Materials List:

- Multiply by 8 Pattern Sheet
- whiteboards

Eureka Math

3rd Grade
Module 7
Lesson 28

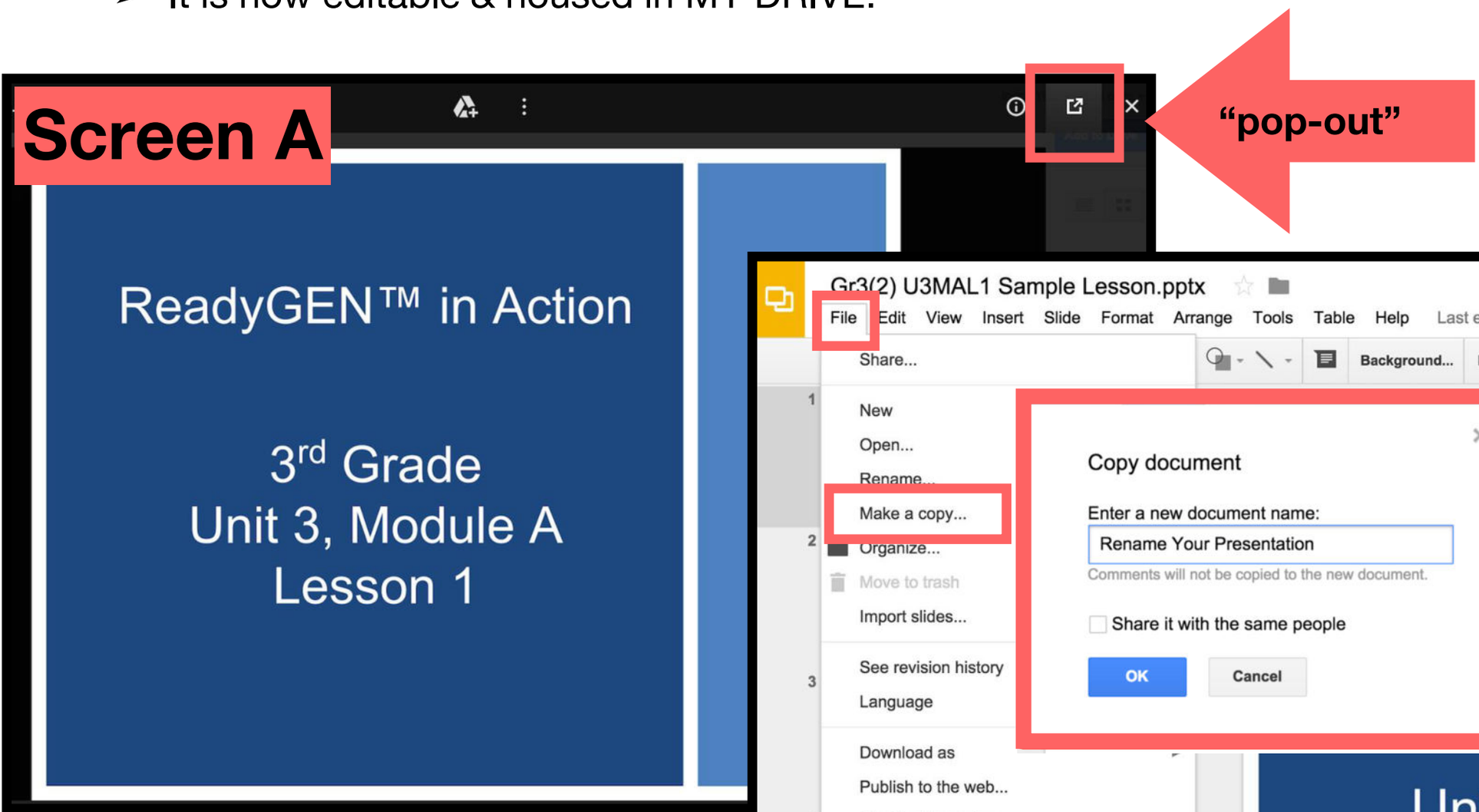
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this project!

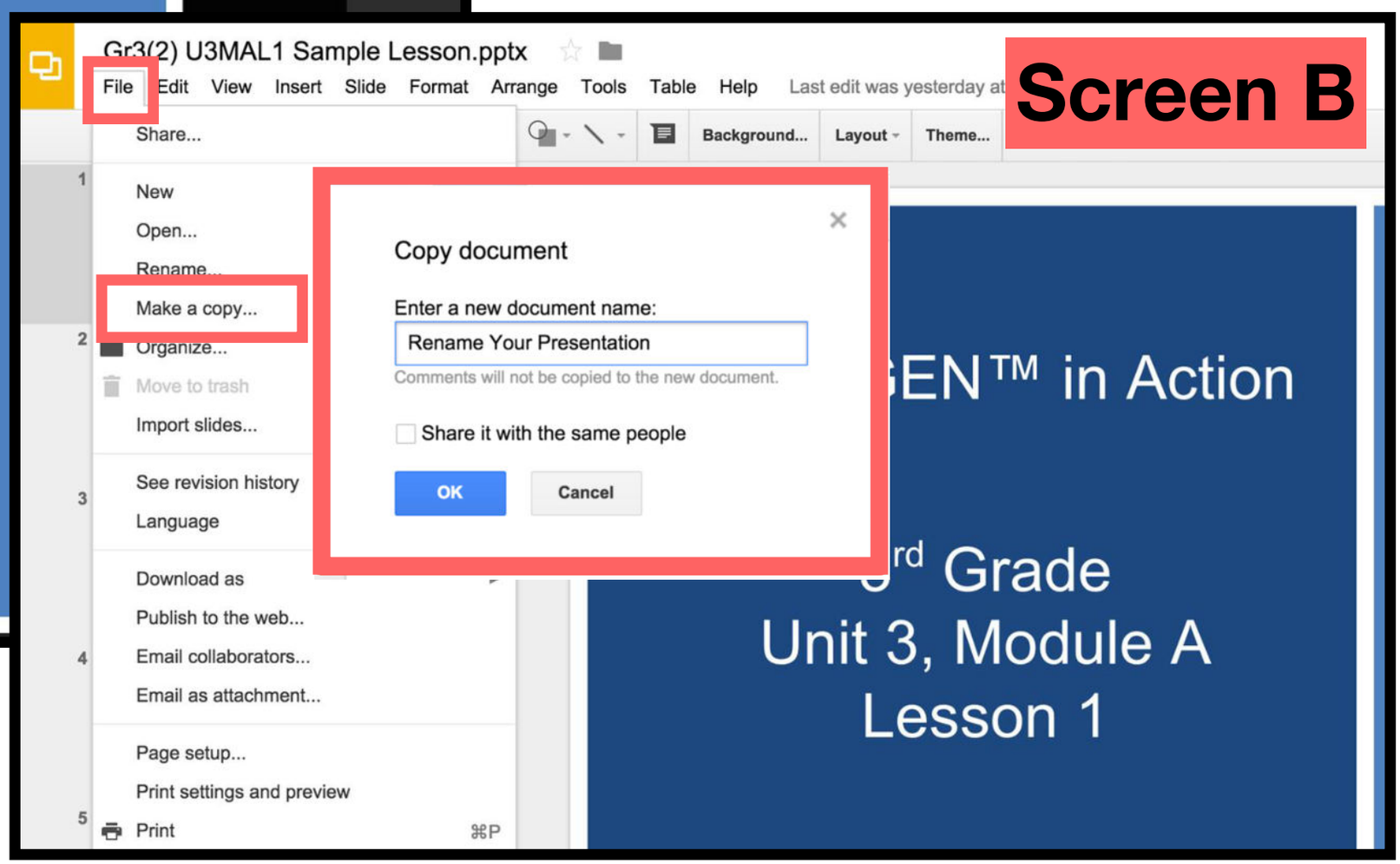
Directions for customizing presentations are available on the next slide.

Customize this Slideshow

Reflecting your Teaching Style and Learning Needs of Your Students

- When the Google Slides presentation is opened, it will look like Screen A.
- Click on the “pop-out” button in the upper right hand corner to change the view.
- The view now looks like Screen B.
- Within Google Slides (not Chrome), choose FILE.
- Choose MAKE A COPY and rename your presentation.
- Google Slides will open your renamed presentation.
- It is now editable & housed in MY DRIVE.



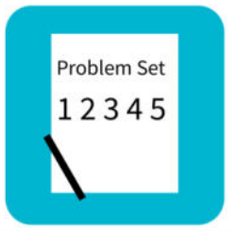


Icons

Read, Draw, Write

Learning Target

Personal White Board

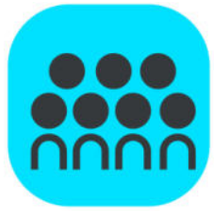


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

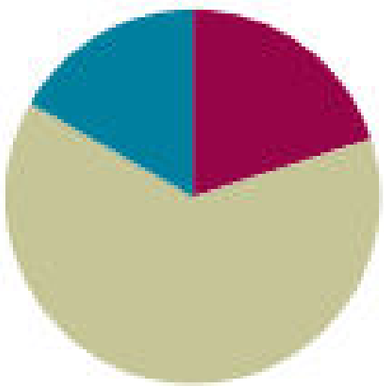
Small Group Time

Lesson 28

Objective: Solve a variety of word problems involving area and perimeter using all four operations.

Suggested Lesson Structure

Fluency Practice	(12 minutes)
Concept Development	(38 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can solve a variety of word problems involving area and perimeter using all four operations.

Fluency Practice

Multiply by 8 (5 minutes)

Let’s skip-count up by eights. I’ll raise a finger for each eight.

7x8= ___

Let’s skip-count up by sevens starting at 40. Why is 40 a good place to start?

Let’s see how we can skip-count down to find the answer, too. Start at 80 with 10 fingers, 1 for each eight.

Continue with the following sequence:

9 × 8

6 × 8

8 × 8

Fluency Practice

Multiply by 8 Sprint (2 minutes)

Multiply.

8 x 1 = _____	8 x 2 = _____	8 x 3 = _____	8 x 4 = _____
8 x 5 = _____	8 x 6 = _____	8 x 7 = _____	8 x 8 = _____
8 x 9 = _____	8 x 10 = _____	8 x 5 = _____	8 x 6 = _____
8 x 5 = _____	8 x 7 = _____	8 x 5 = _____	8 x 8 = _____
8 x 5 = _____	8 x 9 = _____	8 x 5 = _____	8 x 10 = _____
8 x 6 = _____	8 x 5 = _____	8 x 6 = _____	8 x 7 = _____
8 x 6 = _____	8 x 8 = _____	8 x 6 = _____	8 x 9 = _____

Fluency Practice

Find the Perimeter (4 minutes)

Perimeter = 14 cm

On your personal white board, write the length of this rectangle.

On your board, write the perimeter of this rectangle. Write a four-step addition sentence if you need to.

Fluency Practice

Find the Perimeter (4 minutes)

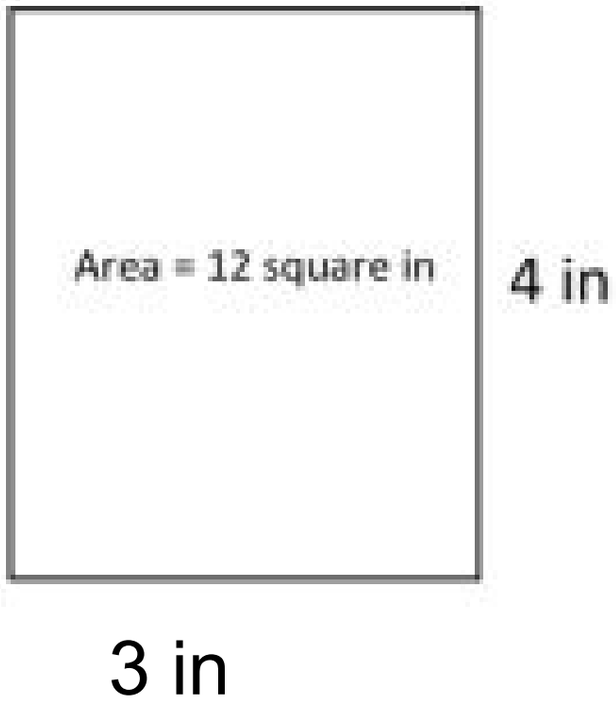
Perimeter = 14 cm

On your board, sketch a rectangle that has an area of 10 square cm but different side lengths from this rectangle.

The, calculate the perimeter of the new rectangle.

Fluency Practice

Find the Perimeter (4 minutes)



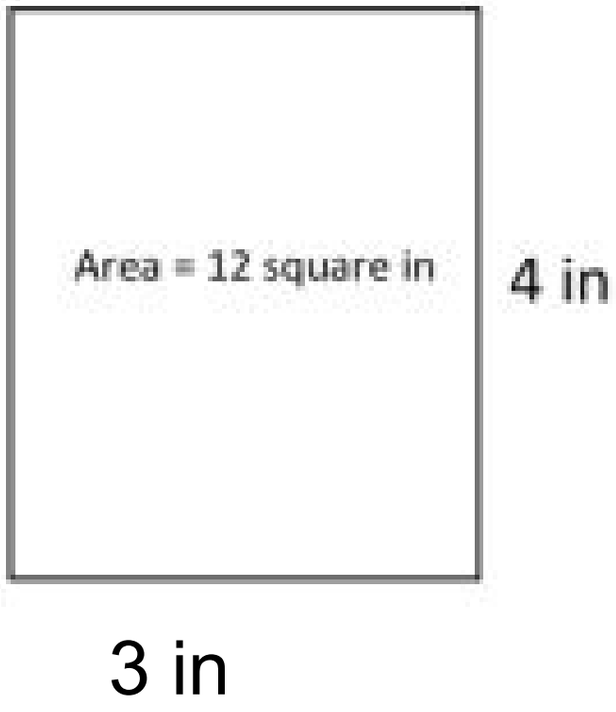
Perimeter = 14 in

On your personal white board, write the width of this rectangle.

On your board, write the perimeter of this rectangle. Write a four-step addition sentence if you need to.

Fluency Practice

Find the Perimeter (4 minutes)



Perimeter = 14 in

On your board, sketch a rectangle that has an area of 12 square in but different side lengths from this rectangle.

Then, calculate the perimeter of the new rectangle.

Fluency Practice

Find the Perimeter (4 minutes)

Perimeter = 22 m

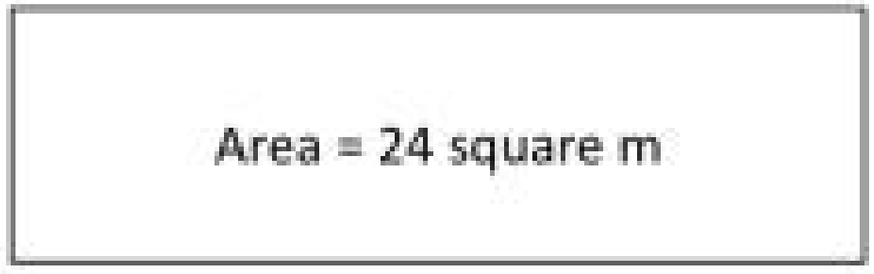
On your personal white board, write the width of this rectangle.

On your board, write the perimeter of this rectangle. Write a four-step addition sentence if you need to.

Fluency Practice

Find the Perimeter (4 minutes)

3 m



8 m

Perimeter =22 m

On your board, sketch a rectangle that has an area of 24 square m but different side lengths from this rectangle.

Then, calculate the perimeter of the new rectangle.

Concept Development

(40 minutes)

Get out your Lesson 28 Problem Set. We will using our Read Draw Write strategy to solve story problems involving area and perimeter.

Problem 1: Gia measures her rectangular garden and finds the width is 9 yards and the length is 7 yards.

a. Estimate to draw Gia's garden, and label the side lengths.

b. What is the area of Gia's garden?

c. What is the perimeter of Gia's garden?

Concept Development

(40 minutes)

Problem 2: Elijah draws a square that has side lengths of 8 centimeters.

a. Estimate to draw Elijah's square, and label the side lengths.

b. What is the area of Elijah's square?

c. What is the perimeter of Elijah's square?

d. Elijah connects three of these squares to make one long rectangle. What is the perimeter of this rectangle?

Concept Development

(40 minutes)

Problem 3: The area of Mason's rectangular painting is 72 square inches. The width of the painting is 8 inches.

a. Estimate to draw Mason's painting, and label the side lengths.

b. What is the length of the painting?

c. What is the perimeter of Mason's painting?

d. Mason's mom hangs the painting on a wall that already has two of Mason's other paintings. The areas of the other paintings are 64 square inches and 81 square inches. What is the total area of the wall that is covered with Mason's paintings?

Concept Development

(40 minutes)

Problem 4: The perimeter of Jillian's rectangular bedroom is 34 feet. The length of her bedroom is 9 feet.

a. Estimate to draw Jillian's bedroom, and label the side lengths.

b. What is the width of Jillian's bedroom?

c. What is the area of Jillian's bedroom?

d. Jillian has a 4-foot by 6-foot rug in her room. What is the area of the floor that is not covered by the rug?

Debrief (10 minutes)

- How was it helpful to have each question broken down into several parts?
- Share your drawing of Elijah's larger rectangle in Problem 2(d). How does the drawing of the rectangle help you figure out the side lengths?
- Explain to a partner how knowing the area and the width helped you find the length of the rectangle in Problem 3.
- How did you know you needed to add the areas of three paintings in Problem 3(d)?
- Explain to a partner the steps you took to find the width of the rectangle in Problem 4(b).
- Compare your model with your partner's model for Problem 4(d). What was the same? What was different?
- Which problem did you find most difficult? Why?

Exit Ticket (3 minutes)

Name _____ Date _____

Jennifer measures her rectangular sandbox and finds the width is 8 feet and the length is 6 feet.

a. Estimate to draw Jennifer's sandbox, and label the side lengths.

b. What is the area of Jennifer's sandbox?