

"BEE" THE INVENTOR

STEM ACTIVITY AND COLORING BOOK



"BEE" THE INVENTOR

WRITTEN BY:

DR. LEIGH ESTABROOKS AND DOUG SCOTT

ILLUSTRATED BY:

RICK KEENE

INKED BY:

DEEKSHA VAIDYANATHAN

EDITED BY:

DR. VALERIE KING AND VICKY PASQUANTONIO

WORKER BEES:



DWIJ



SHAGUN

"BEE" THE INVENTOR™
INVENTION COLORING BOOK

HELP SHAGUN AND DWIJ BUILD A NEW HOME

MY NAME IS _____ AND I AM AN
INVENTOR!

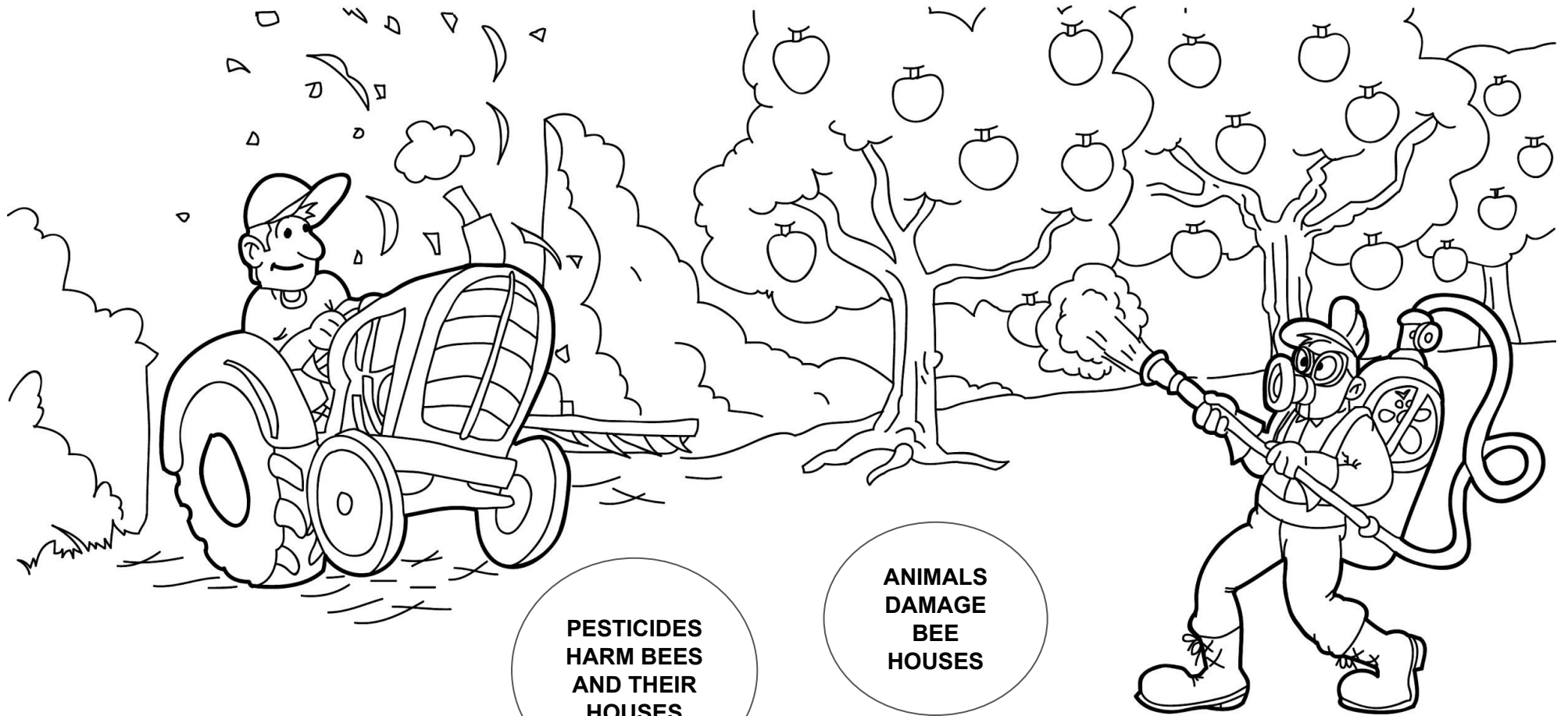


Dwij and Shagun are leafcutter bees. They happily live in a great big field in the USA.

Leafcutter bees, like Shagun and Dwij, spread pollen from plant to plant. Pollen helps fruits and vegetables to grow. This is called POLLINATION.



**They find snug little twigs, logs and bushes to live in near their big field. }
They use cut up bits of leaves to help make their nests comfy and safe.**

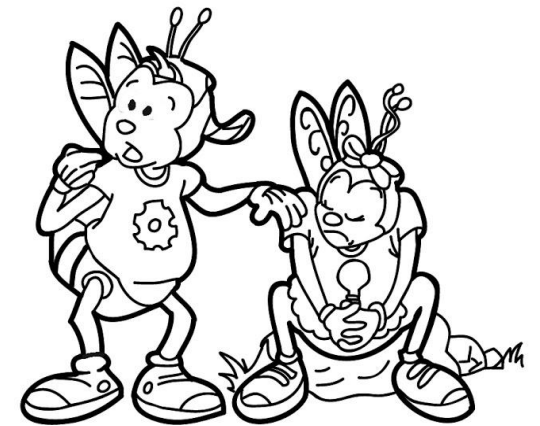


PESTICIDES
HARM BEES
AND THEIR
HOUSES

ANIMALS
DAMAGE
BEE
HOUSES



PEOPLE
WITH
MACHINES
DAMAGE
BEE
HOUSES



**Sometimes they are sad because their homes get damaged.
Can you match the objects with the damage they would cause?**

Shagun and Dwij are in your backyard looking for a new, snug little house. Can you help them?



First take a look at the needs of their new house...

❁ The house must be off the ground as tall as you are.

❁ Leafcutter bees need hollow tubes to nest in.

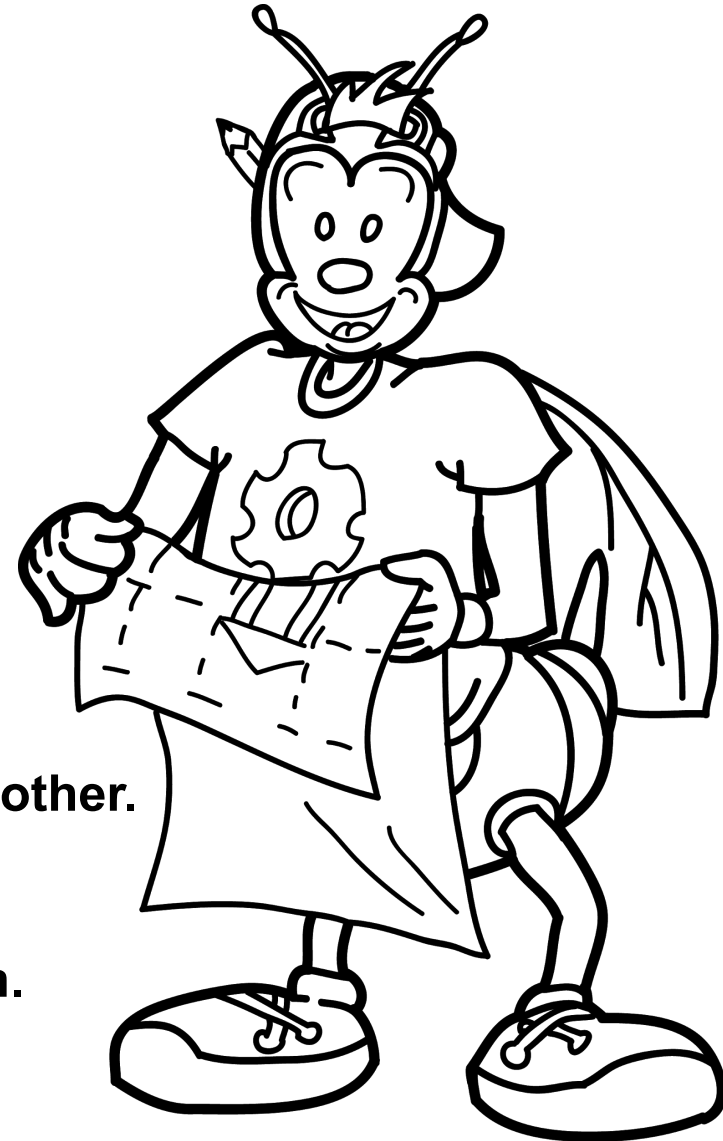
🍓 Smallest could be = $\frac{1}{16}$ of an inch (Like a drink box straw)

🍓 Largest could be = $\frac{1}{2}$ inch (Like a garden hose)

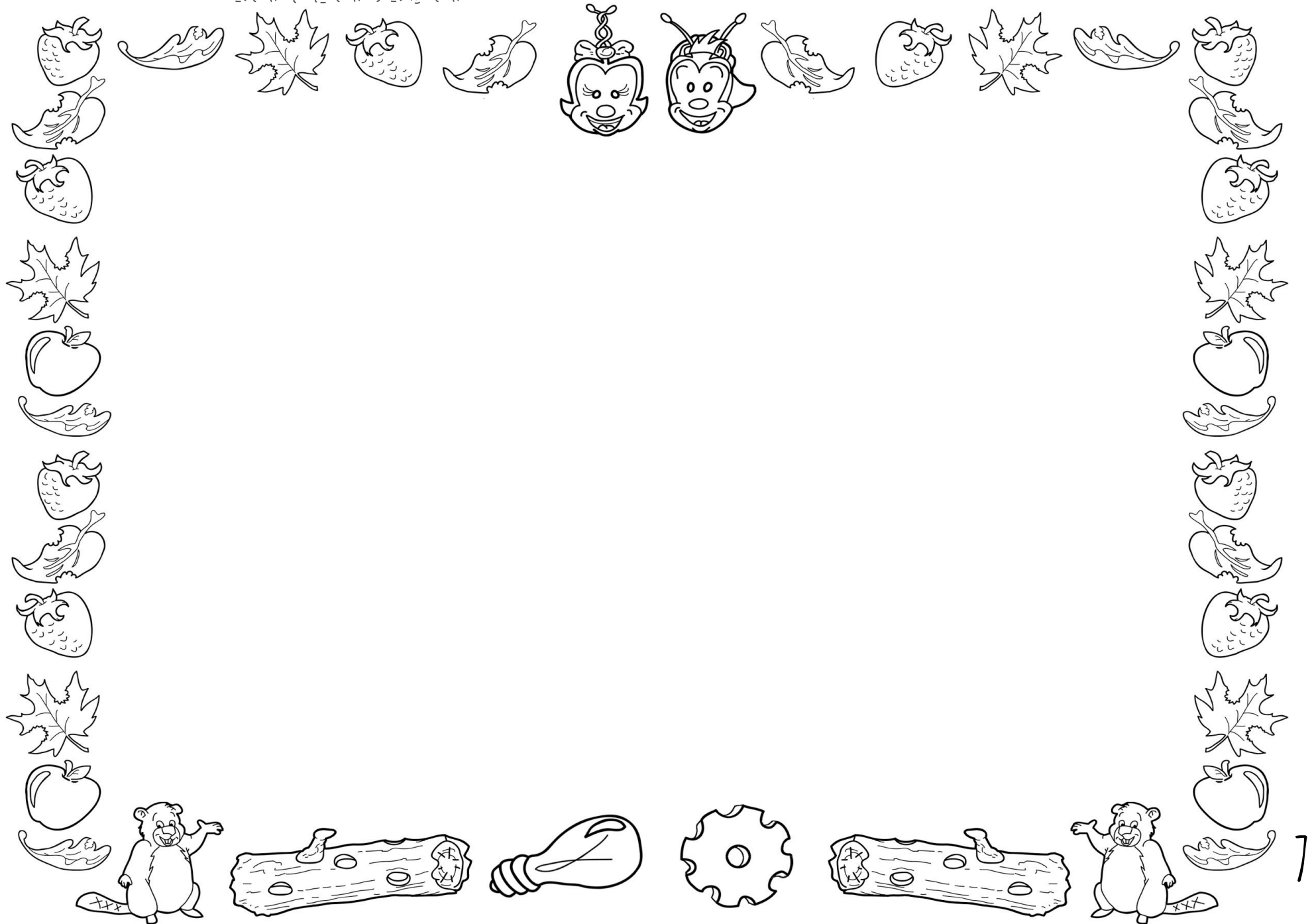
❁ Leafcutter bees need bundled tubes to live near each other.

❁ The house must provide **SHELTER** from the rain.

❁ The house must protect leafcutter bees.



Inventors design new things. Invent a house for Shagun and Dwij.
Draw your INVENTION here.



Now it's time to make a “practice” house for Shagun and Dwij.

Inventors call this a **PROTOTYPE**.



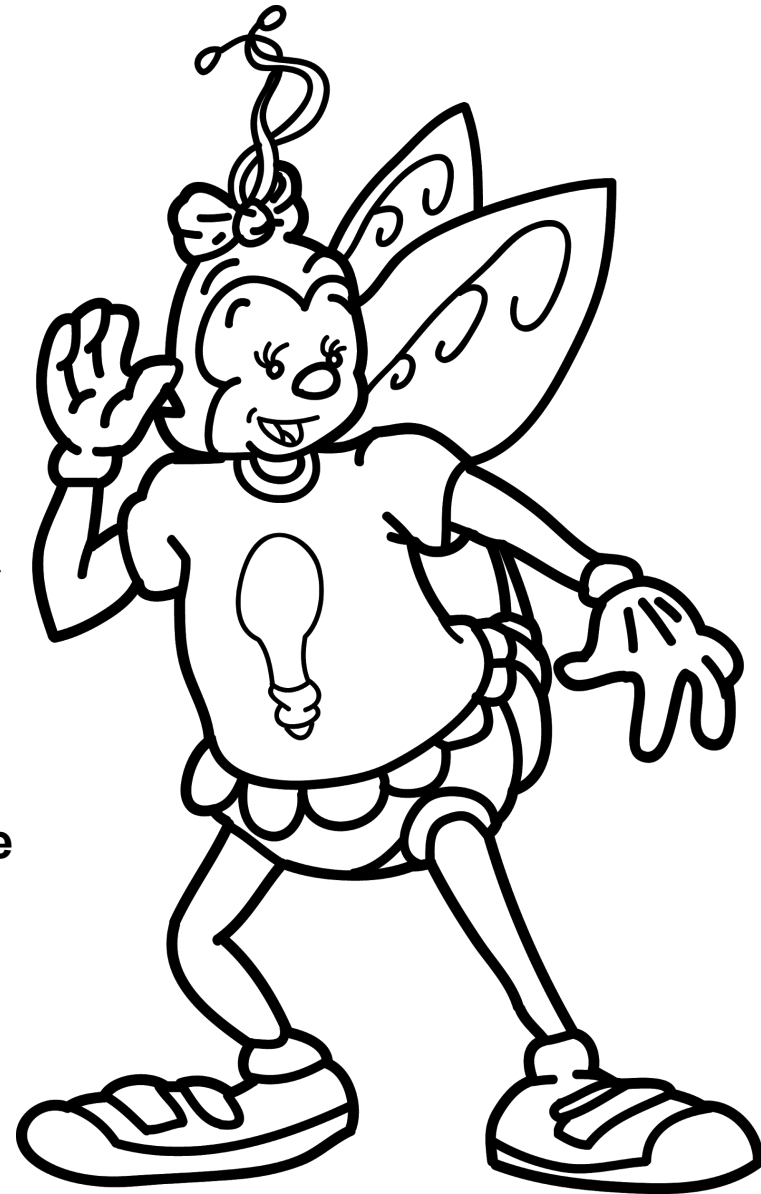
Ask a grown up to help you. Use things from the recycle bin to make a prototype. Do you have other free things that you can build with?

**Shagun and Dwij want to hear all about your prototype.
Share your ideas with them and others.**

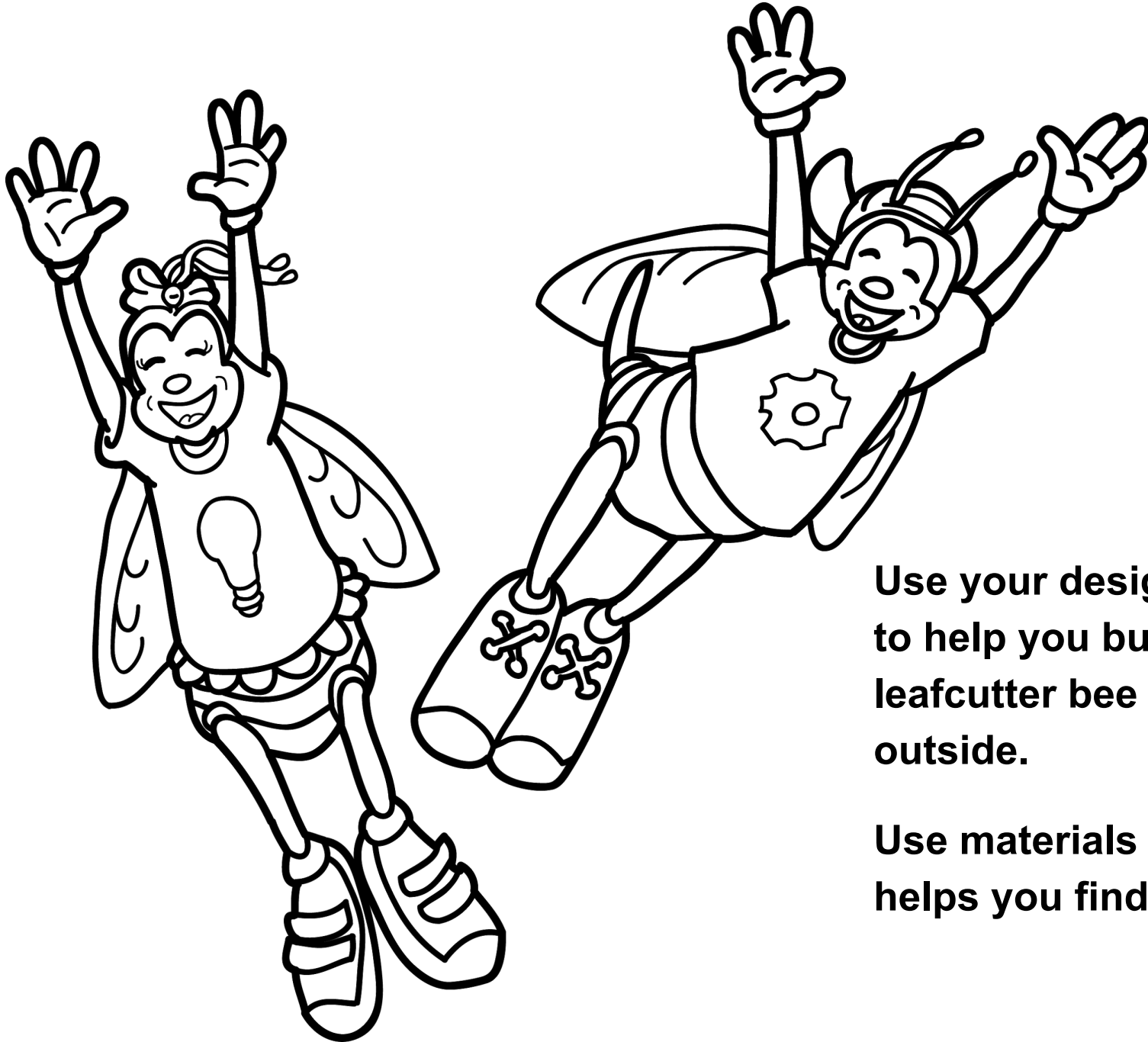
1. **How is it useful?** _____

2. **How is it special and unique?** _____

3. **What will Shagun and Dwij like best about the house
you made?** _____



**Help Shagun and Dwij's leafcutter bee friends outside.
Let's build a real house for them!**



**Use your design and prototype
to help you build a real
leafcutter bee house for
outside.**

**Use materials that a grown up
helps you find.**

Trace and color some new words you have learned

POLLINATE

Taking pollen from one plant to another

PROTOTYPE

A practice model of your design

SHELTER

A safe place

INVENTION

A useful thing that solves a problem in a new way

Information On Leafcutter Bees And Invention Resources

[MICHIGAN STATE UNIVERSITY - BUILDING AND MANAGING
LEAFCUTTER BEE HOUSES](#)

[PLANET BEE FOUNDATION - NATIVE BEE SERIES - LEAFCUTTER BEES](#)

[LEMELSON FOUNDATION - SMITHSONIAN - SPARK LAB - INVENTOR'S
NOTEBOOK](#)

[INVENTION EDUCATION ORG](#)

[LEMELSON FOUNDATION](#)

[LEMELSON-MIT PROGRAM](#)

LEMELSON-MIT

©2020 MASSACHUSETTS INSTITUTE OF TECHNOLOGY