Eureka Math

2nd Grade
Module 7
Lesson 17

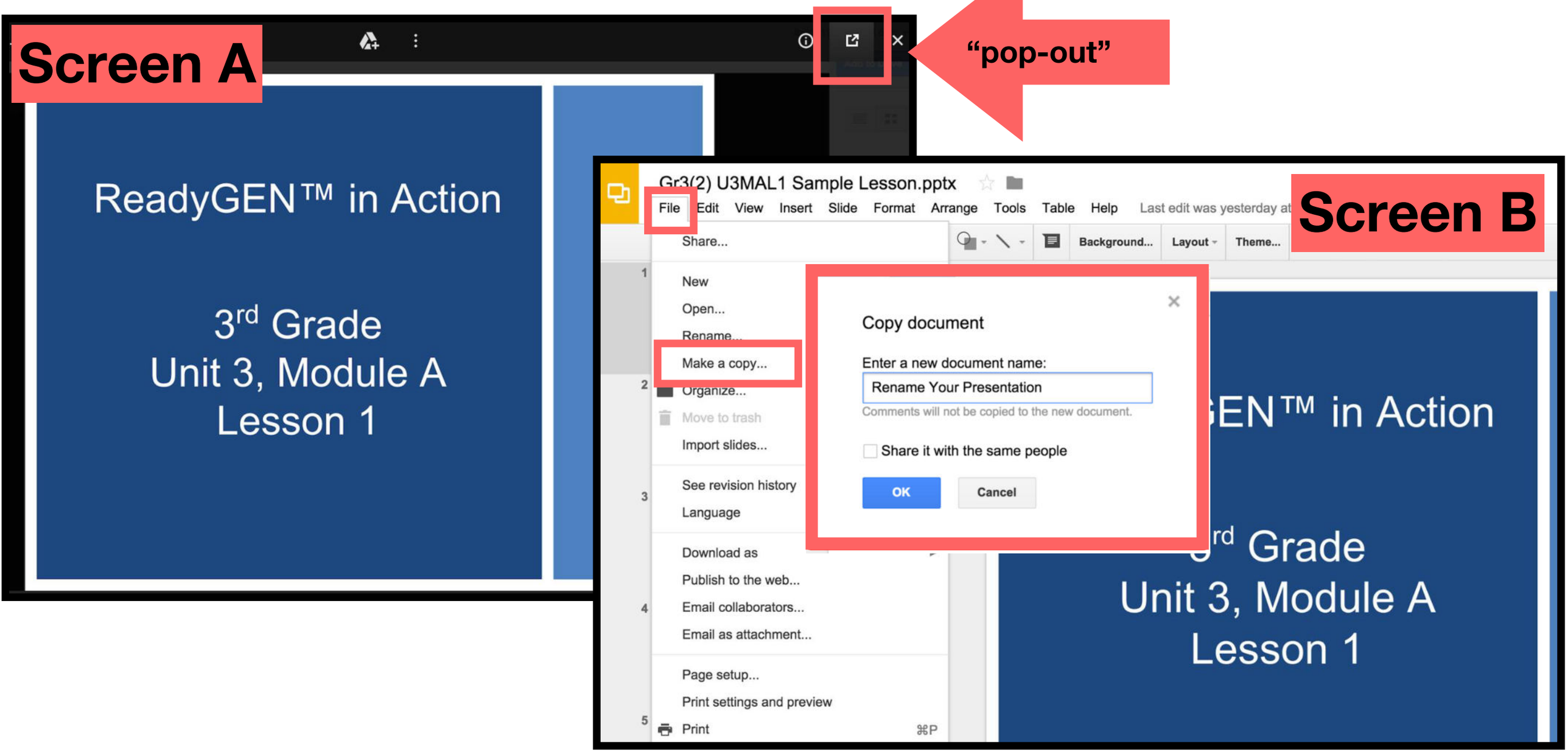
At the request of elementary teachers, a team of Bethel & Sumner educators met as a committee to create Eureka slideshow presentations. These presentations are not meant as a script, nor are they required to be used. Please customize as needed. Thank you to the many educators who contributed to this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

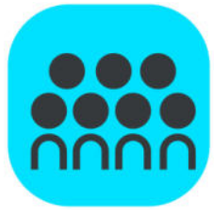
Personal White Board

Problem Set

Manipulatives Needed

Fluency

Think Pair Share



Whole Class

Individual

Partner

Small Group

Small Group Time

Materials Needed:

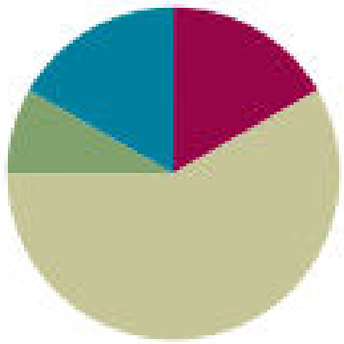
- Subtraction fact flash cards set 2
- Core fluency practice sets
- 2 charts
- Dry erase marker
- Lesson 16 recording sheets
- New unused pink eraser
- 12-inch ruler
- 1 yard stick

Lesson 17

Objective: Develop estimation strategies by applying prior knowledge of length and using mental benchmarks.

Suggested Lesson Structure

Fluency Practice	(10 minutes)
Application Problem	(5 minutes)
Concept Development	(35 minutes)
Student Debrief	(10 minutes)
Total Time	**(60 minutes)**



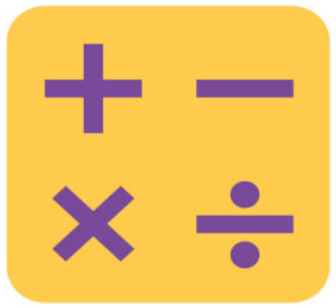
Fluency Practice (10 minutes)

- Subtraction Fact Flash Cards **2.OA.2** (5 minutes)
- Grade 2 Core Fluency Differentiated Practice Sets **2.OA.2** (5 minutes)

Subtraction Fact Flash Cards (5 minutes)

Materials: (T) Subtraction fact flash cards set 2 (Lesson 14 Fluency Template)

- I can develop estimation strategies by applying prior knowledge of length and using mental benchmarks.



Subtraction Fact Flash Cards

Core Fluency Differentiated Practice Sets

A STORY OF UNITS | Lesson 1 Core Fluency Practice Set A | 2•6

A STORY OF UNITS | Lesson 1 Core Fluency Practice Set B | 2•6

A STORY OF UNITS | Lesson 1 Core Fluency Practice Set C | 2•6

A STORY OF UNITS | Lesson 1 Core Fluency Practice Set D | 2•6

Name _____ Date _____

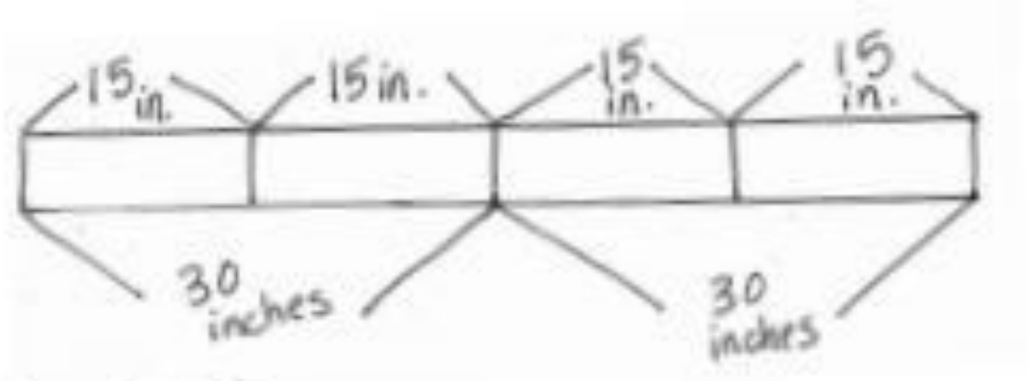
1.	19 – 9 =	21.	16 – 7 =

Application Problem

Benjamin measures his forearm and records the length as 15 inches. Then, he measures his upper arm and realizes it's the same!

a. How long is one of Benjamin's arms?

b. What is the total length of both of Benjamin's arms together?

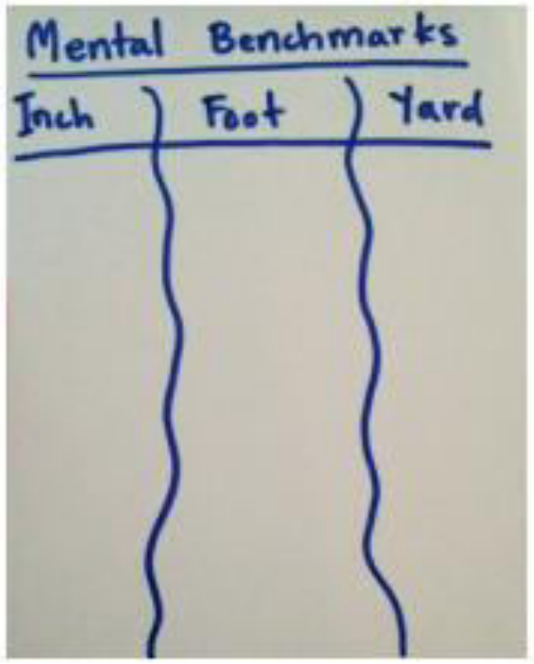


a. 15 + 15 = 30
One of Benjamin's arms is 30 inches.

b. 30 + 30 = 60
The total length of both Benjamin's arms is 60 inches.

Concept Development

Look back at your Recording Sheets from yesterday's centers. Let's make a list of things we measured that were about the size of a foot



What on our list could remind us about the length of a foot?

How about a mental benchmark for a yard?

Which item on our list should be our class benchmark for a yard?

How about a mental benchmark for an inch?

Concept Development

Talk to your partner about how it is helpful to understand mental benchmarks when people say things such as “Your new teacher is about 6 feet tall,” “Draw a line about 6 inches long,” or “The room is about 10 yards long.”

Concept Development

The width of a quarter is a benchmark for…?

The length of a paper is a benchmark for…?

The width of a door is a benchmark for…?

Let’s use mental benchmarks to estimate measurements.

Step 1: Use a mental benchmark to think how long something is. Look at this dry erase marker. Turn and talk: How long do you think it is?

Step 2: Let’s measure and see how close our estimates are! Which unit should we use?

Concept Development

(Have a student measure and record the length on the chart.)

Were our estimates close to the actual length?

What strategies can we use so that our estimates are close to the actual length?

Step 1 is…?

Step 2 is…?

Repeat the above process with two or three more objects around the room before moving on to the Problem Set.

Problem Set

Name _____ Date _____

Estimate the length of each item by using a mental benchmark. Then, measure the item using feet, inches, or yards.

Item	Mental Benchmark	Estimation	Actual Length
a. Width of the door			
b. Width of the white board or chalkboard			
c. Height of a desk			

Debrief

Look at your Problem Set. With a partner, figure out the difference between your estimate of the height of a desk and the actual measure of the height of a desk. Did you include the unit?

Look at your Problem Set. Were there some estimates and actual length measures that were exactly the same? Why do you think that you were able to guess the right measurement for some items?

Debrief

How do mental benchmarks, objects that are about the same length as standard forms of measure like the 12-inch ruler, help when we are comparing length?

Talk to your partner about why getting good at estimating length could be helpful.

Sometimes when we measure things, they are not exactly a foot or a yard long. How do we record things that are a foot and a little bit more or a yard and a foot more?

Exit Ticket

Name _____ Date _____

Estimate the length of each item by using a mental benchmark. Then, measure the item using feet, inches, or yards.

Item	Mental Benchmark	Estimation	Actual Length
a. Length of an eraser			
b. Width of this paper			