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Grade 2 Pacing and Preparation Guide

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This guide includes three components. The first section, *Preparing to Teach a Module*, outlines a process for understanding the instructional sequences of the module—a vital foundation for making decisions about pacing. Next, *Preparing to Teach a Lesson* outlines a process for customizing a lesson to fit the daily time constraints and unique needs of the students.

The final section of this guide, *Suggestions for Consolidation or Omissions*, is intended to provide guidance in the event that educators need to reduce the number of days in the 180-day curriculum. Keep in mind that Grade 2 is comprised of 152 daily lessons. The remaining 28 instructional days are devoted to the 14 assessments. Assessments are typically allotted half a day to administer the assessment, half a day to return and review the assessment, and one day for remediation or enrichment. The 14 embedded remediation/enrichment days are intended to provide some built-in flexibility for teachers. However, in the event that even more flexibility is needed, these suggestions for consolidation or omissions will free up additional days. These suggestions should not be viewed as a mandate to omit or consolidate lessons, but as guidance for how to do so wisely when the need arises.

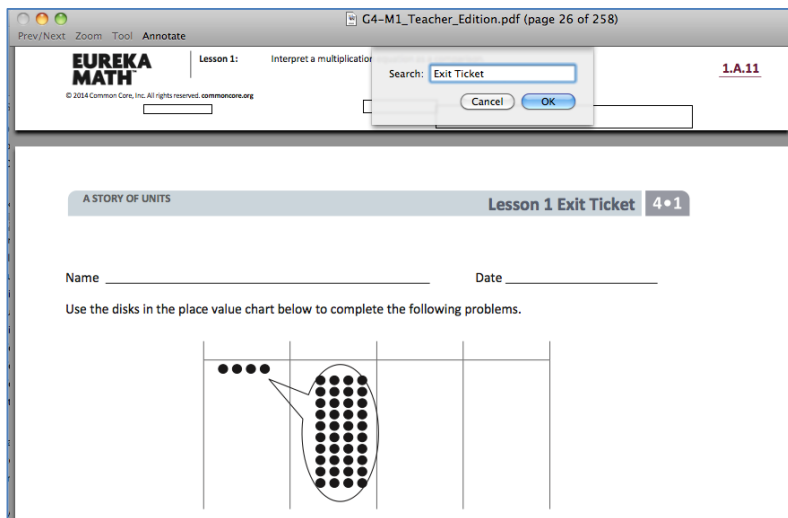
Preparing to Teach a Module

Preparation of lessons will be more effective and efficient if there has been an adequate analysis of the module first. Each module in *A Story of Units* can be compared to a chapter in a book. How is the module moving the plot, the mathematics, forward? What new learning is taking place? How are the topics and objectives building on one another? The following is a suggested process for preparing to teach a module.

Step 1: Get a preview of the plot.

- A: Read the Table of Contents. At a high level, what is the plot of the module? How does the story develop across the topics?
- B: Preview the module's Exit Tickets¹ to see the trajectory of the module's mathematics and the nature of the work students are expected to be able to do.

Note: When studying a PDF file, enter "Exit Ticket" into the search feature to navigate from one Exit Ticket to the next.



Step 2: Dig into the details.

- A: Dig into a careful reading of the Module Overview. While reading the narrative, liberally reference the lessons and Topic Overviews to clarify the meaning of the text—the lessons demonstrate the strategies, show how to use the models, clarify vocabulary, and build understanding of concepts.

¹ A more in-depth preview can be done by searching the Problem Sets rather than the Exit Tickets. Furthermore, this same process can be used to preview the coherence or flow of any component of the curriculum, such as Fluency Practice or Application Problems.

Consider searching the video gallery on *Eureka Math's* website to watch demonstrations of the use of models and other teaching techniques.

- B: Having thoroughly investigated the Module Overview, read through the chart entitled Overview of Module Topics and Lesson Objectives to further discern the plot of the module. How do the topics flow and tell a coherent story? How do the objectives move from simple to complex?

Step 3: Summarize the story.

Complete the Mid- and End-of-Module Assessments. Use the strategies and models presented in the module to explain the thinking involved. Again, liberally reference the work done in the lessons to see how students who are learning with the curriculum might respond.

Preparing to Teach a Lesson

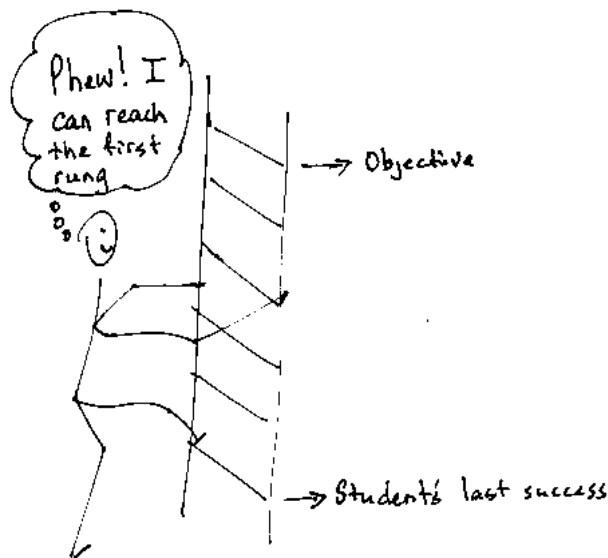
A three-step process is suggested to prepare a lesson. It is understood that at times teachers may need to make adjustments (customizations) to lessons in order to fit the time constraints and unique needs of their students. The recommended planning process is outlined below. Note: The ladder of Step 2 is a metaphor for the teaching sequence. The sequence can be seen not only at the macro level in the role that this lesson plays in the overall story, but also at the lesson level, where each rung in the ladder represents the next step in understanding or the next skill needed to reach the objective. To reach the objective, or the top of the ladder, all students must be able to access the first rung and each successive rung.

Step 1: Discern the plot.

- A: Briefly review the module’s Table of Contents, recalling the overall story of the module and analyzing the role of this lesson in the module.
- B: Read the Topic Overview related to the lesson, and then review the Problem Set and Exit Ticket of each lesson in the topic.
- C: Review the assessment following the topic, keeping in mind that assessments can usually be found midway through the module and at the end of the module.

Step 2: Find the ladder.

- A: Complete the lesson’s Problem Set.
- B: Analyze and write notes on the new complexities of each problem as well as the sequences and progressions throughout problems (e.g., pictorial to abstract, smaller to larger numbers, single- to multi-step problems). The new complexities are the rungs of the ladder.
- C: Anticipate where students might struggle, and write a note about the potential cause of the struggle.
- D: Answer the Student Debrief questions, always anticipating how students will respond.



Step 3: Hone the lesson.

At times, the lesson and Problem Set are appropriate for all students and the day’s schedule. At others, they may need customizing. If the decision is to customize based on either the needs of students or scheduling constraints, a suggestion is to decide upon and designate “Must Do” and “Could Do” problems.

- A: Select “Must Do” problems from the Problem Set that meet the objective and provide a coherent experience for students; reference the ladder. The expectation is that the majority of the class will complete the “Must Do” problems within the allocated time. While choosing the “Must Do” problems, keep in mind the need for a balance of calculations, various word problem types², and work at both the pictorial and abstract levels.
- B: “Must Do” problems might also include remedial work as necessary for the whole class, a small group, or individual students. Depending on anticipated difficulties, those problems might take different forms as shown in the chart below.

Anticipated Difficulty	“Must Do” Customization Suggestion
The first problem of the Problem Set is too challenging.	Write a short sequence of problems on the board that provides a ladder to Problem 1. Direct the class or small group to complete those first problems to empower them to begin the Problem Set. Consider labeling these problems “Zero Problems” since they are done prior to Problem 1.
There is too big of a jump in complexity between two problems.	Provide a problem or set of problems that creates a bridge between the two problems. Label them with the number of the problem they follow. For example, if the challenging jump is between Problems 2 and 3, consider labeling the bridging problems “Extra 2s.”
Students lack fluency or foundational skills necessary for the lesson.	Before beginning the Problem Set, do a quick, engaging fluency exercise, such as a Rapid White Board Exchange, Counting Exercise, or Sprint. Before beginning any fluency activity for the first time, assess that students are poised for success with the easiest problem in the set.
More work is needed at the concrete or pictorial level.	Provide manipulatives or the opportunity to draw solution strategies. Especially in Kindergarten, at times the Problem Set or pencil and paper aspect might be completely excluded, allowing students to simply work with materials.
More work is needed at the abstract level.	Hone the Problem Set to reduce the amount of drawing as appropriate for certain students or the whole class.

- C: “Could Do” problems are for students who work with greater fluency and understanding and can, therefore, complete more work within a given time frame. Adjust the Exit Ticket and Homework to

² See the Progression documents “K, Counting and Cardinality” and “K–5, Operations and Algebraic Thinking” pp. 9 and 23, respectively.

reflect the “Must Do” problems or to address scheduling constraints.

- D: At times, a particularly tricky problem might be designated as a “Challenge!” problem. This can be motivating, especially for advanced students. Consider creating the opportunity for students to share their “Challenge!” solutions with the class at a weekly session or on video.
- E: Consider how to best use the vignettes of the Concept Development section of the lesson. Read through the vignettes, and highlight selected parts to be included in the delivery of instruction so that students can be independently successful on the assigned task.
- F: Pay close attention to the questions chosen for the Student Debrief. Regularly ask students, “What was the lesson’s learning goal today?” Help them make observations, draw connections, and articulate the goal.
- G: Adjust the balance of the lesson’s components as necessary to support the work students are expected to do in the Problem Set or task (e.g., the Fluency Practice, Exit Ticket, Homework, Application Problem).

Suggestions for Consolidation or Omissions

Module 1

It is not recommended to modify or omit any lessons in Module 1. The concepts learned in this module serve as the foundation for all other lessons in Grade 2.

Module 2

If pacing is a challenge, consider the following modifications and omissions. If students show conceptual understanding of iterated length units in Lesson 1, consider consolidating Lessons 2 and 3. If consolidated, students can apply the “mark and move forward” strategy to making a ruler.

Consider consolidating Lesson 4, which provides practice measuring the lengths of various objects using rulers and meter sticks, with Lesson 5, if a chart of benchmarks is created while measuring. Lesson 8 could be omitted unless students demonstrate a need to use the number line to solve addition and subtraction problems.

Module 3

If pacing is a challenge, consider the following modifications and omissions. Omit the Application Problem in Lesson 7 in order to give more time to practice the multiple segments in the Concept Development.

Reduce the Concept Development of Lesson 9 by omitting the empty number line. Instead, have students draw the bills used to count up from one amount to the next as was done in Lesson 3 but with bundles. If the empty number line is omitted in Lesson 9, then the component following the Problem Set of Lesson 13, “Estimating Numbers on the Empty Number Line,” should also be omitted along with related questions from the Debrief and Problem 2 of the Exit Ticket. Consider using the empty number line as an extension.

Omit Lesson 10, and use it instead as an extension for early finishers or as a center activity during a different time of day (e.g., RTI time, economics, morning work, or problem of the week).

Reduce Lesson 11 by omitting the use of Dienes blocks in the Concept Development. Distribute bills instead. Omit the discussion about the difference between modeling with the blocks and the bills. Have students only model with bills and place value disks in the Problem Set.

Omit, or move to morning work, the Application Problems in Lessons 12 and 14 to allow more time for the Concept Developments. Consolidate Lessons 17 and 18, or perhaps use Lesson 18 as an activity for centers to allow students continued practice comparing numbers when represented in different forms.

Consider using Lesson 21 as either a center activity or morning work.

Module 4

If pacing is a challenge, consider the following modifications and omissions. Consider pacing more quickly the lessons that follow Topic A in Module 4 as students readily grasp renaming different hundreds, tens, and ones. Spend additional instructional minutes with word problems, unknowns in different places (e.g., $27 + \underline{\quad} = 350$ or $281 = \underline{\quad} - 99$), and mental math. Note that this same adjustment in pacing can also be made in looking ahead to the lessons that follow Topic A in Module 5.

Consider omitting Lessons 29 and 30. Instead, introduce the concept of “Totals Below” in Lesson 21. Continue to embed “Totals Below” in the Concept Development or in the Debrief of subsequent lessons.

Module 5

If pacing is a challenge, consider the following modifications. The lessons that follow Topic A in Module 5 could be paced more quickly as students readily grasp the concepts.

Module 6

If pacing is a challenge, consider consolidating Lessons 1 and 2. Omit Lessons 3, 8, and 11. Use Lesson 3’s Problem Set and Homework as a center activity for early finishers or for a future date when additional review homework is needed. Consider moving Lesson 16, which guides students through a tessellation project with 1-inch tiles, to art class.

Module 7

If pacing is a challenge, consider consolidating Lessons 1 and 2, Lessons 3 and 4, Lessons 11 and 12, and Lessons 14 and 15. Omit Lesson 26, or consolidate it with Lesson 25.

Module 8

If pacing is a challenge, consider consolidating Lessons 9 and 10.