EUREKA MATH² CALIFORNIA

Ready-Set-Go

Eureka Math² California

Pilot Support Guide

GREAT MINDS

Ready-Set-Go Pilot Support Guide

About the Guide

The Ready-Set-Go Guide provides contextual information to support your pilot of *Eureka Math²® California*. Follow along as we explore the contents of the *Teach*, *Learn*, and *Apply* books. The guide also highlights key components of the digital experience that are seamlessly integrated into *Eureka Math² California*.

Prepare for Instruction

Teacher Tip: Successful implementation requires you to stay keenly aware of your students as you honor the strategic guidance offered in the lessons as they are crafted. Difficulty with pacing at the lesson level tends to come about when teachers feel pressured to ask every question and engage with every problem presented in every lesson. Using the curriculum with fidelity means honoring the integrity of its structure and the intent of the guidance within lessons.

What does the program include?

Teacher Tip: Remember our program includes both print and digital resources in addition to manipulative kits for students.

- Every grade includes 6 Teach books and 6 Learn books (in TK the 6 books are bound together into a single workbook)
- Grades 1–5 include the Apply book
- TK also includes core texts.

Teach
Teacher Edition

Learn
Student consumable workbook used in-class

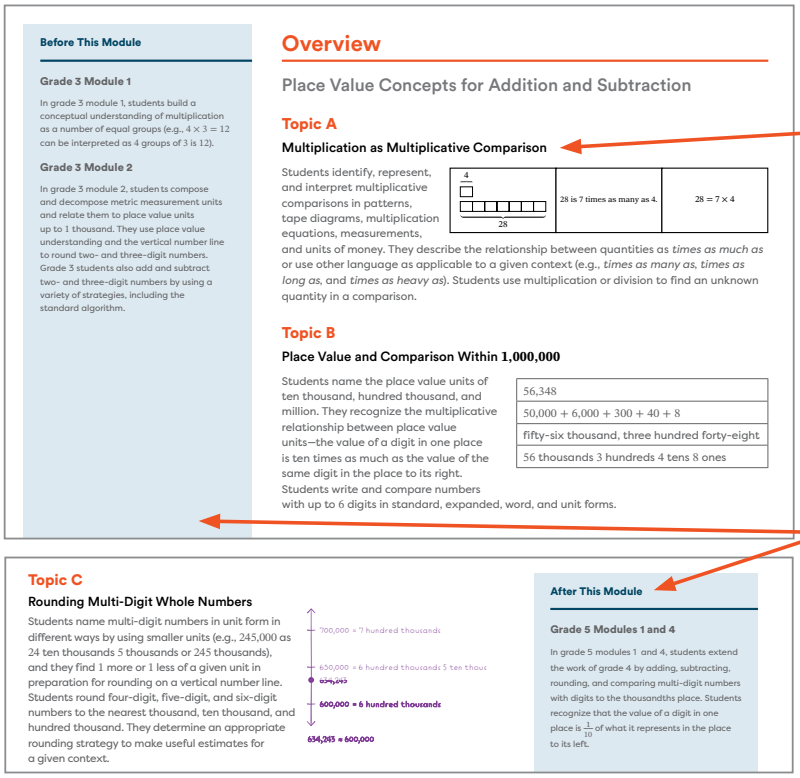
Apply
Student consumable workbook used for additional practice

Each of your six *Teach* books includes one module. Within a module, small groups of related lessons are organized into topics.

Module-Level Components

Overview

Your *Teach* book contains the Overview, a topic-by-topic summary that shows the development of learning throughout the module. It also provides connections to work done before and after the module, helping you understand the module's place in the overall development of learning in and across the grade levels.



Before This Module

Grade 3 Module 1

In grade 3 module 1, students build a conceptual understanding of multiplication as a number of equal groups (e.g., $4 \times 3 = 12$ can be interpreted as 4 groups of 3 is 12).

Grade 3 Module 2

In grade 3 module 2, students compose and decompose metric measurement units and relate them to place value units up to 1 thousand. They use place value understanding and the vertical number line to round two- and three-digit numbers. Grade 3 students also add and subtract two- and three-digit numbers by using a variety of strategies, including the standard algorithm.

Overview

Place Value Concepts for Addition and Subtraction

Topic A

Multiplication as Multiplicative Comparison

Students identify, represent, and interpret multiplicative comparisons in patterns, tape diagrams, multiplication equations, measurements, and units of money. They describe the relationship between quantities as *times as much as* or use other language as applicable to a given context (e.g., *times as many as, times as long as,* and *times as heavy as*). Students use multiplication or division to find an unknown quantity in a comparison.

4 / 28	28 is 7 times as many as 4.	$28 = 7 \times 4$

Topic B

Place Value and Comparison Within 1,000,000

Students name the place value units of ten thousand, hundred thousand, and million. They recognize the multiplicative relationship between place value units—the value of a digit in one place is ten times as much as the value of the same digit in the place to its right. Students write and compare numbers with up to 6 digits in standard, expanded, word, and unit forms.

56,348
$50,000 + 6,000 + 300 + 40 + 8$
fifty-six thousand, three hundred forty-eight
56 thousands 3 hundreds 4 tens 8 ones

Topic C

Rounding Multi-Digit Whole Numbers

Students name multi-digit numbers in unit form in different ways by using smaller units (e.g., 245,000 as 24 ten thousands 5 thousands or 245 thousands), and they find 1 more or 1 less of a given unit in preparation for rounding on a vertical number line. Students round four-digit, five-digit, and six-digit numbers to the nearest thousand, ten thousand, and hundred thousand. They determine an appropriate rounding strategy to make useful estimates for a given context.

700,000 + 7 hundred thousands

650,000 + 6 hundred thousands 5 ten thous

~~634,243~~

600,000 = 6 hundred thousands

634,243 ≈ 600,000

After This Module

Grade 5 Modules 1 and 4

In grade 5 modules 1 and 4, students extend the work of grade 4 by adding, subtracting, rounding, and comparing multi-digit numbers with digits to the thousandths place. Students recognize that the value of a digit in one place is $\frac{1}{10}$ of what it represents in the place to its left.

The **Overview** describes, topic by topic, the story of learning in the module.

Before This Module and **After This Module** look back and forward to reveal coherence across modules and grade levels.

Lesson objectives reveal the story of each topic at a glance.

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Contents

Multiplication and Division with Units of 2, 3, 4, 5, and 10

(A) Art (D) Digital Interactive (M) Math Past (V) Context Video

12

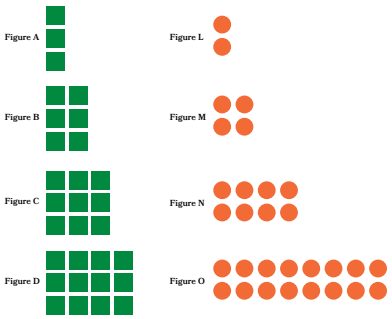
The Why section gives insight into the decisions made during the writing of the module. This insight helps you understand the underlying structure of the module, flow of the content, and coherence of the different parts of the curriculum.

Why

Place Value Concepts for Addition and Subtraction

Why does the place value module begin with a topic on multiplicative comparisons?

Beginning with multiplicative comparison enables students to build on their prior knowledge of multiplication from grade 3 and provides a foundation upon which students can explore the relationships between numbers and place value units. This placement also activates grade 3 knowledge of multiplication and division facts within 100 and provides students with opportunities to continue building fluency with the facts in preparation for multiplication and division in modules 2 and 3.



Students are familiar with additive comparison—relating numbers in terms of *how many more* or *how many less*. Multiplicative comparison—relating numbers as *times as many*—is a new way to compare numbers. Students use multiplicative comparison throughout the year to relate measurement units, whole numbers, and fractions. This important relationship between factors, where one factor tells how much larger the product is compared to the other factor, is foundational to ratios and proportional relationships in later grades. Taking time to develop this understanding across the grade 4 modules sets students up for success with interpreting multiplication as scaling in grade 5 and applying or finding a scale factor in scale drawings, dilations, and similar figures.

Achievement Descriptors

The Achievement Descriptors (ADs) section is a helpful guide that identifies specific ADs for the module. The Achievement Descriptors resource provides more guidance and is found at the end of each *Teach* book.

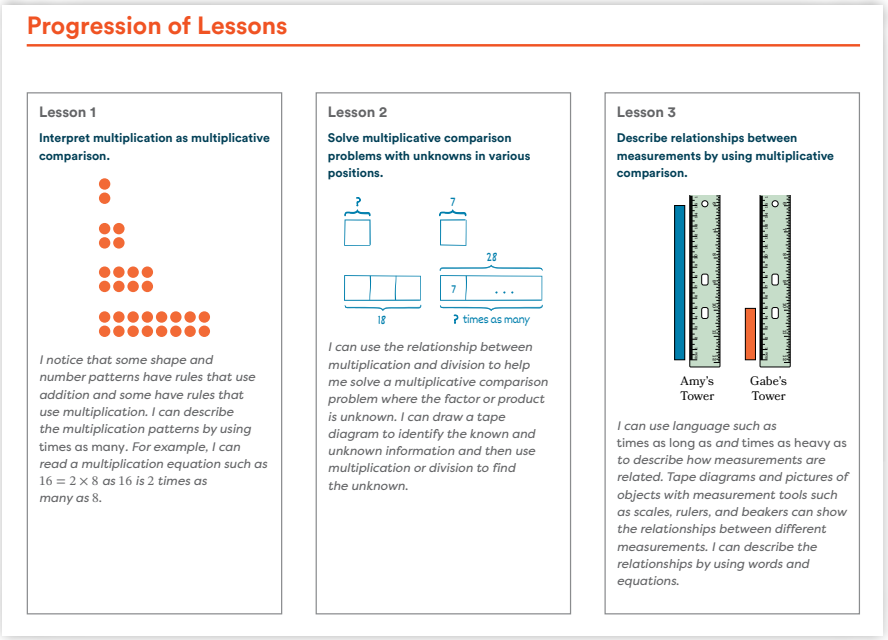
Topic-Level Components

Topic Overview

Each topic begins with a Topic Overview that is a summary of the development of learning in that topic. It typically includes information about how learning connects to previous or upcoming content.

Progression of Lessons

The Progression of Lessons is a list of lessons in the topic that shows sample content from each lesson along with a student-friendly statement of the major learning.



Progression of Lessons

Lesson 1

Interpret multiplication as multiplicative comparison.

I notice that some shape and number patterns have rules that use addition and some have rules that use multiplication. I can describe the multiplication patterns by using times as many. *For example, I can read a multiplication equation such as* $16 = 2 \times 8$ *as* 16 *is* 2 *times as many as* 8.

Lesson 2

Solve multiplicative comparison problems with unknowns in various positions.

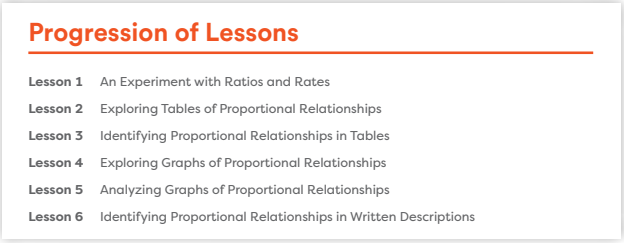
I can use the relationship between multiplication and division to help me solve a multiplicative comparison problem where the factor or product is unknown. I can draw a tape diagram to identify the known and unknown information and then use multiplication or division to find the unknown.

Lesson 3

Describe relationships between measurements by using multiplicative comparison.

I can use language such as times as long as *and* times as heavy as *to describe how measurements are related. Tape diagrams and pictures of objects with measurement tools such as scales, rulers, and beakers can show the relationships between different measurements. I can describe the relationships by using words and equations.*

Grades K–5



Progression of Lessons

Lesson 1	An Experiment with Ratios and Rates
Lesson 2	Exploring Tables of Proportional Relationships
Lesson 3	Identifying Proportional Relationships in Tables
Lesson 4	Exploring Graphs of Proportional Relationships
Lesson 5	Analyzing Graphs of Proportional Relationships
Lesson 6	Identifying Proportional Relationships in Written Descriptions

Grades 6–8

Each lesson is structured in four sections: Fluency, Launch, Learn, and Land. Lessons are designed for one instructional period, with total length determined by the grade level as listed here.

- Kindergarten: 50 minutes
- Grades 1–5: 60 minutes
- Grades 6–12: 45 minutes

Fluency

Fluency provides distributed practice with previously learned material. It is designed to prepare students for new learning by activating prior knowledge and bridging small learning gaps.

Launch

Launch creates an accessible entry point to the day's learning through activities that build context and often create productive struggle that leads to a need for the learning that follows. Every Launch ends with a transition statement that sets the goal for the day's learning.

Learn

Learn presents new learning related to the lesson objective, usually through a series of instructional segments. This lesson component takes most of the instructional time. Suggested facilitation styles vary and may include direct instruction, guided instruction, group work, partner activities, interactive video, and digital elements. The Problem Set, an opportunity for independent practice, is included in Learn.

Land

Land helps you facilitate a brief discussion to close the lesson and provides students with an opportunity to complete the Exit Ticket. In the Debrief portion of Land, suggested questions, including key questions related to the objective, help students synthesize the day's learning. The Exit Ticket provides a window into what students understand so that you can make instructional decisions.

- Light blue text shows sample student responses.

Model putting together the 4 five-sticks to form a 4 by 5 array and ask students if it still shows 4 fives. Ask them what changed.

4 x 5 = 20
The product is 20.

Does $4 \times 5 = 20$ still represent the array? Why?

Yes, because the array did not change. We just put the five-sticks together to remove the spaces between the rows.

Invite students to turn and talk about how equal groups are represented in an array.

- Text that resembles handwriting indicates what you might write on the board. Different colors signal that you will add to the recording at different times during the discussion.

Ask students to write a repeated addition equation on their whiteboards to represent the groups.

What repeated addition equation represents the equal groups?

Write the repeated addition equation $3 + 3 + 3 + 3 = 12$.

How many threes did we add to make 12?

Write the unit form, 4 threes $= 12$, below the addition equation.

3 + 3 + 3 + 3 = 12
4 threes = 12
4 x 3 = 12
Multiply: 4 times 3 equals 12

- Bulleted lists provide suggested advancing and assessing questions to guide learning as needed.

Write $94 \approx 100$ and $318 \approx 300$, and write 100 and 300 in the table.

So if there are about 200 birds in the first picture, about 100 birds in the second picture, and about 300 birds in the third picture, about how many birds are in all three pictures?

About 600 birds

Rounding and then adding is another way to estimate.

Facilitate a brief discussion to draw out the distinction between these two types of estimating. Consider asking questions such as the following:

- When we estimated the number of birds in the picture, what information did we start with?
- When we estimated the total number of birds in all three pictures, what information did we start with?
- What strategy did we use to estimate when we were given the number of birds in each picture?
- How did we use benchmark numbers for the different ways we estimated?

Consider summarizing the two ways to estimate with the following statement.

We estimated in two different ways. First, we estimated visually, because we weren't given any numbers to start with. In the next problem, we estimated by using rounding because we knew exactly how many birds were in each picture.

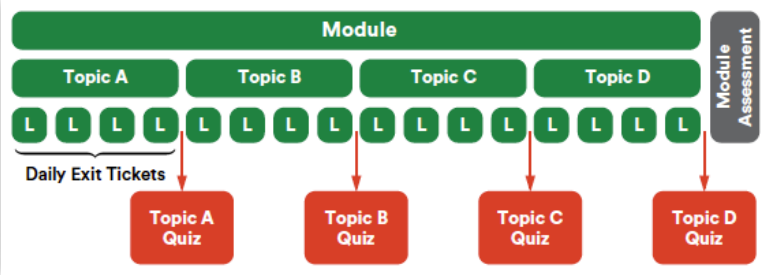
Assessment Components

Grades K–1

- Checklists of look-for items to guide your observations during lessons
- Lesson-embedded Exit Tickets
- Topic quizzes known as Topic Tickets
- Module Assessments
- Pre-Module Assessments in *Eureka Math² Equip*
- Benchmark Assessments

Grades 3–8

- Lesson-embedded Exit Tickets
- Topic quizzes
- Module Assessments
- Pre-Module Assessments in *Eureka Math² Equip*
- Benchmark Assessments



Teacher Tip: The image on the left shows the various assessments that are included in the *Eureka Math² California* core curriculum. As the image suggests, Exit Tickets are designed for use at the end of each lesson. A Topic Quiz is available at the end of each topic.

Study a Module

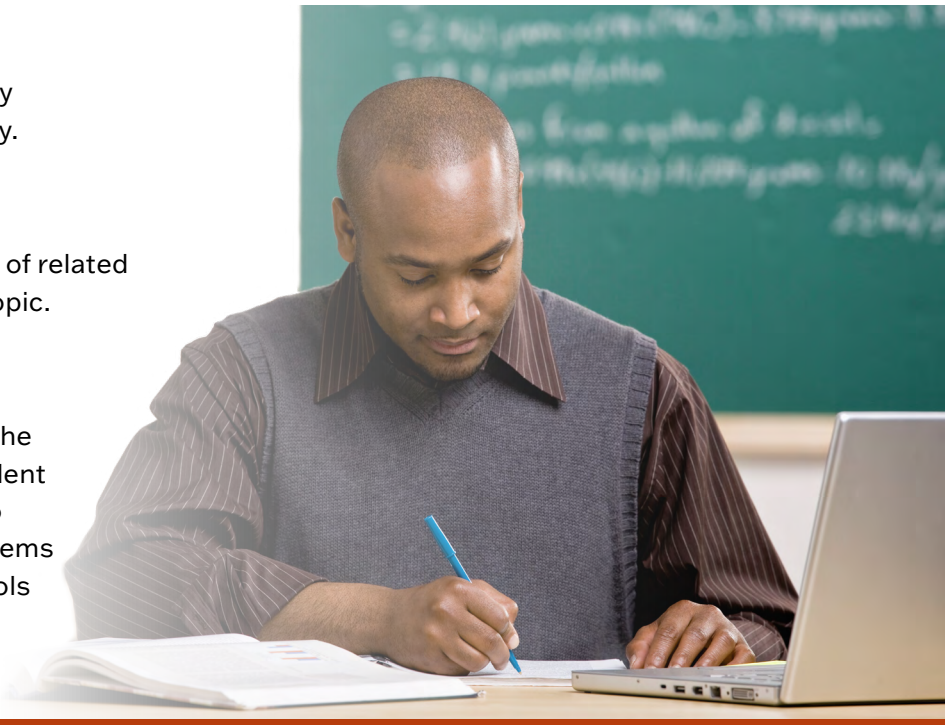
Teacher Tip: Begin your planning process by familiarizing yourself with the module's story.

Study a Topic

Teacher Tip: Within a module, small groups of related lessons are organized into topics. Plan by topic.

Study a Lesson

Teacher Tip: Read the lesson, considering the flow of the lesson components and the student experience. Do the math to gain insight into the complexities within a sequence of problems and consider the thought processes and tools that students will have available.



To learn more, visit **greatminds.org/math/eurekamathsquared/california**