Eureka Math

3rd Grade
Module 7
Lesson 31

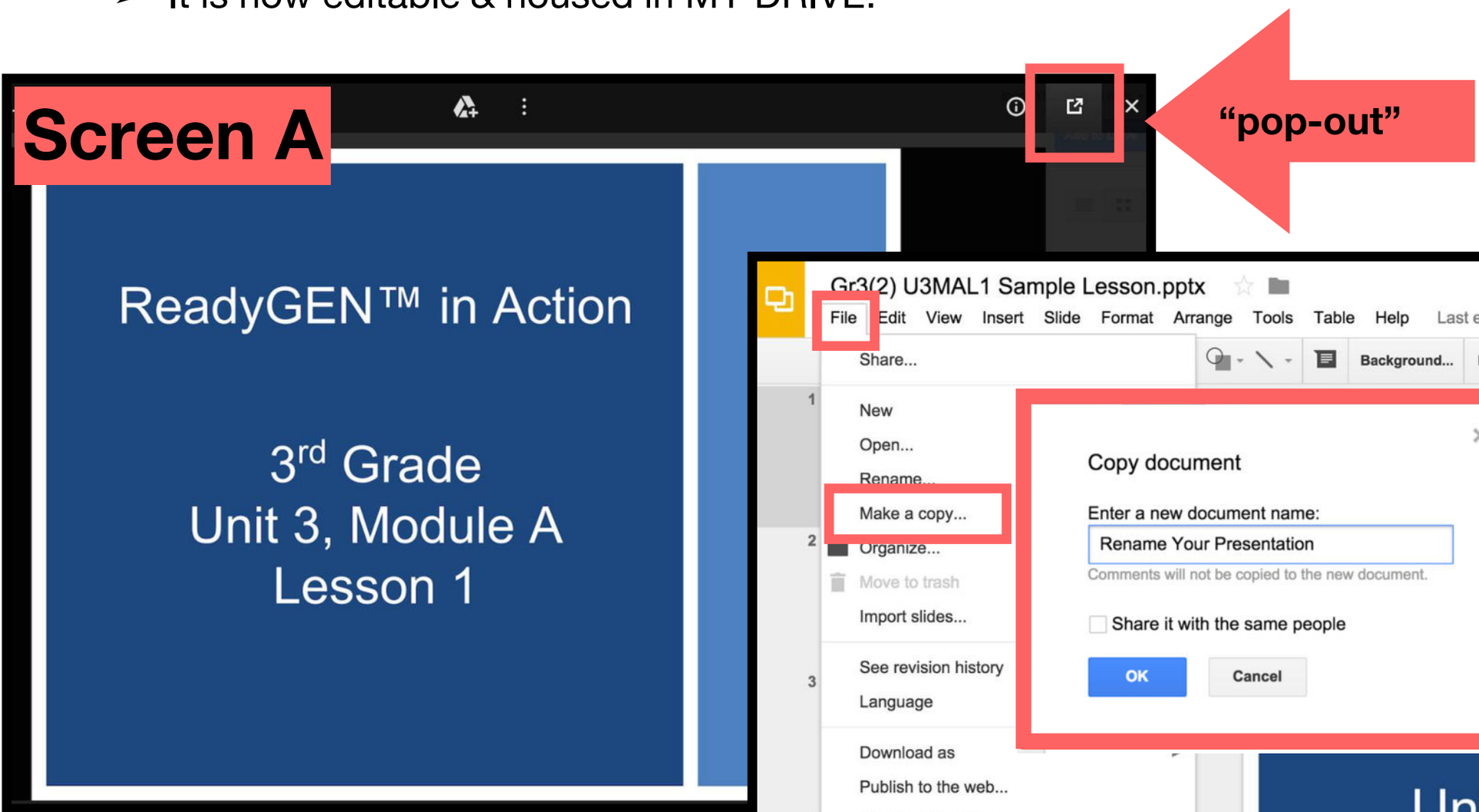
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

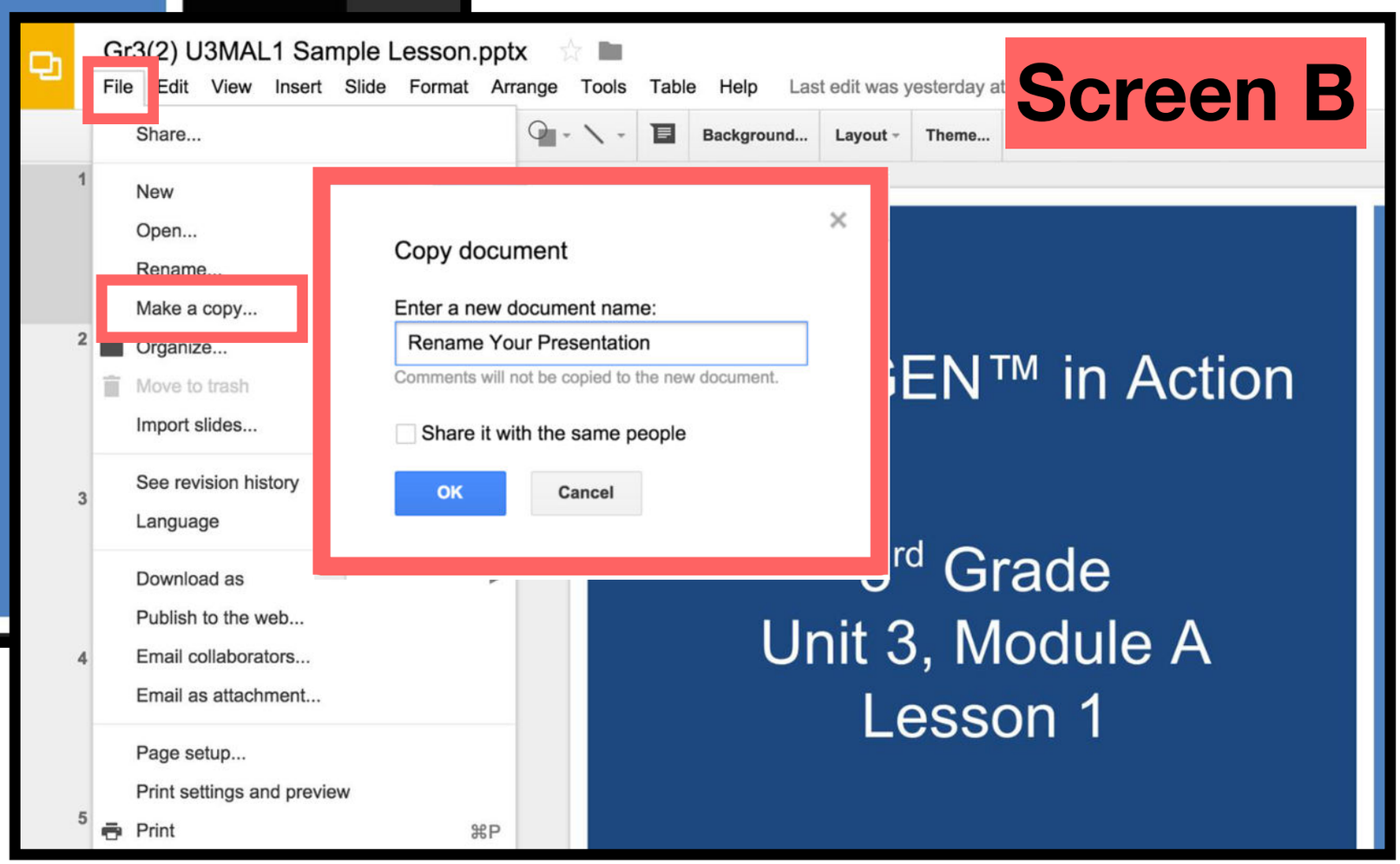
Directions for customizing presentations are available on the next slide.

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.



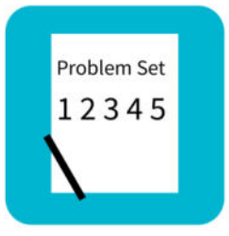


Icons

Read, Draw, Write

Learning Target

Personal White Board

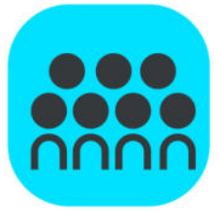


Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

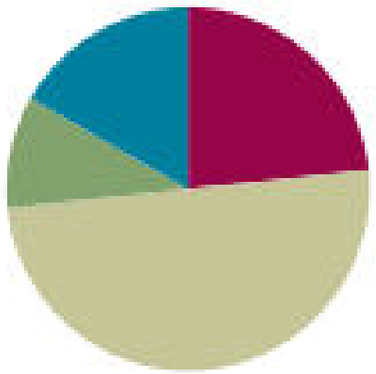
Small Group Time

Lesson 31

Objective: Explore and create unconventional representations of one-half.

Suggested Lesson Structure

Fluency Practice	(14 minutes)
Application Problem	(6 minutes)
Concept Development	(30 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can explore and create unconventional representations of one-half.

Fluency Practice

Sprint: Multiply or Divide by 9 (10 minutes)

Number Correct: _____

A

Multiply or Divide by 9

1.	2 × 9 =	
2.	3 × 9 =	
3.	4 × 9 =	
4.	5 × 9 =	
5.	1 × 9 =	
6.	18 ÷ 9 =	
7.	27 ÷ 9 =	
8.	45 ÷ 9 =	
9.	9 ÷ 9 =	
10.	36 ÷ 9 =	
11.	6 × 9 =	
12.	7 × 9 =	
13.	8 × 9 =	

23.	___ × 9 = 90	
24.	___ × 9 = 18	
25.	___ × 9 = 27	
26.	90 ÷ 9 =	
27.	45 ÷ 9 =	
28.	9 ÷ 9 =	
29.	18 ÷ 9 =	
30.	27 ÷ 9 =	
31.	___ × 9 = 54	
32.	___ × 9 = 63	
33.	___ × 9 = 81	
34.	___ × 9 = 72	
35.	63 ÷ 9 =	

Fluency Practice

Multiply and Divide (4 minutes)

Write each multiplication or division sentence.
Then fill in with the missing product or quotient.

5 × 4 = ____

5 × 8 = ____

7 × 8 = ____

6 × 4 = ____

9 × 8 = ____

6 ÷ 3 = ____

30 ÷ 6 = ____

18 ÷ 3 = ____

28 ÷ 7 = ____

Application Problem

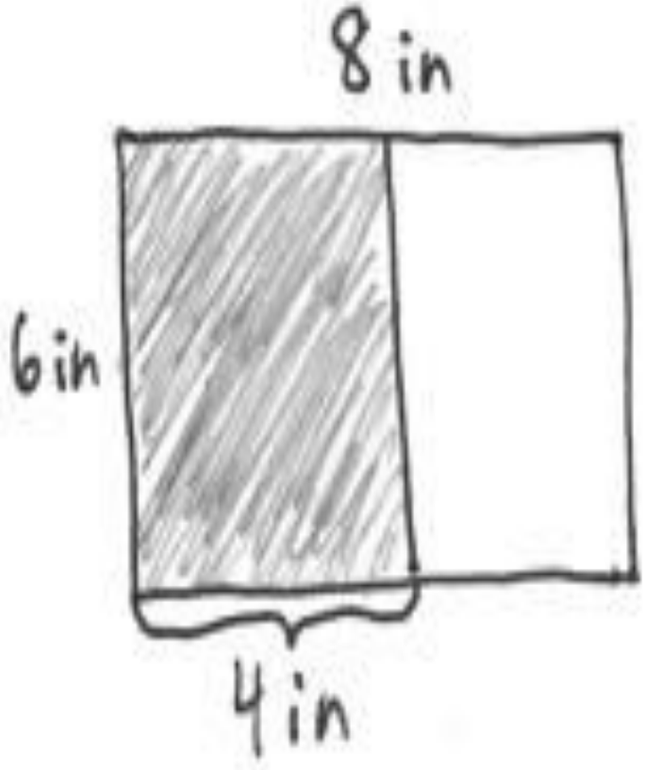
(6 minutes)

Mara draws a 6-inch by 8-inch rectangle. She shades one-half of the rectangle. What is the area of the shaded part of Mara's rectangle?

Application Problem

(6 minutes)

Mara draws a 6-inch by 8-inch rectangle. She shades one-half of the rectangle. What is the area of the shaded part of Mara's rectangle?



A = 6 in x 4 in
A = 24 sq in

The area of the shaded part of Mara's rectangle is 24 square inches.

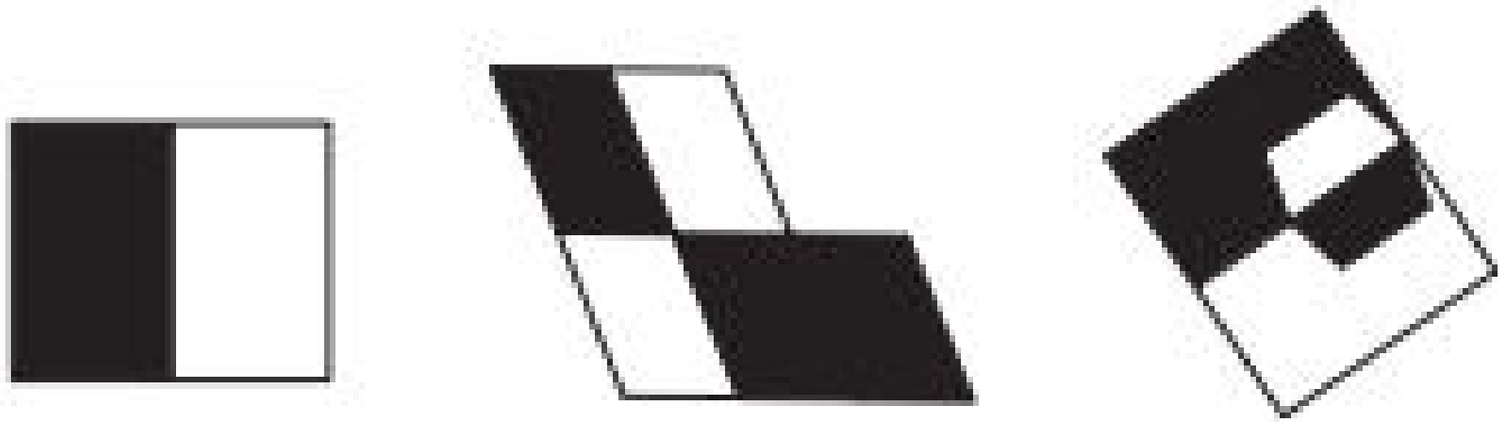
Concept Development

(30 minutes)

Materials: (S) **Square Template, ruler, crayons, and Problem Set**

Part 1: Explore different representations of one-half.

Study these images. Estimate to decide which shapes have one-half shaded. Discuss your reasoning with a partner.



A B C

Concept Development

(30 minutes)

I'll pass out squares with grids in them that will help you be precise in showing one-half. Instead of making my shapes, make your own representations. Be as creative as you can!

- **Create** different representations of one-half of a 6 by 6 square. Create **between 4 and 10 different representations of one-half using the template.**
- **Label each square with a letter** so partners can refer to squares by the letter name.
- Then **trade squares with a partner** to analyze each other's work. The Problem Set is a tool for you to use to record your partners' work.

Debrief

Any combination of the questions below may be used to lead the discussion.

- Look at our class quilt. How is it possible to have so many different ways to show one-half of the same square?
- What is the area in square units of the shaded part of each of your squares? How do you know?
- What fraction of our class quilt is shaded in? How do you know?
- Did anyone shade in one-half of a unit square? How? Are there other ways to shade in one-half of a unit square?
- How did the Application Problem connect to today's lesson?

Exit Ticket (3 minutes)

Name _____ Date _____

Marty shades the square as shown below and says one-half of the big square is shaded. Do you agree? Why or why not?