

A Story of Units®

**K**

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## IMPLEMENTATION GUIDE

**K** Part-Part-Total

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# What's Included

## Teach book



## Great Minds® Digital Platform



## Learn book



*Eureka Math*<sup>2</sup>® *New York Next Gen* is a comprehensive math program built on the foundational idea that math is best understood as an unfolding story where students learn by connecting new learning to prior knowledge. Consistent math models, content that engages students in productive struggle, and coherence across lessons, modules, and grades provide entry points for all learners to access grade-level mathematics.

***Eureka Math*<sup>2</sup> *New York Next Gen* is designed with access and engagement in mind.** Peer discussion helps students solidify their understanding of math concepts, so every lesson includes opportunities for rich student discourse. The *Eureka Math*<sup>2</sup> *New York Next Gen* digital experience further supports discourse, giving all students opportunities to access learning and share their mathematical thinking while also providing teachers with windows into students' thinking. *Eureka Math*<sup>2</sup> *New York Next Gen* encourages students to think like mathematicians as they tackle tough problems and answer their own questions. In *Eureka Math*<sup>2</sup> *New York Next Gen* classrooms, students regularly share their mathematical knowledge through discussion and reasoning.

In addition, lessons follow Universal Design for Learning principles to accommodate various learning differences and increase access for multilingual learners and emergent readers. We've also increased our focus on student ownership of learning and belonging in the mathematics classroom. These elements are woven into our instructional design and instructional routines, and lesson-specific strategies help teachers address learner variance.

***Eureka Math*<sup>2</sup> *New York Next Gen* was also designed with teachability in mind.** Every classroom is unique, and we've designed the curriculum with that understanding. For example, we've intentionally built flexibility into the year-long pacing and created options for you to choose from within modules and lessons. This way you can spend your time where it's needed most—delivering instruction that meets the needs of your specific students.

So what should you expect from this guide? Think of it as a user’s manual for the curriculum. This guide orients you to the structure and design of *Eureka Math<sup>2</sup> New York Next Gen* and to what is available in the digital experience and in print. You’ll find answers to questions both big and small:

- How does *Eureka Math<sup>2</sup> New York Next Gen* enrich my content and pedagogical knowledge?
- What is the lesson structure?
- What is included in my *Teach* book? What about the digital platform?
- How do students engage with the digital platform?
- What is included in the *Learn* and *Apply* books?
- What assessments are available?

We are so excited to launch this curriculum together with you. We hope this Implementation Guide is an empowering resource as you begin to teach *Eureka Math<sup>2</sup> New York Next Gen*. At Great Minds<sup>®</sup> we believe that every child is capable of greatness. We are confident that, as your students notice and wonder, as you foster their interest in the mathematics, and as their minds are opened to new connections, greatness will be brought to life in your classroom each day.



# Inside Teach

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

## Module-Level Components

### Cover Art

Each *Teach* book opens with a stunning work of fine art that has a connection to the math learned within the module. The cover art is discussed or analyzed in specific lessons within the module.

### Overview

Your *Teach* book begins with 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**

**Kindergarten Module 1**

In the previous module, students identified the attributes of an object, used attributes to sort objects, and discussed sorting strategies and rules. Students also learned strategies to count and keep track of their count.

**Overview**

Two- and Three-Dimensional Shapes

**Topic A**

**Analyze and Name Two-Dimensional Shapes**

Most kindergarten students come to school with some knowledge about shapes. Those ideas may be based on visual examples or real-world experience: "That is a rectangle because it looks like a door." They may be able to name some shapes based on the general look or feel of the shape. The goal of this topic is to turn their attention to the specific qualities that are used to classify shapes, such as number of sides and corners, known as defining attributes. This process helps students build a conceptual understanding of two-dimensional, or flat, shapes.

**Topic B**

**Analyze and Name Three-Dimensional Shapes**

Students continue to extend the list to include or solid, shapes: faces of solid shapes, such as discover that some attributes of solid shapes, such as evolves as they consider the way a solid shape it leaves.

**Topic C**

**Construct Shapes**

Prior experience with attributes paves the way for building, drawing, and composing shapes. To manipulate materials and successfully construct a shape, students draw from the mental images built in the first two topics. Experiences constructing and composing shapes provide students opportunities to observe how shapes look from multiple perspectives, how parts fit together to make a whole, and how shapes relate to one another.

**After This Module**

**Kindergarten Module 3**

The ability to focus on a specific set of attributes sets the stage for comparison. The measurable attributes of length, weight, quantity, volume, and area are the focus as students use and fine-tune the spatial reasoning skills developed in module 2. They communicate their observations about objects with structured comparison statements by using precise mathematical language. The module culminates with a return to counting and cardinality when students compare sets and numbers.

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.



## Contents

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

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Organize, count, and represent a collection of objects. (Optional)	

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

#### Counting and Cardinality

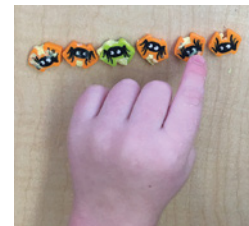
##### What is the number core? How is it tied to counting?

In this module, children have sustained interaction with four core ideas for describing the number of objects in a group. These ideas are collectively referred to as the number core.

- **The number word list**—Students say numbers in the appropriate count sequence (1, 2, 3 ...).
- **One-to-one correspondence**—When counting, students pair one object with one number word, being careful not to count any objects twice or skip any objects.
- **Cardinality**—Students say a number to tell how many are in a group. They may be able to tell how many by subitizing, counting, or matching to group of known quantity. When counting, students recognize that the last number said represents the number of objects in the group.
- **Written numerals**—Students read and write the symbols used to represent numbers. They also connect the written numeral with the number of objects in a set.

Students must integrate all aspects of the number core to count and use numbers fluently. The majority of kindergarten activities should involve three or more elements of the number core in conjunction. The number core components are not learned in isolation.

The number core plays a foundational role in work with number relations, operations, and place value understanding and is thus a critical start to the kindergarten year.



Students use one-to-one correspondence when they say one number word for each spider they touch.



Students show how many are in a set (cardinality) using written numerals.

## Achievement Descriptors: Overview

The Achievement Descriptors: Overview section is a helpful guide that describes what Achievement Descriptors (ADs) are and briefly explains how to use them. It identifies specific ADs for the module, with more guidance provided in the Achievement Descriptors: Proficiency Indicators resource 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.

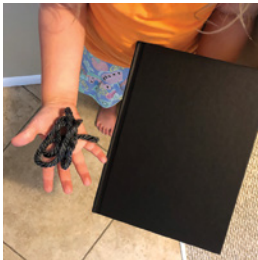
### Progression of Lessons

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 7**

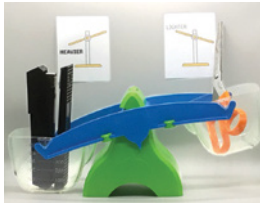
Compare weights by using *heavier than*, *lighter than*, and *about the same weight as*.



*The book feels heavier than the ribbon. It presses down on my hand.*

**Lesson 8**


Use a balance scale to compare two objects.



*When you can't tell by touch, you can use the balance scale to see which is heavier or lighter.*

**Lesson 9**

Use a balance scale to compare an object to a group of cubes.



*The glue stick is the same weight as 7 cubes. Neither side goes up or down.*

## Lesson Overview

Each lesson begins with two pages of information to help you prepare to teach the lesson.

**8**

**LESSON 8**  
**Use a balance scale to compare two objects.**

**Observational Assessment Recording Sheet**

Grade K Module 3  
Comparison

Student Name \_\_\_\_\_

Achievement Descriptors	Dates and Details of Observations
<b>K.Mod3.AD1</b> <b>Compare</b> the number of objects in two groups by using the terms <i>more than</i> , <i>fewer than</i> , or the same number to help by counting the objects in each group.	
<b>K.Mod3.AD2</b> <b>Compare</b> two numbers between 1 and 10 presented as written numerals by using the terms <i>greater than</i> , <i>less than</i> , or <i>equal to</i> .	
<b>K.Mod3.AD3</b> <b>Describe</b> the relative positions of an object.	
<b>K.Mod3.AD4</b> <b>Compare</b> the weights of two objects directly by weighing endpoints and <b>describe</b> the difference with terms such as <i>lighter</i> and <i>heavier</i> .	
<b>K.Mod3.AD5</b> <b>Compare</b> the weight of two objects directly and <b>describe</b> the difference with terms such as <i>heavier</i> or <i>lighter</i> .	
<b>K.Mod3.AD6</b> <b>Count</b> the number of objects in each category of a set and <b>order</b> the groups by count.	

\*This AD is not assessed on the Module Assessment.      ## Doubly Proficient   # Proficient   ## Highly Proficient

Notes \_\_\_\_\_

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**Lesson at a Glance**

Students use a balance scale to compare the weights of two objects. They observe that the heavier objects go down on a balance scale while the lighter objects go up. They relate this to real world experiences with balance beams and seesaws. Students make comparison statements by using *heavier than*, *lighter than*, and *about the same weight as*.

**Key Question**

- How can you tell which object is heavier when you use a balance scale?

**Achievement Descriptor**

**K.Mod3.AD5** Compare the weights of two objects directly and describe the difference with terms such as *heavier* or *lighter*. (NY-K.MD.2)

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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. It includes information about the tools, representations, and terminology used in the lesson.

**Key Questions** help focus your instruction and classroom discourse. They encapsulate the key learning of the lesson and may help develop coherence and connections to other concepts or a deeper understanding of a strategy or model. Students discuss these questions as part of the Debrief to synthesize learning during the Land section of the lesson.

The **Observational Assessment Recording Sheet** is listed on the first page of each lesson and indicates which Achievement Descriptor or Descriptors you are likely to observe during that lesson. Within the lesson, a note in the margin indicates when there is likely to be an opportunity to observe performance related to the proficiency indicator(s).

**Achievement Descriptors (ADs)** are standards-aligned descriptions that detail what students should know and be able to do based on instruction. The number of ADs addressed in each lesson varies depending on the content. Turn to the Resources section at the end of the *Teach* book to see the proficiency indicators for each AD. Proficiency indicators help you assess your students' level of proficiency.

Agenda	Materials	Lesson Preparation
<p><b>Fluency</b> 10 min</p> <p><b>Launch</b> 10 min</p> <p><b>Learn</b> 25 min</p> <ul style="list-style-type: none"> <li>• Heavier, Lighter, and the Same As</li> <li>• Scavenger Hunt</li> </ul> <p><b>Land</b> 5 min</p>	<p><b>Teacher</b></p> <ul style="list-style-type: none"> <li>• Heavier or Lighter Recording Sheet (digital download)</li> <li>• Bell</li> <li>• School rocker scale</li> <li>• Pencil</li> <li>• Book</li> <li>• Classroom items</li> <li>• Weight Comparison cards</li> <li>• Music</li> <li>• Stapler</li> <li>• Scissors</li> </ul> <p><b>Students</b></p> <ul style="list-style-type: none"> <li>• Heavier or Lighter Recording Sheet (in the student book)</li> <li>• Weight Comparison cards</li> <li>• School rocker scale (1 per student group)</li> <li>• Student book</li> </ul>	<ul style="list-style-type: none"> <li>• Gather a pencil, a book, and several other classroom items to place on a balance scale (e.g., a paper clip and a stapler).</li> <li>• Ready the Weight Comparison cards from lesson 7.</li> <li>• Copy or print the Heavier or Lighter Recording Sheet for demonstration.</li> </ul>

The **Agenda** shows the sequence and recommended time length of the sections of the lesson.

**Materials** lists the items that you and your students need for the lesson. If not otherwise indicated, each student needs one of each listed material.

**Lesson Preparation** provides guidance about materials that need to be created, assembled, or placed in advance.

## Lesson Structure

Each lesson is structured in four sections: Fluency, Launch, Learn, and Land. Lessons are designed for one 50-minute instructional period.

### 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. Suggested questions, including key questions related to the objective, help students synthesize the day's learning.

## Margin Notes

There are six types of instructional guidance that appear in the margins. These notes provide information about facilitation, differentiation, and coherence.

**Teacher Notes** communicate information that helps with implementing the lesson. Teacher Notes may enhance mathematical understanding, explain pedagogical choices, give background information, or help you identify common misconceptions.

**Universal Design for Learning (UDL)** suggestions offer strategies and scaffolds that address learner variance. These suggestions promote flexibility with engagement, representation, and action and expression, the three UDL principles described by CAST. These strategies and scaffolds are additional suggestions to complement the curriculum's overall alignment with the UDL Guidelines.

**Language Support** provides ideas to support students with receiving (reading and listening) and producing (speaking and writing) English in mathematical contexts. Suggestions may include ways to promote student-to-student discourse, support new and familiar content-specific terminology or academic language, or support students with multiple-meaning words.

**Differentiation** suggestions provide targeted ways to help meet the needs of specific learners based on your observations or other assessments. There are two types of suggestions: support and challenge. Use these to support students in the moment or to advance learning for students who are ready for more of a challenge.

**Promoting the Standards for Mathematical Practice** highlights places in the lesson where students are engaging in or building experience with the Standards for Mathematical Practice (MPs). Although most lessons offer opportunities for students to engage with more than one Standard for Mathematical Practice, this guidance identifies a focus MP within each lesson. The notes also provide lesson-specific information, ideas, and questions that you can use to deepen students' engagement with the focus MP.

**Math Past** provides guidance about how to use the module's Math Past resource in the lesson. (See Resources in this document.)

## Lesson-Level Sample Solutions

Sample Solutions are examples of solutions to problems students will engage with during the lesson, including those in the Problem Set. Although specific solution paths are provided in the sample solutions, they are only samples. Accept accurate responses, reasonable explanations, and equivalent answers for student work even if they differ from the sample.

## Visual Design

In the *Teach* book, color coding and other types of text formatting are used to highlight facilitation recommendations and possible statements, questions, and student responses. These are always suggestions and not a script.

- Each section includes a bold line of text that gives the purpose for that section. These purpose statements, taken together, support the overall objective of the lesson.

**Launch**

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Materials—T: Scale

**Students analyze sorted pictures to find a rule that applies.**

Display the sorting chart. Use the guess my rule routine to engage students in thinking about how objects are sorted. Establish a silent signal for students to show when they think they know the sorting rule. Then display the objects one at a time.

**The hippopotamus follows my rule.**

**The beach ball does not follow my rule.**

**Guess My Rule**

⬆

⬆


- Dark blue text shows suggested language for questions and statements that are essential to the lesson. Light blue text shows sample student responses.

**Let's find how many cubes are the same weight as the glue stick.**

Remove all the cubes from the bucket.

**Count as I drop in the cubes. You'll say**  
**1 cube, 2 cubes, 3 cubes ... Ready?**  
 1 cube, 2 cubes, 3 cubes, ... , 7 cubes

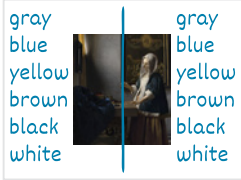
**We can tell about the glue stick and the cubes like this: The glue stick is the same weight as 7 cubes.**  
**Your turn.**  
 The glue stick is the same weight as 7 cubes.



- 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.

**Johannes Vermeer used color to balance the sides in this painting. Let's draw a line down through the middle of the painting, right through the balance scale. (Draw line.) Which colors do you see on the left side of the painting? (Point.)**

Write the colors as students name them. When they have named all the colors they see, check the right side of the painting for each of the colors found on the left. Write the name of each color as it is found so the lists on both sides of the picture appear balanced. If students notice new colors on the right side of the painting, encourage them to look again for those colors on the left side.



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

Circulate to ensure that students make accurate comparison statements: The object is the same weight as \_\_\_\_ cubes. Use the following questions and prompts to assess and advance student thinking.

- What does it mean when the sides of the scale are balanced?
- How did you find how many cubes are the same weight as your object?
- What would happen if I added 1 more cube? If I took 1 away?

Once groups have weighed each student's object and recorded their work, challenge them to find something that is the same weight as 5 cubes. Students are unlikely to encounter many objects that are the same weight as 5 cubes. Anticipate that they will need to adjust by adding or taking away to get the perfect balance. For example, a pack of crayons is too heavy, but when 3 loose crayons are removed, it is the same weight as 5 cubes.



## Resources

Near the end of your *Teach* book, you will find resources for assessment, lesson planning, and further study.

## Module Assessment


A master copy of the Module Assessment is included in the *Teach* book.

### Module Assessment

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**Grade K Module 2**  
**Two- and Three-Dimensional Shapes**

Administer this assessment only to students whose observational assessments show inconsistent proficiency throughout the module. Use the suggested language, or support students in their native language to better ascertain the student's understanding of the math content. If a student is unable to answer the first few questions, end the assessment and retry after more instruction.



Materials—Solid shapes: rectangular prism, pyramid, sphere, cone, cylinder, and cube

- Shape set for task #1
- Shape set for task #2
- Blank piece of paper for a work mat
- 10 coffee stirrers

## Standards

Standards lists the content standards that are addressed in the module. This resource also lists the Standards for Mathematical Practice.

## Achievement Descriptors: Proficiency Indicators

Achievement Descriptors (ADs) are standards-aligned descriptions that detail what students should know and be able to do based on instruction they receive. The number of ADs addressed in each lesson varies depending on the content.

This resource includes proficiency indicators for each AD. Proficiency indicators are descriptions of work that is partially proficient, proficient, or highly proficient. Proficiency indicators help you assess your students' level of proficiency.

## Terminology

Terminology is a list of new and familiar terms used in the module. New terminology includes definitions as they appear within the module.

### Terminology

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The following terms are critical to the work of grade K module 2. This resource groups terms into categories called New, Familiar, and Academic Verbs. The lessons in this module incorporate terminology with the expectation that students work toward applying it during discussions.

Items in the New category are discipline-specific words that are introduced to students in this module. These items include the definition, description, or illustration as it is presented to students. At times, this resource also includes italicized language for teachers that expands on the wording used with students.

Items in the Familiar category are discipline-specific words introduced in prior modules.

Items in the Academic Verbs category are high-utility terms that are used across disciplines. These terms come from a list of academic verbs that the curriculum strategically introduces at this grade level.

Visit the digital glossary to see complete definitions, illustrations, or descriptions for new and familiar terms across grade levels. The digital glossary also includes the academic verbs list for each grade.

**New**

**circle**  
A circle is a closed, totally round, curved shape. The space from the middle to the curve is always the same. (Lesson 3)

**cone**  
A cone is a solid shape with a circular face and a point. (Lesson 7)

**cube**  
A cube is a solid shape that looks like a box. All of a cube's faces are square rectangles. (Lesson 7)

**cylinder**  
A cylinder is a solid shape that has 2 circular faces and is curved around the side. (Lesson 7)

**flat shape**  
When placed on a table, flat shapes lay down (or do not rise above the table top). Triangles, rectangles, and circles are examples of flat shapes. (Lesson 6)

**hexagon**  
A hexagon is a closed shape with 6 straight sides and 6 corners. (Lesson 3)

**pyramid**  
A pyramid is a solid shape that has square and triangular faces and a point. (Lesson 7)

**rectangle**  
A rectangle is a closed shape with 4 straight sides and 4 corners. If we sit any side of a rectangle on the floor, there are 2 sides that go straight up and down. (Lesson 4)

**rectangular prism**  
A rectangular prism is a solid shape that looks like a brick. All of a rectangular prism's faces are rectangles. (Lesson 7)

**solid shape**  
When placed on a table, solid shapes stand tall (or rise above the table top). Cubes, cylinders, and rectangular prisms are examples of solid shapes. (Lesson 6)

**Familiar**

count

number

sort

**Academic Verb**

describe

**Familiar** terms were introduced or used in earlier modules.

A small number of strategically selected **academic verbs** are introduced in each grade level. This verb is introduced in this module.

**New** terminology is described in student-friendly language, and the lesson in which each term is introduced is listed.

## Observational Assessment Recording Sheet

Every module in kindergarten has an Observational Assessment Recording Sheet. This sheet includes short checklists that summarize the module’s ADs. Use the Observational Assessment Recording Sheet to suit the needs of your classroom by recording information by date or activity and taking notes for further instruction.

<b>Observational Assessment Recording Sheet</b>		_____
Grade K Module 2		Student Name
<b>Two- and Three-Dimensional Shapes</b>		
Achievement Descriptors	Dates and Details of Observations	
<b>K.Mod2.AD1*</b> Describe objects in the environment by using names of shapes.		
<b>K.Mod2.AD2</b> Describe shapes and objects in the world by using position words such as above, below, beside, in front of, behind, and next to.		
<b>K.Mod2.AD3</b> Name and identify shapes regardless of their orientation or overall size.		
<b>K.Mod2.AD4</b> Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").		
<b>K.Mod2.AD5</b> Analyze and describe two- and three-dimensional shapes, in different sizes and orientations, by using informal language to describe them (e.g., number of sides and corners or having sides of equal length).		
<b>K.Mod2.AD6</b> Compare two- and three-dimensional shapes, in different sizes and orientations, by using informal language to describe their similarities and differences (e.g., number of sides and corners, other attributes).		
<b>K.Mod2.AD7</b> Construct flat and solid shapes by using tactile materials (e.g., sticks and clay balls).		
<b>K.Mod2.AD8*</b> Draw flat shapes with the intention to represent their parts and other attributes.		

\*This AD is not assessed on the Module Assessment. **PP** Partially Proficient **P** Proficient **HP** Highly Proficient

**Notes**

## Math Past

Math Past tells the history of some big ideas that shape the mathematics in the module. It 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 information to inform your teaching and lesson-specific ideas about how to engage students in the history of mathematics.

### Math Past

#### The Wheel

**Why are wheels shaped like circles?**  
**Were wheels always used for transportation?**  
**What other uses do wheels have?**

Ask your students where they have seen wheels. Wheels are a great example of a circular object that we interact with almost every day. Whenever we ride in a car, on a bus, or on a bike, we use wheels to get where we want to go. But why are wheels shaped like circles?

Ask students what shape a wheel is. Challenge students to describe why we don't see wheels shaped like squares or ovals. This can be a useful way to help students distinguish circles from ovals: Ask them how it would be different to ride a bike with wheels shaped like ovals instead of circles.

Circular wheels work best on a smooth, flat road. Have you ever driven on an old gravel road? That can be a bumpy and uncomfortable ride! Early human civilizations didn't have modern-day paved roads. In fact, wheels were first used to make pottery and weren't used for transportation until much later, after better roads had been built.



So, smooth roads and circular wheels are a team. Do different wheel shapes work with different kinds of roads? A square wheel sounds like it wouldn't be useful at all. But this tricycle shows that a square wheel works just as well if it's paired with a special bumpy road. Since square wheels work on this road, ask your students if they think it makes sense to use square wheels all the time.

## Materials

The Materials resource lists items that you and your students need for the module. In kindergarten, it also includes suggestions for making daily tool kits of frequently used items.

## Sample Solutions

The Sample Solutions resource contains answers to the Module Assessment.

## Works Cited

A robust knowledge base underpins the structure and content framework of *Eureka Math<sup>2</sup> New York Next Gen*. A listing of the key research appears in the Works Cited for each module.

# Inside Learn

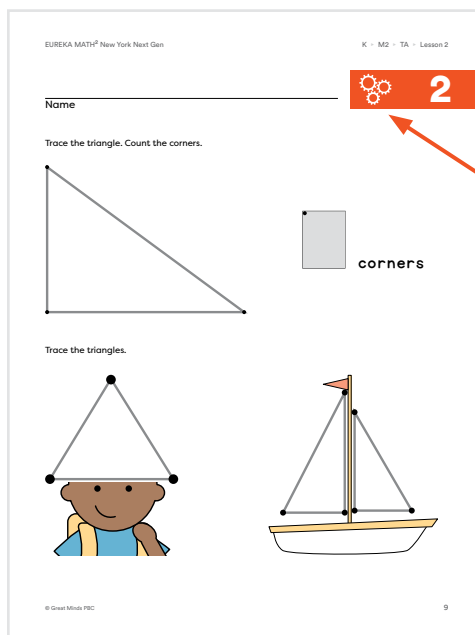
*Learn* is students' companion text to the instruction in *Teach*. It contains all the pages your students need as you implement each lesson.

## Cover Art

Each *Learn* book includes the same work of fine art included on the cover of the *Teach* book. The art has a connection to the math learned within the grade.

## Components

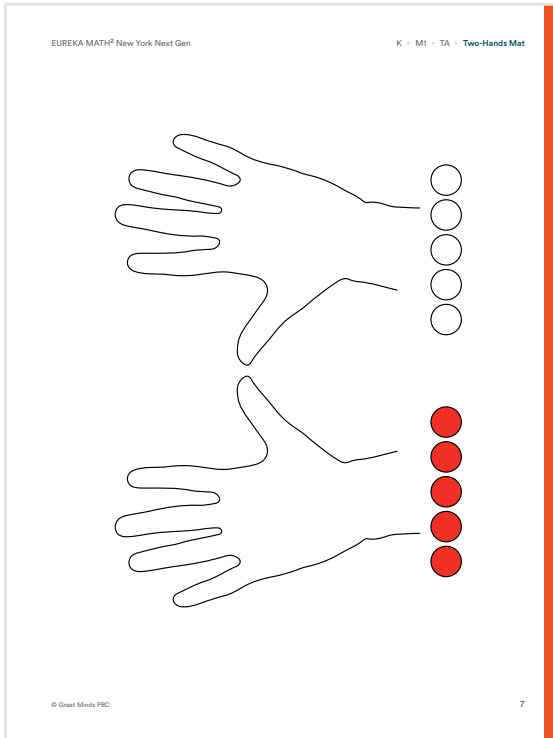
The components that go with each lesson are indicated by icons in the student book.



The magnifying glass icon indicates a **lesson page** that students use during the guided or directed portion of the lesson.



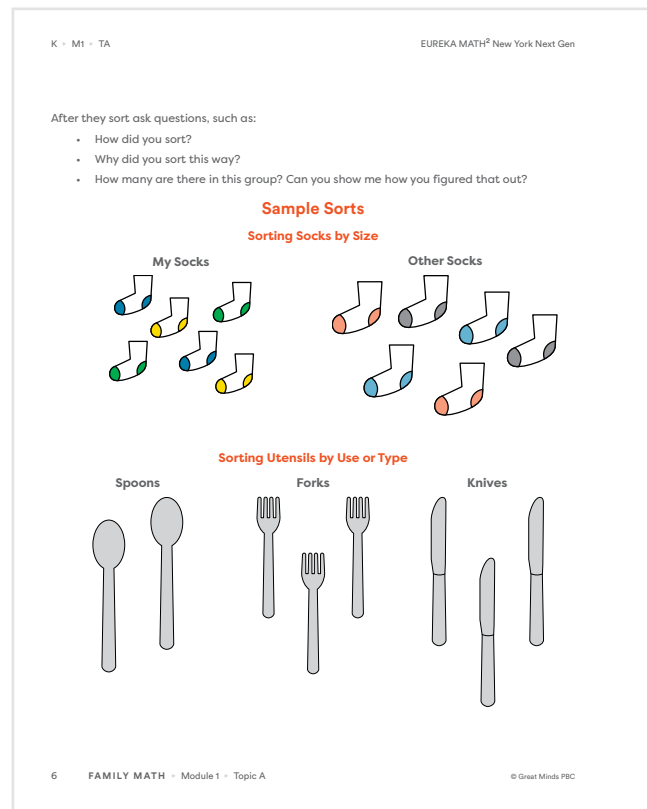
The gears icon indicates the **Problem Set**. This is a carefully crafted set of problems or activities meant for independent practice during the lesson. Items from the Problem Set may be debriefed in Land, or you may use the items as formative assessment or for deeper discussion about a specific aspect of the instruction.



← An **orange bar** on the side of a page indicates a removable, a student page that should be removed from the *Learn* book. A removable may be used inside a personal whiteboard so students can practice skills several times in different ways, or it may be cut, assembled, or rearranged for an activity during a lesson or across multiple lessons.

## Family Math



Family Math is a letter to families that describes the major concepts in the current topic. Each letter uses words and phrases that should be familiar to the student from the lessons in the topic. The letter includes visual supports that students can use to explain the concepts or strategies or that can help adults at home understand or unpack a concept. Family Math also includes simple and practical at-home activities to extend the learning and help students see mathematics in their world.



## Talking Tool

The Talking Tool is a scaffold to support students in producing the language to engage in discourse about mathematics with other students. It provides a set of general sentence frames and sentence starters that can be applied to a wide variety of situations.

Language Support margin boxes within the lessons may refer to specific sections of the Talking Tool. Model the use of the sentence frames and sentence starters. This can be done at any time in any lesson but is specifically useful during times of extended student-to-student discourse, such as cooperative activities.

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





# Inside the Digital Platform

The Great Minds Digital Platform is organized into five key curriculum spaces: Teach, Assign, Assess, Analyze, and Manage. On the digital platform, lessons include the same features as in the *Teach* book, as well as a few more elements that are unique to the digital space. For example, on the digital platform, the side navigation panel previews digital presentation tools, such as slides, that accompany lessons.

Each space within the digital platform supports you to maximize the features that *Eureka Math<sup>2</sup> New York Next Gen* offers.

## Teach

Teach contains all the information in the print version, as well as digital curriculum components such as assessments, digital interactives, and slides to project for students. Use this space to access the curriculum components you need for daily instruction.

## Assign

Create assignments for your students by using any artifact in the *Eureka Math<sup>2</sup> New York Next Gen* resource library, such as Exit Tickets, Module Assessments, Classwork, removables, or problems for practice. You can launch assessments, view and monitor progress on assigned assessments, and score and analyze completed assessments.

## Assess

Access the Great Minds Library of digital assessments, where you can duplicate and adjust assessments. You can also assign several assessments at once from this space.

## Analyze

Generate reports and view data about students' progress toward proficiency. Assessment reports provide insights, summaries of class performance, and student proficiency by item.

## Manage

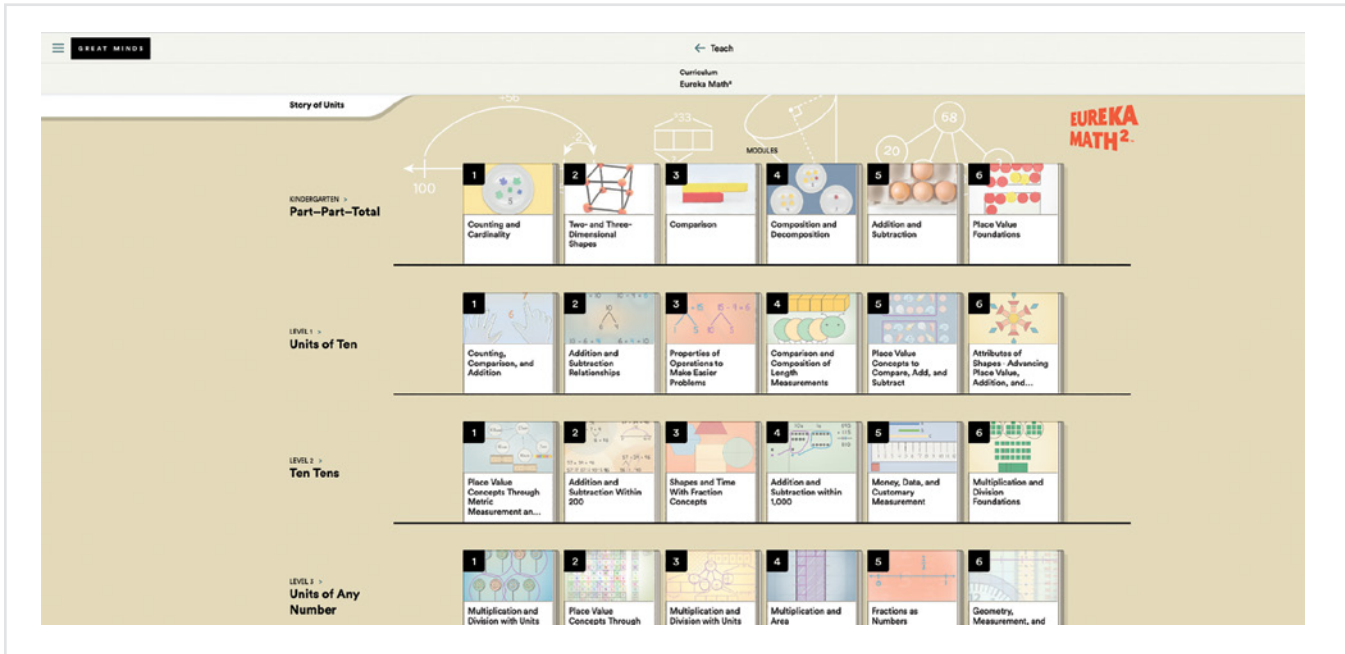
The Manage space allows administrators and teachers to view rostering data for their schools or classes. It is also where you can set or reset a student's password.

This section discusses Teach in detail. Visit the Help Center to read more about Teach as well as Assign, Assess, Analyze, and Manage.

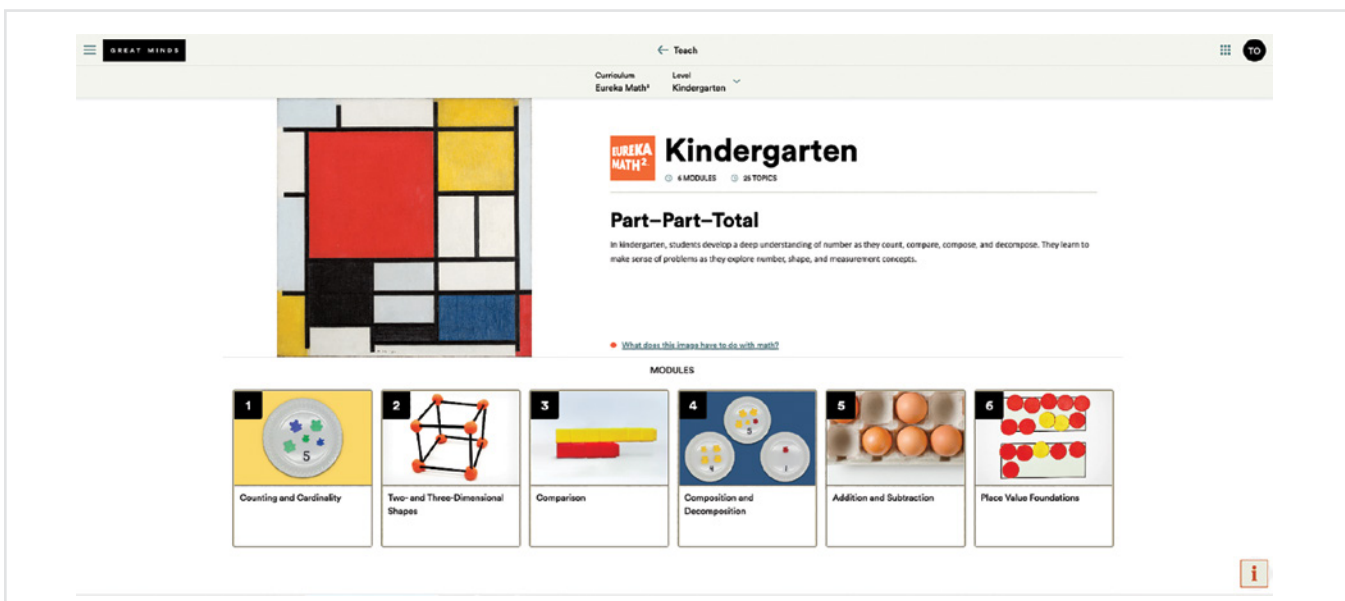
## Teach

On the digital platform, use Teach to navigate to the curriculum, level, and module landing pages for easy access to different components.

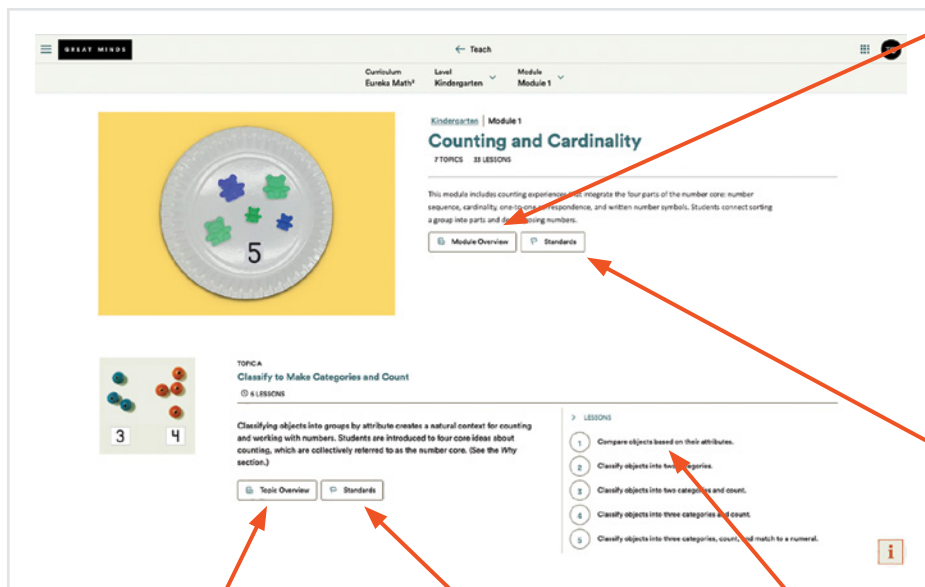
The curriculum landing page, or the bookshelf, gives easy access to the entire curriculum.



The grade-level landing pages provide a brief description of the year-long learning. Use the drop-down arrows in the top navigation panel to view different grade levels.



The module-level landing page houses all the module-, topic-, and lesson-level resources needed to teach each module.



The Module Overview includes resources from the *Teach* book, including Why, Terminology, Math Past, Module Assessment, Scoring Guides, and additional module-level resources.

Access the Achievement Descriptors and standards for the entire module.

The Topic Overview includes the Progression of Lessons and topic-level resources.

Access the Achievement Descriptors and standards for the topic.

Lessons are visible at a glance.




## Slides







Each *Eureka Math<sup>2</sup> New York Next Gen* lesson provides projectable slides that have media and content required to facilitate the lesson, including the following:

- Fluency activities
- Digital experiences such as videos, teacher-led interactives, and demonstrations
- Images and text from *Teach* or *Learn* cued for display by prompts such as *display*, *show*, *present*, or *draw students' attention to*
- Pages from *Learn* including Classwork, removables, and Problem Sets

Some slides contain interactive components such as buttons or demonstrations.

**EUREKA MATH<sup>2</sup>** Classify shapes as rectangles or non-rectangles, with square rectangles as a special case. T11 Copy Answer Key Code GM X

Rectangles	Not Rectangles	Square Rectangles
		

Reset

## Teacher View

Lessons that include digital interactives are authored so that while you demonstrate the digital interactive, students engage with the demonstration as a class. *Eureka Math<sup>2</sup> New York Next Gen* digital interactives help students see and experience mathematical concepts interactively. You can send slides to student devices in classroom settings where it feels appropriate to do so.

Use Teacher View to present, send slides to students, monitor student progress, and create student discussions. If you send interactive slides to students from this view, you can choose to view all students' screens at once or view each student's activity individually.

The screenshot shows the Teacher View interface. At the top, there are tabs for 'Guidance', 'Monitoring', and 'Gallery'. The main area is divided into a large central window and a grid of smaller windows below it. The central window displays a slide with a grid of blue squares. The grid below shows three student screens, each displaying a bar graph with the number 35. The interface includes a 'Launch' button on the left and a 'Present slide T1' button at the bottom.

You can track the pace of the class and pause students as needed.

Toggle among Guidance, Monitoring, and Gallery modes to present, monitor student progress, and create student discussion points.

You can send interactive slides to students.

You can see the number of students active on each slide.

You can see your own display and students' work as they move through the interactive.

Add student work to the Gallery to create specific examples to analyze and critique.

## Student View

Teacher demonstration slides contain interactives that you can send to student devices. Students use the interactives to engage directly with the mathematical concepts and receive immediate feedback.

The interface displays a dot plot with ten columns of objects. The objects in each column are: 1 blue bird, 2 bees, 3 flowers, 4 cats, 5 chickens, 6 squirrels, 7 birds, 8 green beans, 9 purple worms, and 10 purple cars. Below each column is a light blue square box for counting. At the bottom, there is a text input field and two buttons: 'Next' and 'Reset'. The interface also includes the Eureka Math logo, a title 'Organize, count, and represent a collection of objects.', a slide number 'T1', and navigation controls like 'Copy Answer Key Code', 'GM', and 'X'.





# Pacing

## Year at a Glance

There are approximately 140 lessons for each grade level. Small groups of related lessons are organized into topics. Topics are organized into modules. The following table shows modules by title and gives the total number of lessons per year.

Module	<b>K: Part-Part-Total</b>	<b>1: Units of Ten</b>	<b>2: Ten Tens</b>
<b>1</b>	Counting and Cardinality	Counting, Comparison, and Addition	Place Value Concepts Through Metric Measurement and Data • Place Value, Counting, and Comparing Within 1,000
<b>2</b>	Two- and Three-Dimensional Shapes	Addition and Subtraction Relationships	Addition and Subtraction Within 200
<b>3</b>	Comparison	Properties of Operations to Make Easier Problems	Shapes and Time with Fraction Concepts
<b>4</b>	Composition and Decomposition	Comparison and Composition of Length Measurements	Addition and Subtraction Within 1,000
<b>5</b>	Addition and Subtraction	Place Value Concepts to Compare, Add, and Subtract	Money, Data, and Customary Measurement
<b>6</b>	Place Value Foundations	Attributes of Shapes • Advancing Place Value, Addition, and Subtraction	Multiplication and Division Foundations
<b>Total</b>	142 lessons	146 lessons	142 lessons

## Instructional Days

Plan to teach one lesson per day of instruction. Each lesson is designed for an instructional period that lasts 50 minutes in kindergarten. Grade levels have fewer lessons than the typical number of instructional days in a school year. This provides some flexibility in the schedule for assessment and responsive teaching, and it allows for unexpected circumstances.

<b>3: Units of Any Number</b>	<b>4: Fractional Units</b>	<b>5: Fractions Are Numbers</b>
Multiplication and Division with Units of 2, 3, 4, 5, and 10	Place Value Concepts for Addition and Subtraction	Place Value Concepts for Multiplication and Division with Whole Numbers
Place Value Concepts Through Metric Measurement	Place Value Concepts for Multiplication and Division	Addition and Subtraction with Fractions
Multiplication and Division with Units of 0, 1, 6, 7, 8, and 9	Multiplication and Division of Multi-Digit Numbers	Multiplication and Division with Fractions
Multiplication and Area	Foundations for Fraction Operations	Place Value Concepts for Decimal Operations
Fractions as Numbers	Angle Measurements and Plane Figures	Addition and Multiplication with Area and Volume
Geometry, Measurement, and Data	Place Value Concepts for Decimal Fractions	Foundations to Geometry in the Coordinate Plane
148 lessons	142 lessons	138 lessons

## Optional Lessons

Some lessons in each grade level are optional. Optional lessons are clearly designated in the instructional sequence, and they are included in the total number of lessons per grade level. Assessments do not include new learning from optional lessons.

Lessons may be optional for the following reasons:

- The lesson is primarily for enrichment.
- The lesson offers more practice with skills, concepts, or applications.
- The lesson bridges gaps between standards.
- The lesson can be used more than once or anywhere in the instructional sequence.

## Assessment Days

Use these days flexibly to choose times to give assessments and retakes and to address other instructional needs as appropriate.

## Pacing Your Instruction

The total lesson count at each grade level and many of the elements in the lesson structure provide flexibility. As needed, use that flexibility to adjust pacing so that it meets the needs of your students or your school's schedule.

### Focus on the major work of the grade.

College- and career-readiness standards are typically organized into the following clusters: major, supporting, and additional. At every grade level, the curriculum prioritizes standards in the major cluster by devoting more time to those standards overall and by sequencing modules to teach the major work as close to the start of the school year as possible. Standards in the major cluster appear early and are revisited over the course of the year so that students have ample opportunity to work with them. Whenever possible, the major work of the grade is naturally embedded in lessons, even when the lesson objective targets supporting or additional work.

### **Use Fluency activities to reinforce skills and concepts as needed.**

Interleaved practice presents different skills and concepts in a single session so that learners discern and recall which knowledge and strategies are appropriate. Distributed practice presents a single skill or concept in a single session and systematically spaces out practice sessions over time. The interleaved and distributed practice embedded in Fluency maximizes students' readiness for the grade-level content in the lessons you teach.

Distributed practice will also help you maintain pacing even when your students have unfinished learning. Rather than reteaching the same lesson to address unfinished learning, allow the distributed practice to provide natural opportunities to continue teaching. Help students access the current lesson or upcoming lessons by using Fluency activities to practice previously taught content.

### **Use observational assessment data to make decisions.**

Use student performance during lessons, including data from the observational assessment prompts, and from written work, such as on the Problem Set, to make strategic decisions. The Observational Assessment Recording Sheet can help you keep track of student performance that demonstrates knowledge and skills. Look at upcoming content, and based on your observations, choose the pathway that best advances student understanding and allows students to demonstrate what they know. For example, lessons may provide access to a concept by teaching the concept in more than one way, but students may not need to achieve proficiency with every strategy or method taught.

### **Think flexibly about how and when to use components.**

Some Fluency activities can be used at other times of day, not just before the lesson. Read the statement that describes the purpose of the Fluency activity. The purpose statement will help you determine whether your students will most benefit from engaging in the activity immediately before the lesson or at a different time.

As students learn routines, consider using some Fluency activities and games that are embedded in lessons at stations where students complete the activities independently or in pairs. Use this option to increase opportunities for movement in the classroom and to vary your lesson delivery.

You can also adjust the Problem Set that is provided in the *Learn* book. For example, depending on the needs of your students, consider decreasing the amount of time they spend on the task. Or specify which problems students should complete during the lesson and save the other problems for another time.

### **Expect students to develop proficiency over time.**

Students achieve proficiency with the standards over time. Keep moving through lessons even when your students demonstrate only partial proficiency in the moment. Modules and lessons build student knowledge steadily so that students meet grade-level expectations by the end of the school year, and the curriculum's assessments are designed accordingly. Distributed practice of each concept and skill is built into the curriculum to help students achieve and maintain proficiency. Set a goal to have 80% of students demonstrate proficient performance on ongoing assessments. Use small group work or short exercises to support students who need more time or different instruction to understand the concepts.

# Lesson Facilitation

*Eureka Math*<sup>2</sup> *New York Next Gen* lessons are designed to let students drive the learning through sharing their thinking and work. Varied activities and suggested styles of facilitation blend guided discovery with direct instruction. The result allows teachers to systematically develop concepts, skills, models, and discipline-specific language while maximizing student engagement.

## Effective Delivery

No matter what style of facilitation lessons suggest, effective delivery prioritizes student engagement; promotes student-to-student discussion; fosters students' ownership of and sense of belonging in the mathematics community; and helps students make connections within mathematics and across disciplines. The following are some of the ways that the curriculum supports these elements of your instruction.

Lessons prioritize **student engagement** by

- maximizing the number of students actively participating at any given time,
- creating space for students to share, discuss, and self-reflect,
- inviting students' curiosity by posing questions or scenarios that spur them to notice and wonder, and
- presenting intriguing artifacts or questions that create a need for new knowledge.

Lessons promote **student-to-student discussion** by

- employing routines that encourage student-to-student dialogue,
- using open-ended questions and scenarios to generate opportunities for authentic class discussion, and
- suggesting when students might use the leveled sentence starters provided in the Talking Tool to participate in discussions.

Lessons foster **student ownership and belonging** by

- including guided discovery so that students generate, test, share, critique, and refine their ideas,
- incorporating the Standards for Mathematical Practice by design so that opportunities to engage with them arise naturally,
- adjusting for age-appropriateness and reading proficiency in student materials to maximize students' independence, and
- providing tools to support students with their processing and verbal expression.

Lessons help **students make connections** by

- building content and language sequentially so that it's easier to relate new learning with prior knowledge,
- incorporating Math Past, a component that contextualizes current learning within the history of mathematics, and
- using artwork to convey broad artistic and mathematical principles.

## Sample Dialogue

Lessons include sample dialogue that represents how the teacher and students in a classroom might explore concepts and problems. Sample dialogue gives a sense of how instruction might look and feel. It is not a script and should not be used that way. Instead, use the sample dialogue as if you are observing a class taught by a trusted colleague. For example, the sample dialogue can help you

- identify lines of questioning that advance students toward the objective,
- determine when and how to use precise terminology, or
- navigate content that might be new to you or challenging to teach or learn.

Sample dialogue often includes possible student responses or reasoning. However, sometimes the lesson advances without relying on a certain kind of response, or sometimes responses are expected to vary so much that possible student responses are not provided. For example, sample student responses are not usually included with a question that's meant to be used as a simple turn and talk. When they are present, the provided responses serve as examples of the kind of thinking you might expect to hear. As you listen to your own students, consider using the sample responses to help you identify teachable moments.

## Classroom Culture

Consider the following ideas to help set norms that support a collaborative culture:

- We value and respect each other's contributions. Everyone has knowledge that is worth listening to and building on.
- We are all expected to explain and discuss our thinking.
- We will solve problems in many different ways.
- We embrace a growth mindset. Making mistakes is part of learning. We will analyze and learn from the mistakes we make.

As the culture of your mathematics classroom becomes established, you may feel the need to shift your instruction. For example, students will begin to share, compare, and critique with confidence. Respond by challenging yourself to maximize student action and conversation over teacher action and speech. Leverage the structures and questions within lessons to increase guided discovery and connection-making so that students generate ideas. Your primary roles then evolve to navigating and developing their emerging mathematical thinking.

## Instructional Routines

*Eureka Math<sup>2</sup> New York Next Gen* uses instructional routines, or predictable patterns of classroom interaction, to allow students and teachers to focus on mathematical content. Routines intentionally support engagement, discussion, and building content knowledge. Directions for a routine are included in a lesson every time the routine is used. That way, the specific facilitation guidance is immediately available to you as you work through the lesson. Many of the same routines appear across grade levels from kindergarten to Algebra I, using age-appropriate variations.

### Fluency

Fluency uses routines that promote engagement, require participation from every student, and develop automaticity with counting and calculating. Students become familiar with Fluency routines because they are consistently used across modules and grade levels, allowing for efficient teaching and learning. Some of the primary Fluency routines are choral response, Whiteboard Exchange, and Sprint.



## Launch, Learn, Land

The Launch, Learn, and Land lesson components intentionally include routines that

- promote student engagement in the Standards for Mathematical Practice,
- promote student-to-student dialogue and integrate reading, writing, and listening,
- align to Social Emotional Learning (SEL) core competencies, and
- align to Stanford Language Design Principles.

Although lessons embed many routines, the following routines consistently appear by name within lessons across grade levels. This helps students recognize them and develop ownership over the routines.

<b>Math Chat</b>	Creates open-ended space for sharing mental math strategies and developing number sense, flexibility, efficiency, and accuracy.
<b>Which One Doesn't Belong?</b>	Promotes metacognition and mathematical discourse as students use precise language to compare different examples.
<b>Co-Construction</b>	Provides structure for contextualizing and decontextualizing problems, which helps students build abstract reasoning.
<b>Five Framing Questions</b>	Supports students in analyzing a work sample or solution strategy by guiding them through stages of discovery.

## Problem-Solving Routines

Problem solving routines give students a systematic way to approach a wide range of situations. Many entry points to the routines provide access for students working at different proficiency levels.

Kindergarten lessons use elements of the following Read–Draw–Write (RDW) process, which is formally introduced in grade 1.

**Read** the problem all the way through. Then reread a chunk at a time. As you reread, ask yourself, “Can I draw something?” Then ask, “What can I draw?”

**Draw** to represent the problem as you reread. Add to or revise your drawing as you uncover new information or discover what is unknown. As you draw, label what is known and what is unknown. When you finish rereading and drawing, ask yourself, “What does my drawing show me?” Let your drawing help you find a way to solve.

**Write** number sentences or equations to represent your thinking. Solve. Then use your solution to write a statement that answers the original question.

## Universal Design for Learning

Universal Design for Learning (UDL) is a framework based on current research from cognitive neuroscience that recognizes learner variance as the norm rather than the exception. The guiding principles of the UDL framework are based on the three primary networks of the brain. Although the concept of UDL has roots in special education, UDL is for all students. When instruction is designed to meet the needs of the widest range of learners, all students benefit. *Eureka Math<sup>2</sup> New York Next Gen* lessons are designed with these principles in mind. Lessons throughout the curriculum provide additional suggestions for Engagement, Representation, and Action & Expression. Learn more about UDL in *Eureka Math<sup>2</sup> New York Next Gen* [here](#).

## Multilingual Learner Support

Multilingual learners, or learners who speak a language other than English at home, require specific learning supports for gaining proficiency with the English needed to access the mathematics. Research suggests that best practices for these learners include opportunities and supports for student discourse and for using precise terminology. In addition to precise domain-specific terminology, high-impact academic terminology that supports learners across learning domains is explicitly introduced and used repeatedly in various contexts to build familiarity and fluency across the grade levels. *Eureka Math<sup>2</sup> New York Next Gen* is designed to promote student discourse through classroom discussions, partner or group talk, and rich questions in every lesson. Learn more about supporting multilingual learners in *Eureka Math<sup>2</sup> New York Next Gen* [here](#).

## Readability

A student's relationship with reading should not affect their relationship with math. All students should see themselves as mathematicians and have opportunities to independently engage with math text. Readability and accessibility tools empower students to embrace the mathematics in every problem. Lessons are designed to remove reading barriers for students while maintaining content rigor. Some ways that *Eureka Math<sup>2</sup> New York Next Gen* clears these barriers are by including wordless context videos, providing picture support for specific words, and limiting the use of new, non-content-related vocabulary, multisyllabic words, and unfamiliar phonetic patterns. Learn more about how *Eureka Math<sup>2</sup> New York Next Gen* supports readability [here](#).

# Assessment

The assessment system in kindergarten helps you understand student learning by generating data from many perspectives. The system includes

- a recording sheet to guide your observations during lessons and
- Module Assessments.

All *Eureka Math*<sup>2</sup> *New York Next Gen* assessments are considered formative because they are intended to inform instruction. The assessments may also be considered summative when you choose to use the data to produce a grade or report that becomes part of a student, school, or district record.

On its own, a single assessment does not show a complete picture of student progress. For example, a short assessment might use a single question to assess student understanding of part of a standard, thus producing a limited perspective. Use a combination of observational and scored assessments to understand and report on overall student performance.

## Components

### Observational Assessment Recording Sheet

In kindergarten, every module has an Observational Assessment Recording Sheet. This sheet lists the module's Achievement Descriptors, or ADs. Record often enough so that you can use your observational assessments to inform your understanding of student performance.

The first page of each lesson shows a picture of the module recording sheet. Highlighting on the picture indicates which of the module's ADs are the focus of the lesson.

Observational Assessment Recording Sheet		Student Name _____
Grade K Module 2 Two- and Three-Dimensional Shapes		
Achievement Descriptors	Dates and Details of Observations	
K.Mod2.AD1*	Describe objects in the environment by using names of shapes.	
K.Mod2.AD2	Describe shapes and objects in the world by using position words such as above, below, beside, in front of, behind, and next to.	
K.Mod2.AD3	Name and identify shapes regardless of their orientation or overall size.	
K.Mod2.AD4	Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").	
K.Mod2.AD5	Analyze and describe two- and three-dimensional shapes, in different sizes and orientations, by using informal language to describe them (e.g., number of sides and corners or having sides of equal length).	
K.Mod2.AD6	Compare two- and three-dimensional shapes, in different sizes and orientations, by using informal language to describe their similarities and differences (e.g., number of sides and corners, other attributes).	
K.Mod2.AD7	Construct flat and solid shapes by using tactile materials (e.g., sticks and clay balls).	
K.Mod2.AD8*	Draw flat shapes with the intention to represent their parts and other attributes.	
*This AD is not assessed on the Module Assessment.		PP Partially Proficient P Proficient HP Highly Proficient
Notes		

Occasionally, lessons focus on ADs from earlier modules. These lessons show the module's recording sheet without highlighting. Although they are not the focus, you are still likely to observe the module's ADs in these lessons.

Within the lesson itself, a box in the margin indicates when the opportunity to observe performance related to the achievement descriptors is likely to arise. However, you should use the recording sheet to make notes about student performance during any part of the lesson, including written work on the Problem Set.

## Module Assessments

Typical Module Assessments consist of 3–5 interview-style items that assess proficiency with the major concepts, skills, and applications taught in the module. Module Assessments include the most important content, but they may not assess all the strategies and standards taught in the module. Give this assessment when a student shows inconsistent proficiency over the course of a module based on notes you make using the Observational Assessment Recording Sheet.

Module Assessments provide suggested language for the interview-style items. As needed, and if possible, consider assessing students in their home language. When students are unable to answer or they respond incorrectly to the first few questions, end the assessment, and retry after more instruction.

You may find it useful to score Module Assessments.

## Achievement Descriptors

Achievement Descriptors, or ADs, are standards-aligned descriptions of what students should know and be able to do after having completed the lessons in a given module. ADs combine content from different standards to concisely communicate the work of the module. The ADs describe proficiency for the module, and every module has a unique set of ADs.

## Proficiency Indicators

Each AD has its own set of proficiency indicators. Proficiency indicators are more detailed than ADs and help you analyze and evaluate what you see or hear in the classroom as well as what you see in students' written work. Each AD has up to three indicators that align with a category of proficiency: Partially Proficient, Proficient, or Highly Proficient. Use the indicators

to determine whether a student's performance related to a given AD shows partial proficiency, proficiency, or high proficiency.

## Proficiency Levels

On assessments, student performance aligns with one of four categories: Not Yet Proficient, Partially Proficient, Proficient, or Highly Proficient. A description of each category follows.

### Not Yet Proficient

Performance shows that either the student is not progressing toward proficiency with grade-level expectations or there is insufficient evidence to determine the level of proficiency. At the module level, the student demonstrates

- little to no use of advanced strategies and limited use of lower-level strategies,
- little to no awareness of appropriate and familiar applications,
- little to no ability to construct viable arguments that support the student's reasoning, and
- little to no recognition and selection of any appropriate method.

Performance indicates that the student likely needs support to fully meet expectations.

### Partially Proficient

Performance shows some progress toward proficiency with grade-level expectations.

At the module level, the student demonstrates partial proficiency through

- the limited use of advanced strategies or the occasional use of lower-level strategies,
- an adequate awareness of appropriate and familiar applications,
- an ability to construct partially viable arguments (or a limited ability to construct viable arguments) that minimally support the student's reasoning, and
- a limited recognition and selection of efficient methods, or an occasional recognition and selection of less efficient methods.

Performance indicates that the student may require further development or support to fully meet the expectations of the grade level.

**Proficient**

Performance shows progress toward proficiency with grade-level expectations.

At the module level, the student demonstrates proficiency through

- the occasional use of advanced strategies or the regular use of lower-level strategies,
- an awareness of a variety of new applications,
- an ability to construct viable arguments that adequately support the student's reasoning,
- an ability to moderately critique the reasoning of others, and
- an occasional recognition and selection of the most efficient methods or a consistent recognition and selection of less efficient methods.

**Highly Proficient**

Performance shows advanced progress toward proficiency with the content of the grade-level expectations.

At the module level, the student demonstrates high proficiency through

- the regular use of advanced strategies,
- an awareness of—and an ability to work within—a broad variety of new applications,
- an ability to clearly and concisely construct viable arguments that fully support the student's reasoning and to thoroughly critique the reasoning of others, and
- a consistent recognition and selection of the most efficient methods.

**Proficiency Over Time**

Because some standards are not completely covered over the course of a single module, Achievement Descriptors in several different modules may align with the same standard. Do not expect students to achieve full proficiency with the standard until you teach all of the modules that include related ADs. Also, students are expected to be fluent by the end of the year, although they may achieve fluency at different points during the year.

## Scoring and Grading

You may find it useful to score Module Assessments. Consider using the following guidelines. Give

- 1 point when the student shows evidence of being not yet proficient,
- 2 points when the student shows evidence of being partially proficient,
- 3 points when the student shows evidence of being proficient, and
- 4 points when the student shows evidence of being highly proficient.

As needed, look at the ADs and proficiency indicators for examples of the type of work that corresponds to each level of proficiency. If possible, work with grade-level colleagues to standardize the number of points different types of responses earn. In conjunction with the recording sheet you completed for each student, use these scores to grade students' overall proficiency.





# Plan to Teach

## Study a Module

Begin your planning process by familiarizing yourself with the module's story. Use the following guide to help you review the module as a whole.

### Preview the Learning

Module Resource	Guiding Questions
Read the Overview to preview the learning.	<ul style="list-style-type: none"><li>• What big ideas does the module teach?</li><li>• How do the topic titles relate to the module title? What does that tell me about how the concepts are organized?</li><li>• Which strategies, models, and language will my students use?</li></ul>
Read the Before This Module and After This Module sections in the Overview to understand the coherence between modules.	<ul style="list-style-type: none"><li>• What concepts, skills, and language can I expect my students to bring to the new learning?</li><li>• How does the work of this module support learning in future modules?</li></ul>

### Investigate the Development of Learning

Module Resource	Guiding Questions
Review the Contents to see the module's structure.	<ul style="list-style-type: none"><li>• How do the lesson objectives relate to the topic titles? What does that tell me about the development of learning across the module?</li><li>• How many lessons are in the module and in each topic?</li><li>• How does my school's calendar work with the number of instructional days?</li></ul>
Read the Why section for insight into the module's instructional design and pedagogical choices.	<ul style="list-style-type: none"><li>• What does the Why section tell me about the module's design?</li><li>• In what ways does this information change the way I'm thinking about the content, sequence, models, strategies, and language in this module?</li></ul>

Module Resource	Guiding Questions
Read the Achievement Descriptors: Overview section to get a quick sense of the major learning in the module.	<ul style="list-style-type: none"> <li>• What are the Achievement Descriptors for this module?</li> <li>• How do the Achievement Descriptors relate to the content standards?</li> </ul>
Preview the additional module resources: <ul style="list-style-type: none"> <li>• Terminology</li> <li>• Math Past</li> <li>• Materials</li> </ul>	<ul style="list-style-type: none"> <li>• What familiar terminology will I reinforce as I teach the module? What new terminology will I introduce as I teach the module?</li> <li>• How does the Math Past provide human and/or historical context for the learning of this module?</li> <li>• What materials do I need to gather for the lessons in this module? What do I need to prepare in advance?</li> </ul>

## Explore the Assessment

Module Resource	Guiding Questions
Read the Achievement Descriptors: Proficiency Indicators section to understand what proficiency looks like in this module.	<ul style="list-style-type: none"> <li>• What does proficiency with the content of this module look like?</li> <li>• How will I use this information to evaluate student performance?</li> </ul>
Preview the Module Assessment to see one way that students may be assessed on their learning.	<ul style="list-style-type: none"> <li>• Which content appears on the Module Assessment?</li> <li>• How does the Module Assessment assess the learning in this module?</li> <li>• How do the models, strategies, and language of the module appear in this assessment?</li> <li>• What variety of strategies might students employ?</li> <li>• How do the assessment items add to my understanding of the mathematics this module develops?</li> </ul>
Review the Observational Assessment Recording Sheet to see what you might expect to see in the classroom as a result of the instruction in this module.	<ul style="list-style-type: none"> <li>• Which content appears on the Observational Assessment Recording Sheet?</li> <li>• How will I record and assess the learning in this module?</li> <li>• How do the indicators add to my understanding of the mathematics this module develops?</li> </ul>

## Study a Topic

Within a module, small groups of related lessons are organized into topics. Plan by topic. Use the following guide to help you review the whole topic.

### Preview the Learning

Topic Resource	Guiding Questions
Read the Topic Overview to understand the scope of the topic.	<ul style="list-style-type: none"> <li>• What big ideas does the topic teach?</li> <li>• What strategies, models, and language will students use?</li> <li>• Are there any optional lessons? How do these lessons relate to the major learning of the topic or module?</li> <li>• What information is new to me?</li> <li>• In what ways does this information change the way I'm thinking about the content, sequence, models, strategies, and language in this topic?</li> </ul>
Read the Family Math found in the student <i>Learn</i> book.	<ul style="list-style-type: none"> <li>• How does this foreshadow learning for students and communicate big ideas to students and their families?</li> </ul>

### Investigate the Development of Learning

Topic Resource	Guiding Questions
Review the Progression of Lessons to get a sense of how the learning develops.	<ul style="list-style-type: none"> <li>• What will students learn in each lesson?</li> <li>• How do the lessons relate to one another?</li> <li>• How do strategies and models evolve through the topic?</li> </ul>

### Explore the Assessment

Topic Resource	Guiding Questions
Review the Observational Assessment Recording Sheet and/or Module Assessment.	<ul style="list-style-type: none"> <li>• How does the Observational Assessment Recording Sheet reflect the learning across the lessons in this topic?</li> <li>• How does the Module Assessment reflect the learning across the lessons in this topic?</li> </ul>

## Study a Lesson

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.

### Preview the Learning

Lesson Resource	Guiding Questions
Read the Lesson Overview: <ul style="list-style-type: none"> <li>• Lesson Objective</li> <li>• Lesson at a Glance</li> <li>• Key Question(s)</li> <li>• Achievement Descriptor(s)</li> <li>• Observational Assessment Recording Sheet</li> </ul>	<ul style="list-style-type: none"> <li>• What will students do during the lesson?</li> <li>• What big ideas, understandings, or skills will students have by the end of the lesson?</li> <li>• How is this reflected in the Observational Assessment Recording Sheet?</li> </ul>

### Investigate the Development of Learning

Lesson Resource	Guiding Questions
Read the lesson: Fluency.	<ul style="list-style-type: none"> <li>• What is the purpose of the Fluency?</li> <li>• Does the Fluency offer distributed practice, or does it build toward the current lesson through language, models, and strategies?</li> <li>• Given my students' strengths and areas of need, what modifications might I make to support different populations?</li> <li>• Which activities will benefit students most when used directly before the rest of the lesson? Which activities might I use at another time of day?</li> </ul>
Read the lesson: Launch.	<ul style="list-style-type: none"> <li>• What is the purpose of the Launch?</li> <li>• How will I capitalize on the Launch to activate student thinking, pique student interest, and establish a purpose for today's learning?</li> </ul>

Lesson Resource	Guiding Questions
Read the lesson: Learn.	<ul style="list-style-type: none"> <li>• How do the Learn segments build?</li> <li>• What instructional routines or facilitation suggestions support student engagement?</li> <li>• Where are opportunities for students to share their thinking and for me to facilitate various forms of discussion? Where is dedicated time and space for making connections?</li> <li>• Which parts of the lesson might my students find difficult? How will I support students during these parts?</li> <li>• How will I challenge students who demonstrate proficiency?</li> <li>• Where do I anticipate intentionally engaging students in the Standards for Mathematical Practice?</li> <li>• Which questions, phrasing, or terminology will I use from the sample dialogue to support coherence or precision?</li> <li>• Which ideas from the notes in the margin do I expect to use?</li> <li>• Which facilitation suggestions will I customize to meet the needs of my students?</li> </ul>
Read the lesson: Land.	<ul style="list-style-type: none"> <li>• What takeaways do I plan to make clear during the Debrief?</li> <li>• What terminology do I expect students to use? How will I support them in using it?</li> <li>• How will I support a range of reading abilities in my class?</li> <li>• What misconceptions do I anticipate, and how will I guide students if those misconceptions arise?</li> <li>• How might I assess student learning during the Debrief?</li> </ul>

Lesson Resource	Guiding Questions
Do the math: Fluency, Classwork, Problem Set.	<ul style="list-style-type: none"> <li>• What are the ways I anticipate my students might complete the tasks and answer the questions?</li> <li>• What questions assess student thinking? What questions advance student thinking?</li> <li>• Which problems on the Problem Set will I ask students to complete?</li> <li>• How will I customize the Problem Set to ensure that all students experience a simple-to-complex progression?</li> <li>• What errors or misconceptions do I anticipate?</li> <li>• Will there be barriers as students interact with text? How might I reduce those barriers?</li> </ul>
Explore: Slides	<ul style="list-style-type: none"> <li>• What content is included on the slides?</li> <li>• Do the slides have interactive components? If so, how do they function? How will I plan on using them?</li> <li>• Are there any slides I should plan on sending to student devices?</li> <li>• Do I plan to use all of these slides? Are there any slides I should hide?</li> </ul>

## Prepare for Instruction

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. The following recommendations will help you make strategic decisions as you prepare to teach with your students in mind.

Task	Guiding Questions
Anticipate, prioritize, and customize.	<ul style="list-style-type: none"><li>• Considering the suggestions provided in the margin boxes, the language of the lesson, and the needs of my students, how will I customize the lesson?</li><li>• Considering both my allotted instructional time and the needs of my students, do I need to customize the lesson?</li><li>• How much time will students spend on the Problem Set? What grouping structures will support students?</li></ul>
Prepare the environment.	<ul style="list-style-type: none"><li>• What tools or materials will I need for facilitating this lesson? Do I need to prepare sentence frames or an anchor chart in advance?</li><li>• What tools or materials might my students need? How can I organize them to best facilitate engagement and learning? How will I encourage my students to appropriately select their own tools?</li><li>• Do I need to make any adjustments to my room arrangement for this lesson either to capitalize on space in the room or to maximize student collaboration?</li></ul>



