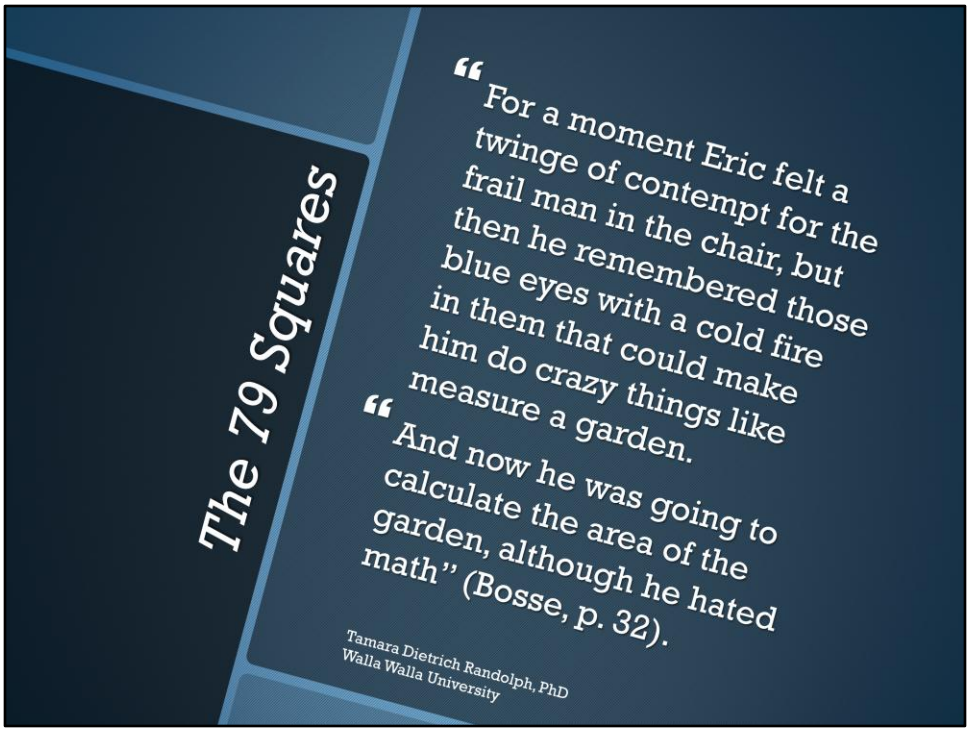
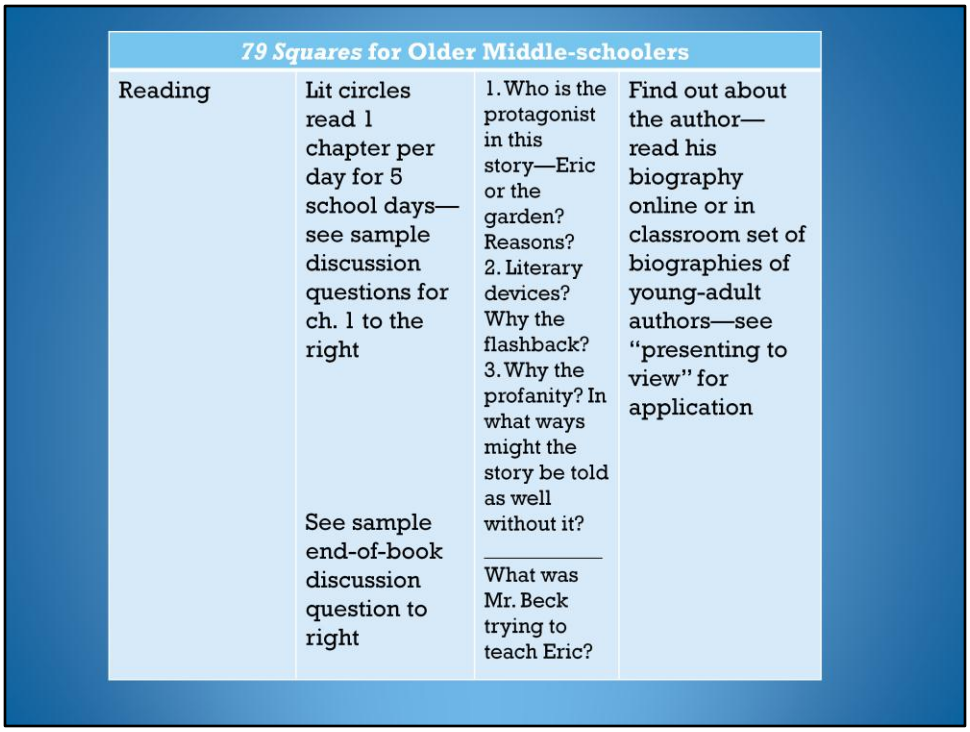
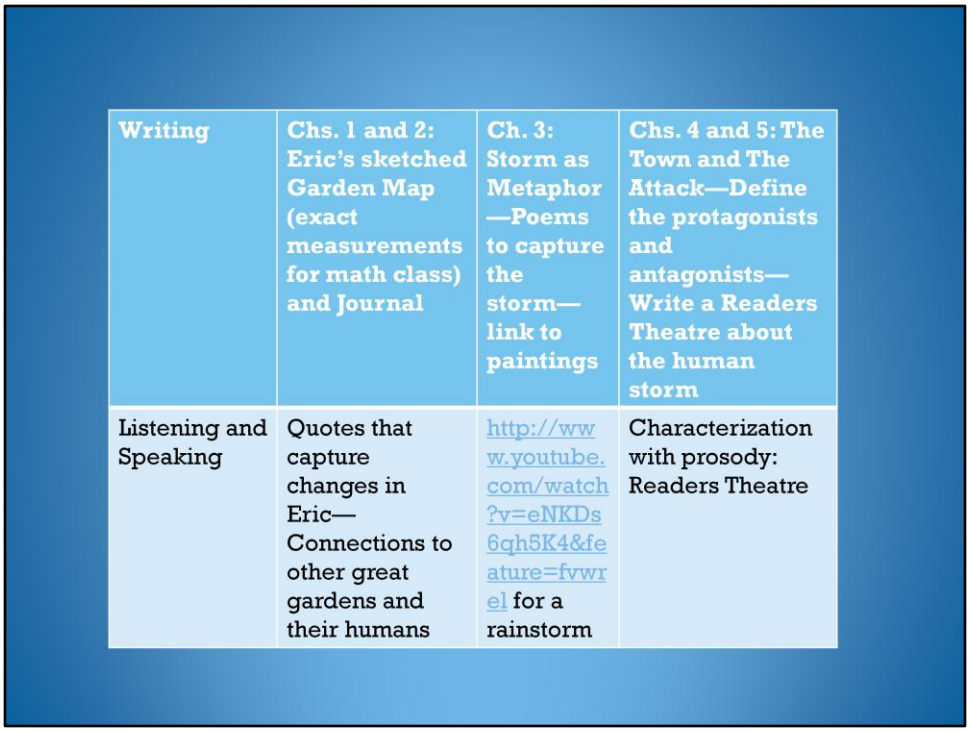
Introductions of the presenters, both working in the education program at Walla Walla University, and the topic, ideas for cross-disciplinary instruction.



Literacy: Reading a key quote from the book *The 79 Squares,* by Malcolm Bosse
Math1: "Hating math" –parents need to take a pro-active stance on this one for the sakes of their children (possible "war stories" here?)



Literacy: What can be done in the area of reading for older middle-school students, using *The 79 Squares,* by Malcolm Bosse?
Math2: Measuring gardens—assumptions, artifacts, and accuracy
Math3: Measuring THIS garden, according to Eric and Mr. B.. Chapter 1—Do this outside, and try to leave the borders in place until you need to fill in the interior squares, as per the book *The 79 Squares*—Why did it have to be squares exactly 6x6?

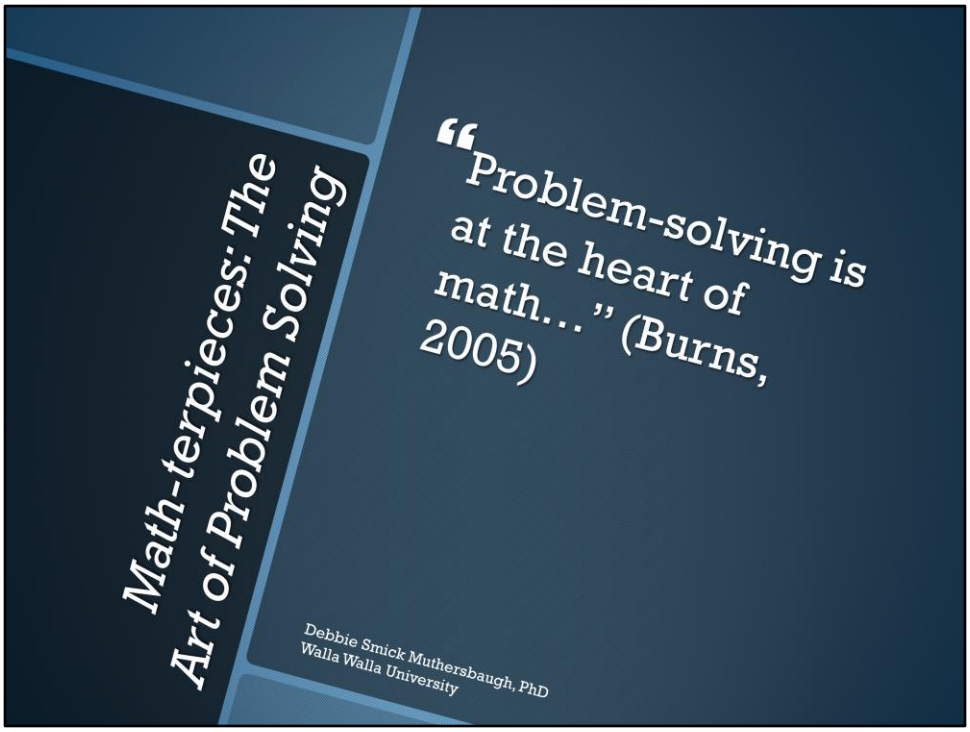


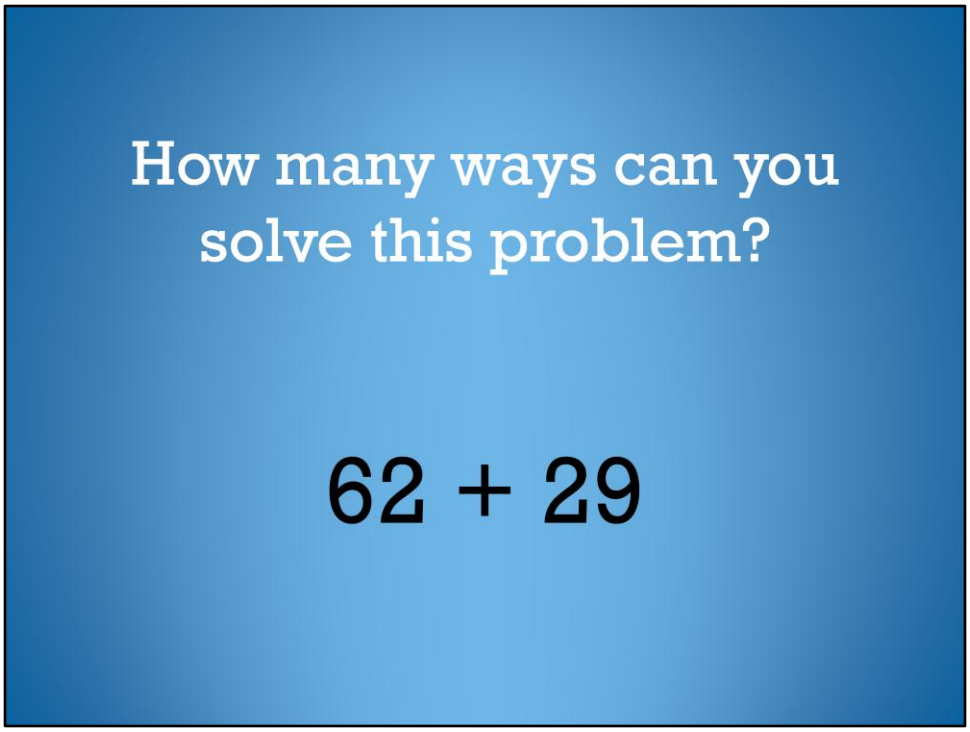
Writing	Chs. 1 and 2: Eric's sketched Garden Map (exact measurements for math class) and Journal	Ch. 3: Storm as Metaphor—Poems to capture the storm—link to paintings	Chs. 4 and 5: The Town and The Attack—Define the protagonists and antagonists—Write a Readers Theatre about the human storm
Listening and Speaking	Quotes that capture changes in Eric—Connections to other great gardens and their humans	http://www.youtube.com/watch?v=eNKDs6qh5K4&feature=fvwrel for a rainstorm	Characterization with prosody: Readers Theatre

Literacy: Ideas for writing, listening, and speaking, using *The 79 Squares*
Math4: Eric has to create a stake-and-string moveable template for a 6x6 foot square and sit in each square for one hour without speaking—set up the template outside within your string perimeter and calculate how many squares (hours)—what is the probability that this number will come out exactly even (see previous discussion Math2)
Math5: Is there an alternative way to find out how many hours (squares) Eric must stake out?
Math6: Measuring between lightning strikes and thunder—can it be done? How accurate is it? Reference *Thunder Cake* by Polacco
Math7: Measuring insect sounds/animal behaviors with regard to weather predictions (chs. 3 and 5 for Eric's attempt to calibrate the bird behaviors and insect sounds with coming changes of weather)

Viewing	Garden Map on DocuCam	Googling "Storm painting" brings up many images—which best partner our novel?	Chessboard showing attack—superimpose on garden map
Representing to View * Reference "Summer Shade Resting" photo title in UB 7/23/12	TV Interview with Malcolm Bosse (see reading)	Painting and titling* our own version, following Bosse's ch3 word pictures	Choreograph the attack—With his intimate knowledge of the garden, how could Eric have been more strategic? Proof?

Literacy: Ideas for viewing and representing to view, using *The 79 Squares*—stage Readers' Theatre written especially for this book.
Math8: Chessboards and garden squares—Are there enough squares on a chessboard to allow the garden squares to be superimposed upon it or should it have to go the other way with the chessboard on top? How many squares ARE there in a chessboard? Are you sure? Count again. No, I think you still need to count some more.
Math9: Write another math/word puzzle similar to the one above in Math6, but with a different geometric shape. Would Eric have had to sit less hours in the garden with this shape? Think of a clever title for it. Publish it on your class math blog with a cross-reference to your class reading blog, *The 79 Squares*.


Math-terpieces: The Art of Problem Solving
"Problem-solving is at the heart of math…" (Burns, 2005)
Debbie Smick Muthersbaugh, PhD
Walla Walla University



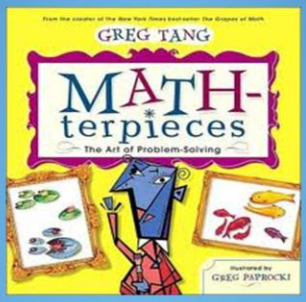
Use the markers and blank white paper to solve this problem in as many ways you can.

Stages of math – real objects, pictorial representation, numerical equations

What are Characteristics of Problem-Solving?

- The course of action is not immediately evident
- The solution may be found in several different ways using a variety of strategies
- More than one answer may be possible

Literature Connection



MATH-terpieces: The Art of Problem-Solving

Written by Greg Tang
Illustrated by Greg Paprocki

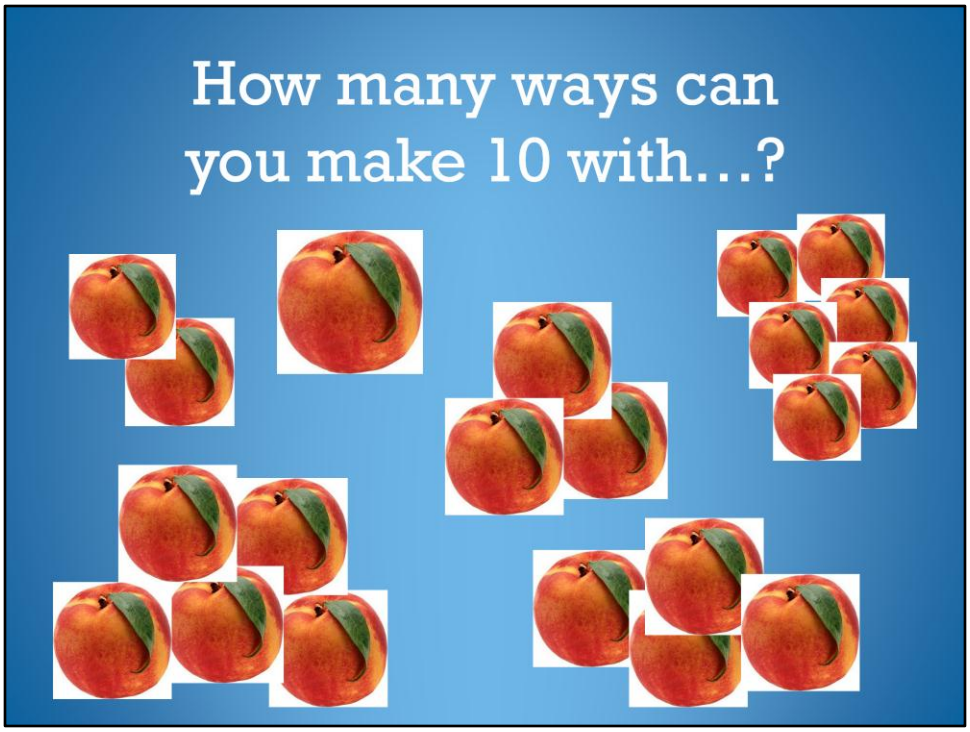
Read Monet lilies – p. 6-7 and Renoir – p. 8-9

Still Life with Commode (ca. 1885)
Paul Cezanne

"For Paul Cezanne, still lifes would do,
A cloth, a vase, and peaches, too.
His planes of color, pure and bright,
So smartly capture form and light" (p. 10).

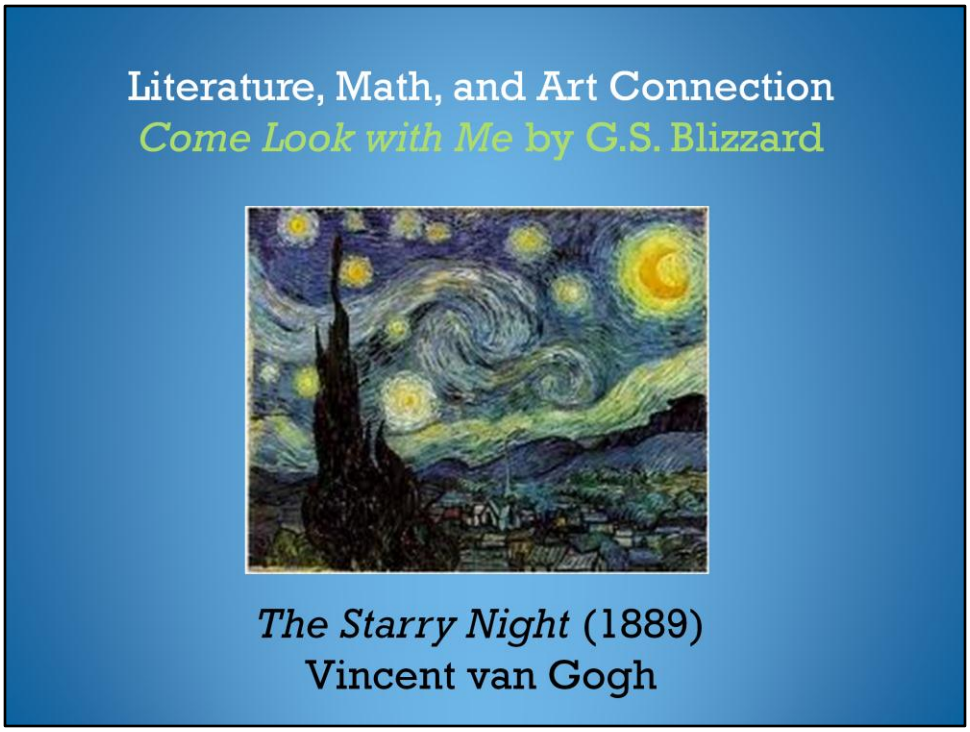
Do Cezanne peaches – p. 10-11. "How many ways can you make 10 (use paper and markers). Share with someone.

Follow-up with van Gogh Starry Night – p. 12-13. Move on to *Exploring Landscape Art with Children* – p. 14-15 and Escher p. 20-21.



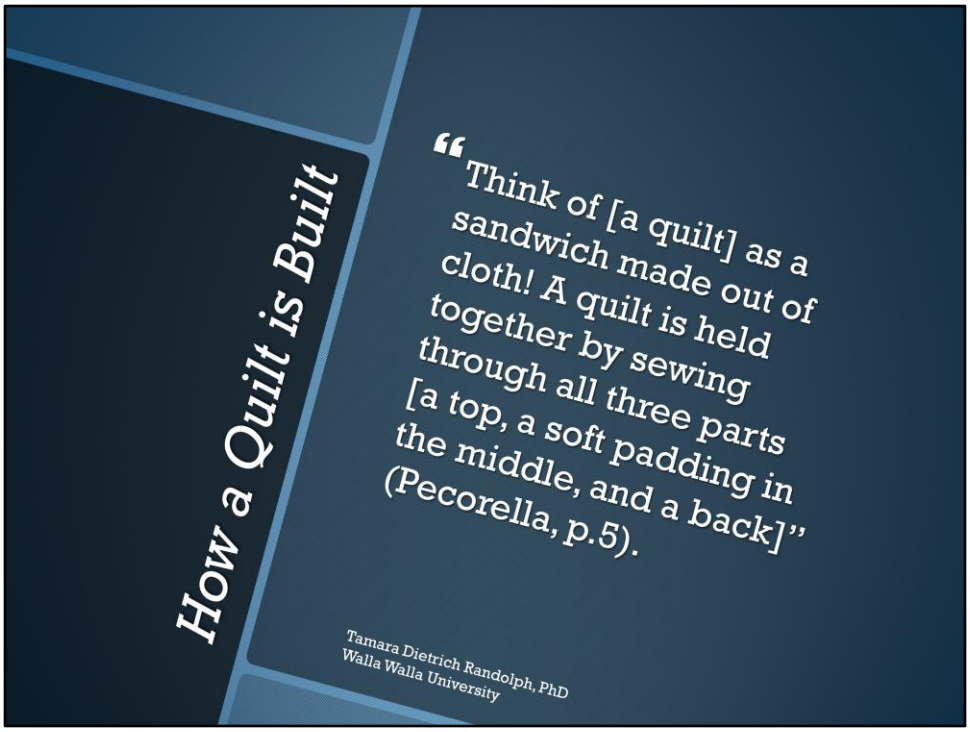
Use the markers and blank white paper to solve this problem in as many ways you can.

Stages of math – real objects, pictorial representation, numerical equations



Do Cezanne peaches – p. 10-11. "How many ways can you make 10 (use paper and markers). Share with someone.

Follow-up with van Gogh Starry Night – p. 12-13. Move on to *Exploring Landscape Art with Children* – p. 14-15 and Escher p. 20-21.



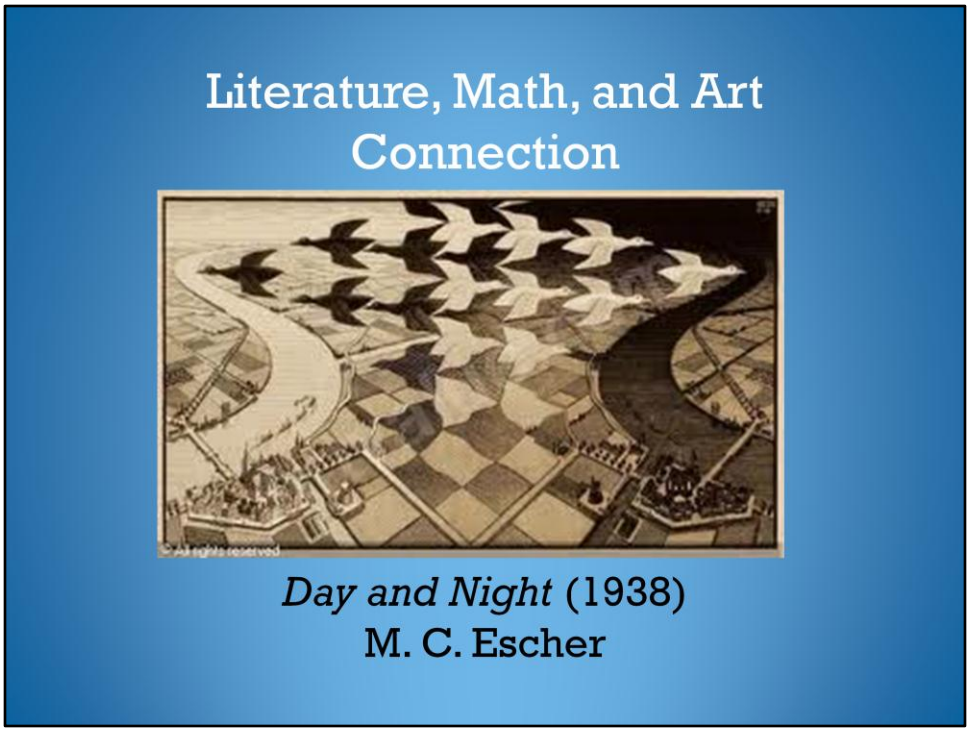
Literacy1: Reading—share from one among 4 quilt books laid out on table: *My Grandmother's Patchwork Quilt: A book and Pocketful of Patchwork Pieces,* by Janet Bolton; *Sweet Clara and the Freedom Quilt,* by Deborah Hopkinson; *Too Much Snow for Tootie,* by Tamara Randolph; *14287 Pieces of Fabric and Other Poems,* by Jean Ray Laury.

Literacy2: Writing, Viewing, Representing to View—describe the use of story quilts with EFL students in China, as published by Randolph (2001). "Using Folktales to Promote Fluency Among Adult EFL Students in China." *TESOL Journal, vol. 10, No. 1,* pp. 9-14.

Math: Follow directions in *How a Quilt Is Built*, by Jane Pecorella, to put together a 9-patch block paper quilt. Involves measuring with a ruler, addition of single digit numbers, and careful cutting/laying out before gluing.

How a Quilt Is Built for 1-3 Graders	
Reading/writing	The book has a glossary on p. 15. The six words* there do not include the word "quilt," which they should. Learn the word first. Read the cover through p. 6, showing pictures.
Art/Math	Give each student a ruler, glue, and 3 sheets of paper—1 white, 1 red, 1blue. DO page 9. Admonish to measure* carefully.
Listening/Speaking	Ask children if they can guess what should happen next. Affirm and direct answers. DO p. 10-13.
Viewing/ Representing to View	Have students tape their quilt blocks evenly within a rectangular space marked out on the wall with yarn. Read p. 14 aloud while children view their representations. Ask for students to point to a block*, a patch*, a pioneer*! Ask why we don't have padding*.

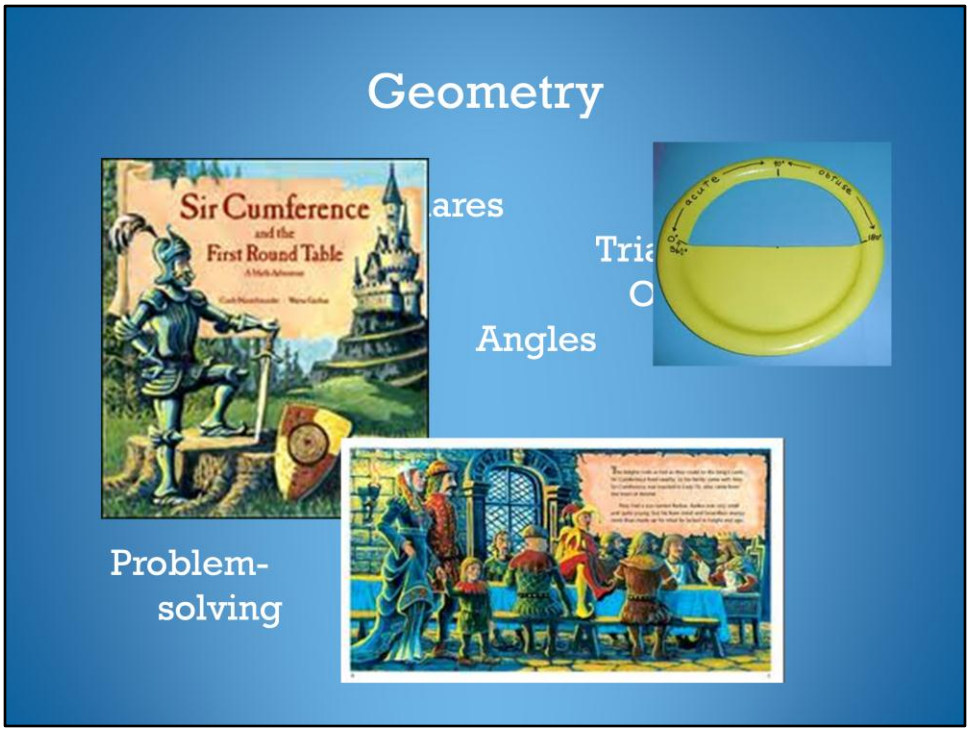
Math: The subtitle tells it all—"Learning to Measure an Object Using Inches."



Follow-up connection to quilting from the book *Come Look with Me – p. 20-21.* Discuss patterns, symmetry.


Sir Cumference and the First Round Table
Players:
Sir Cumference
Lady Di (ameter)
Son Radius
Carpenter Geo of Metry
Debbie Smick Muthersbaugh, PhD
Walla Walla University

Read p. 1-9


Geometry
Sir Cumference and the First Round Table
ares
Tria
O
Angles
Problem-solving

Read p. 24-32