

MILLIONS OF CATS, by Wanda Gag.

ISBN: 978-0142407080; Penguin Group

Grade Level: 3-5

Subject: Mathematics: Place value, names of large numbers

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Story: An old man sets off into the world to find the most beautiful cat to bring back for his wife. He soon learns that he can't choose just one, so brings back millions and more!

Application: Use the sing-song refrain of the text to remember the names for large numbers, and the number of digits required for each.

TEKS:

3rd, 4th, and 5th grade Mathematics:

(1)(A) Students will use place value to read, write (in symbols and words), and describe the value of whole numbers through 999,999 (grade 3), 999,999,999 (grade 4), 999,999,999,999 (grade 5).

(15)(B) Students will relate informal language to mathematical language and symbols.

3rd grade Mathematics:

(1)(B) Students will use place value to compare and order whole numbers

Materials:

- The book.
 - Twelve laminated cardstock copies of the Zero Cat handout.
 - One laminated cardstock copy of the One Cat handout.
 - Four laminated cardstock copies of the Comma Cat handout.
 - One laminated cardstock copy of the letter "S".
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Pre-Reading:

- Write a large number on the board. Ask students to write down the words that the number represents.
- Tell students a little about the history of Wanda Gag and her famous story.

Reading:

- Read aloud the story.
- Encourage students to chant along each time you read the refrain, "Hundreds of cats, thousands of cats, millions, and billions, and trillions of cats!"

Post-Reading:

- Ask students why they think this book has remained popular over so many years.
- Talk about the refrain as a mnemonic device to remember the names of large numbers.
- Hand out the laminated cards one per student until all XX cards are distributed.
- Explain to students that you will re-read the story, but this time when you read the refrain, the students holding the cards will display their cards in front of the group forming the numeric translation of the words hundreds, thousands, etc.
- Allow the students with cards some time to brainstorm how they will arrange and re-arrange themselves each time the refrain is read.
- After completion of the second reading, have students copy the large numbers onto a sheet of paper, using both the numeric and word form of each.

Extension Activities:

Focus on physical representations of large numbers with these books:

- 365 PENGUINS, by Jen-Luc Fromental and Joele Jolivet.
ISBN: 978-0-8109-4460-2, Abrams Books for Young Readers.
- HOW MUCH IS A MILLION, by David M. Schwartz
ISBN: 978-0688-04049-9, HarperCollins Publishers.

Read articles about large numbers and place value through the TEXSHARE databases:

- "Incredibly Big Numbers." Monkeyshines on Math, Money, & Banking (Jan. 2002): 13. Middle Search Plus. EBSCO. [Library name], [City], [State abbreviation]. 22 Feb. 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=7588979&site=srck5-live>>.
- Whitt, Stephen. "Get to Know a Million." Highlights for Children 59.2 (June 2004): 5. Primary Search. EBSCO. [Library name], [City], [State abbreviation]. 22 Feb. 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=prh&AN=13095479&site=srck5-live>>.
- Brickley, Sarah. "TACKLE PLACE VALUE." Scholastic DynaMath 27.2 (Sep. 2008): 10. Middle Search Plus. EBSCO. [Library name], [City], [State abbreviation]. 22 Feb. 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=35241371&site=srck5-live>>.
- Rehmyer, Julie J. "Infinity can be big or bigger, countable or not." Math Trek (Jan. 2008): 3. Middle Search Plus. EBSCO. [Library name], [City], [State abbreviation]. 22 Feb. 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=29967734&site=srck5-live>>.
- Peterson, Ivars. "Touring the Poles." Math Trek (Sep. 2006): 3. Middle Search Plus. EBSCO. [Library name], [City], [State abbreviation]. 22 Feb. 2009
<<http://search.ebscohost.com/login.aspx?direct=true&db=mih&AN=22905860&site=srck5-live>>.

Explore these websites about large numbers:

- A Mathematics Fantasy: The Million \$ Mission
<http://math.rice.edu/~lanius/pro/rich.html>
- What Does One Million Look Like?
<http://sciencejunkies.com/2008/02/22/what-does-one-million-look-like/>
- Large Numbers and Infinity
<http://mathforum.org/dr.math/faq/faq.large.numbers.html>
- Can You Say Really Big Numbers?
<http://www.mathcats.com/explore/reallybignumbers.html>



