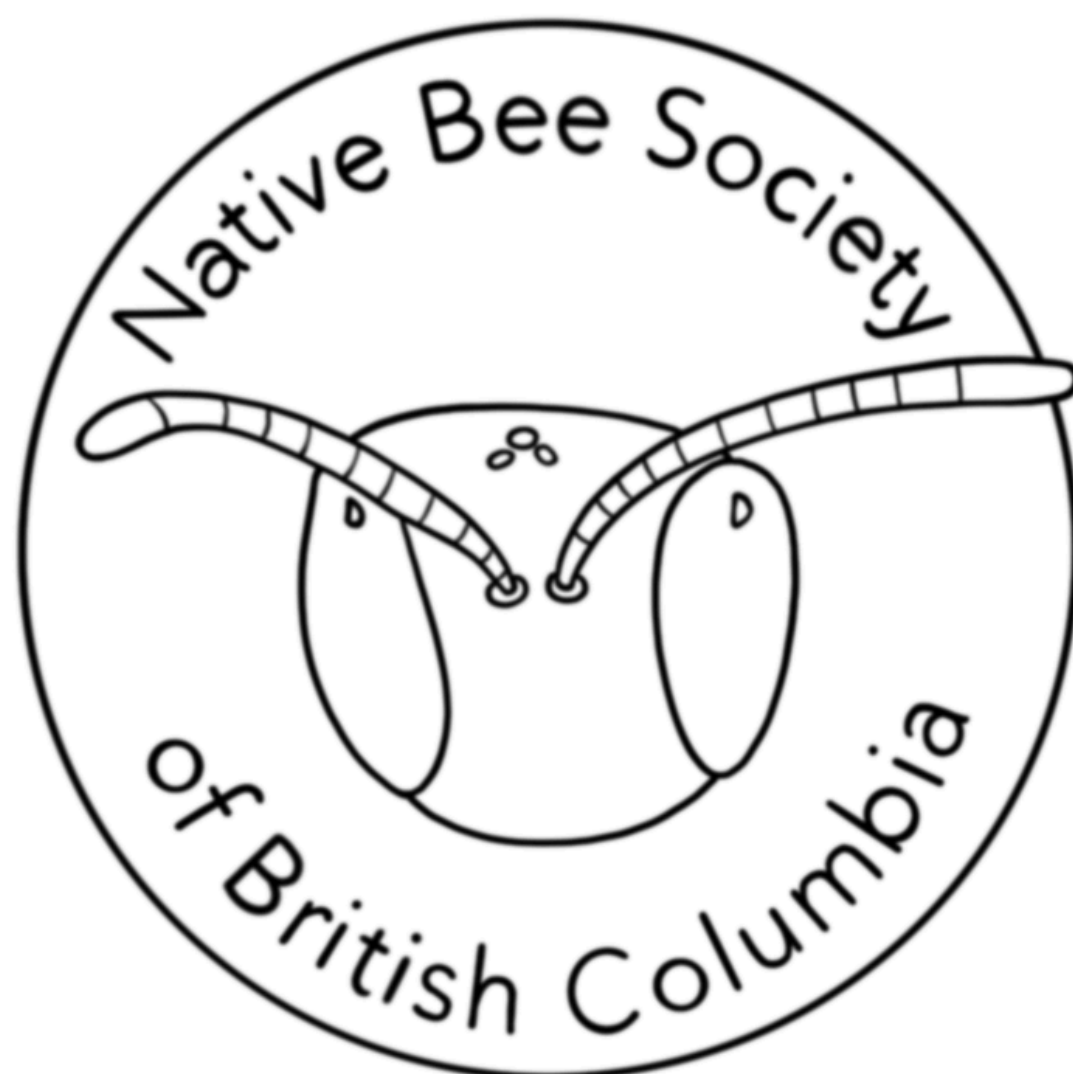
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