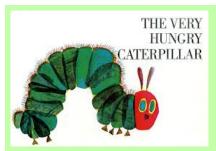
DISCOVERING THE MATH: BOOK GUIDE



AUTHOR: Eric Carle

This classic book is illustrated with colorful collages and die-cut pages. Counting, classification, comparison, nutrition, health, and metamorphosis are topics that can be introduced with this book.

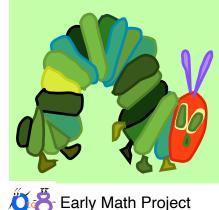
Ages: Birth and up

ATOS Reading Level: 2.9

Lexile: AD 460L

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The Very Hungry Caterpillar

Count along with the very hungry caterpillar as he transforms from an egg to a caterpillar to a butterfly.

Topics: counting, days of the week, cause and effect, categorizing, comparisons

Activities To Do Together:

Use the book *The Very Hungry Caterpillar* to count, categorize, and compare with your child while exploring cause and effect relationships.

While reading the book:

- Find the little egg on the leaf and compare the egg's size to the leaf's size.
- Explore the idea of cause and effect by looking at what the caterpillar ate and how he changed over the week. While reading, ask your child what changed on Saturday and how the caterpillar reacted. Ask you child what might have made the caterpillar feel better on Sunday.
- Point out the vibrant colors on each page.
- Point to and count the food on each new page.
- Compare the shapes of the fruit.

When you have finished reading the story, try the following:

- Discuss sequences. Ask your child to retell the story. What did the caterpillar do first, second, next, later, and at the end?
- Count the fruit the caterpillar ate each day with your child. Count all of the foods the caterpillar ate over the course of the week.
- Categorize the food the caterpillar ate—for example, which foods grow on plants, which do not. Which of the foods have seeds? Which do not?
- Talk about the days of the week. Do you have any daily routines? What do you do first, second, and third when you wake up? Count with your child how many days are in one week.

Conversations During Daily Routines with Infants and Toddlers:

- 1. Meal Time Eat some of the fruits the caterpillar ate. Count them together. Talk about what they look like, their size, their shape, and what they taste like.
- 2. Outside Time Look for butterflies and talk about how the caterpillar became a beautiful butterfly. What happened first, second, next, and last? Explore plants together and talk about which ones may produce fruits like in the story.
- 3. Park Time Notice and talk about the way people and animals move. Caterpillars crawl, butterflies fly, people walk, jog, run, swim, etc.
- Play Time While playing with toys, count them. Compare the toys by size and color. Explore cause and effect together by rolling balls to see where they go, or building a tower and knocking it down.

Questions for Mathematical Thinking:

- 1. How many days did the caterpillar eat? How long was the caterpillar in the cocoon? Did the caterpillar spend more time eating or in its cocoon?
- 2. What words did the author use to describe things that are small?
- 3. How many pieces of fruit did the caterpillar eat his way through between Monday and Friday?
- 4. How many pieces of food did the caterpillar eat his way through on Saturday? Which foods do you think gave the caterpillar a stomach ache?
- 5. Why do you think the caterpillar got a stomach ache?
- 6. What happens at the end of this story?

Early Math Project Resources:

Visit <u>The Very Hungry Caterpillar Activities</u> (earlymathca.org/ the-very-hungry-caterpillar)

Follow this <u>link</u> or visit earlymathca.org/external-resources for additional online resources.

Vocabulary

Math words found in

the story: big, five, four, little, more than, one, out, piece, slice, small, three, through, tiny, two

Related math words:

bite, chunk, crumb, half, hunk, morsel, portion, scrap, sip, slice, sliver, slurp, wedge

Words to build Reading Comprehension:

beautiful, butterfly, caterpillar, cocoon, hungry, morning, nibbled, plums, salami, stomachache, strawberries

Spanish Title: La oruga muy hambrienta

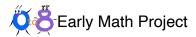
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Also available in:

Arabic, Braille, Somali, German, Urdu, Vietnamese, Panjabi, Japanese, Italian, Dutch, Swedish, Hebrew, Swedish, Portuguese, and others





Math Connections:

Sequences are found in many places. A sequence is a particular order in which related events, movements, or things follow each other. For example, the numbers 1, 2, 3, 4, 5... are part of the counting sequence. Understanding that numbers are said in a particular order is one of the beginning steps in learning to count. Explore other sequences with ordinal words, **first, second, next, later**. Retell the story together. What did the caterpillar do first, second, next, later, and at the end? Explore the sequences you follow in your daily routines or the steps you take when getting ready for the day. What do you do first, second, third, and last?

Talk together about cause and effect relationships. For example, if you are hungry, you grab a snack. If you crash your toy car into your block tower, it falls down. Talk about how one event brings about another. Ask your child to give you an example of a cause and effect relationship they have observed. What happened? Enjoy exploring cause and effect together. What cause and effect relationships can you make happen?

Counting is easy to include in daily routines. Children often enjoy counting collections of objects. Encourage this and count with them. At some point, children also begin to identify a quantity of objects without actually counting. This is called subitizing. Practice subitizing with your child. Go back through the book and ask your child to tell you how many pieces of fruit are on each page. See if they can do this without counting the fruit. For example, do they recognize there are two pears or three plums without having to count the illustrations? You can also try something similar with a small collection of objects. Place different quantities of up to 5 objects in front of your child and ask them to tell you how many there are without actually counting. If your child is not ready to do this yet, then count the objects together. With more counting practice, your child will begin to recognize the number of objects in front of them without actually counting.

Practice comparing objects by size, shape, and other characteristics. Use words such as **bigger**, **longer**, **heavier**, or **taller** to compare size. Make comparisons about the foods the caterpillar ate. What do you notice about the sizes, colors, and shapes of the fruits? Compare the size of the caterpillar at the beginning of the story and at the end of the story. What do you notice?

Related Books: Baby

Goes to Market by Atinuke; Eight Silly Monkeys illustrated by Steve Haskamp; Counting Crocodiles by Judy Sierra and Will Hillenbrand.

Click this link to the World Catalog or enter bit.ly/3wOliX6 in your browser, to find *The Very Hungry Caterpillar* in the public library.

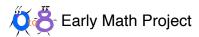


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Observe how the caterpillar changes throughout the story. Discuss the changes that occur from the time the caterpillar pops out of the egg to the day he becomes a beautiful butterfly.

Have you ever seen a cocoon or a chrysalis in person? Are they the same? Explore and see if you can locate a cocoon, chrysalis, caterpillar, butterfly, or other insect. Describe the location of what you discover with positional words. For example, "The cocoon is **under** the highest branch and to the **left** of the leaf."

Many butterflies have beautiful patterns on their wings. Look at pictures of different butterflies and take turns describing the pattern(s) on their wings. Afterwards, design a butterfly with an ABAB pattern.



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Age Level	Related <u>Infant Toddler Foundations,</u> <u>Preschool Foundations</u> , and <u>CA State</u> <u>Standards</u>
Infant/ Toddler	Spatial Relationships The developing understanding of how things move and fit in space Number Sense The developing understanding of number and quantity
Preschool/ TK	Number Sense 1.0 Children begin to understand numbers and quantities in their everyday environment.
Kindergarten	Counting and Cardinality K.CC.1, K.CC.2, K.CC.3 Know the number names and the count sequence. K.CC.4, K.CC.5 Count to tell the number of objects.

