



LADYBUG CITIES



It's ladybug season! Spring is here, the weather is getting warmer, and the earth is teeming with new life- Including new ladybug life! Now is a perfect time to get outside in search of these charming helpers.

Ladybugs are most active between April and October, when the weather is warm, plants they enjoy are blooming, and pests they eat are out in abundance. While they do enjoy plants often found in gardens such as herbs, cosmos, and marigolds, they also love weeds you can find growing along your neighborhood sidewalk or city street, such as clover and yarrow! Whether you live on a farm or in a high rise, you can go on a ladybug investigation in search of Ladybug Cities.

WHERE TO FIND LADYBUGS

Ladybugs can thrive in different habitats. They can live in suburban towns, forests, grasslands, and even in your house! We think one of the most exciting ways explore Ladybug Cities is to simply go for a walk in your neighborhood. There are loads of ladybugs eating, mating, emerging from eggs, and thriving on nearly every sidewalk where there is wild vegetation. Below are three plants that ladybugs love that grow wild in cities in Los Angeles, and can easily be found atop the earth that borders city sidewalks- We just never stop to take a closer look at them! These are great places to start looking for ladybugs:

BUR CLOVER



DENDELION



SWEET ASYLUM



Where you see these plants, you will see ladybugs! If you come across them, stop, get down, and look closely within the plants. You will likely start to see little red critters crawling all around! On the off chance that you a) can't find these plants or b) don't find ladybugs on them, worry not- Just keep exploring your neighborhood until you find plants that do have them! They are out and about, you just have to put on your explorer glasses. Once you have found a Ladybug City, begin your investigations! Below is a list of ladybug explorations you can do to begin your investigations:

LADYBUG IDENTIFICATION

There are about 5,000 different species of ladybugs in the world. They come in many different colors and patterns, but the most familiar in North America is the seven-spotted

ladybug, with its shiny, red-and-black body. What kinds to you see? What color are they? How many spots do they have? What types of patterns do they have? How big are they? Use a ladybug identification guide to research what types of ladybugs you've discovered, such as those found at these three links, available from the Lost Ladybug Project, DiscoverLife.org, and BugGuidenet:

- http://www.lostladybug.org/file_uploads/FieldGuide.pdf
- <https://www.discoverlife.org/20/q?guide=Ladybug&cl=llp>
- <https://bugguide.net/node/view/179>



LADYBUG MATH

How many ladybugs can you find? How many spots are on each ladybug? Use this opportunity to practice some playful math by adding up or multiplying the total number of spots present in your Ladybug City. This is also a good opportunity to talk about symmetry- Ladybugs can be both symmetrical and asymmetrical. Which are yours?



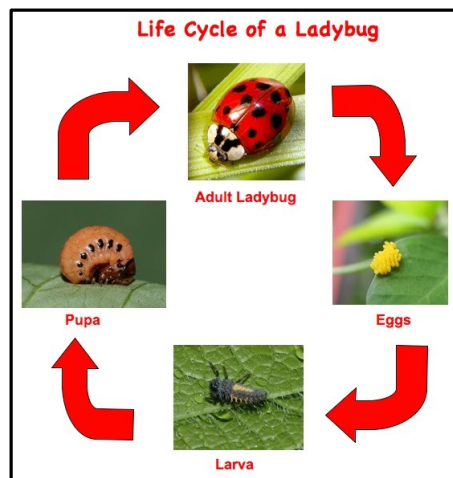
LADYBUG CITY PLANNING

What is happening in your Ladybug City? How are the ladybugs using their environments? Do you see any paths, roads, or shelters? Do you see a nursery that's housing ladybug eggs, or a restaurant where they are eating? Draw a map of the Ladybug City, noting the structure and function of what you see!



LADYBUG LIFE CYCLES

When you are observing your Ladybug Cities, you will likely see what look like other types of non-ladybug insects. You may see something that looks like a colorful snail, and you will more than likely see something that looks like a miniature alligator! Both of these things are ladybugs- Just in different stages of their life. While exploring your Ladybug City, keep an eye out for more than just the fully-grown adult ladybug we are used to seeing. Those other little critters like the ones shown below are ladybugs too, they are simply in the process of growing up!



OPPORTUNITIES FOR EXPANDED LEARNING

Ladybug investigations provide a wonderful opportunity to exercise social-emotional learning skills, and to explore the subject of empathy. Most of us love ladybugs, and welcome their company. We find them charming, we delight when they land and crawl on us, and some cultures even consider them good luck. But how are they different from the rest of the bugs we fear and disdain so much? The truth is, they aren't very different at all. Why do we love some bugs, and fear others? Consider showing children images of a ladybug next to a cockroach- Ask them to identify their physical differences and similarities. Ask them which they like better, and why. Next, research some cool facts about both. What you will often find with this exercise is that the fear we feel for one bug and the love we feel for another are influenced by superficial biases. The anatomy of a butterfly and a spider, for example, are not that different when compared side by side, the same way that the anatomy of a ladybug or an ordinary black beetle are not dissimilar. Use this opportunity to discuss the broader concept of bias, and to introduce the concept of empathy for those who are different from us.

Ladybug Investigations Support NGSS!

While exploring Ladybug Cities, children will: Plan and carry out investigations; Use mathematics and computational thinking; and Obtain, evaluate, and communicate information. They will also explore: Patterns; Scale, proportion, and quantity; Systems and system models; Energy and matter; Structure and function; and Stability and change. They will do all of this while learning about Life Science, Earth Science, and Physical Science.

HAPPY EXPLORING!

LET'S STAY CONNECTED!

We'd love to see photos of your family doing
At-Home Nature Adventures!

Post your photos and videos on Instagram and Facebook
using our hashtags

#LAArboretumKids and **#LAArboretumAtHome**

for a chance to be featured on our social media pages.
Don't use social media? Just email us your footage at
brooke.applegate@arboretum.org.

