



**Educational
Insights®**

FEATURES:

- **LADYBUG GARDEN HABITAT**
- **3 VIEWING MAGNIFIERS**
- **INSTRUCTION GUIDE**
- **MAIL-IN CERTIFICATE FOR
LADYBUG LARVAE**

WARNING:
CHOKING HAZARD — Small parts.
Not for children under three (3) years.



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3+

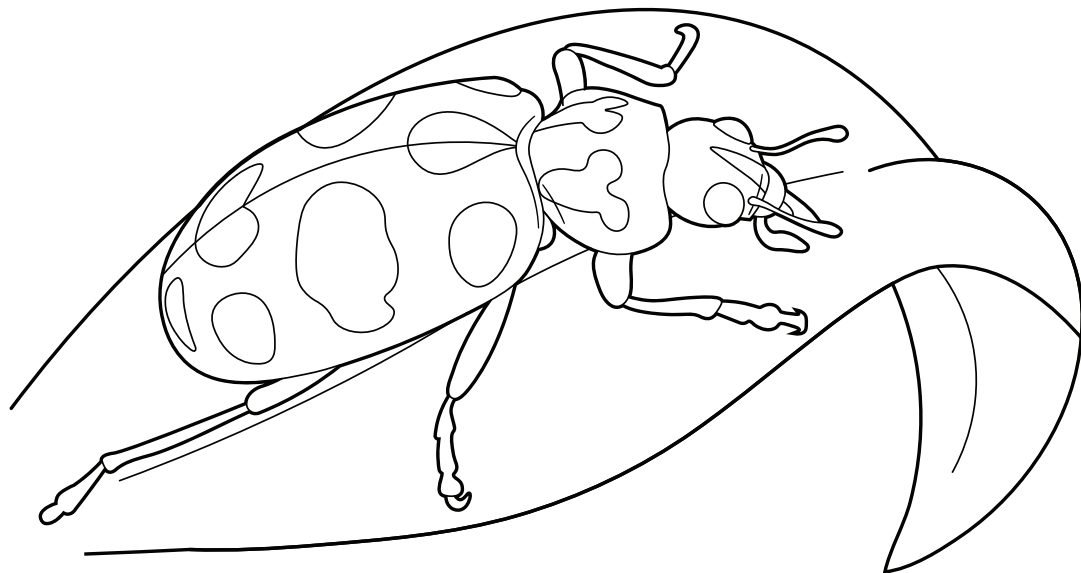
GEOSAFARI JR.

**LADYBUG
GARDEN**

WELCOME TO THE WONDERFUL WORLD OF LADYBUGS.

Did you know ladybugs are also called ladybirds or lady beetles? They're friends to farmers and come in lots of bright colors. Ladybugs like to live in your garden and fly in the sky. Did you know they don't start out as baby ladybugs? They change from larvae that look like tiny alligators, into cute brightly colored adult ladybugs.

How do they do that? Become a scientist, and with the help of your Ladybug Garden, you can watch and see for yourself. Are you ready for an adventure? Let's get started and have some fun!



COLOR ME!

This little ladybug wants to play with her friends but she has no color. Can you help her?

LADYBUG GARDEN

This is a temporary home where your larvae can grow big and strong and change into delightful ladybugs.

1

MAGNIFIERS

There are three magnifiers placed at the top, each with 3x magnification, to help you see all the amazing details and changes up-close. The top magnifier is also a secret window you can open to feed your ladybugs. Be sure to close it after putting food in so no one escapes.

2

TREE SPONGE

A moist tree sponge allows your thirsty larvae and adult ladybugs to drink water. Learn about feeding and watering later in the guide.

3

LADYBUG CAVE

This is a cool hidey-hole where your ladybugs can relax.

4

LADYBUG CERTIFICATE

When you're ready to get started, follow the instructions on your certificate to receive live pink-spotted ladybug larvae!



FUN FACT

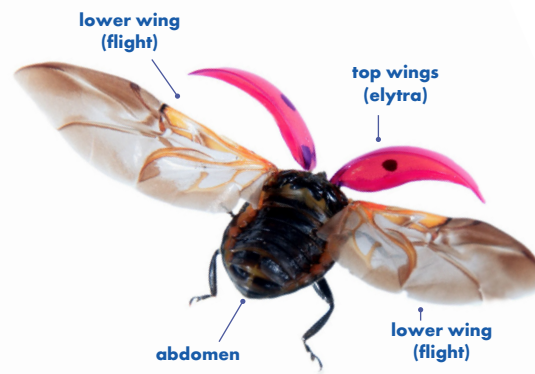
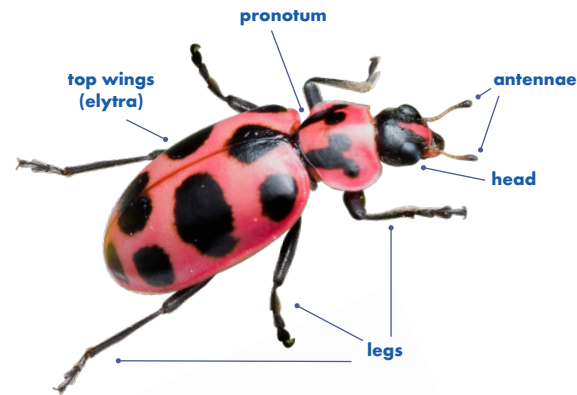
Scientists are people who study things. They ask questions, then observe and listen to find answers. Scientists explore and try new things. It's fun to be a scientist! Scientists who study insects are called entomologists.

PLAN IT OUT

Raising ladybugs is super exciting! It's important to prepare so you're ready to welcome your new friends. Spring and summer are the best times to order your ladybug larvae. Once you make a plan and send in the certificate, check the mail every day so you can open the package when it arrives. You don't want your larvae to wait too long in a hot mailbox. It will take several weeks before your larvae turn into full-grown ladybugs. Remember, your ladybug larvae are living creatures, so keep them safe, remember to feed them, and check on them every day.

WHAT IS A LADYBUG?

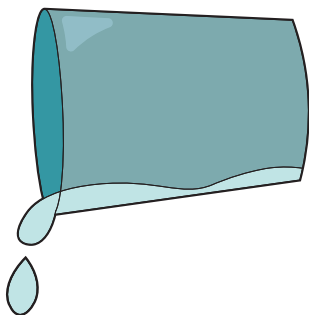
A ladybug is an insect. How can you tell an insect from other animals? All insects have three main body parts (head, thorax, and abdomen). The part of a ladybug's thorax you see is called the pronotum. The pronotum is much larger than the head and helps protect it. Insects also have 4 wings, 6 legs, and 2 antennae. Instead of using them to fly, the top set of a ladybug's wings (elytra) are hard and shield the body like a little suit of armor.



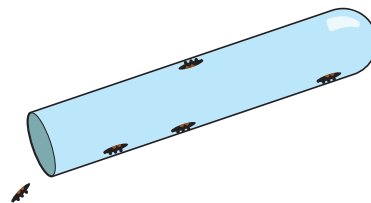
THEY'RE HERE!

As soon as your ladybug larvae arrive, open the box and look at everything to make sure it's intact.

- 1) Keep the larvae out of the sun while you get your Ladybug Garden ready. First, fill a little cup with water (tap water is okay). Use the cup to pour a few drops of water onto the sponge in the center of the tree.



- 2) Add a half scoop of food to the dry floor of the Ladybug Garden. Be careful to keep the food out of the water. Store the rest of the food in your refrigerator.



- 3) Carefully open the ladybug larvae container, and gently tap the ladybug larvae into the Ladybug Garden. Avoid touching the larvae with your hands. Always keep your Ladybug Garden upright and leave the lid on unless you're feeding or watering them. Your larvae may not move around at first. They've just had a long trip and need to rest a bit and eat. Try not to disturb them too much and be patient. They'll get more active as they eat. Place the Ladybug Garden in a safe place indoors out of direct sunlight and drafts. The sunlight can cause the Ladybug Garden to get too hot for the larvae.

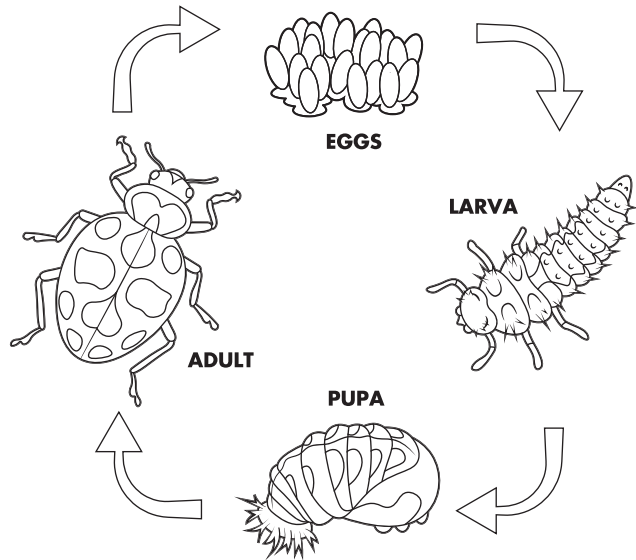
There are no air holes in your Ladybug Garden because your larvae are so tiny they would be able to squeeze out. Don't worry, though; there's plenty of air for them to breathe!



TRANSFORMERS!

One of the coolest things about ladybugs is their life cycle. From teeny eggs to cute, brightly colored, winged flyers, ladybugs go through amazing changes. These changes are a four-stage process called metamorphosis.

COLOR THE LADYBUG LIFE CYCLE



STAGE

1

Egg—A female ladybug lays between 25–50 eggs. They lay them on the underside of leaves or on stems so the babies can find food like aphids. Inside the tiny eggs, larvae grow. The eggs turn gray when they're ready to hatch.



STAGE

2

Larva—The baby ladybugs (larvae) start eating as soon as they hatch. They can eat a lot of aphids and grow quickly. Their skin (exoskeleton) is hard so it protects them, but it doesn't stretch. As a ladybug larva outgrows its skin, it splits open and falls off. But don't worry! It has new, larger skin underneath.



STAGE

3

Pupa—When the larva has grown big and strong, it's ready to change to a pupa and will find a leaf to attach to. It looks kind of like a shrimp sleeping. But it's not sleeping at all! It's busy making big changes growing wings and other ladybug parts.



STAGE

4

Adult—Once the ladybug is formed and ready, the pupa breaks open and the adult ladybug comes out. It feeds on some yummy aphids, then takes off to find a mate. The female lays eggs and the cycle of life starts over again. Pretty amazing!

**Look at the pupae with the magnifiers.
Draw and color your ladybug pupae in the box.**

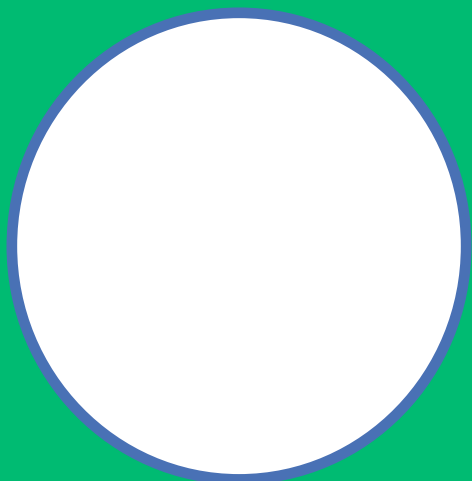
GROWING UP

Be sure to check your Ladybug Garden every day. Keep the Tree Sponge wet so your ladybugs have water to drink. During the larvae stage, they'll be busy eating and growing. Add $\frac{1}{2}$ to $\frac{3}{4}$ of a scoop of food every 2–3 days. It's okay to feed them more often if they run out. When your little guys are ready to change from larvae to pupae, they'll stop eating and climb to find a cozy place to attach to. Be super careful not to move, jiggle, or bump the Ladybug Garden while they're changing to pupae. The larvae need to focus all their energy on changing. Note that during this time they will not move, but be patient, they will awake and be active again in a few days.

THE GREAT REVEAL

The pupae stage lasts about four days. During this time, the larva goes through amazing transformations. The physical structure of the ladybug is changing. It's growing wings and legs and antennae inside the pupa shell. Cool!

Keep your eyes open because you may get to witness the birth of a ladybug! When a ladybug first emerges, it's a yellow color and very delicate. Its body is soft and wet. Be careful not to touch or jiggle the Ladybug Garden while they are drying out. Your ladybugs need time to rest and get strong. As they get older, they turn pink and their spots emerge.



**DRAW
YOUR
LADYBUG**

FEEDING TIME

It's fun to feed and watch your ladybugs for a few days before you release them. To feed the adults, soak a raisin in water for a few minutes. Then cut it in half and place it in the Ladybug Garden. Replace the raisin if it gets moldy. Make sure to keep water in the Tree Sponge. Your adult ladybugs will also be happy to eat a tiny piece of banana or any larvae food you have left.

FUN FACT

If a ladybug's bright colors don't warn off a predator, they have other ways to survive. A ladybug can drop to the ground and play dead. Or if a ladybug is really scared, its knees can ooze out a juice that smells and tastes yucky!

ALL AROUND THE WORLD

There are more than 4,000 species (different kinds) of ladybugs, and they're found all over the world. They come in different shades and varieties. One of the most common ladybugs is red with black spots. Ladybugs can be other colors too like yellow, orange, green, pink, or black. They can have two spots, twenty spots, no spots, or even stripes!



MORE FUN FACTS

- 1) Ladybugs smell with both their feet and their antennae.
- 2) Female ladybugs eat as many as 75 aphids in one day.
- 3) A ladybug chews side to side instead of up and down.
- 4) Ladybugs are considered good luck to many people.
- 5) When a ladybug flies, its wings beat 85 times a second.
- 6) Ladybugs hibernate in winter and, sometimes, hundreds will group together to stay warm...like a huge ladybug blanket!

LADYBUG RELEASE POEM

Ladybugs, ladybugs
We loved to watch you grow
From larvae to pupa
You amazed us with a show.

Ladybugs, ladybugs
It's time to set you free
Play, fly and explore
Find a new perfect tree.

Ladybugs, ladybugs
We hate to see you go
Farewell little friends
We'll miss you so!



BE FREE!

It's time to release your ladybugs so they can play in the sunshine and find mates. Once back in nature, they can continue their life cycle, breeding, laying eggs, and having their own tiny larvae. If you release them in your garden, they will eat aphids, which help your plants grow big and strong.

Watching the miracle of the ladybug life cycle up-close is magical. Now that your ladybugs are ready to be on their own, share the fun and throw a ladybug release party!

Invite friends and family to help celebrate the end of your learning journey.

You can sing songs and talk about your wishes for your ladybugs. You can make special snacks, take pictures, and tell everyone about all the amazing changes you saw.

Release your ladybugs one at a time. Be very gentle. Some ladybugs will sit on your hand for a few minutes before they fly off. Be sure to thank them and wish them luck on their new adventure! And don't be sad, it's not goodbye! The next time you see a ladybug in your garden, it may be one that you raised, or one of her children!



COMMON QUESTIONS

1

WHAT KIND OF LADYBUGS ARE THESE LARVAE? ARE THEY THE SAME AS THE LADYBUGS SOLD FOR PEST CONTROL?

Your ladybugs are pink spotted ladybugs. They're native to the United States. The ladybugs sold for pest control are different species that gather in large numbers and are easier to gather. Both kinds are beneficial and eat pests.

2

WHAT DO LADYBUGS EAT?

Ladybugs are carnivores and eat a variety of things including aphids, mites, and insect eggs. They also like to eat nectar and pollen when other food is hard to find.

3

IS ONE OF MY LARVAE TRYING TO EAT ONE OF THE PUPAE?

Maybe. They're carnivores so this happens sometimes. We reduce the odds by only shipping larvae that are the same age. You can help by always remembering to feed them.

4

WHAT ARE THE CRUMPLED BLACK THINGS IN THE LADYBUG GARDEN?

Those are the exoskeletons. Ladybug larvae shed their skin (exoskeleton) 3–4 times before they pupate.

5

WHAT IS THE LADYBUG'S LIFE CYCLE?

Ladybugs spend about 4 days as eggs, 12 to 14 days as larvae, 4 days as pupae, and then emerge as adults. Adult ladybugs live to about one year. If it's cooler, the developing stages take a little longer.

ADVERTENCIA: PELIGRO DE ATRAGANTAMIENTO.

Partes pequeñas. No conviene para niños menores de tres años.

ATTENTION: DANGER D'ÉTOUFFEMENT.

Petites éléments. Ne convient pas aux enfants de moins de trois ans.

ACHTUNG: ERSTICKUNGSGEFAHR.

Kleine Teile. Nicht für Kinder unter drei Jahren geeignet.

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