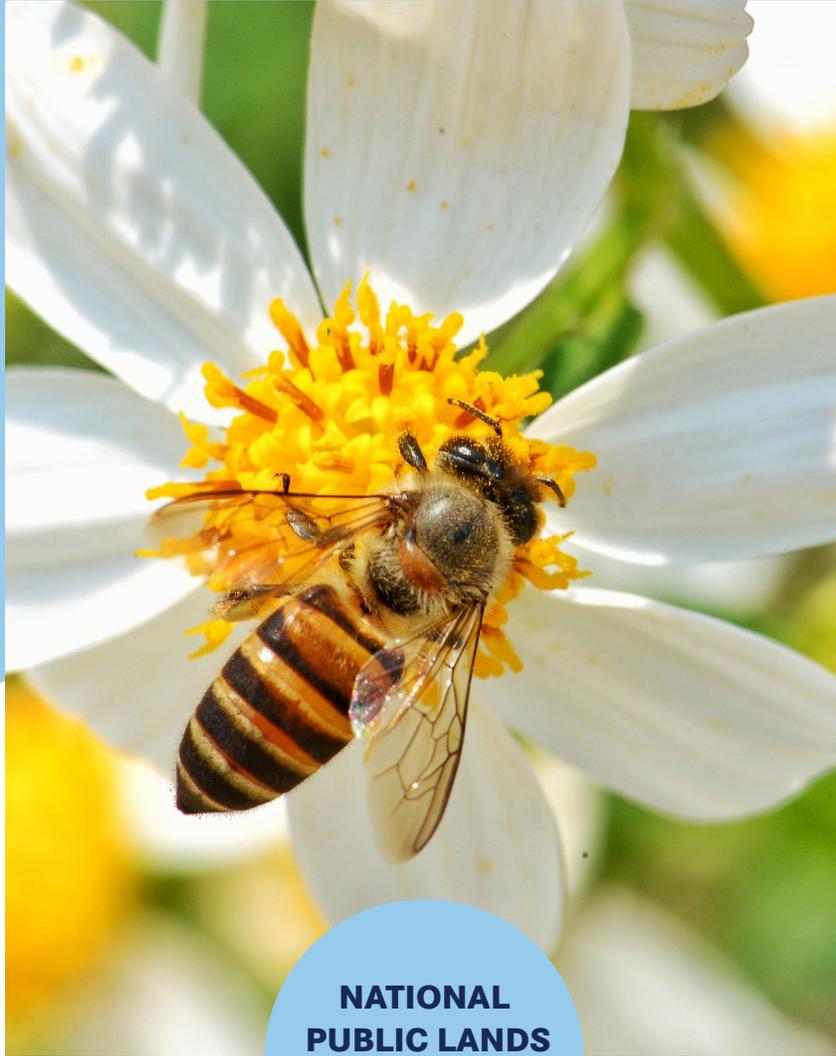


# Build a Bee Hotel



**NATIONAL  
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## What is a Bee Hotel?

Bee hotels, or bee houses, are structures that bees can use to lay their eggs. They provide a safe space away from predators, weather, and other threats that can interfere with a successful reproductive cycle.

Bee hotels are a great way to attract pollinators to your flower or vegetable garden. Building a bee hotel is a fun activity for the whole family!



### Bee Nurseries

The bees that nest in bee hotels are solitary bees—they are different than honeybees or bumblebees that people typically think of when talking about bees. Solitary bees comprise a large percentage of the world's bees. In fact, nearly 90% of all bee species are solitary bees!

Solitary bees lay their eggs in small holes. Many solitary bees are too small to chew their own holes in solid wood, so they save time and energy by nesting in pre-made holes like old grub tunnels or crevices in peeling bark. Solitary bees will nest in a variety of pre-made cavities, as long as the hole is the right size and depth for them.



### Have You Thanked a Bee Today?

Three-fourths of the world's flowering plants and about 35 percent of the world's food crops depend on pollinators to survive. Pollinators are animals that travel between plants, carrying pollen with them to help plants reproduce. Between \$235 and \$577 billion worth of annual global food production relies on the contribution of pollinators, including bees.

Unfortunately, pollinator populations are declining for several reasons, including habitat loss, pesticide use, and climate change. We need pollinators like solitary bees to carry pollen between plants in our vegetable plots, flower gardens, and agricultural crops. Solitary bees are becoming increasingly important pollinators as the number of honeybees continues to decrease.

# Make a Bee Hotel

## Supplies

- 15–20 sheets of construction paper, computer paper, or scrap paper
- Scissors
- Pencil
- Empty tin can
- 2 toilet paper rolls
- Tape
- Glue

## Steps

1

### Make paper tubes

- Cut the paper so that it's a little shorter than the can.
- Roll the paper around the pencil. Try to roll each piece of paper around the pencil at least five times to create a thick tube.
- Tape the paper and remove it from the pencil.
- Make about 30 paper tubes.

2

### Assemble your bee house

- Cover the bottom of the can with glue.
- Place the toilet paper tubes inside the can.
- Fill in the empty spaces around the the toilet paper rolls with your paper tubes. Make sure the paper tubes are snug, but not squished!
- Then, fill in the toilet paper rolls with your paper tubes. You have a bee house!

3

### Place your bee house

- Find a sunny spot outside, about three feet off the ground, to place your bee house. Make sure it is secure.
- Watch your bee house to see if bees move in!



## How-to Video

Watch this video from SciShow Kids to learn more about bees and make a bee house!



[youtube.com/watch?v=m0re9o1ZqX8](https://youtube.com/watch?v=m0re9o1ZqX8)

## Sources

Activities and information for this activity were sourced from the following resources:

[Pollinator Partnership](#)

[SciShow Kids](#)

[Ottawa Field-Naturalists' Club](#)

[Edmonton & Area Land Trust](#)

[All Things Fadra](#)

[National Geographic](#)

[Toyota 2050 Challenges](#)

# Toyota 2050 Challenges

In October 2015, Toyota announced the Toyota Environmental Challenge 2050. Since then Toyota's has been striving to reduce the environmental burden attributed to automobiles to as close to zero as possible, while developing measures to contribute positively to the earth and its societies with the aim of achieving a sustainable society. This activity directly aligns with two of Toyota's 2050 Challenges:

## Challenge 5 Establishing a Recycling-based Society and Systems

Due to global population increase along with the pressure for economic growth and convenient lifestyles, the pace of resource consumption is accelerating. If large-scale exploitation continues as it is, natural resources will be depleted, and if waste increases due to mass consumption, appropriate disposal will be unable to keep pace, resulting in risks of environmental pollution.

## Challenge 6 Establishing a Future Society in Harmony with Nature

It is critical for humans to conserve forests and other natural environments in all regions for coexistence in harmony with nature. However, deforestation is progressing across the world, resulting in the fragmentation of diverse living creature habitats, as well as the continuing loss of biodiversity. This entails a number of issues including the loss of biological resources that are essential for society, causing natural disasters, and spurring global warming, and we believe that it poses a risk to the potential for the sustainability of the entire society.

The graphic features the text 'TOYOTA ENVIRONMENTAL CHALLENGE 2050' in large, bold, black letters. Above the text are icons for a car, recycling, a factory, a water drop, and a tree. To the right is a green silhouette of the Earth. Below this is a grid of six challenge boxes, each with a title and an icon. The challenges are: 1. New vehicle Zero CO2 Emissions Challenge (car icon), 2. Life Cycle Zero CO2 Emissions Challenge (recycling icon), 3. Plant Zero CO2 Emissions Challenge (factory icon), 4. Challenge of Minimizing and Optimizing Water Usage (water drop icon), 5. Challenge of Establishing a Recycling-based Society and Systems (recycling icon), and 6. Challenge of Establishing a Future Society in Harmony with Nature (nature icon).

CHALLENGE 1	CHALLENGE 2	CHALLENGE 3	CHALLENGE 4	CHALLENGE 5	CHALLENGE 6
New vehicle Zero CO <sub>2</sub> Emissions Challenge	Life Cycle Zero CO <sub>2</sub> Emissions Challenge	Plant Zero CO <sub>2</sub> Emissions Challenge	Challenge of Minimizing and Optimizing Water Usage	Challenge of Establishing a Recycling-based Society and Systems	Challenge of Establishing a Future Society in Harmony with Nature



## National Environmental Education Foundation

4301 Connecticut Avenue NW Suite 160  
Washington, DC 20008-2326

202-833-2933

[neefusa.org](http://neefusa.org)