

Bridges in Mathematics Pre-K Unit 8

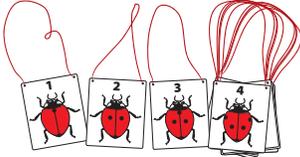
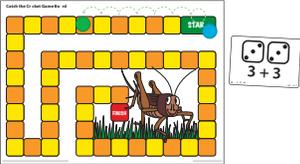
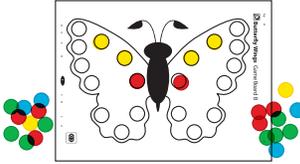
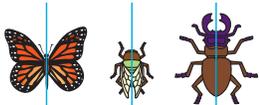
April



Ladybugs, butterflies, and crickets offer reasons to count and compare, add and subtract, sort, pattern, sequence, and measure this month. In this unit, your child will:

- Count, compare, read, write, and put numbers to 10 in order
- Start at 10 and subtract one at a time until there are none left
- Show and solve addition doubles through $5 + 5$
- Put events in order from first to last
- Explore symmetry
- Compare distances

Your child will learn and practice these skills by doing activities and playing games like these.

ACTIVITY OR GAME	COMMENTS
<p>Read, count and order numbers 1–10.</p> 	<p>Children discover a set of 10 ladybug necklaces in the mystery box. The next day, the teacher reads a story that starts with 10 ladybugs and ends with 0 as they leave 1 by 1 to eat a snack, take a rest, get away from a predator, shelter from the rain, and so on. Ten of the children put on ladybug necklaces, line up in counting order, and dramatize the story as the teacher reads it again.</p>
<p>Solve doubles addition facts like $2 + 2$, $3 + 3$, and $4 + 4$.</p> 	<p>Children play a board game that ends with them catching a cricket. Each time it's their turn, they draw a doubles card to see how many spaces they get to move their marker. The cards include combinations of $1 + 1$ through $5 + 5$ in a variety of formats so everyone can play, including children who aren't yet ready to work with bare numbers.</p>
<p>Order pictures of a butterfly's life stages from egg through butterfly.</p> 	<p>After listening to <i>It's a Butterfly's Life</i>, which shows and describes the life cycle of a monarch butterfly, children color and cut out pictures of eggs, a caterpillar, a chrysalis, and an adult butterfly. Then they glue the pictures in order along a paper strip, number them, and finally trim and tape the strip to make a life cycle headband.</p>
<p>Work with a partner to arrange colored disks so their butterfly's wings look exactly the same on both sides.</p> 	<p>Bugs, with their colorful wings, distinctive markings, and weird body parts, provide a great context for observing and describing symmetry. The Butterfly Wings game, in which children take turns covering the dots on their side of the butterfly board, gives them a chance to practice making symmetrical arrangements.</p> 
<p>Line up miniboards to show how far a cricket can jump, and then see if they can jump at least as far.</p> 	<p>Children line up 8 miniboards end-to-end to approximate the distance a cricket can jump—about 3 feet. Then they each get a turn to do a standing long jump. After each turn, the group marks the distance and checks to see if it is shorter than, longer than, or the same as the distance a cricket can jump.</p>

FREQUENTLY ASKED QUESTIONS ABOUT UNIT 8

Q: What are the children doing with measurement this year? I'm curious because I don't think I've seen them use rulers yet.

A: Have you ever heard your child say, "I want the bigger cookie!" or "My carrot is longer than yours!" or "I want the green cup because it holds more." All of these involve an early form of measurement called direct comparison.

As simple as it might sound, children have to understand some important ideas to do this kind of measuring. To find out which of two carrots is longer, you have to put them side by side, even at one end. To tell for sure if one cup holds more than another, you may have to fill one of them and then pour the water from that cup into the other to see what happens. To find out which apple is heavier, you have to hold one in either hand and see if you can tell by feel, or use a balance scale. (While it's true that you can weigh each of them on a scale, the numbers that appear may not mean much unless you've actually picked them up and tried to compare them.)

As children make these kinds of comparisons, they start to learn key words and phrases: *longer than*, *shorter than*, *the same length*; *heavier than*, *lighter than*, *the same weight*; *more*, *less*, *bigger*, *smaller*, *equal*. This kind of experimentation lays the foundation for measuring length, weight, mass, capacity, area, and volume in the elementary grades.

Q: Are there things I can do at home to help my child understand more about measuring?

A: Absolutely! Here are a few ideas:

- Encourage your child to compare objects by size, length, weight, or capacity—which is bigger/longer/heavier? Which holds more?
- When you measure something, explain what you're doing and why: "I'm watching the clock to see how many more minutes until we have to leave for school." "I'm using a cup to measure the flour for the pancakes so they turn out right." "I'm using measuring the cloth to make sure we have enough for your new curtains."
- Add a few plastic measuring cups of different sizes (half cup, cup, quart) to your child's collection of bath toys.
- Make a 3-minute egg timer or similar device available when your child is taking turns with a sibling or a friend to play a video game or use a coveted toy.
- Invite your child to help measure simple ingredients when you're cooking—a cup of oats, a half cup of juice, a tablespoon of sugar.

You might also look for some of these picture books about early measuring next time you're at the library:

- *Who Sank the Boat?* by Pamela Allen
- *Just a Little Bit* by Ann Tompert
- *Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, An Actual-Size Animal Encyclopedia* by Teruyuki Komiya
- *A Little Story about a Big Turnip* by Tatiana Zunshine
- *Balancing Act* by Ellen Stoll Walsh
- *How Tall? Wacky Ways to Compare Height* by Mark Weakland
- *How Heavy? Wacky Ways to Compare Weight* by Mark Weakland

For more ideas and resources, go to www.mathlearningcenter.org/families