

*Drawing Math Stories:
Linking Language, Art, and Math*

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Drawing Math Stories: Linking Language, Art & Math ~ Lesson Overview (complete lesson plan: http://www.readwritethink.org/lessons/lesson_view.asp?id=144)

Focus on the language of math and 'deconstruct' equations to turn them into stories. Begin with a read aloud, model the writing of a story, then let individuals, pairs, or groups of students write their own stories. Mount on construction paper and bind to publish.

Materials Needed:

chart paper; markers; pre-selected equations, written out on paper strips or typed in a large font; white copy paper, full or half sheets; pencils; crayons or colored pencils; construction paper for mounting

Introduction:

Read aloud a math-oriented story of your choice.
Make a chart of as many math words as you can. Post the chart in a visible place.

Whole Group Collaborative Math Story:

Model the writing of a math story by writing one with the whole class together:

Write a pre-selected equation on the board. Choose an equation that is just slightly challenging for most of the class. Talk about the equation by asking questions, looking at each number and symbol one at a time.

What is our starting number?

Every math equation is talking about things. What things could this be?

(Allow students to give suggestions; later you'll choose something to draw.)

Look at this symbol? What does it mean?

As students respond, draw and write the story on chart paper using their suggestions. Use a separate paper for each part of the equation. The finished story will have text and drawings which represent the original equation. The equation can be used as a title for the story.

Read the story aloud with students. For younger students, use the story for shared reading.

Individual, Partner, or Small Group Stories:

Follow the same procedure as with the whole group collaborative story. Use equations that are just slightly challenging for the students. Depending on the class, students can work independently on their stories while the teacher monitors and assists as needed, or the entire process can be "talked through" as it was done with the whole group.

Have student groups share their stories with the class and have the class guess the equation.

A Buggy Math Story



One day, ten ladybugs were walking on the grass.

1

$$10 - 3 = 7$$



Three flew away.

2.

$$7 + 5 = 12$$



Then, five brand new ladybugs came.

3.

Then there were twelve ladybugs, in the grass.

4.

A Buggy Math Story

written by Stanford Avenue School Kindergarten; April 2004

teacher: Renée Goularte

Mathematics in Literature Read-Aloud Books

Anno's Mysterious Multiplying Jar. Mitsumasa Anno
Explores the factors of ten in a playful way.

Spaghetti and Meatballs for All. Marilyn Burns
Where will thirty-two guests sit to eat spaghetti?

Old Henry. Joan W. Blos.
The pies baked by neighbors could become a fractions, measurement, or multiplication lesson.

Benny's Pennies. Pat Brisson
Benny has five new pennies to spend and many family members telling him what to buy.

The Purse. Kathy Caple
Katie uses all her money to buy a purse.

Fish Eyes. Lois Ehlert
A good book to use when first graders are working on adding on.

The Doorbell Rang. Pat Hutchins.
This story lends itself well to measurement, multiplication, division, graphing, etc

Inch by Inch. Leo Lionni
An inchworm inches his way to safety by measuring animals.

How Big is a Foot? Rolf Myller
The king wants to give the queen a new bed, but nobody knows how big it should be.

Amanda Bean's Amazing Dream. Cindy Neuschwander
A girl loves to count things, and discovers how multiplication helps.

Sir Cumference and the Sword in the Cone. Cindy Neuschwander
Sir Cumference and his friends search for the sword Edgecalibur.

One Hundred Hungry Ants. Elinor J. Pinczes
The ants go marching two by two, and in other configurations.

Caps For Sale. Esphyr Slobodkina
A classic about a peddler selling his caps.

The Magic Money Box. Rozanne Lanczak Williams
A story about coin equivalents.

Alexander, Who Used to be Rich Last Sunday. Judith Viorst.
Alexander gets a small amount of money and spends a little each day.

Activity ideas for some of the books listed above can be found at
<http://www.share2learn.com/mathliterature.html>

Teacher Resources: Linking Language Arts and Mathematics

Math is Language Too: Talking and Writing in the Mathematics Classroom.

Whitin Phyllis, and David J. Whitin. 2000. National Council of Teachers of English and National Council of Teachers of Mathematics.

(first chapter available online at

<http://www.ncte.org/library/files/Store/Books/Sample/21349Chap01.pdf>)

Principles and Standards for School Mathematics.

National Council of Teachers of Mathematics. 2000. <http://standards.nctm.org/>

Mathematics Framework for California Public Schools - Kindergarten Through Grade Twelve

California Department of Education. 2000.

<http://www.cde.ca.gov/cdepress/math.pdf>

On the Internet

Draw a Math Story ~ Read-Write-Think lesson by Renée Goularte

http://www.readwritethink.org/lessons/lesson_view.asp?id=144

Complete lesson plan for drawing math stories.

Share2Learn

<http://www.share2learn.com>

<http://www.share2learn.com/greatideas.html>

Resources for teachers, including shared ideas from real classrooms for all curriculum areas.

Read-Write-Think

<http://www.readwritethink.org/>

Printable literacy lessons written by teachers, sorted by grade level and purpose; collaboration between National Council of Teachers of English, International Reading Association, and MarcoPolo Foundation.

Math Cats: Math and Literature Idea Bank

<http://www.mathcats.com/grownupcats/ideabankmathandliterature.html>

Links to a variety of websites with ideas for lessons and math literature lists.

Making Books With Children

<http://www.makingbooks.com/>

Some great ideas for publishing student-written books.

Mathematics in Literature Booklists

Math Literature: <http://home.nyc.rr.com/teachertools/mathliterature.html>

Math in Literature: <http://nancykeane.com/rl/161.htm>

Mathematics and Children's Literature: <http://sci.tamucc.edu/%7Eeyoung/literature.html>

Math in Children's Literature: <http://literacy.kent.edu/Oasis/Resc/Educ/mathkidslit.html>