

Small creatures. Big discoveries.

A 15-20 minute nature activity. Find one small animal, look closely, and bring home a page of discoveries. You do not need to know its name.

START SMALL

Bring: a pencil, something firm to write on and one record sheet (page 5). A camera or magnifier is optional. Choose a path, garden edge or view from a seat.

01 Choose one.

Watch from a comfortable distance. What is it resting on? If nothing appears, draw the habitat and plan another visit.

02 Look before you name it.

Find three details: a shape, a color or pattern, and a body part. Watch what it does. Describe only what you can actually see.

03 Make a field note.

Sketch the main shapes on page 5, then add labels. An adult can write your words. A rough drawing with good clues is enough.

04 Make a careful guess.

Use pages 2-3 or a reliable guide. Write a possible group, or leave it unknown. Share one discovery and one question.

FOR THE GROWN-UP

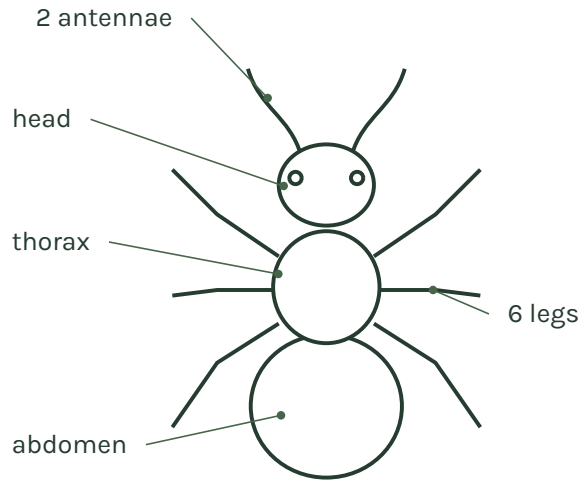
Read the steps together; younger explorers can draw or dictate. Older explorers can compare references. Stay on permitted paths, leave animals and nests undisturbed, and do not handle unfamiliar insects or caterpillars. An app result is not a handling decision.

Print only what you need: page 5 for a first walk; pages 2-4 as references; page 6 for repeat visits. Black-and-white printing works. No app or signup required.

Look for the parts.

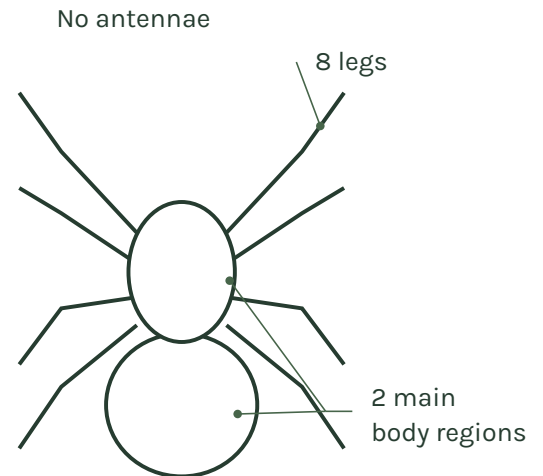
Start with a body plan, not a species name. Count only the legs and body parts you can see. Hidden details can stay unknown.

AN ADULT INSECT



Three main body regions. All six legs attach to the thorax. Wings, when present, also attach there.

A SPIDER



Two main body regions. Eight walking legs attach to the front region. Spiders are arachnids, not insects.

SCHEMATIC TOP VIEWS / NOT TO SCALE / NOT AN IDENTIFICATION KEY

Three views can reveal more.

1

Whole animal

Start with its shape and where it is.

2

Visible details

Try a side or wing view only if it is easy to see.

3

Its surroundings

Note the plant, bark, soil or web around it.

Does neither drawing fit? A caterpillar is a young insect, and other young stages can look very different. Pill bugs, snails and millipedes are different groups. Record your clues without forcing a match.

Anatomy sources: University of Kentucky Entomology, Insect Basics; University of Maryland Extension, Predatory Spiders. Diagrams are original simplified teaching drawings. Links: underfoot.web.app/collection-kit

Eight groups to investigate.

These are starter clues for common adult insects. A clue suggests a group; it does not prove a name. Compare more than one feature.

WHOLE ANIMALS & ENLARGED DETAILS / SIMPLIFIED, NOT TO SCALE



Beetles

COLEOPTERA

Often have hard front-wing covers with a straight seam down the back.



Butterflies & moths

LEPIDOPTERA

Their wings have tiny scales, often making a pattern. Caterpillars are the young stage.



True flies

DIPTERA

One pair of flight wings. Some resemble bees, so color alone is not enough.



Bees, wasps & ants

HYMENOPTERA

Winged adults usually have two pairs of clear wings. Worker ants are wingless.



True bugs & relatives

HEMIPTERA

Piercing, sucking mouthparts; many true bugs have front wings that overlap.



Grasshoppers & crickets

ORTHOPTERA

Usually have large hind legs for jumping. Antenna length can help narrow the group.



Dragonflies & damselflies

ODONATA

Two pairs of long, veined wings, large eyes and a long, narrow abdomen.



Mantises

MANTODEA

Grasping front legs and a long thorax. The head often looks triangular.

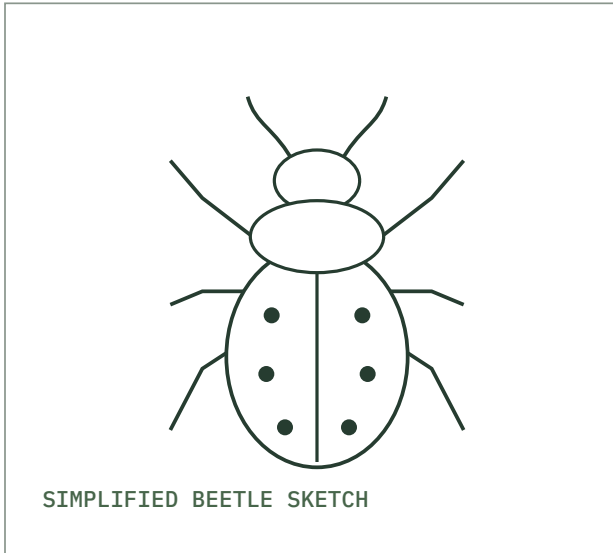
Do not force a match. Wings may overlap or be hidden. Young insects need a different reference. A broad label such as "insect" is useful when the details are unclear.

Sources: University of Kentucky insect-order guides; University of Minnesota Extension, Flies; Minnesota Landscape Arboretum, Of dragons and damsels. Full references: underfoot.web.app/collection-kit

A good note beats a quick guess.

Practice with this invented example before your walk. It shows how a few visible details support a broad identification without proving a species.

EXAMPLE / NOT A REAL FIELD RECORD



What I can see

Six legs. Two antennae. An oval back with a line down the middle. Dark spots.

What I think

Possible group: beetle. The wing-cover seam is a clue. Spots alone do not tell me the species.

What would help?

A clearer view of the head and wing covers, then a comparison with a regional beetle guide. If the features do not match, I can change my guess.

YOUR TURN / OBSERVATION OR GUESS?

Circle the sentence that reports something visible. Underline the part of the other sentence that needs more evidence.

- A. It must be a lady beetle because it has spots.
- B. I can see a line down its back.

Talk it through: B describes a visible feature. A makes a claim from spots alone. Other beetles have spots too. Compare body shape and markings with a guide before narrowing the name.

The distinction between observation and explanation is informed by BEETLES, The Lawrence Hall of Science. This example and worksheet are original; no endorsement is implied. Reference links are on the download page.

My small discovery.

Look. Draw. Label. A careful observation counts, even when the animal stays unknown. Repeat this sheet whenever you find something worth a closer look.

FIND NO.

DATE / TIME

PLACE: PARK / CITY, NOT ADDRESS

WHERE WAS IT? (A LEAF, BARK, SOIL, A WEB...)

DRAW OR ADD A PHOTO. LABEL TWO DETAILS YOU CAN SEE.

A simple shape is a good start.

MORE CLUES I NOTICED: LEGS, WINGS, COLORS, SHAPES...

WHAT IT WAS DOING

MY QUESTION

POSSIBLE NAME / GROUP (OPTIONAL)

REFERENCE I COMPARED IT WITH

Not sure? Write "unknown." Keep people and private details out of photos.

Keep the discoveries coming.

One animal, many questions. Keep your sheets and photos together. Revisit the same place and see what has changed; you do not need to fill every row.

FIND	DATE	POSSIBLE NAME / WHAT I SAW	SHEET / PHOTO
01			
02			
03			
04			
05			
06			

ON THE NEXT VISIT

- ☐ Look again in the same place.
- ☐ Compare two finds: one similarity, one difference.
- ☐ Use a reference to check an earlier guess.

ONE THING THAT CHANGED / ONE THING I WANT TO FIND OUT

Keep it yours. No upload or account is needed. If sharing a photo, an adult should check for people, private locations and embedded location information. For a school or scout assignment, confirm the required format first.

MADE BY UNDERFOOT / OPTIONAL IPHONE COMPANION

Underfoot suggests insect and spider IDs and collects illustrated cards. Collect your first 10 species free; Pro is optional and paid. Photo ID needs internet. The printable works on its own.

More copies: underfoot.web.app/collection-kit

