HCTF Education Habitats at Home

Learn how to create habitats that bring nature into your own backyard!

Make a.. Bee Home

Purpose

When we think of bees, most of us just think of honey bees. However, there are actually hundreds of bee species in British Columbia! Bees are important pollinators, helping plants to reproduce and make seeds, fruits, and berries. A garden with bees is a richer, more vibrant place. Unlike honey bees, many bee species are solitary and nest in tube-like holes. Here you'll learn how to make these bees feel at home in your yard!

A Note on healthy bee homes: Recently, bee homes have become more popular and you'll see many kinds available. Not all designs are safe for the inhabitants! Designs that are too large can attract predators, those that are hard to clean can attract mites and other parasites, and those made with materials such as bamboo do not breathe well and can get moldy. This simple design can be kept clean by replacing the paper straws annually after bees have emerged in the spring.

You will need

*** An Adult to help use tools safely***

1 Clean can. Can should be about 13cm (5") high to allow for 10cm (4") tubes and a 3cm (1") overhang.

1 Electric drill with a drill bit.

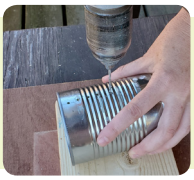
Paper smoothie straws or rolled paper tubes. A variety of diameters between 7mm and 11mm is ideal. (Smoothie straws tend to be more robust than regular straws.)

Metal wire, screws, screw driver. To secure the can.

Safety glasses

Step 1 - wear safety glasses!

With the help of an adult, drill a line of holes down the can. This will be the bottom of your bee home and allow drainage of any water that gets in.



Step 2

Cut the paper straws into 10cm lengths. Alternately, roll 10cm wide strips of paper into tubes and tape them. A variety of tube sizes between 7mm and 11mm will attract different sizes and types of bees. Try rolling the paper around a pencil, a marker, a knitting needle, etc.

Step 3

Tightly pack the tubes into the can. If you tip the can upside down, the tubes should stay put.

Step 4

Find an open, sunny spot which isn't shaded by plants, about 1m (3ft) off the ground. Using a length of wire looped around the can, screw the can horizontally to something sturdy: a stake, a fence, a shed, etc. The drainage holes should be at the base of the can. The fixing must be secure – the can shouldn't flap and move in the wind.

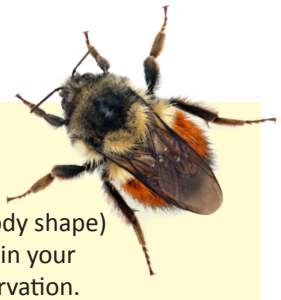
Step 5

Nesting bees will lay their eggs next to a food store inside the tubes. Once a tube is 'full', its entrance will be sealed with a plug of 'mortar'; leaf-cutter bees use fresh leaves. In winter, move the can to a dry, unheated garage or shed, then put it back outdoors the following spring, when adult bees will emerge.

Step 6

After bees have emerged in spring, remove tubes, rinse and dry can, and fill with new tubes. Repeat!

Bees of British Columbia



There are close to 500 species of bees in BC! Each species is unique, but they generally fall into the four categories described below: Honey Bees, Bumble Bees, Hairy Belly Bees, and Mining Bees.

These categories are used to describe groups of bees that share similar physical characteristics (such as body shape) and ecological roles (such as foraging practices and nesting needs). By identifying which types of bees live in your area, you can begin to understand which flowers and habitat resources are needed to support their conservation.

Honey Bees

Originally from Europe, honey bees live in hives containing tens of thousands of female workers, one queen, and a small number of male drones. The honey bee was one of the first domesticated insects and it is the primary species maintained by beekeepers to this day for both its honey production and crop pollination activities.

Honey bees are approximately 2.5cm long, oval-shaped, with golden-yellow colours and brown bands. They are covered in small hairs and carry pollen in “saddle bags” on their legs.

Bumble Bees

Like honey bees, bumble bees live in colonies with a queen and workers. Bumble bee nests can be found in holes dug by larger animals, abandoned birds nests, tree hollows, and other cavities.

Bumble bees range from 1.5cm to 3cm in length. They are covered in long, fuzzy hairs in a combination of yellow, orange, red, and black stripes depending on species. Like honey bees, they carry their pollen in sacs on their legs.

Hairy Belly Bees

Mason bees, leaf-cutter bees, and resin bees are all in the hairy belly bee category. Hairy belly bees are solitary, and most nest in tunnel-shaped cavities such as holes in trees or plant stalks. Female hairy belly bees build walls in these cavities from a variety of materials including leaves, mud and tree bark.

Hairy Belly Bees range in size from 5mm to 10mm. As the name suggests, they have hair on their undersides, which carries pollen. Depending on species, colours vary from black and yellow stripes to metallic greens and blues.

above: Blue Orchard Mason Bee
Osmia lignaria

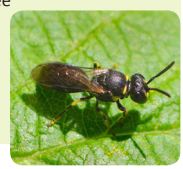
top right: Western Leafcutter Bee
Megachile perihirta

bottom right: Sculptured Resin Bee
Megachile sculpturalis

Mining Bees

The mining bee category includes all ground nesting bees: mining bees, sweat bees, and plasterer bees. These bees tend to nest in sandy soils with nearby shrubbery. Some species nest in large groups, but all have individual nests.

Mining bees range in size from 1cm to 1.5cm and generally have dark, narrow bodies and minimal hair. Some species have yellow stripes. A few are metallic green in colour. A number of species carry pollen along the length of their legs, characteristically called “pollen pants”.



above: Willow Mining Bee
Andrena salicifloris

top right: Metallic-green Sweat Bee
Agapostemon texanus

bottom right: Modest Masked Plasteter Bee
Hylaeus modestus

INSIGHT is a mobile app that allows you to record pollinator observations using an iphone or ipad. Growing our understanding of the status of pollinators in BC will allow for more informed decisions in the effort to support pollinator populations.
To participate as a citizen scientist, visit **insightcitizenscience.com**