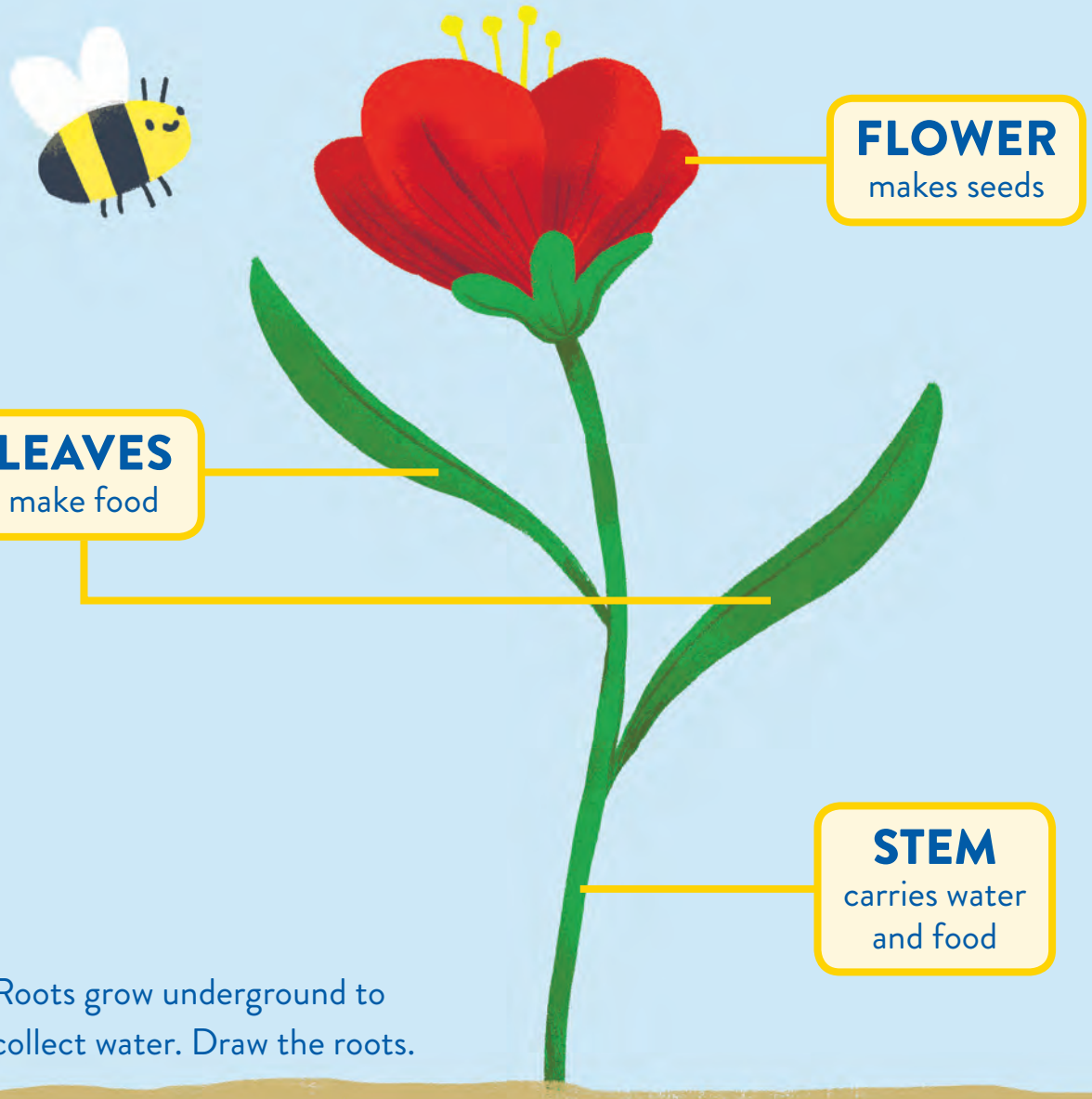
LET'S LEARN ABOUT

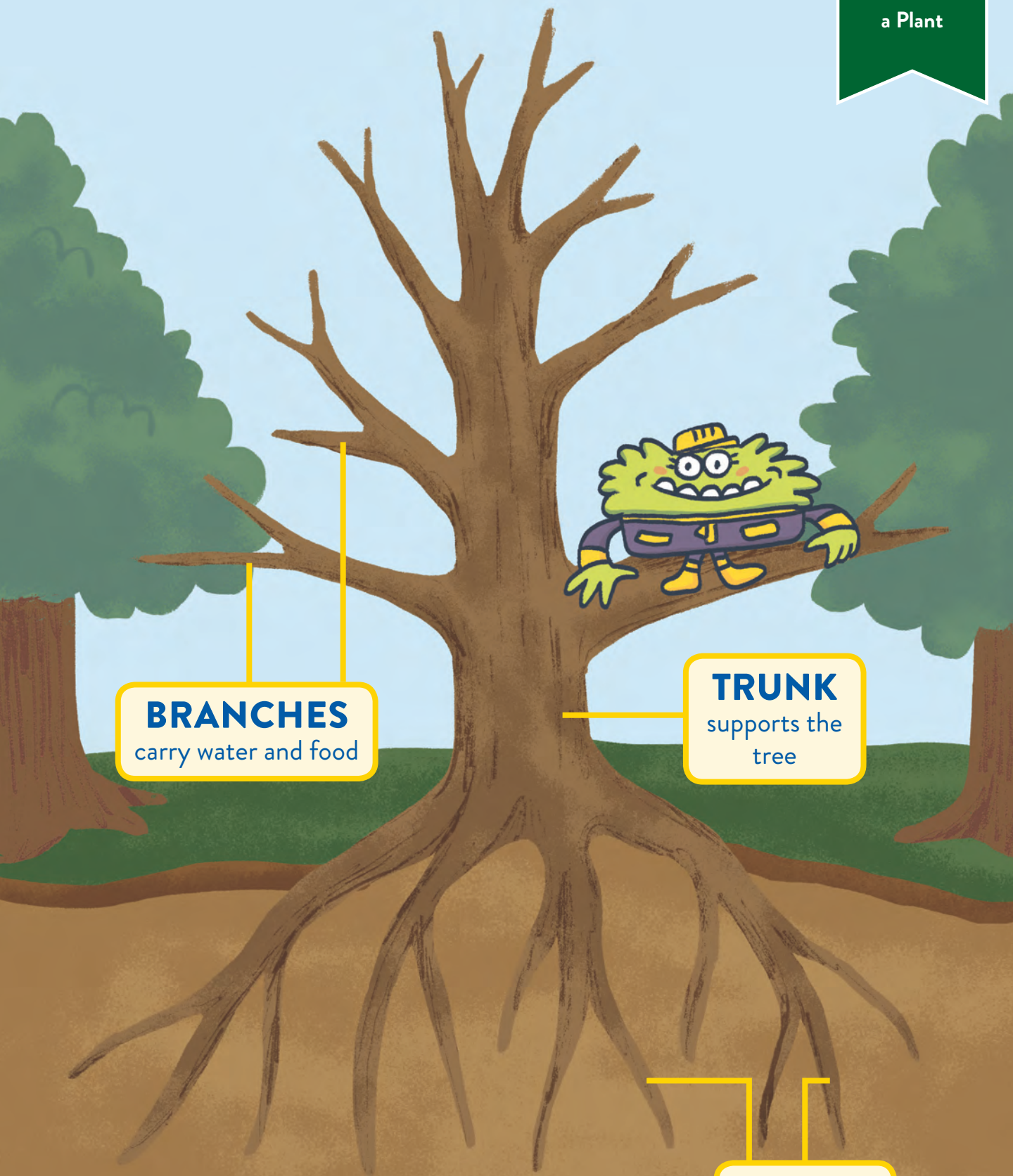
Parts of a Plant

Plants have many parts to help them live and grow.



Roots grow underground to collect water. Draw the roots.

Leaves collect sunlight to make food for the plant. Draw the leaves.



Go outside and look around your home. Which parts of flowers, trees, and other plants can you see?

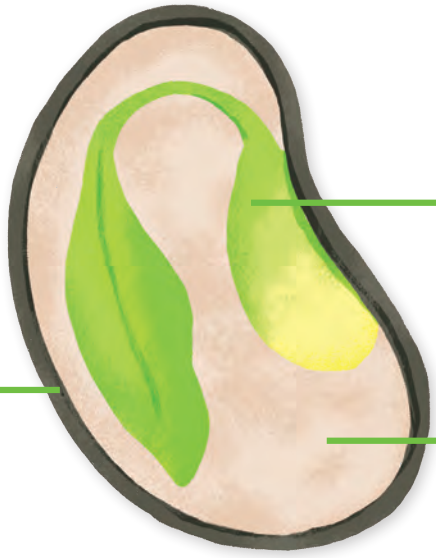
Read Enid's poem aloud.

I Like Plants, Yes I Do

I eat plants, that's what I like.
When I'm hungry, I take a hike.
Tubers, bulbs, and flowers, too.
Roots and seeds are what I chew.
Did you know you can eat a stem?
Celery, asparagus—I pick them!
Leaves seem to be what I like best.
But I couldn't live without the rest.
Plants are tasty—want to see?
Just come and take a hike with me!

Draw the parts of plants that you like to eat below.

Many plants spread seeds to grow new plants.
Seeds come in many different shapes, sizes, and colors,
but inside they have the same parts:

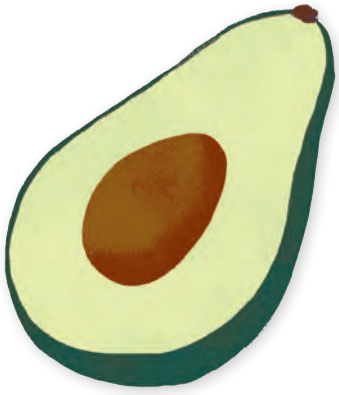


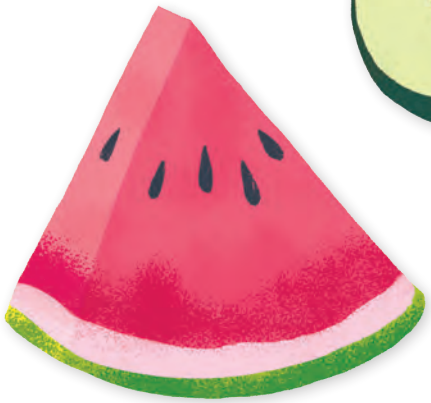
EMBRYO
a tiny new plant

SEED COATING
an outer layer for protection

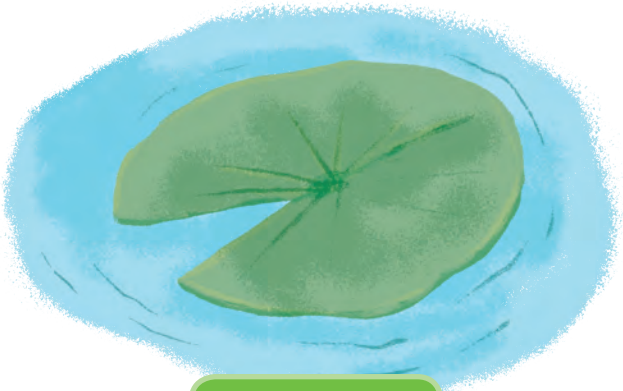
FOOD
for the new plant

Circle the seeds in each fruit and vegetable.

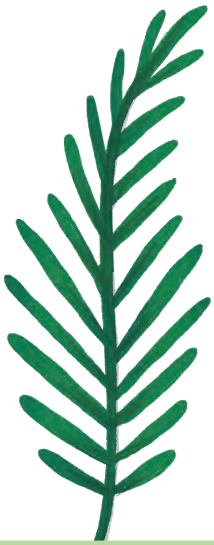




Different types of plants have different leaves:



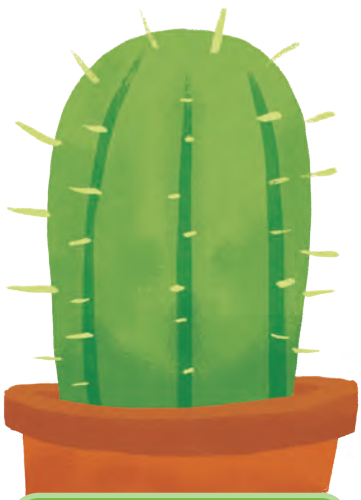
lily pads



fern fronds

grass blades

pine needles



cactus spines

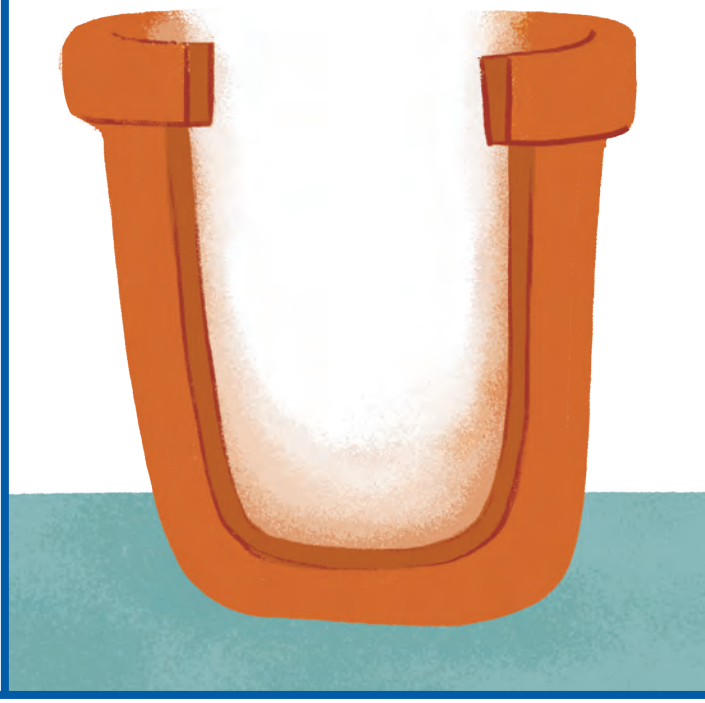
clover leaves

6

Parts of a Plant

Observe a plant.
Draw the parts you can see.

Find a plant. Draw the parts that you can't see, under the dirt.



Pick a leaf from a tree or plant. Then trace it here.

LET'S START!

GATHER THESE TOOLS AND MATERIALS.

4–6 cotton balls

4–6 twist ties

4–6 rubber bands

4–6 drinking straws

Toilet paper roll

Large cup

Water

Celery stalk with leaves or a white flower

Food coloring

LET'S TINKER!

Use your materials to show the different parts of a plant.

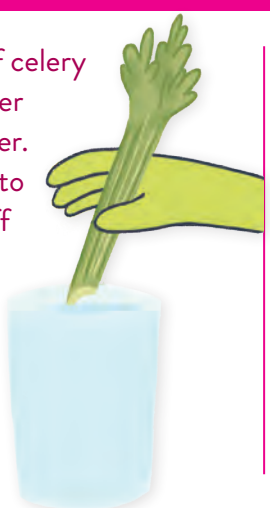
Try making a model that lies flat on a table or stands upright.

Include roots, a stem or trunk, and leaves.

LET'S MAKE: STEM EXPERIMENT!

A stem carries water and food up and down a plant. **Watch** a stem at work!

1. Place a stalk of celery or a white flower in a cup of water. You may need to break or cut off a small piece of the stem first.



2. Add several drops of food coloring to the water.

3. **Predict** what the stem will do with the colored water. Do you notice any changes right away?

4. **Check** back the next day. What changes do you see? What work does the stem do? What do you think will happen if you leave the stem in the water?

LET'S ENGINEER!

Callie wants to teach Dimitri how seeds grow in many different shapes and sizes—but she doesn't have any seeds!

How can Callie teach Dimitri without seeds?

Design a model of your own seed.

How can you use one of your materials to represent the tough outer shell of a seed? What can you make to represent the food inside? Which materials can hold everything together? How does your seed travel—can it float or fly?

PROJECT 6: DONE!
Get your sticker!

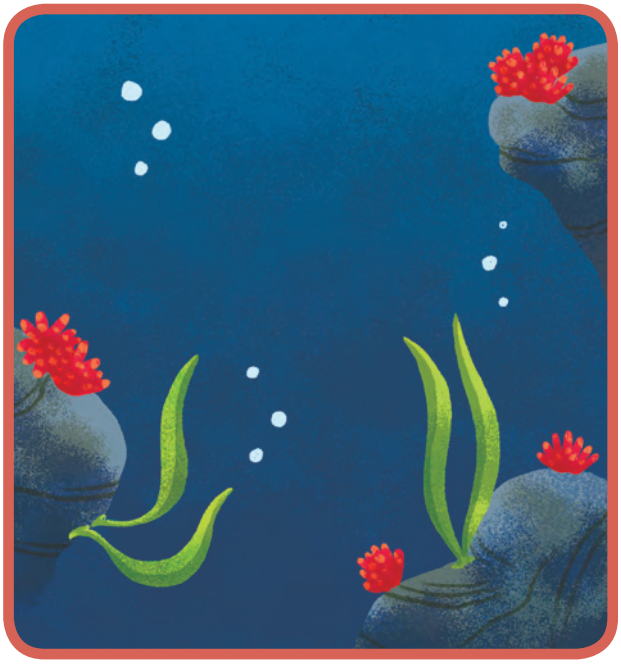
LET'S LEARN ABOUT

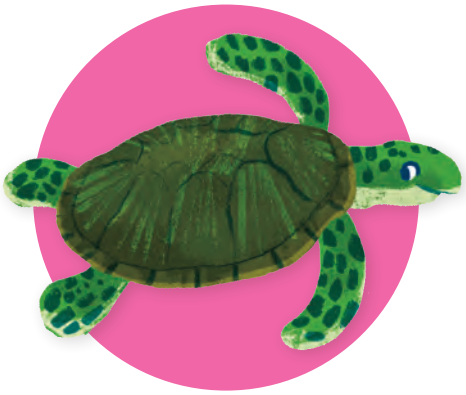
Animal Habitats

Animals live close to the things they need to survive, like food, water, and shelter. This place is called their habitat. Draw a line to connect each animal to its habitat. Then trace the name of each habitat.

grassland

ocean





rain forest

desert

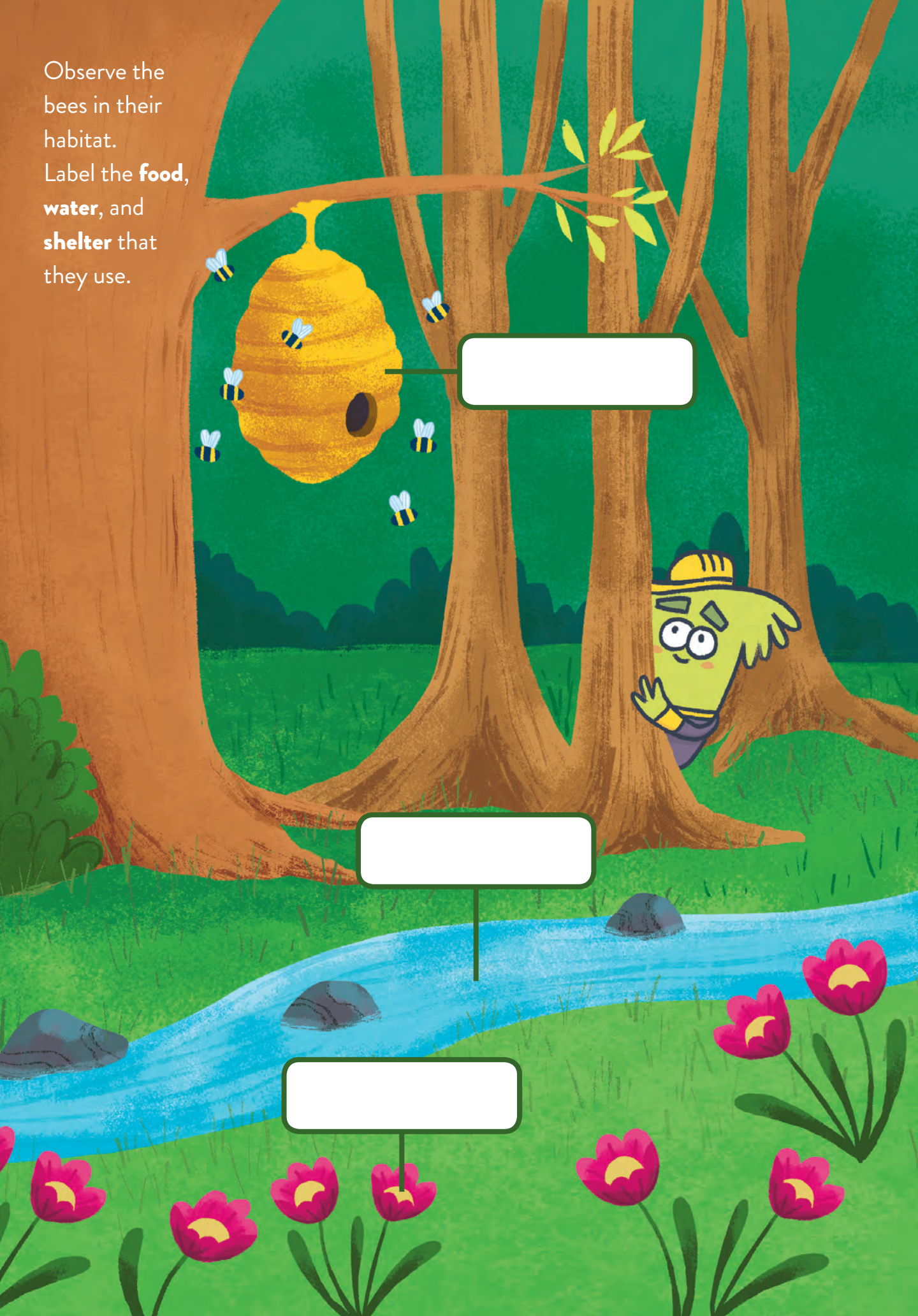
Anteaters eat over 35,000 ants a day! They live in forests and grasslands, where there are many anthills.

Draw a line through the maze to connect the anteater to all of the anthills. Avoid the hungry pumas—they want to eat the anteater!

Bald eagles eat small birds and mammals, but they mainly eat fish! They live in forests near oceans, rivers, or lakes, where they can find food.

Draw a line through the maze to connect the bald eagle to all of the fish. Avoid the bobcats—they want to eat the eagle!

Observe the bees in their habitat. Label the **food**, **water**, and **shelter** that they use.



Walk around in your habitat at home. Then draw a picture of yourself in your habitat. Label the food, water, and shelter that you use.

LET'S START!

GATHER THESE TOOLS AND MATERIALS.

Stick

Paper bag

Dirt

Leaves

Rocks

Shoebox

Grass or a shredded newspaper

Water

Cardboard box

LET'S TINKER!

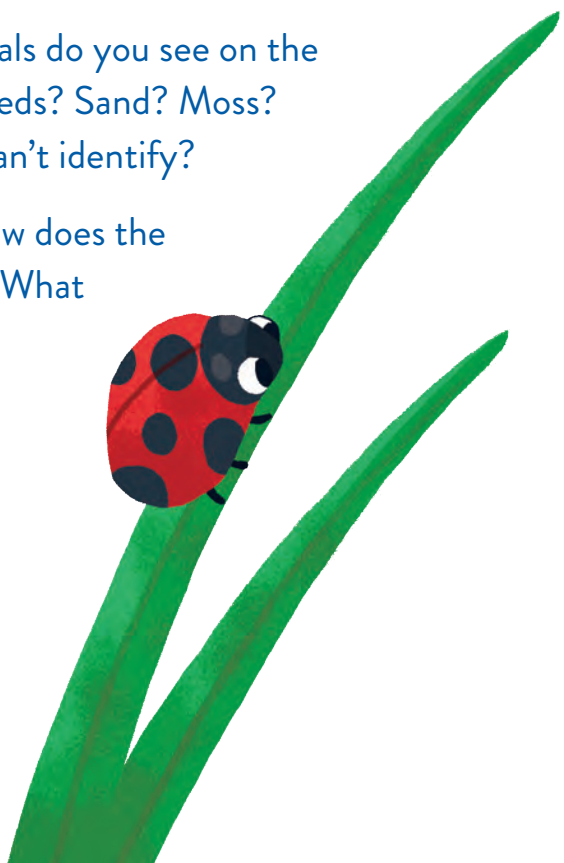
Many types of animals live right outside your front door. The area around your home is their habitat.

Choose a safe place to sit and explore the ground near your home.

Investigate by looking closely. What materials do you see on the dirt? Are there blades of grass, leaves, or seeds? Sand? Moss? Any insects? Are there any materials you can't identify?

Use a stick to dig a little hole in the dirt. How does the dirt change as you go beneath the surface? What new materials do you see?

Take a paper bag with you, and save some of the materials you've found for the next activities.



LET'S MAKE: LOCAL HABITAT!

What insects and animals do you see outside your home?

Make a diorama—a model of a habitat—for your favorite local animal.

Use a shoebox and some of the materials you collected. Include materials that represent the food, water, and shelter that this animal needs. Does the animal need anything else to survive?

LET'S ENGINEER!

There's a rabbit in Amelia's backyard. But winter is coming!

How can Amelia keep the rabbit warm?

Make a model shelter for Amelia's new friend.

Use a cardboard box and some of the materials that you found outside in your habitat, like sticks, leaves, and rocks. Which materials are strong enough to shelter a rabbit? What kind of door or opening can you build so a rabbit can go in and out?

PROJECT 9: DONE!
Get your sticker!

TinkerActive WORKBOOKS

TINKER

MAKE

ENGINEER

The NEW way to
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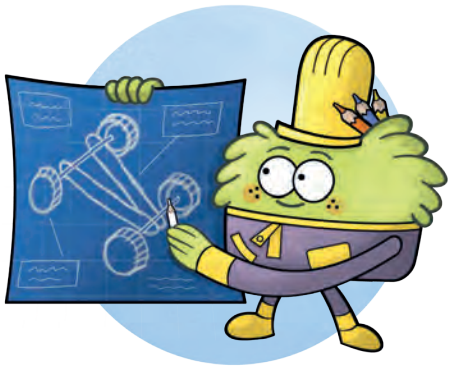
DEAR READER,



At the TinkerActive workshop, our mission is to inspire a generation of fearless **learners**, **makers**, and **problem solvers**. We all know that kids have to learn the ABCs and 123s. But the future belongs to the children who learn to think beyond the basics.

So we designed **TINKERACTIVE WORKBOOKS** to do both: build children's foundational knowledge ***and*** encourage them to try new things, discover new skills, and imagine new possibilities. That's what "Tinker, Make, and Engineer" means to us, and we believe that it can lead to lifelong learners who create a better world.

Tinker — TRY NEW THINGS

Make — DISCOVER NEW SKILLS

Engineer — IMAGINE NEW POSSIBILITIES

SO HOW DO WE DO IT?

Each chapter includes **curriculum-based activities** as well as tinkering, making, and engineering projects, where kids can actually use the concepts they just learned to solve problems hands-on.

Every TinkerActive Workbook has been created in consultation with an **award-winning teacher** to ensure that we cover the core competencies and align with Common Core State Standards and Next Generation Science Standards.

We also include **achievement stickers** for each project, and a **secret magnetic merit badge** so kids can celebrate their accomplishments!

CLOSE-UP OF MERIT BADGE

Our goals are to cheer on your child, to ask, "Why do you think that?" and to help them explore all the possible answers. By supporting your child's innate curiosity, who knows what we might learn together!

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Yours in discovery,
THE TINKERACTIVE TEAM

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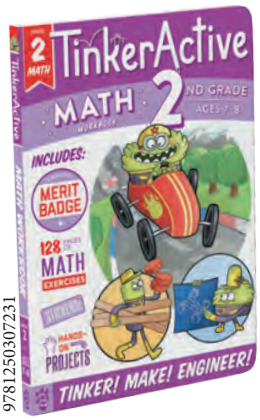

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