

Zachary Zormer, Shape Transformer: A Math Adventure

Grade 4

4 skill lessons · 3 math-through-reading

Skill lessons

4 lessons on the mathematics the book carries. Printable workbook pages and teacher keys are not available for this book yet.

1. The Same Card, Two Different Numbers

Reasoning · Distinguishing perimeter from area on the same rectangle

2. Five Rows of Eight Square Inches

Concept · Finding the area of a rectangle by multiplying its length by its width

3. Twenty Inches Around a Hall Pass

Concept · Finding the perimeter of a rectangle from its length and width

4. One Square Inch or Forty

Application · Comparing two areas and stating the difference both ways

Math through the reading

The mathematics is reached through a sentence the book prints: change one word in the reading and the numbers change with it. These carry their own standards, matched against these lessons rather than inherited from the skill ones.

5. Change One Word, Change the Answer

Integrated · Students take the hall pass's own two measurements, produce 20 by going round the card and 24 by covering it, and then find which single word in Zack's sentence is the one that chose 20.

6. The Number Zack Did Not Say

Integrated · Students find the area of Zack's hall pass — 24 square inches, a number nowhere in the book — and hand it in together with the one sentence that makes it the only possible answer.

7. Say It Both Ways About the Light

Integrated · Students count the squares in two light patches they have traced themselves, then state the relation between the book's own two areas in both directions and show that the two sentences describe one arrangement.

Reading and language lessons

5 lessons on the reading and language the book carries - what a word means in its sentence, how a character is shown, how a text is built. No mathematics: these are matched against the English language arts curricula, which are a different and smaller set than the mathematics ones.

8. What Their Hands Say: Reading a Motive Off the Page

Language · Character Motive from Action

9. The Locker Banana: Where the Book Stops Meaning It

Language · Figurative and Exaggerated Language

10. Bullets, Numbers and Because: How Directions Are Built

Language · How-To Text Structure

11. Asked Suspiciously: What a Tag Word Does

Language · Dialogue, Speaker Tags and Tone

12. Three Fridays: Following What Changes and What Does Not

Language · Tracking Change Across a Text