

Why Math + Literature

- Invites children into the world of math
- Generates interest in math
- Provides a context for solving problems
- Motivates students
- Helps students connect mathematical ideas to their personal experiences
- Accommodates children with different learning styles
- Promotes critical thinking

Ways to use books

- To provide a context or model for a mathematical activity
- To inspire a creative mathematics experience for children
- To pose an interesting problem
- To prepare for, develop, or review a mathematics concept or skill



(Welchman-Tischler,1992)

Children's Literature

- Think-Pair-Share
- What is your favorite children's literature book? Why?



Children's Lit Tiers

- Fundamental—story written with the math concepts as the driving force of the plot line
- Embedded—story written with apparent math connections, but story stands on its own
- Connected—story written with no math in mind, yet mathematics can be created based off the text

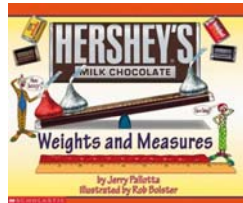


Fundamental Mathematics Books



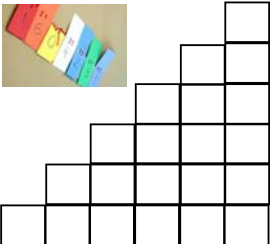
Picture Books Anticipation Guide

- ___ 1. A mile is more than 64,000 Hershey's Kisses long.
- ___ 2. A Hershey's Kiss weighs about a gram.
- ___ 3. One Hershey's Kiss is about a centimeter tall.




From Hershey's Weights and Measures:
Agree – Disagree – Why?



Place Value




Race to the Bottom




Sum




Zero was a big round number.




When she looked at herself, she just saw a hole...right in her center.




Every day she watched the numbers line up.



She wanted to **count** too.




I a number worth nothing become something?

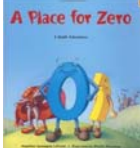


Zero felt empty inside.

Every number knew its place. A 7 was the number of days in a week, and a 5 was the number of points on a star. A 2 was handy for counting the wheels on a bicycle.




A Place for Zero

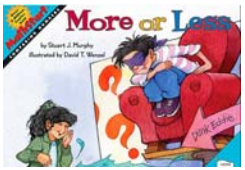


Every number had a place except Zero. Count Infinity had been experimenting when he formed the strange new digit. But Zero wasn't smiling, and no one was sure what his job would be. King Multiples declared that no more zeros would be made until they found a purpose for this one.

Zero was alone.



BrainBashers Daily Futoshiki


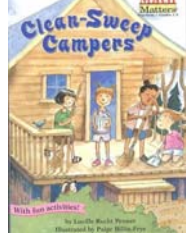



4			
		>	
^		<	^
2			

Objective / Rules

- You have to complete the grid such that every row and column contains the numbers 1 to 4.
- Each row and column contains each number only once.
- The arrows on the grid are less-than and greater-than signs, and always point to a smaller number.
- i.e. $1 < 4$, $3 < 5$, $2 > 1$, etc.

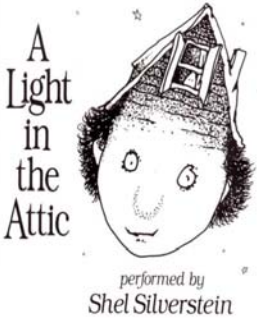
Fractions

Shapes Illustration

A square was sitting quietly
Outside his rectangular shack
When a triangle came down
- keeplunk!
"I must go to the hospital,"
Cried the wounded square,
So a passing rolling circle
Picked him up and took him
there.

Shel Silverstein




A Light in the Attic
performed by
Shel Silverstein

Work on this project was supported by
Wisconsin Improving Teacher Quality
Grant #09-0531.

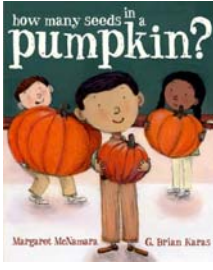

Talking Drawing

My Illustration



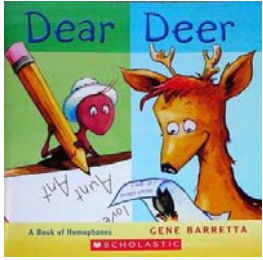
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Embedded Mathematics



The DONUT CHEF
Beth Brantley

how many seeds in a pumpkin?
Margaret McNamara G. Brian Karas



Dear Deer
A Book of Homophones
GENE BARRETTA
SCHOLASTIC

Two of a Kind
Vocabulary Games for the Classroom by Marzano and Carleton

Weight
Wait

The students seemed to enjoy the game. Of course, they always seem to enjoy activities that include a little competition in them. I think the activity did a good job of reinforcing the skills needed to decipher common homonym meanings. I especially like to focus on the most commonly misused ones that I see in my students' writing.

Sum
Some

Rows
Rose

Plane
Plain

Mode
Mowed

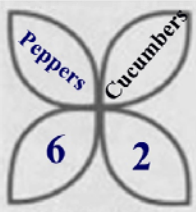
Volume
Product
Vertex



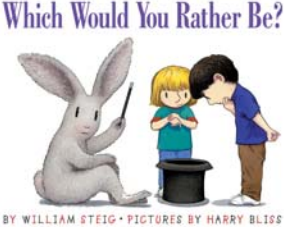
AUNT ANT,
You do have some very interesting new neighbors. I have a new neighbor, too! Do you KNOW about the HARE with NO HAIR? She's an expert on skin care.
Love,
Your DEAR DEER

Which Would You Rather Be?

- Create your "Which Would You Rather Be?"
- Ask eight peers to collect your data
- Grab 2 paper plates.



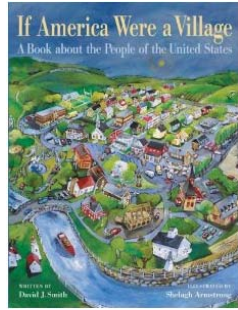
Peppers
Cucumbers
6
2



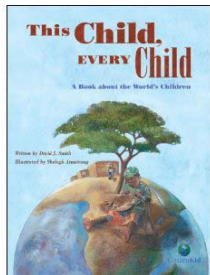
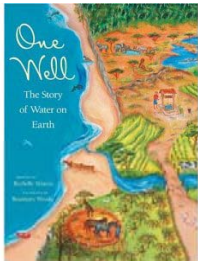
Which Would You Rather Be?
BY WILLIAM STEIG • PICTURES BY HARRY BLISS

If America Were a Village

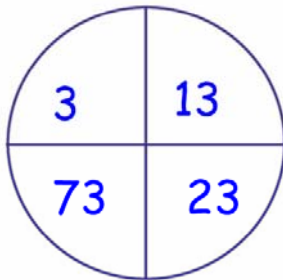
- There are more than 306 million people living in America. But what if we imagine
- America as a village of just 100 people we can capture a snapshot of America —past, present and future.



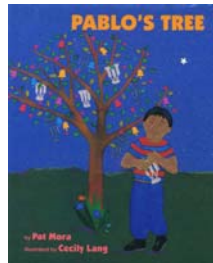
Percents



Concept Circle



Concept _____



Pablo's Tree

- My gift is a geometric shape.
- My gift is not a polygon.
- My gift has no sides or corners.
- My gift can be folded in half and it will be symmetrical.

CIRCLE!!

Pablo's Tree

- My gift is a number.
- My gift has two vertices.
- My gift has one right angle.
- My gift is $2 + 3 =$ answer.

5!!



Mad Libs

- (adjective)
- (noun)
- (noun)
- (-ing verb)

Ka's Garden Overview

- Ka's Garden* is a **bilingual** story written in English and Hmong.
- In the book, a **mother** tells her daughter about the Hmong way of living.
- The story centers on a young girl who plants a **garden** and realizes that it takes time and patience for her seeds to grow into vegetables.
- The story tells of the importance of **appreciating** the earth, being thankful for everything that lives on it.

Connected: Hmong and Mathematics

one ib	1	two ob	2	three peb	3	four plaub	4	five tsib	5
six rau	6	seven xya	7	eight yim	8	nine cuaj	9	ten kaum	10

PK-2: Counting Book;
3-5: Creating Paj Ntaub "Flower Cloth"
6-8: Fraction Activity; Probability

Creating a Mathematical Paj Ntaub “Flower Cloth”

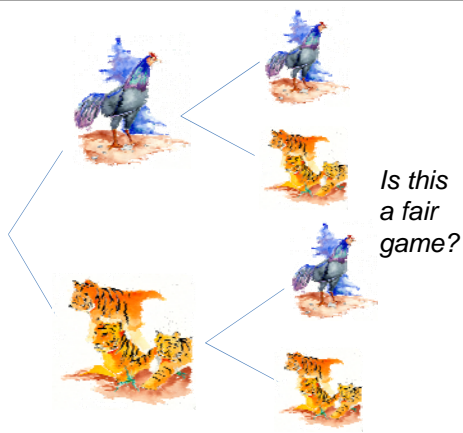
six - tsib	4 divided by ob	ib plus one	kaum minus 9
yim + 2	cuaj take away rau	one + ob + ib	xya - plaub
Rau divided by two	2 multiplied by ob	10 - xya	plaub times one
kaum + kaum	cuaj - xya	rau divided by 3	peb divided by peb

one ib	1	two ob	2	three peb	3	four plaub	4	five tsib	5
six rau	6	seven xya	7	eight yim	8	nine cuaj	9	ten kaum	10

Math Connections to Games


- Qaib vs. Tsov
– ib... ob... peb...






Fractions

5. one-third corn and two-thirds peppers



6. one-third tomatoes, one-third corn, and one-third peppers




Cathy's 2nd grade students



Estimation and Measurement

- How many miles between La Crosse, WI and Vientiane, Laos?
- 8705 miles!
- (You could travel to the center of the Earth and back!)



mapcrow.com


I am the Mighty Mississippi.
I am the Majestic Mekong.
 I am 2,320 miles.
I am 4,350 kilometers.
 Which means I am 3,730 kilometers
And I am 2,703 miles.
 I run past the states of WI, MN, Iowa and
 beyond.
*I run past the countries of China, Laos,
 Vietnam, and more.*

My name means "Father of Waters" and it
 comes from the Ojibwe people.
*My name means "Mother Khong" and
 it comes from the Thai language.*
*We are important to the people who live by our
 banks.*
 Explorers crossed me to discover the West.
*Lao refugees crossed me to seek safety in
 Thailand.*
 We are mighty. We are majestic. We are
 The Mississippi
And the Mekong.

www.uwlax.edu/faculty/kosiak/projects

**Using Picture Books to Teach
 Mathematics**

Maggie McHugh
 &
 Jennifer Kosiak



PC *Partnerships, Connections, Awareness*
 Creating Balance in Mathematics Education

UNIVERSITY of WISCONSIN
LA CROSSE

Jelly Bean Estimation

- Enough Jelly Belly beans were eaten in the last year to circle the earth more than five times.
- U.S. manufacturers produce more than 16 billion jelly beans for Easter each year.
 - April 22nd is National Jelly Bean Day
 - The world's largest jar of jelly beans



weighed 6,050 pounds.
Each jelly bean is 4 calories