

Amanda Bean's Amazing Dream

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MATH STANDARD

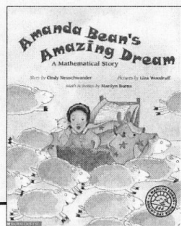
Number and Operation

MATH TOPIC

Multiplication

CONNECTING TO YOUR CURRICULUM

Introduces or reinforces the concept of multiplication.



About the Book

Amanda Bean loves to count anything and everything. But when it comes to learning multiplication at school, Amanda isn't convinced and continues to count one by one—from the tiles on her countertop to books on the library's shelves. She soon realizes counting this way is slow and arduous. But after falling asleep counting sheep, she has an amazing dream that reveals that multiplying is another—and faster—way of counting. Amanda promises herself she'll learn to multiply—and never again count sheep.

The Lesson Summary

Ask students to suggest different ways to count the objects shown on the pages in the book. Some pages present rectangular arrays and others present objects in equal size groups, giving students experience with both ways to think about multiplication. Record their computations on the board or on chart paper. This lesson may need more than one class period to complete.

The Lesson

After reading the story, revisit each of the pages and talk with students about different ways to count objects. On the first page, for example, the illustration of the building on the far left shows six large windows, each with a six-by-three array of smaller panes. Ask children, "How many panes are in each window?"

As volunteers share their answers with the class also have them explain their reasoning. Continue until all students who want to share an idea have had the chance to do so. This helps support the idea that there's more than one way to solve a math problem. Plus, children benefit from hearing other ideas.

To connect students' ideas to standard mathematical notations, record each of their suggestions on the board or on chart paper. Children's methods may include adding three sixes, adding six threes, skip counting by sixes, skip counting by threes, or multiplying:

$$6 + 6 + 6 = 18$$

$$3 + 3 + 3 + 3 + 3 + 3 = 18$$

$$6, 12, 18$$

$$3, 6, 9, 12, 15, 18$$

$$6 \times 3 = 18$$

$$3 \times 6 = 18$$

Next continue with other questions from the same pages. For example, ask:

- How many windows are there on the second building from the left?
- How many windowpanes are in each?
- How many windowpanes are there altogether in that building?

On the page where Amanda is in the bakery, you can ask:

- How many brownies or cookies are on the bakery shelves?
- How many cakes are in the display cabinet?
- How many stripes are there on all the loaves of bread?

On the page where Amanda counts in the kitchen at home, you might ask:

- How many tiles are on the counter?
- How many pickles are in the jars?
- How many pieces of popcorn are in the bowl?

Popcorn in a bowl isn't organized in any particular way that makes multiplication useful. Talk with students about how they might organize popcorn by twos, fives, and in other ways.

Each page offers multiple opportunities for children to count objects in different ways.

Follow Up

- Don't feel you have to present all of the problems from all of the pages at one sitting. Revisit the book multiple times. Let students' interest and attention be the gauge.
- On some pages, rather than posing problems, you might ask, "What math problems do you think we might solve on this page?"