Eureka Math

3rd Grade
Module 4
Lesson 16

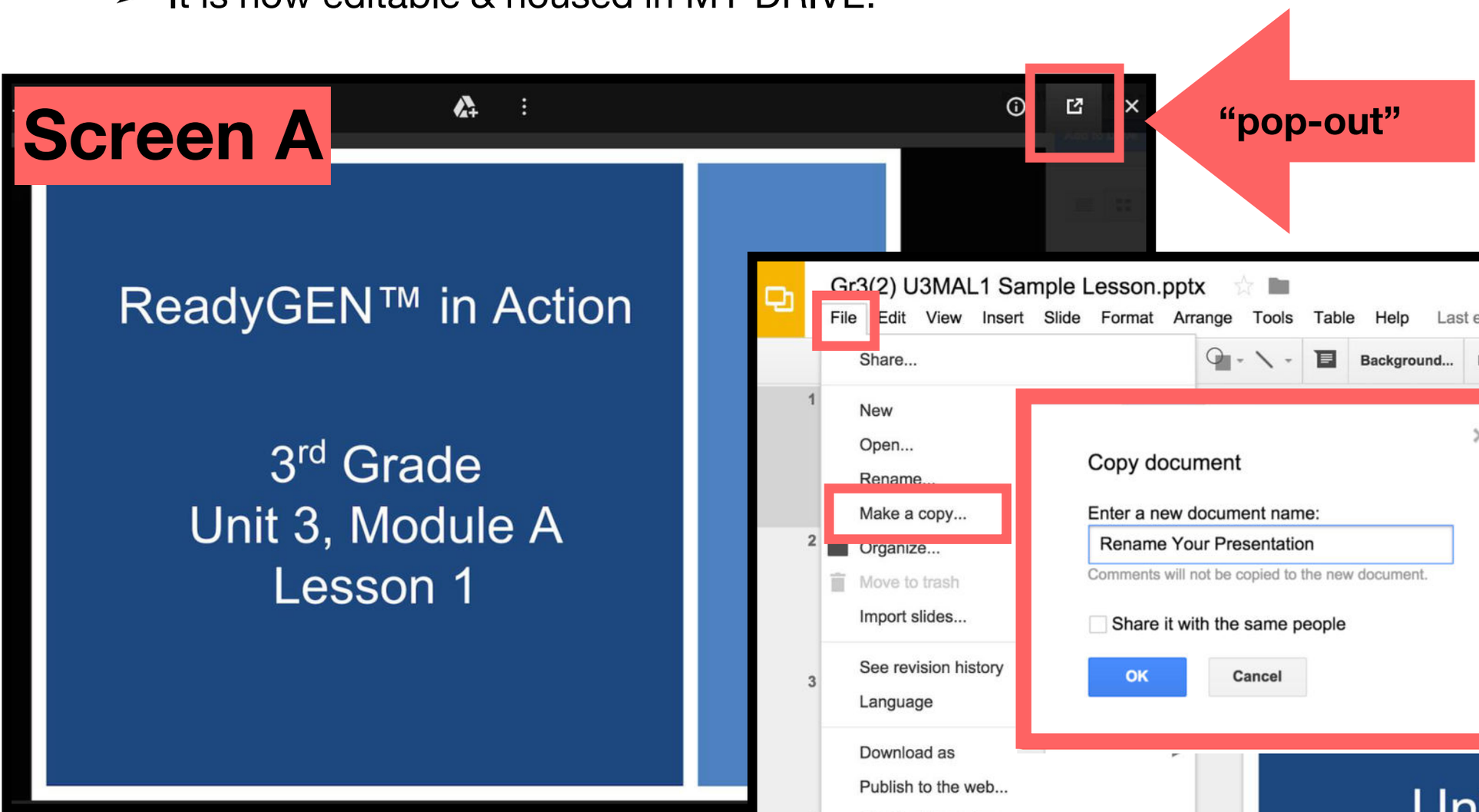
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

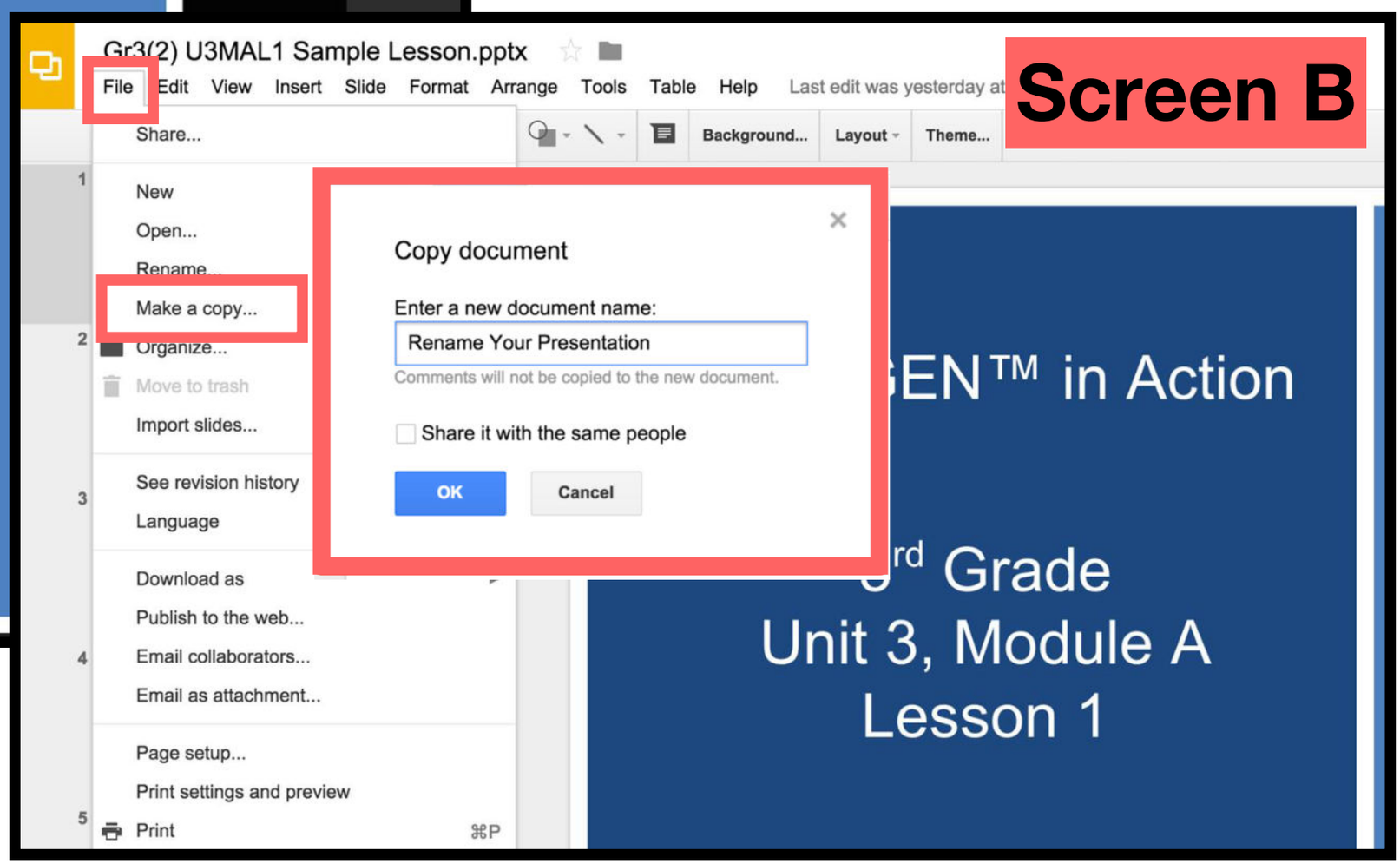
Directions for customizing presentations are available on the next slide.

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

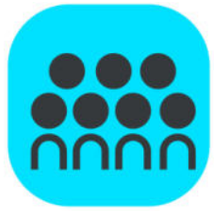
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

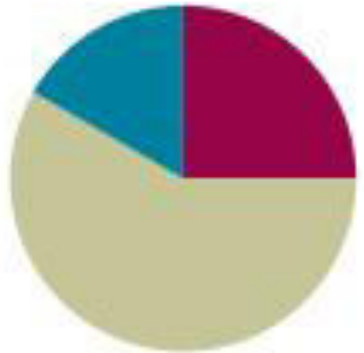
Small Group Time

Lesson 16

Objective: Apply knowledge of area to determine areas of rooms in a given floor plan.

Suggested Lesson Structure

Fluency Practice	(15 minutes)
Concept Development	(35 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



I can apply knowledge of area to determine areas of rooms in a given floor plan.

Fluency Practice

Group Counting

Count forward and backward as I indicate with pointing my finger, by...

- Sixes to 60
- Sevens to 70
- Eights to 80

Fluency Practice

Multiply by 9

6 × 9 = _____

Let's skip-count by nines to find the answer.

Let's skip-count down to find the answer, too. Start at 90.

Let's skip-count up again to find the answer, but this time start at 45.

Fluency Practice

Multiply by 9

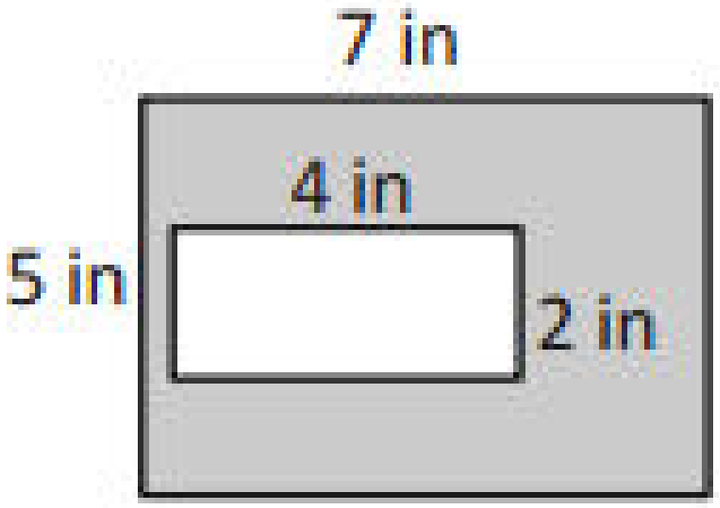
Let’s practice multiplying by 9. Be sure to work left to right across the page.

Multiply.

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

Fluency Practice

Find the Area



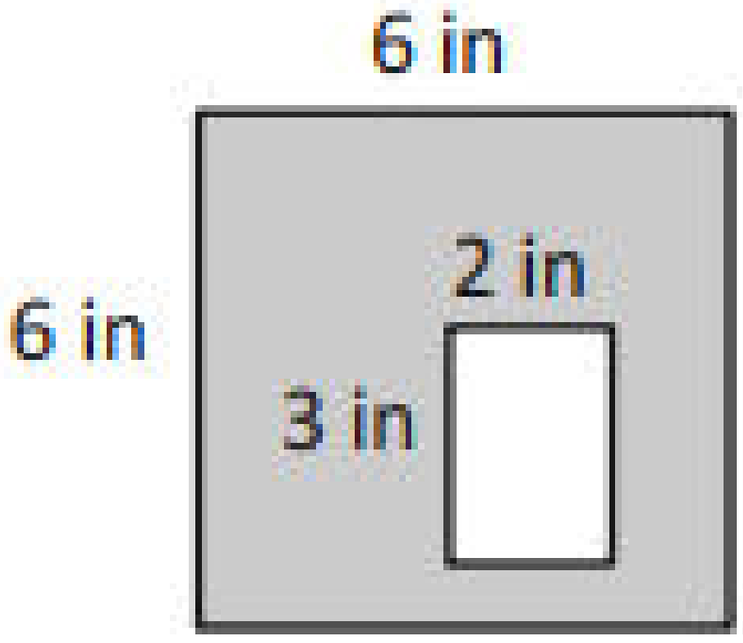
Find the areas of the large rectangle and the unshaded rectangle.

Then, subtract to find the area of the shaded figure.

___ sq units - ___ sq units = ___ sq units

Fluency Practice

Find the Area



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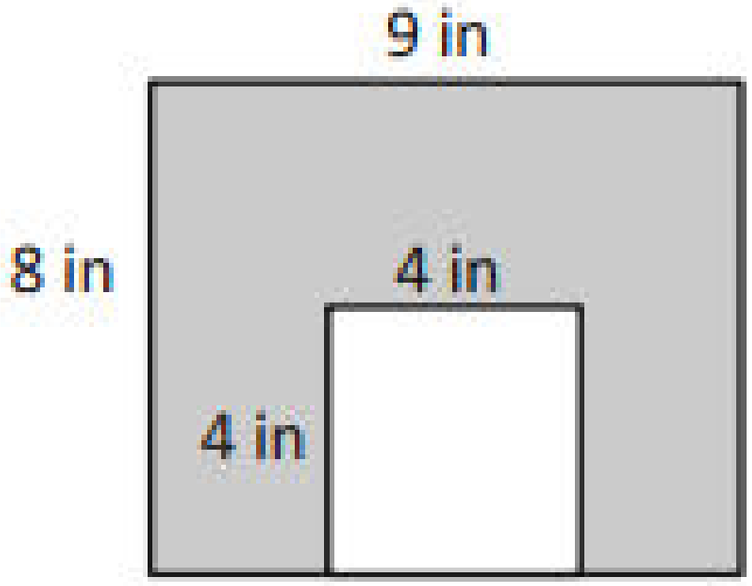
Fluency Practice

Find the Area



Find the areas of the large rectangle and the unshaded rectangle.

Then, subtract to find the area of the shaded figure.

___ sq units - ___ sq units = ___ sq units

Concept Development

Today you will continue to find the area of each room in the house in square centimeters.

Room	Area	Strategy
Bedroom 1	_____ sq cm	
Bedroom 2	_____ sq cm	
Kitchen	_____ sq cm	
Hallway	_____ sq cm	
Bathroom	_____ sq cm	
Dining Room	_____ sq cm	
Living Room	_____ sq cm	

Concept Development

Option 1: Create a floor plan with different side lengths for given areas.

Your task is to find new side lengths for each room, but keep the same area.

After you find new side lengths, mark each room on centimeter grid paper and then cut out the rooms.

Then fit the rooms together to make your floor plan.

Glue your final arrangement of rooms onto a piece of construction paper.

Concept Development

Option 2: Review strategies to find new side lengths of given areas.

Yesterday you found the areas of the rooms in a floor plan that your clients designed. They like the area of each room, but they want to change the way the rooms look. Your job today is to create rooms with the same areas, but with different side lengths. Are you up for the challenge, architects?

Concept Development

Look at the Problem Set. What is the area of the hallway?

24 square centimeters.

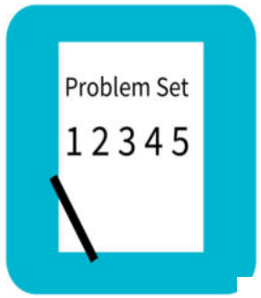
What are possible side lengths you can have for the hallway and still have the same area?

3 and 8 1 and 24 2 and 12 6 and 4.

Which of these choices was used in the floor plan?

8 and 3. The numbers are just switched.

So, when you redesign the floor plan today, be sure you don't use that combination!



Problem Set

Name _____ Date _____

Record the new side lengths you have chosen for each of the rooms and show that these side lengths equal the required area. For non-rectangular rooms, record the side lengths and areas of the small rectangles. Then, show how the areas of the small rectangles equal the required area.

Room	New Side Lengths
Bedroom 1: 60 sq cm	
Bedroom 2: 56 sq cm	

Debrief

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

Explain to a partner how you found the side lengths of the whole house without using your ruler to measure.

Can you multiply the side lengths of the house to find the area of the house? Why or why not? How did you find the area of the whole house?

Do we usually measure rooms in centimeters? What unit might each centimeter in this picture represent on a real house? (Yards, feet, or meters.)

Exit Ticket

Name _____ Date _____

Find the area of the shaded figure. Then, draw and label a rectangle with the same area.