

Animals and Their Needs: Ladybugs and Earthworms (Teacher Master)

Set 1: Ladybugs

Show PowerPoint slide 12 (lesson 2b).

Ladybugs get their food by catching and eating smaller insects. Most often, they eat tiny insects called *aphids*.



Photo courtesy of Amazonaws.com

Show slide 13.

Aphids destroy many garden plants by sucking the sap out of them. So gardeners are happy when ladybugs are around to eat up the aphids.

Video links:

- Ladybugs eating aphids. (**Note:** Show 1 or 2 minutes of the clip.)
<https://www.youtube.com/watch?v=oTnTWre488s>



Photograph by Scott Bauer/U.S. Department of Agriculture

Show slide 14.

Ladybugs don't see very well, so they use their sense of smell to find their food. A pair of antennae helps a ladybug smell and feel its way around. Like praying mantises, ladybugs use their mouths to grasp, crush, and cut up the food they catch.

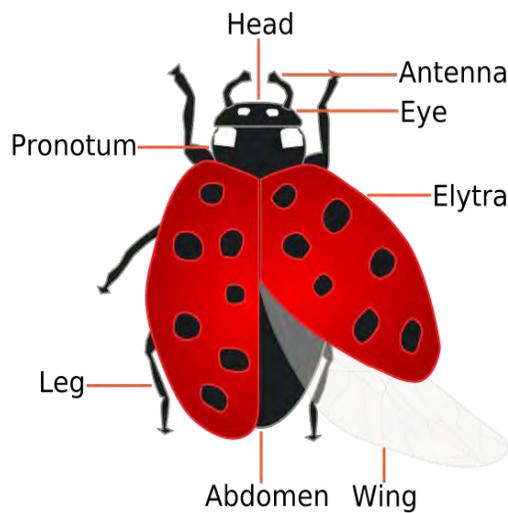
- *Can you find the ladybug's antennae in this picture?*



Photograph by C. L. Goforth

Show slide 15.

- *What body parts does a ladybug use to find and eat its food? [Answer: Eyes and antennae to spot aphids, legs to crawl to their food, and a mouth to eat aphids.]*



Courtesy of Persian Poet Gal/Wikimedia Commons

Show slide 16.

Ladybugs need oxygen from the air to stay alive. But like praying mantises, ladybugs don't use lungs to breathe. Instead, they take in air through tiny holes on the sides of their bodies. These holes are located underneath their wings. Ladybugs can open (or expand) and close (or contract) these holes.

- *Can someone point to the area under the ladybug's wings? [Note: You can't see the holes in this picture, but they're located underneath the wings on the sides of the body.]*



Photo courtesy of Pexels.com

Show slide 17.

Because ladybugs can close their air holes, they can stay alive underwater for a little while. But they can't live that way for long. It's like when we hold our breath underwater. We can only do it for a short while.



Photo courtesy of Pixabay.com

Show slide 18.

Ladybugs need water to stay alive, but too much water will drown a ladybug. Ladybugs use their mouths to drink water. Ladybugs sometimes close their air holes to keep their bodies from losing water.

Video link:

- A ladybug drinks from a water droplet. (**Note:** Show 1 minute of the clip.)
<https://www.youtube.com/watch?v=VC9rVp8uur8>



Photo courtesy of Wallpaperbetter.com

Show slide 19.

- *Is this a good environment for the ladybug? Why or why not?*



Photograph by Donald Hobern/Wikimedia Commons

Set 2: Earthworms

Show PowerPoint slide 21 (lesson 2b).

Earthworms need food to live and grow. Earthworms that live near the top of the ground use their mouths to take in dead leaves and grass. Earthworms eat dead leaves, but they also eat tiny creatures we can't see that live on these leaves.

Video link:

- Earthworms eating dead leaves. (**Note:** Start at around segment 00:20 and end at 1:00 before the mating segment.)

<https://www.youtube.com/watch?v=bFpbIBf1dfE>



Photograph by Dodo-Bird

Show slide 22.

Earthworms that live deep underground find tiny living things in the dirt. The earthworms swallow the dirt and use the tiny living things as their food. People mistakenly think that earthworms eat dirt, but what they're actually eating are the living things in the dirt.



Photo courtesy of USDA NRCS

Show slide 23.

- *What kind of food do you think these earthworms are searching for? [Answer: leaves and tiny things that live in the soil]*



Photograph by Mikhail Kokhanchikov

Show slide 24.

Some people put leftover pieces of food, like fruits and vegetables, in a pile to rot and turn into materials that are good for the soil. These piles are called *compost bins*.



Photo courtesy of Southgippsland.wordpress.com

Show slide 25.

People like to put earthworms in compost bins because the worms will eat the old, rotting vegetables and fruits.

- *Do you see pieces of rotting fruits and vegetables in this picture?*



Photograph by Clare Snow

Show slide 26.

Earthworms need air (or oxygen) to survive, but they don't have noses and lungs to help them breathe. So they take in air through their skin. This means that they breathe all over their bodies!



Photograph by Ben McLeod

Show slide 27.

For an earthworm to take in air, its skin needs to be wet. So earthworms have to find water in their environment.



Photograph by Il browneyes II

Show slide 28.

If an earthworm's skin dries out, it will die because the air can't soak through its skin. So earthworms don't spend a lot of time in the hot sun!

- *What might happen to this earthworm if it stays in the sun too long? Why do you think that?*



Photograph by Schizoform