

Math in Focus™: Theory and Practice

Volume 3

Adopting a new program that matches the Common Core State Standards for Mathematics brings many successes as well as some challenges. *Math in Focus™: Singapore Math by Marshall Cavendish* offers support to help build students' capacity in mathematics and helps to close the gap between what they know and what they need to learn.

During our *Math in Focus* mid-year professional development days, teachers, coaches and administrators ask:

- Is there a pacing guide for *Math in Focus*?
- My students are missing so many of the prerequisite skills/processes for this chapter in *Math in Focus*, how will I be able to teach everything this year?
- Our current district/state assessment covers some topics that don't appear until much later in *Math in Focus* and I'm afraid I won't get to them. Can you suggest ways to cover the material?

In this edition of *Math in Focus: Theory and Practice*, we will address the issue of pacing the curriculum throughout the year (or remainder of the year) to cover the standards and allow students to build mathematical knowledge.

Pacing Within the *Math in Focus* Curriculum: In Theory

Because *Math in Focus* was the model for the writing of the Common Core State Standards for Mathematics (CCSSM), its chapters and lessons reflect the focus, coherence and rigor that is expected in the new standards. Its chapters and lessons are purposeful, with a deliberate unfolding of concepts over a multi-day period. The suggested pacing in each of the Chapter Planning Guides should allow enough time for students to develop concepts at a deeper cognitive level and thus be able to apply mathematics in novel, or new, situations.

Each year, students will learn new concepts that are built upon and extend previous learning. In this way, mastery of concepts is achieved and students can continue to apply and extend their understanding, instead of consistently reviewing concepts at the same level.

There are extra days built into the pacing of *Math in Focus* so that teachers can review particularly difficult concepts and/or pose problems to extend student learning.





Pacing Within the *Math in Focus* Curriculum: In Practice

Remember, *Math in Focus* follows the current standards that may be quite different from the standards your school/district has been using.

You may be facing one of two issues:

- Content is now taught at an earlier grade level than previous years and your current students have missed the opportunity to learn this content.
- Students know the concepts at a procedural level and now need to build conceptual understanding

Currently, there is not a pacing guide for *Math in Focus* beyond the Chapter Planning Guides. We have been asked to create such a document but each district, school, classroom and student is different in terms of what content is needed to build student understanding. Instead of a 'one size fits all' approach, we offer recommendations for teachers to work with students to fill these gaps. The transition year(s) looks different for each classroom/school/district.

The Transition Guide, online Transition Resource Map and online resources from previous grade levels are provided to help close the gaps that students have and help build understanding of concepts.

Pacing the curriculum to cover your grade level standards includes knowing which previous grade level tasks to choose, knowing how much time to give to these pre-requisite tasks, knowing how to scaffold current lessons to close the gaps, and covering multiple concepts at once.

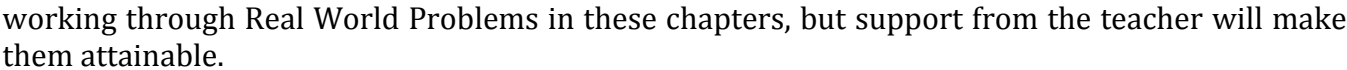
Choosing previous grade level tasks

Recall Prior Knowledge and Quick Check are an important first step in determining how soon to move into a lesson (pacing of each lesson). During the Recall Prior Knowledge, students devote a half-day or a whole day to tasks and discussion to help bring knowledge to the front of the brain. This discussion should be interactive and include concrete materials and/or pictorial models as well as questioning by the teacher. It is not a surface level discussion, but one where students are asked to explain their understanding of this prerequisite content. Then, the Pre-Test can be given to pinpoint any specific gaps in student knowledge.

Once scored, the Pre-Test can be used in conjunction with the Transition Guide to find an entry point into the content. The Transition Guide describes the mathematics and the visuals used to develop understanding of content across the grade levels. Teachers use this information to find the grade level and chapter that fit the students' current levels. Using Think Central to access previous grade level materials, teachers can meet their students' needs.

The scored Pre-Test can also be used with the online Transition Resource Map to find appropriate materials for re-teaching. Missed items on the Pre-Test are hyperlinked to the previous grade level chapter where the content is taught. It is further hyperlinked to Reteach and Extra Practice pages from that lesson for teachers to use to build understanding.





Even using all of these suggestions, you may still not cover every concept at your grade level. However, be rest assured that your students have developed a much deeper understanding of the content that will serve them well moving forward. Making vertical team planning part of you end-of-year tasks will help teachers know where future instruction should begin. One must remember that though transition is needed, the goal for the students is to move forward in grade level content at a deep cognitive level.

If you have ideas to share on pacing, we would love to hear from you!

Take Care,
The *Math in Focus* Specialist Team

