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Grade 3 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 3 is comprised of 152 daily lessons. The remaining 28 instructional days are devoted to the 13 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 embedded 10 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.

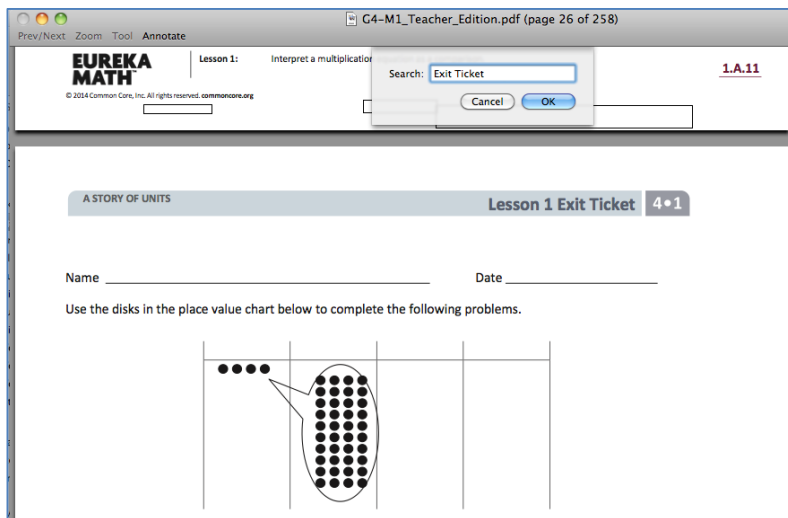
Preparing to Teach a Module

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

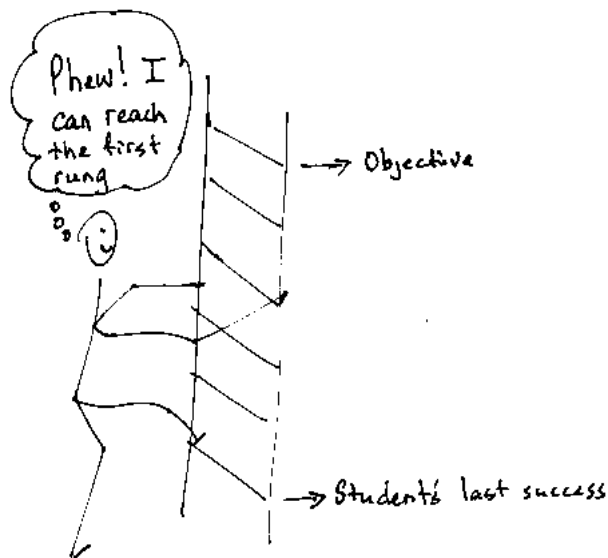
A three-step process is suggested to prepare a lesson. It is understood that at times teachers may need to make adjustments (customizations) to lessons in order to fit the time constraints and unique needs of their students. The recommended planning process is outlined below. Note: The ladder of Step 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

If pacing is a challenge, consider the following modifications and omissions.

Consolidate Lessons 12 and 13, both of which are division lessons sharing the same objective. Include units of 2 and units of 3 in the consolidated lesson.

Omit Lessons 15 and 19. Lesson 15 uses the tape diagram to provide a new perspective on the commutative property, a concept students have studied since Lesson 7. Lesson 19 introduces the significant complexity of the distributive property with division. The concepts from both lessons are reinforced within Module 3.

Module 2

If pacing is a challenge, consider the following modifications and omissions.

Omit Lesson 1. Prior to Lesson 2, use a stopwatch to time different activities such as lining up or moving to the meeting area of the classroom. Discuss the continuity of time. Reduce Lesson 2 by replacing the Minute Counting fluency with an activity in which students draw and label 14-centimeter number lines with tick marks at every centimeter in preparation for the Concept Development component of the lesson.

Omit Lesson 4, the first of two consecutive problem solving lessons involving time. Take note of the word problem analysis it provides, and consider embedding that work into the delivery of Lesson 5.

Consolidate Lessons 15 and 16. Within the lesson that results, include some problems that require regrouping once to add and some problems that require regrouping twice.

Consolidate Lessons 18 and 19. Within the lesson that results, include some problems that require regrouping once to subtract and some problems that require regrouping twice.

Omit Lesson 20. While it engages students in a study of estimation and provides practice with reasoning about the relationships between quantities, the lesson does not present new skills.

Module 3

If pacing is a challenge, consider the following modifications and omissions.

Omit Lessons 6 and 10. Both lessons involve using the distributive property with multiplication and division, a recurring objective in Module 3. Within later distributive property lessons, incorporate units of 6 and 7.

Omit Lesson 11, a problem solving lesson involving multiplication and division. Lesson 11 shares an objective with Lesson 15 and is also similar to Lesson 7.

Omit Lesson 13. Study its essential understandings, and embed them into the delivery of Lesson 14's Concept Development. Modify Lesson 14 by omitting Part 1 of the Concept Development, a part which relies on the foundation of Lesson 13.

Module 4

If pacing is a challenge, consider the following modifications and omissions.

Consolidate Lessons 2 and 3, both of which involve measuring and comparing area. From Lesson 3, omit the use of square centimeter tiles and the Application Problem. Have students establish square inches as units, and then tile with them as a strategy to measure area.

Consider omitting Lesson 9, which reviews previously learned skills. If omitting, be sure that students are ready to transition toward more complex practice.

Omit Lessons 15 and 16. These lessons guide students through a project involving floor plans. Skip the application of area that these lessons provide.

Module 5

If pacing is a challenge, consider the following modifications and omissions.

Omit Lesson 3. Lesson 3's objective is similar to Lesson 2's. The difference is a shift from concrete to pictorial. Students will have exposure to extensive pictorial practice throughout the module.

Omit Lesson 4. Although Lesson 4 is an exploratory lesson that affords students the opportunity to synthesize their learning, no new material is presented.

Consolidate Lessons 10 and 11, both of which have nearly identical objectives and provide practice comparing unit fractions pictorially. Within the lesson that results, incorporate a variety of models into practice.

Omit Lesson 13. Lesson 13 provides practice with concepts and skills taught in the three preceding lessons. Although this lesson deepens practice, no new material is presented.

Omit Lesson 19. Lesson 19, designated as an optional lesson in the teaching sequence, provides practice with concepts and skills taught in the five preceding lessons.

Omit Lesson 20, an equivalent fractions lesson. The seven subsequent lessons in Topic E provide practice that is more targeted toward specific understandings about equivalent fractions.

Consider omitting Lesson 25 since its content is embedded into the work of prior lessons. Ensure that students have practiced counting and labeling whole number fractions as part of their work with fractions on the number line.

Module 6

If pacing is a challenge, consider the following modifications and omissions.

Omit Lesson 9, a problem solving lesson involving categorical and measurement data. Be sure to embed problem solving practice with both types of data into prior lessons.

Module 7

If pacing is a challenge, consider the following modifications and omissions.

Move Lessons 8 and 9 to art class or to another time of day. At this level, the use of tangrams is quite similar to that of Grade 2.

Omit Lesson 11. Tessellating helps students understand that perimeter is not just a property of shapes with straight sides. Lesson 16 revisits this idea.

Omit Lesson 22. This lesson culminates Topic D by having students record data collected from Lessons 20 and 21 on a line plot. Although it deepens understanding of concepts explored in earlier lessons, no new material is presented.

Consider omitting Lessons 24–27, which guide students through a multi-day art project involving perimeter and area. If omitting, simply skip this opportunity for application.

Omit Lessons 31–34, which provide a review of important Grade 3 material including fluency and fractions. Be sure, however, to notice the resources for summer practice included in Lesson 34.