# The Tailor Shop

Teacher's Guide

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## **Line Masters**

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## Mathology Little Books

This series recognizes that children's understanding of maths concepts develops over time, and so the series allows you to choose the book that best matches a child's or group's level of mathematical understanding. The books engage children at just the right level in a wide range of mathematical ideas, thinking, and activities in a variety of real world and imaginary contexts.

*The Tailor Shop* engages children in conversations, investigations, and activities that help to develop their understanding of the big maths idea that "Shapes and solids can be transformed in many ways."\*

<b>Big Idea: Shapes and solids can be transformed in many ways</b> (Flips, slides, turns and symmetry)					
TITLE	KEY MATHS FOCUS	MATHS SKILLS	STRATEGIES	ADDITIONAL FOCUS	
The Patient Shop	Transform and describe shapes Describe and compare shapes	Identify congruent shapes Describe how to make shapes congruent Identify symmetrical shapes and designs Construct and/or complete symmetrical shapes and designs Describe location, position, and/or orientation of shapes Compose and complete composite shapes	Move and manipulate shapes to check for congruency (slide, flip, turn)	Identify symmetry in the environment Add and subtract to 20 Duration of 1 min, 10 min, days Use positional language to describe location Sorting and resorting Explore Area	
Gallery Torrest Constants Constants Constants Constants	Describe and compare transformations Identify, describe, and compare 2D shapes	Identify 2-D shapes that have symmetry Identify lines of symmetry Construct and complete 2-D symmetrical designs Describe and perform transformations (slides, flips, turns)	Find 2D shapes within an image Use knowledge of 2D and 3D shape properties	Collect and organise data Identify angles Compare numbers Estimate quantity Estimate measurements: perimeter, area length Select units: kg, g, m, cm	

<sup>\*</sup> This book can also be used to address the big idea that "Shapes and solids can be explored and compared based on attributes."

# Describing and comparing shapes

• What shapes do you recognize? What can you tell us about the (square) you are pointing to?

Point to 2 similar shapes.

• How is this (circle) different from this one? (accept all reasonable answers, and prompt children to describe all possible differences)





#### WATCH FOR...

- How do children describe shapes? Are they comfortable labelling them as squares (rectangles, circles, triangles)?
- When comparing shapes, do children describe the number of sides and corners/points (whether shapes are the same size)?

#### CONNECTING TO MEASUREMENT

Area: Ask children how many small squares in the picture might fit exactly over the red rectangle and then the yellow rectangle. Discuss how this measurement relates to Area.

## Describing and comparing shapes

- Let's play I Spy a Shape. I'll start the game: I spy a shape that has 4 sides and all the sides are the same length. Which shape is it? (Children may point out several examples that meet the criteria. If so, confirm and add a new clue, e.g., Yes, I spy a square. The one I spy is between a circle and another square.)
- What is Thomas thinking about as he moves the shapes around? (what the shapes could be; what he could make with them) What do you think Thomas might make? Tell your elbow partner. Discuss whether you agree that the shapes could be arranged to make your partner's idea.

# Transforming and describing shapes

• If Thomas wants to use shapes that are the same size and shape, which shapes do you think he might choose? How might he check that the shapes he chose are the same size and shape?

## **Large Group Options**

If you read *The Tailor Shop* to a large group or whole class, you might project the book to facilitate reading aloud and better engage children in describing and comparing shapes, and also in predicting what new shapes they will see as they turn the pages. These activities engage children in exploring and predicting transformations of 2-D shapes and developing the language and gestures to describe changes in shape and location. They also offer opportunities for exploring, describing, and comparing 2-D shapes. Choose the activities that best address your children's developing geometric and spatial thinking.

### **MAKING SHAPE PICTURES**

## ENGAGE

Hold up a circle, a rectangle, and a square, cut from construction paper or Shape Cut-Outs (LM 4). If necessary, review the names of the shapes. Project page 6 of *The Tailor Shop*. (You might repeat for pages 10 and 14 afterward.) Ask:

• Thomas chose shapes and arranged them to make a picture. Where can you find each of these shapes in Thomas's truck? Describe where he placed each one.

After each shape is located, ask children to explain why they think Thomas chose the shape, and to trace it in the air or on their palms. Ask:

• What is the same about all the (squares) we found? What is different?

## WORK ON IT

Provide materials for picture-making (shapes from LM 4, LM 5, and/or shape stickers; blank paper, glue, scissors), and say:

• Now it is your turn to make shape pictures. What picture or design can you make with these shapes? Use at least (10) shapes. When you are happy with your arrangement, glue the shapes to your blank paper. Feel free to colour shapes and draw details to make your picture or design more interesting or to help you tell a story.

As children work, you might ask:

- How did you use the (large rectangle) in your picture? What shapes have you put above (below, beside, on top of) the (rectangle)?
- What shapes did you combine to make this (rectangle)?
- What other shape could you have used for (the roof)?
- Why did you turn the triangle so that it points downward? Why did you cut the square in half? What shapes did that make?

## SHARE AND REFLECT

Invite children to share and talk about their pictures. Possible prompts:

• Tell us about your picture. Why did you choose these shapes to make your (house)? Which shape do you think you used the most (the least, not at all)? Why? Is there a shape you wish you had used?

MATHS FOCUS: recognize and describe 2-D shapes and their relative position; compose pictures using 2-D shapes

**MATERIALS:** *The Tailor Shop*, p. 6; construction paper; shapes from Shape Cut-Outs (LM 4), Pattern Block Cut-Outs (LM 5), and/or shape stickers; blank paper; glue; scissors; drawing and colouring materials

#### WATCH FOR...

- Does the child recognize and describe 2-D shapes?
- Does the child combine small shapes into larger ones? Does the child see larger shapes formed by smaller shapes?
- Does the child use spatial, positional, and geometric language to describe his/her picture?

**DIFFERENTIATE:** Children could be challenged to list the shapes they used and record (or graph) how many of each they included in their picture or design. Some children might benefit from creating pictures or designs with objects (such as pattern blocks, tiles, tangrams and/or attribute blocks), and taking a photo to make a record of their work.

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About My Shape Picture