

Pollinator Activity Guide



*Two-tailed tiger
swallowtail on
western serviceberry*

*Learn about pollinators
and native plants and
why we need them.*



What are pollinators and why should we care?

Have you ever watched a bee land on a flower? Bees, butterflies, hummingbirds, moths, beetles, wasps, & bats are called *pollinators*. When pollinators visit flowers in search of food—nectar & pollen—they fertilize them by moving pollen grains from the male part to the female part of a flower, which is called *pollination*. Bees intentionally pick up pollen to feed their young, while other pollinators pick up pollen accidentally. Either way, that's good news because flowers need pollinators and we do too.

Pollinators:

- help maintain healthy environments;
- pollinate plants, which produce one-third of the food we eat—fruits, vegetables, grains, nuts, beans and chocolate;
- are beautiful and fascinating to watch.

What can we do to help? Learn more about them, plant pollinator-friendly gardens and protect wildlife habitat.



Activity 1

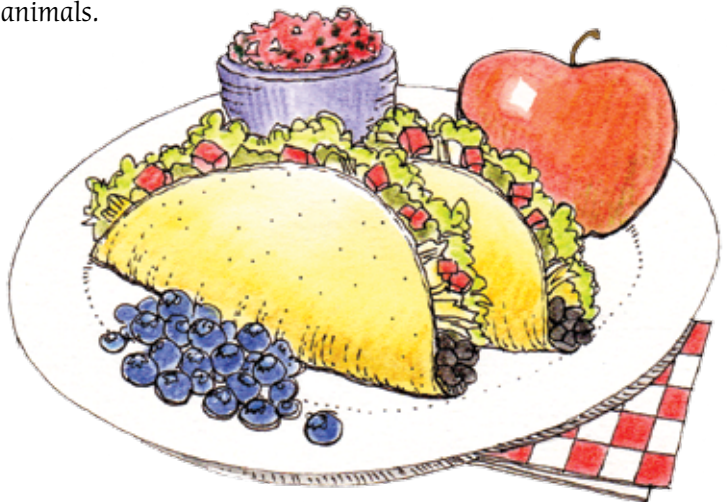
Make a “pollinated” lunch

Menu: Chicken tacos with fruit on the side

Check the ingredients in the lunch that have been pollinated by animals.

Ingredients:

- ☐ chicken
- ☐ lettuce
- ☐ tomatoes
- ☐ black beans
- ☐ salsa (pepper, onions and tomatoes)
- ☐ avocado
- ☐ corn tortilla
- ☐ apple
- ☐ blueberries





Activity 2 Flower power

Dissect a flower, carefully laying out its parts and compare the parts to this diagram below. Can you find the pollen?

FEMALE PARTS



pistil

- stigma** catches pollen
- style** passageway for pollen
- ovary** becomes fruit
- ovules** become seeds when fertilized

PARTS OF AN APPLE FLOWER

MALE PARTS



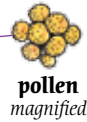
stamen

- anther** produces pollen
- filament** supports anther

petal
color attracts pollinators

sepal
protects flower bud

stem
supports flower and delivers water and food



pollen
magnified

POLLINATION



Activity 3 Fantastic fruit

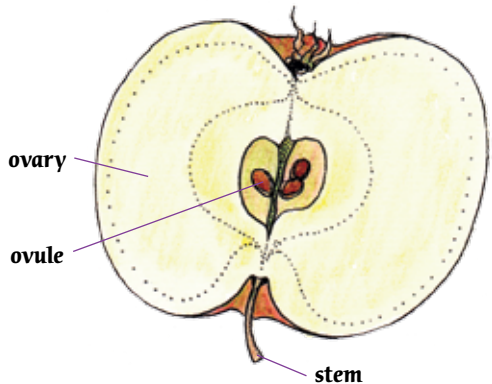
Cut an apple in half and turn it upsidedown.

What do you see?

Compare to the flower above.

Question: Why does a flowering plant, like an apple tree, produce fruit?

Answer: Fruit protects seeds and entices animals to eat the fruit so that the tree's seeds are moved (animals "poop out" the seeds unharmed).





Activity 4

Match the flower to its pollinator

Draw a line from the flower to one of its pollinators.

It may have more than one. (see example)

A. Blanketflower

is a flower with a flat landing platform
that blooms in the late summer



B. Lupine

has bright purple blooms with
a funnel-like shape



C. Evening Primrose

blooms at night and has a
strong, sweet aroma



D. Honeysuckle

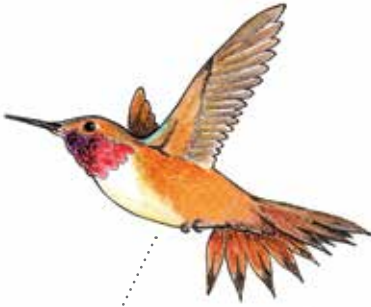
is a tube-shaped, sweet-smelling flower
that is bright red or orange



E. Buttercup

blooms in the early spring and has a
waxy looking bowl shape





1. Hummingbirds

are attracted to scarlet, orange, or red flowers with a funnel-like shape.



2. Flower Beetles

are attracted to light-colored, bowl-shaped, or stinky flowers.



3. Bumble Bees

are attracted to tubular flowers, sweet-smelling flowers, and blue or yellow flowers including sunflowers.



4. Moths

are attracted to flowers that bloom at night that have a strong, sweet aroma.



5. Butterflies

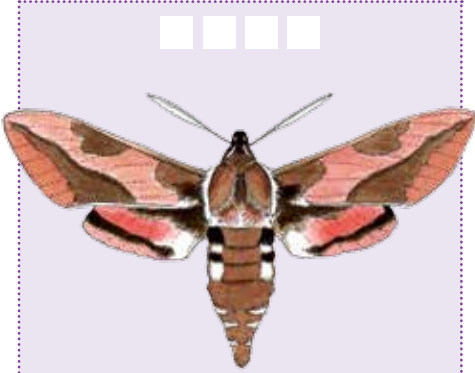
are attracted to clusters of small flowers that are red, yellow, or purple.



Activity 5

Guess who I am? Know your pollinators!

Fill in the white boxes in each of the pictures below with one of the eight pollinators at the top of the next page.



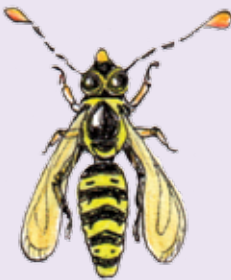
- Fringed antennae
- Holds wings flat and open when resting
- Flies at night

1



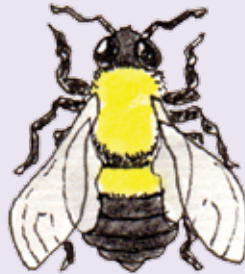
- Clubbed antennae
- Holds wings up over body when resting
- Flies during the day

2



- Rarely carries pollen on body or legs
- Hairless or few fine hairs
- Narrow body, pinched abdomen
- Looks shiny

3



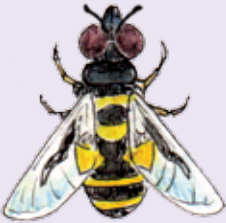
- Usually carries pollen on body or legs
- Hairy, branched hairs
- Broader body, wider abdomen
- Looks furry

4

Check the box next to each pollinator when you have used it in the puzzle.

- ☐ Honey Bee
- ☐ Green Sweat Bee
- ☐ Butterfly
- ☐ Wasp
- ☐ Bumble Bee
- ☐ Moth
- ☐ Beetle
- ☐ Fly


☐☐☐



- Two wings
- Short antennae
- Large eyes on top of head
- No pollen on body
- Wings angle out from body
- Not hairy
- Hovers

5


☐☐☐☐☐
☐☐☐☐☐☐☐☐



- Four wings
- Long antennae
- Large eyes on side of head
- Carries pollen on body or legs
- Wings fold over body
- Hairy
- Doesn't hover

6


☐☐☐☐☐☐☐



- long, segmented antennae
- hard wing covers
- shiny, armored-looking
- small eyes

7

☐☐☐☐☐☐☐☐☐



- four wings
- hairy
- carries pollen in baskets on legs
- large eyes

8



Activity 6

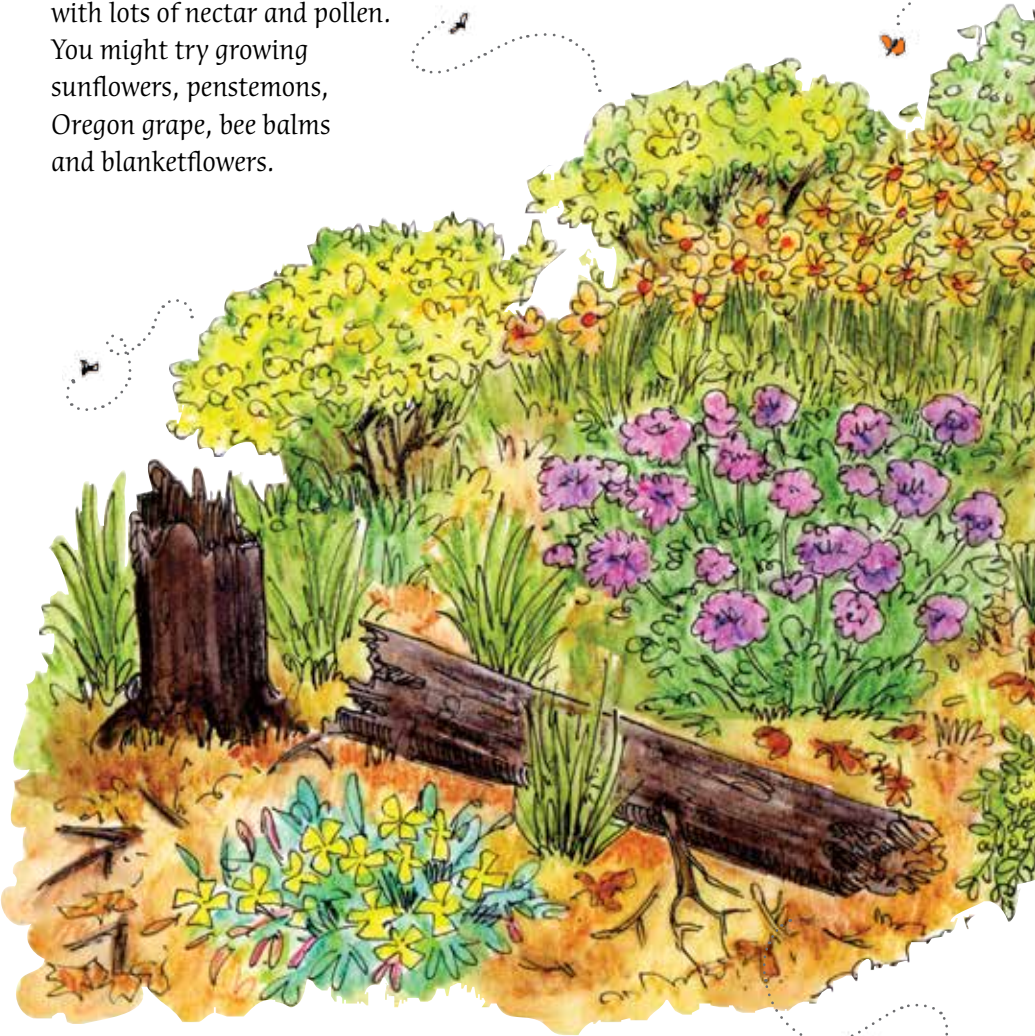
Make a pollinator-friendly habitat



Use your observations from your naturalist field journal (see pages 9 and 10) **to decide which plants are visited by pollinators in your area.** You don't need to make a big

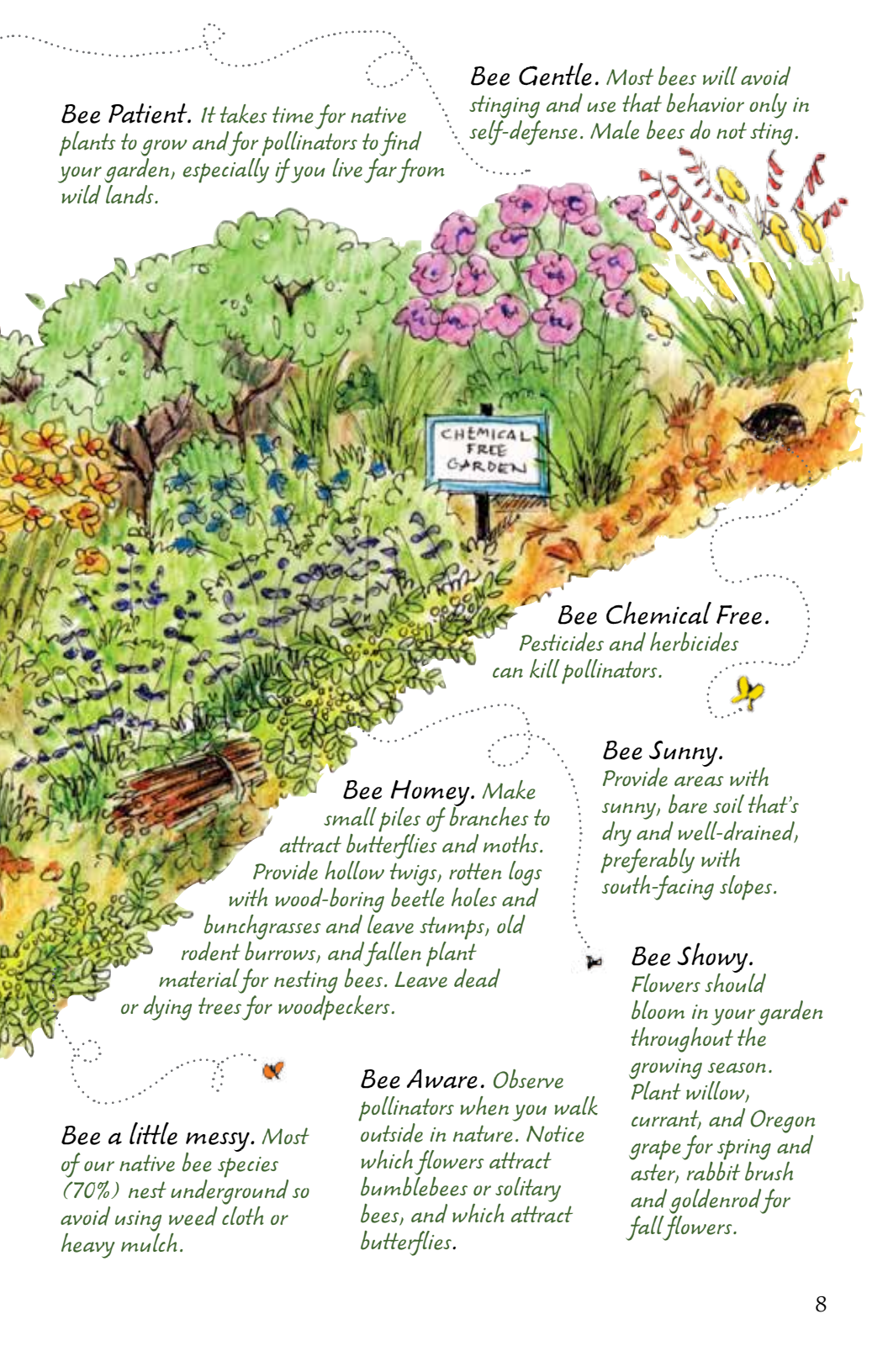
garden; a collection of container pots with herbs such as lavender, oregano and mint is a good start. Pollinators do like native plants with lots of nectar and pollen.

You might try growing sunflowers, penstemons, Oregon grape, bee balms and blanketflowers.



***Go Native.** Pollinators are "best" adapted to local, native plants, which often need less water than ornamentals.*

***Bee Bountiful.** Plant big patches of each flower.*



Bee Patient. It takes time for native plants to grow and for pollinators to find your garden, especially if you live far from wild lands.

Bee Gentle. Most bees will avoid stinging and use that behavior only in self-defense. Male bees do not sting.

Bee Chemical Free.
Pesticides and herbicides can kill pollinators.

Bee Homey. Make small piles of branches to attract butterflies and moths. Provide hollow twigs, rotten logs with wood-boring beetle holes and bunchgrasses and leave stumps, old rodent burrows, and fallen plant material for nesting bees. Leave dead or dying trees for woodpeckers.

Bee a little messy. Most of our native bee species (70%) nest underground so avoid using weed cloth or heavy mulch.

Bee Aware. Observe pollinators when you walk outside in nature. Notice which flowers attract bumblebees or solitary bees, and which attract butterflies.

Bee Sunny.
Provide areas with sunny, bare soil that's dry and well-drained, preferably with south-facing slopes.

Bee Showy.
Flowers should bloom in your garden throughout the growing season. Plant willow, currant, and Oregon grape for spring and aster, rabbit brush and goldenrod for fall flowers.



Activity 7

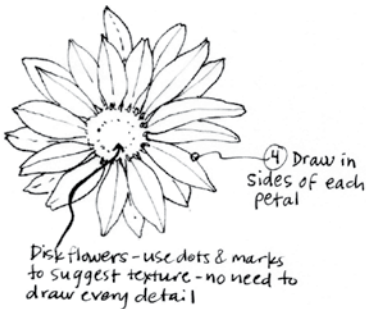
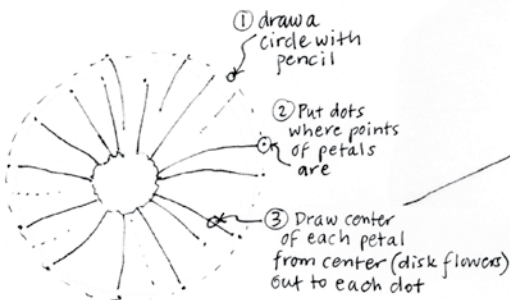
Make a pollinator nature journal

Make a naturalist field journal of pollinators and the plants they use that you find in your backyard environment or nearby natural area. What do the pollinators look like? On what plants do you find them?

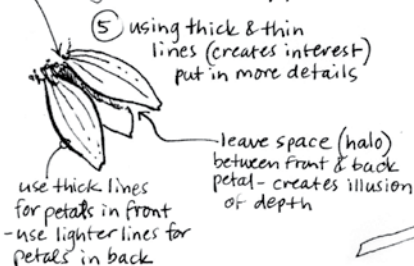
Hint: Look for lots of flowers – in gardens, on dandelions, in flowering bushes and trees.

Use tracing paper to practice first by tracing over the **arrowleaf balsamroot flower** and **leaf** steps below, then start or continue drawing in your nature journal! An example of a nature journal page is at right.

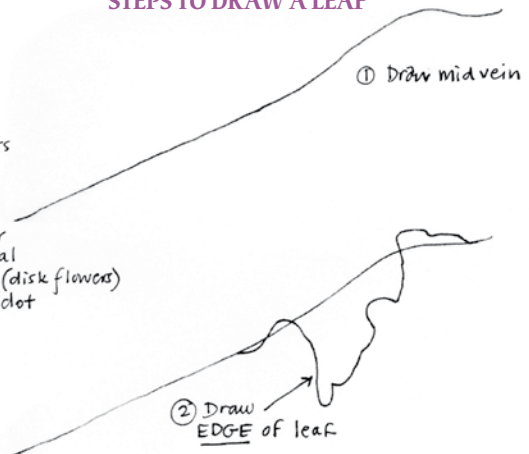
STEPS TO DRAW A FLOWER



add shading so petals in front 'pop'



STEPS TO DRAW A LEAF



④ Draw in details & where leaf fronts & backs join



Start your page with location,
date, time, weather, sounds, etc.

NATURE JOURNAL PAGE

Add little drawings here and there with
your observations. Draw a leaf or a flower
petal. Nothing fancy!

Orlando • June 12, 2006 11:15 a.m.
Nature Journaling Class
with The Bladfoot Challenge
Sunny ☀️ & very Breezy 70°?
warm in the sun

Dew drops still on plants

Sticky
Geranium

Sounds: wee-trill-E bird call
wind in grass



grasshopper - only 1/2" long.

Lots of Butterflies
Smoky brown w/ blue
3/4" long / Blue, black & orange

← Really, this is
hot PINK!



Could hardly
see
the wings!

Bitten off - Deer?

There are many
Geranium stems
nipped off

Lots of Plants growing on
this sunny hillside:

mauve
strawberry
lupine
pansy - very tiny
inflorescence



tiny strawberry
just starting to form.

fusion storm

spittle
bug
sign

This is a lovely ponderosa pine meadow
Trees are spaced out, lots of sunshine
so many species of plants find their
home here. A variety of bird calls. Old
man's beard hanging from the p. pines.
I love the electric blue dragonflies - the
wings are practically invisible. Lots of
good snags for wildlife to live in and get
their meals from.

What's the elevation here?

Warm smells -
Vanilla wafts through the air

Squirrel midden

Do some writing to add to your
drawings. You'll remember
your visit!

Include questions about your
observations to remind you to
find the answers later.



*Bumble bee and
penstemon flower*



For more information
about pollinators, visit:

Pollinator Partnership at
www.pollinator.org

U.S. Forest Service at
www.fs.fed.us/wildflowers

The Xerces Society at
www.xerces.org



Lolo National Forest
24 Fort Missoula Rd.
Missoula, MT 59804



Montana Natural History Center

120 Hickory St.
Missoula, MT 59802

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