



Access the Great Minds Digital Platform
to review *Eureka Math*² assessments, digital
interactives, context videos, and more.

GREAT
MINDS



**EUREKA
MATH²**

Getting Started Guide
Level K Module 1

Getting Started

This Getting Started Guide provides contextual information as you review *Eureka Math*². Follow along as we explore the contents of the *Teach*, *Learn*, and *Apply* books. The guide also highlights some **key components of the digital experience** that are seamlessly integrated into *Eureka Math*².

Exponentially More

Eureka Math[®] revolutionized math teaching in the United States. The curriculum has helped students understand the *why* behind the math, not just the *how*. It has become the most widely used K-5 math curriculum in the country—so why would we change it? Because we listened to feedback from our dedicated team of *Eureka Math* teachers throughout the country and studied the findings of current educational research. Armed with this knowledge, we decided to expand the accessibility and efficacy of our materials so that even more students can achieve greatness in math.

*Eureka Math*² is exponentially more efficient. Exponentially more engaging. Exponentially more accessible. And this adds up to exponentially more knowledge and joy for students and teachers alike.



$$\text{Teachability}^2 + \text{Engagement}^2 + \text{Accessibility}^2 = \text{Joy}^2$$

Thinking and Talking *About Math*

The teacher-writers who crafted *Eureka Math*² realize the value of student discourse. Starting in kindergarten, *Eureka Math*² students engage with the teacher and with one another to make their thinking visible. Students work in pairs and in groups as they engage in a variety of instructional routines and participate in whole class discussions to explore mathematical ideas. The Talking Tool, detailed on the inside cover of every *Learn* book, provides sentence frames and sentence starters to help guide student discourse.

Thinking and talking about math helps students develop a deeper understanding of the topics they learn. These activities are key factors in creating an equitable classroom culture—and in helping students find the joy in mathematics.

How Students *Build Knowledge*

*Eureka Math*² is organized into three coherent stories that build from year to year: *A Story of Units*[®] for Grade Levels K–5, *A Story of Ratios*[®] for Grade Levels 6–8, and *A Story of Functions*[®] for Grade Levels 9–12.

Each grade level is organized into six modules. Within each module, related lessons are organized into topics.

A close look at the module map reveals that the major work of the grade level is delivered earlier in the school year. This allows students to have ample opportunities to establish strong foundational knowledge. *Eureka Math*² reinforces this knowledge later in the year by connecting supporting content to major grade-level work and providing students with real-world context.

Talking Tool	
I Can Share My Thinking 	My drawing shows I did it this way because I think _____ because
I Can Agree or Disagree 	I agree because I disagree because I did it a different way. I
I Can Ask Questions 	How did you . . . ? Why did you . . . ? Can you explain . . . ?
I Can Say It Again 	I heard you say _____ said Can you say it another way?
	

Implement with Fidelity and *Confidence*

The same team of teacher-writers who crafted *Eureka Math*² also developed an Implementation Guide to help educators bring the curriculum into their classrooms. The guide provides a detailed map of the resources built into the curriculum and offers advice on how to prepare to teach each module. [Access the full Grade Level K Implementation Guide.](#)

Below we'll highlight some of the information covered in the Implementation Guide to help you explore *Eureka Math*² Level K Module 1.

An Intentional and Meaningful Integration of *Digital Learning*

The *Eureka Math*² writers strategically integrated digital components with K–5 lessons so that technology enhances instruction without the need for individual student devices. *Eureka Math*² Equip™, a companion product to *Eureka Math*², is a digital diagnostic tool that offers a Pre-Module Assessment for every student. It identifies learning gaps and provides teachers with content tailored to address those gaps so that all students can access grade-level content. The curriculum's digital platform includes teacher facilitation slides that display lesson visuals such as mathematical representations, images, videos, or digital interactives. Students also participate in a teacher-led class demo with interactive tools on the Great Minds® Digital Platform to visualize various mathematical models.

When students have their own devices, they can access the *Learn* book content and complete assignments digitally.

Every module includes at least one context video that shows an application of the module's math in real-life scenarios. Each video in our *Eureka Math*² digital experience has been crafted with special care to ensure representation of students from different backgrounds and abilities. These videos do not include spoken words because we want to make them accessible to multilingual learners and striving readers and keep the focus on the math story instead of the dialogue. You can access the video for this lesson on the webpage where you accessed this guide.

[Access the Great Minds Digital Platform](#) to review *Eureka Math*² assessments, digital interactives, context videos, and more.

Bringing Fine Art *into Math*

Among all math curricula, *Eureka Math*² is unique in its integration of fine art. The cover of each module features an impressive work of fine art that is visually or conceptually connected to the math. Level K Module 1 features the painting *Composition with Large Red Plane, Yellow, Black, Gray and Blue* by Piet Mondrian, and a note on the inside cover helps students understand how the artwork is connected to the math they will learn.



A Map to the *Learning*

Every *Teach* book begins with an Overview. In Level K Module 1, the Overview begins on page 2. The Overview notes any previous knowledge students use and build upon in the module, summarizes the student learning taking place on each topic in the module, and shows where in the curriculum students will next access the module's learning to build new layers of understanding and more complex knowledge.

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

What Does Understanding *Look Like*?

Beginning on page 10, the *Teach* book highlights the Achievement Descriptors addressed in the module. Achievement Descriptors are clear, concise, standards-aligned descriptions that detail what students should know and be able to do based on the instruction. The first page of each lesson identifies the Achievement Descriptors aligned with that lesson. Proficiency Indicators for each Achievement Descriptor support teachers with interpreting student work in the module. The Proficiency Indicators begin on page 400 in the Level K Module 1 *Teach* book.

History of the *Math*

Math Past is another way that *Eureka Math*² helps students build knowledge—by telling the history of some of the big ideas that shape the mathematics in the module. Math Past frames mathematics as a human endeavor by telling the story of the discipline through artifacts, discoveries, and other contributions from cultures around the world. Math Past provides material that can inform your teaching and offers lesson-specific ideas about how to engage students in the history of mathematics. The Math Past summary for Level K Module 1 appears on page 408.

Math Past

Zero


**If zero means "nothing," then why do we need it?
Did someone invent the number zero?
Was zero always drawn as 0?**

Invite your students to imagine a world without the number zero. Here are some scenarios that might amuse them. Try to think of more!

Without zero ...

- ... you could count down: 3, 2, 1. But you couldn't launch a rocket! Rockets need a countdown that goes all the way to zero: 3—2—1—blastoff! The blastoff happens when the countdown time reaches zero.
- In a world without zero, the rocket just sits there!
- ... you could walk because one foot is always on the ground. But you couldn't hop, skip, or jump. If you did, you would have zero feet touching the ground.
- In a world without zero, you couldn't hop, skip, or jump!
- ... you could have a cookie in your hand, but you couldn't eat it! If you ate the cookie, you would have zero cookies in your hand.
- In a world without zero, you couldn't eat the cookie!

It's a good thing that our world does have the number zero. We need zero!



People have been counting 1, 2, 3, and so on for a very long time. Quantities such as 1 rock, 2 twigs, and 3 flowers represent things that people can see and touch. But you can't see or touch zero rocks.

Eventually people realized that a symbol to represent zero was needed in our number system. As one historian of number symbols wrote,

*The zero is something that must be there in order to say that nothing is there.*¹

¹ Karl Menninger, *Number Words and Number Symbols*, 400.

408 Copyright © Great Minds[®] PBC

Dive into a *Topic*

It's time to dive into a topic to better understand the *Eureka Math*² learning design. On page 70 in Level K Module 1, we begin Topic B: Answer *How Many* Questions with Up to 5 Objects. Every topic begins with an overview that summarizes the knowledge students will build as they engage with the upcoming content. In the Topic B overview, the teacher can see that students will build on previous work with number core concepts by practicing using the number word list, one-to-one correspondence, cardinality, and written numerals together in a variety of authentic contexts. This learning strengthens the idea that there is more than one way to find the cardinality of, or number of objects in, a set. It also confirms that the number of objects in a set is the same regardless of their arrangement. The teacher can also see how this learning will continue in the topic.

Each topic also includes a Progression of Lessons list on page 72. This list shows sample content from each lesson along with a student-friendly statement about the major learning.

The image shows a page titled "Progression of Lessons" from Eureka Math. It features three columns, each representing a lesson. Lesson 6 is titled "Organize, count, and represent a collection of objects" and includes a photo of a child with blocks and the text "There are 8 blocks. We touched them to count." Lesson 7 is titled "Practice counting accurately" and shows a grid of cards with numbers and dots, with the text "I counted to match the cards." Lesson 8 is titled "Count sets in linear, array, and scattered configurations" and includes a photo of flowers with the text "We used mark and count for the white flowers so we wouldn't miss any." The page number 72 is at the bottom left, and "EUREKA MATH²" and "Copyright © Great Minds. P⁸CC" are at the bottom right.

Lesson Structure *and Support*

Every Grade Level K-5 *Eureka Math*² lesson is organized into four sections, providing the teacher with a clear lesson plan for the day's learning.

- **Fluency** opens each lesson and provides distributed practice with previously learned material. This practice prepares students for new learning by activating prior knowledge and bridging small learning gaps.
- **Launch** creates an accessible entry point to the day's learning with activities that build context and create productive struggle, which helps build new knowledge.
- **Learn** presents new math concepts related to the lesson objective, usually through a series of instructional segments.
- **Land** provides time for teachers to facilitate a brief closing discussion and for students to complete the Exit Ticket.

Throughout the lesson, margin notes provide information about facilitation, differentiation, and coherence. The curriculum has six types of margin notes: Teacher Notes, Universal Design for Learning, Language Support, Differentiation, Promoting the Standards for Mathematical Practice, and Math Past.

Dive into a *Lesson*

The lesson overview on page 104 helps teachers prepare to teach Lesson 9.

- The **Lesson at a Glance** is a snapshot of the lesson framed through what students should know, understand, and do while engaging with the lesson.
- The **Key Question** helps focus instruction and classroom discourse.
- The **Achievement Descriptors** appear again, this time mapping what students should know and be able to do based on the instruction of the specific lesson to the standards covered.

Finally, page 105 lays out the learning agenda as well as the materials list and lesson preparation notes. These are all shared up front to help teachers feel organized and ready for the lesson from the start.

During the Lesson 9 Fluency exercise on page 106, the teacher provides student pairs with Match cards. Student partners work through the fluency activity, matching numeral cards to set cards. Through this activity, students build fluency with one-to-one correspondence and an understanding of cardinality so that the last number said represents the number of objects in the group. This activity is introduced in Lesson 7 and recurs in the Fluency segment in Lesson 24.

In Launch, students practice conservation as they analyze images of a set of students arranged in various configurations. They count the number of students in each configuration to determine that the total stayed the same.

In Learn, the teacher displays the 1–5 Hide Zero demonstration cards with a set of 3 Unifix cubes from your classroom. The students identify how many cubes there are, and then the teacher rearranges the set of cubes into a new configuration. Students consider if they need to recount to find the total.

After working through several sets of 4 and 5 cubes, students practice the routine of turning to their *Learn* books to work on a Problem Set. Before students begin this work, be sure to note the guidance provided in the teacher margin note on page 109.

Another margin note on page 109, Observational Assessment, provides information to guide formative assessment as students work.

Teacher Note

Do not exceed 5 cubes. With small quantities, some students will subitize, while others may touch and count.

If a student subitizes, do not insist that they touch and count. They may think they made a mistake and will not learn to trust their ability to “just see” the number. Subitizing is important when it is time to learn to count on.

Teacher Note

This Problem Set is designed for systematic modeling (see lesson 8 for more detail). Continue to use systematic modeling for Problem Sets throughout module 1 until students become comfortable working with pencil and paper.

The Student Experience:

Learn

On page 29 of the *Learn* book, students begin the Problem Set for Lesson 9. Notice the gears icon in the top corner of the page. This icon is used to indicate a Problem Set section. Other icons that may appear in lessons include a magnifying glass which indicates a lesson page that students use during the guided or directed portion of the lesson.

Let's look at readability. You will notice that the student materials are intentionally designed to be readable by young students while maintaining the rigor that you've come to expect from Great Minds curricula. We have reduced wordiness—eliminating unnecessary wording entirely—and we have been intentional in our language choices and sentence length. The Grade Level K–2 *Learn* books use visuals paired with words that may still be beyond a student's decoding ability, and teacher-read directions appear in a smaller font.

EUREKA MATH[™] K • M1 • TB • Lesson 9

Name _____

Place the cubes and count. Circle the number.
Move the cubes to make a different design. Then circle the number.

3 4 5


3 4 5

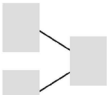
Copyright © Great Minds[®] PBC


EUREKA MATH[™] K • M5 • TA • Lesson 2


Name _____


Tell a story. Write the number bond and number sentence.















Copyright © Great Minds[®] PBC 17

EUREKA MATH[™] K • M1 • TB • Lesson 9

Land 

Debrief 5 min

Materials—T: Unifix Cubes, Hide Zero cards

Objective: Conserve number regardless of the arrangement of objects.

Show 4 cubes in an array configuration as shown.

How many cubes are there?
4

Label the array with the 4 card. Move the cubes as shown.

How many cubes are there now?
4

Do I have to count again because I moved the cubes?
No, because you just moved the same cubes.

Do I have to change the number card?
No, there are still 4 cubes.

That's right. If I don't put any cubes on or take any off, the number of cubes will stay the same no matter how many times I move them.

Move the cubes a few more times and ask how many after each move. Consider trying linear, circular, scattered, and even silly configurations.

Can I move the cubes any way I want?
Yes! There are still 4 cubes.

Teacher Note

Not all students will demonstrate conservation of number at the end of this lesson. Conservation develops with experience over time. Students will have additional opportunities to practice conservation throughout the module.

Copyright © Great Minds[®] PBC 111

After students work independently on their Problem Set, the class comes back together for the Land portion of the lesson. For Lesson 9, this section begins on page 111 of the *Teach* book. In this portion of the lesson, the teacher facilitates a discussion by using suggested questions related to the lesson's objectives and guides students to synthesize the day's learning.

Continued Practice *at Home*

Also included in *Learn* for Level K is Family Math, a letter to families that describes the major concepts in the current topic. The letter uses words and phrases that students should recognize from the class lessons. It also includes visual supports students can use to explain concepts and strategies to their family. The at-home activities provide ideas for families to practice the module's math concepts with their students.

Module 1
Topic B

FAMILY MATH


Answer *How Many* Questions with Up to 5 Objects

Dear Family,


Students are learning to count groups of up to 5 objects. Counting each object only once can be a challenge, especially when objects are not lined up neatly. Students are using three strategies (touch and count, move and count, and mark and count) to help them organize and count accurately. Students are learning to use these strategies to determine whether they have enough when passing out classroom materials.

Words We Are Learning


enough
line



Touch and count
A student touches each object as they count.



Move and count
A student picks up each sticker and moves it to the mat as they count.



Mark and count
A student puts a mark on each white flower to show it has been counted.

At-Home Activities

Activity Idea 1 Number Match

Cut out the dot cards and number cards. Set aside the cards for 6–10 to use later. Hold up a dot card. Ask your child to tell how many dots. Then ask your child to find and hold up the matching number card. Have some fun with the number. Ask your child to stand up and hop, clap, or touch their toes the same number of times. (You can do it, too!) When cards 0–5 become easy for your child, move to cards 6–10.

CHALLENGE: Show the dot card for only two seconds.
Can your child recognize how many without counting?

Activity Idea 2 Are There Enough?

As part of everyday activities we often ask the question, “Are there enough?” Children may ask themselves this question as they set the table, have a party, or share with siblings or friends. As your child participates in counting out enough by using the strategies they learn

Copyright © Great Minds[®] PBC

Module 1
Topic C


FAMILY MATH

Write Numerals and Create Sets of Up to 5 Objects


Dear Family,

Students are learning to count out up to 5 objects from a larger group. This is harder than it seems! It can be hard to stop counting at a specific number and not keep counting the entire group!


Students are also learning to write numbers 1 through 5 by using writing rectangles and practicing rhymes. Look for more information about this important skill on the back of this page.



Students count out 3 cubes from a larger group to match the number.



Students know there are enough cubes because each dot gets a cube.



Students show 4 by using drawings and numbers.

At-Home Activities

Activity Idea 1 Count Out a Group

Give your child a container of household items such as pasta, beans, or pennies. Show a number from 1 to 5 and ask your child to count out the same number of items. When groups of 5 become easy for your child, count out groups up to 10.

Tip: Use the number cards from the set sent home with Family Math, module 1 topic B, or write the numbers 1–10 on index cards or sticky notes.

Activity Idea 2 Trace Numbers

Practice writing numbers 1 through 5 by asking your child to trace each number with their finger. Use the tracing lines on this page to remind them how to write each number. Ask your child to trace a number on your back. See whether you can guess the number you traced. Once your child has had time to practice each number, ask your child to guess the number you traced.

31

Module 1
Topic D

FAMILY MATH

Decompose Numbers

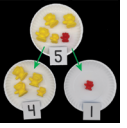
Dear Family,

Your child is learning about the relationship between numbers by sorting objects in more than one way. You might be thinking, Why are we still sorting? Sorting is a way to see how numbers can be broken into parts. For example, 5 bears can be sorted into 4 yellow bears and 1 red bear. The number sentence $5 = 4 + 1$ represents this situation. 5 bears can also be sorted into 3 big bears and 2 small bears. Your child might say, “5 is 3 and 2” to represent this sort.

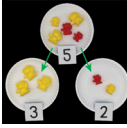
Invite your child to show you counting the math way—a new way they are learning to count on their fingers.

Words We Are Learning

number sentence



Sorting by color—5 is 4 and 1.



Sorting by size—5 is 3 and 2.

At-Home Activities

Activity Idea 1 Sorting Different Ways

Give your child a group of 4 or 5 items, such as toys, markers, or coins, that they can sort into different categories by color, shape, or size. Let your child decide how to sort. Then ask the following questions to help your child think about the total number of objects and the number in each group.

- How many _____ are there?
- How many groups did you make?
- How many are in this group?

Put the objects back into a pile. Ask your child to sort in a different way, and then ask the same questions. Did this sort result in the same number of groups?

Copyright © Great Minds[®] PBC

45

Assessment with *Eureka Math*²

The assessment system for Grade Level K helps teachers understand student learning by generating data from different perspectives. The system includes two components.

- Every module in Kindergarten has an **Observational Assessment Recording Sheet** that includes short checklists that summarize the module's ADs and Proficiency Indicators. On this recording sheet teachers note student performance that demonstrates students are building the intended knowledge and skills during lessons using data from the observational assessment prompts and from written work.
- **Module Assessments** consist of three to five interview-style items that assess proficiency with the major concepts, skills, and applications taught in the module. Module Assessments cover the most important content, but they may not assess all the strategies and standards taught in the module. Teachers give this assessment when the notes they've taken in the Observational Assessment Recording Sheet suggest that a student has shown inconsistent proficiency over the course of a module. Module Assessments provide suggested language for the interview-style items.

All Grade Level K assessment resources appear in the Resources section beginning on page 390 of the *Teach* book.

[Click to review the *Eureka Math*² assessments](#) on the Great Minds Digital Platform.

Observational Assessment Recording Sheet

Grade K Module 1
Counting and Cardinality

Student Name _____

Achievement Descriptors	Dates and Details of Observations
K.Mod1.AD1 Count to 10.	
K.Mod1.AD2 Write numbers from 0 to 10.	
K.Mod1.AD3 Represent a group of objects with a written numeral 0-10.	
K.Mod1.AD4 Say one number name with each object when counting up to 10 objects.	
K.Mod1.AD5 Use the last number of a count to tell how many regardless of arrangement or order counted.	
K.Mod1.AD6 Say how many without recounting when objects are rearranged.	
K.Mod1.AD7 Recognize that each successive number is one more when counting within 10.	
K.Mod1.AD8 Count to answer how many questions about as many as 10 things arranged in a rectangular array, a circle, or a scattered configuration.	
K.Mod1.AD9 Count out a given number of 1-10 objects from a larger group.	
K.Mod1.AD10 Sort objects into categories.	

Notes

390 This page may be reproduced for classroom use only.

Module Assessment

Grade K Module 1
Counting and Cardinality

Administer this assessment only to students who show inconsistent proficiency throughout the module, per observational assessment recordings. End the assessment if the student is unable to answer the first few questions.

Materials

- Bag of 10 loose Unifix[®] Cubes
- Collection of writing utensils to sort—colored pencils, crayons, markers
- Hide Zero[®] 7 card
- Number Path (provided removable)
- Flower image (provided removable)
- Numeral writing page (provided removable)

392 Copyright © Great Minds PBC

Raising the Bar to the *Second Power*

In the world of math curricula, *Eureka Math*² stands alone. Our curriculum invites student discourse, provides accessibility, and advances equity. Its combination of digital and print resources helps *all* students build a strong foundation of mathematical knowledge that they will build upon, module after module and year after year.



Access the [Great Minds Digital Platform](#) to review *Eureka Math*² assessments, digital interactives, context videos, and more.