PLANNING TIPS

In this section, many of the components of *MathLinks*: Grade 6 are referenced. Use this chart to locate them.

LOCATIONS OF THE FEATURES REFERENCED IN THIS SECTION

Print	Portal
Teacher Edition • Unit Planning Information (TE-UPI) ✓ Unit Planning ✓ Planning for Different Users ✓ Teaching Tips • Annotated Answer Key, including Student Packet and Lesson Notes (TE-AK) ✓ Getting Ready (beginning of each lesson) ✓ Review (after the last lesson) **Program Information** (PI) • About the Program • Features to Engage Students • Assessment Options	**Portal Landing Page** (LP) • *MathLinks* Skill Boosters • *MathLinks* Puzzles and Games **Grade 6 Unit Resources** → <Unit number> (UR) • Teacher Edition (TE) ✓ Slide Decks • Student Packet (SP) • Other Resources ✓ For Adults (OR-A) ✓ For Students (OR-S) **Grade 6 General Resources** (GR) • Program Information (PI) • Getting Started Videos and Resources • Pre-Assessments • Activity Routines (The *MathLinks* Rubric)

PLANNING A YEAR

MathLinks: Grade 6 consists of just 33 lessons in 10 units, which comprehensively develop all the Common Core Mathematics Content and Practice Standards for the grade. These lessons take about 100 class hours of instruction, leaving ample time for review, assessment, Other Resources in the Teacher Portal, and other school obligations. Thus, a typical 180-day school year of *MathLinks* may break down like this.

Component/Activity	Estimated Class Hours
MathLinks lessons (33 lessons in 10 units of study, about 3 class hours per lesson)	100
Review activities in Student Packets (3 class hours per unit)	30
Unit Quizzes (1 class hour per unit)	10
Other Resources, Skill Boosters, Puzzles and Games	30
School obligations (assemblies, field trips, snow days, mandated assessments, etc.)	10
TOTAL	**180**

When planning a *MathLinks* year, use a school calendar and note the start and "hard stop" dates of all 10 units before the school year begins. Pay attention to district and statewide testing dates to ensure the completion of the 33 lessons in a timely fashion. The suggested number of class hours for lessons, reviews, and quizzes is summarized here. These estimates do not include differentiation (e.g. intervention/enrichment) or school activities.

Unit Domain	1 SP	2 NS	3 RP	4 NS	5 RP	6 EE	7 EE	8 EE	9 G	10 NS/G
Class hours	13-14	12-14	15-17	14-16	12-13	12-14	12-14	13-15	14-16	14-15
	Ratio and Proportional Relationships			Number Sense		Expressions and Equations			Statistics and Probability	Geometry

PLANNING YOUR FIRST UNIT

Here are some tips for getting started with a *MathLinks* unit. Many teachers find it helpful to plan with a partner or grade-level group. And don't forget that Getting Started Videos and Resources are available online (GR) to orient you to the program.

- Begin with an overview of the entire unit. Leaf through the TE-AK, paying close attention to the answer key. This preview helps to understand the nature of the content and the work students will do. Note that many answers are expanded beyond what is expected of students to provide additional support for instruction.

- Preview the Slide Decks (or Slide Deck Alternatives) and Lesson Notes that appear after the corresponding student pages. Look for teacher-guided opportunities to engage students in discussions and collaboration. Grouping suggestions appear at the bottom of pages in diamonds.

CREATING A STUDENT-CENTERED ENVIRONMENT

A student-centered environment requires that students clearly express their mathematical ideas to each other. Teachers should encourage students to politely question and challenge each other. This takes practice and guidance. Some things students may say in a safe, student-centered environment:

- "That doesn't make sense to me. Will you repeat it?"
- "I'm not sure if I understand. Will someone else say it in a different way?"
- "I got something different. What I did was …"
- "I think you forgot to …"

- Look at Unit Planning (TE-UPI) for lesson pacing recommendations. Block the number of days for each lesson. Include details about which pages (or portions of pages) might be appropriate for group work, classwork, independent practice, and homework. Students need not do every problem on every page. Make these instructional decisions based on student needs.

- The Unit Planning page (TE-UPI) also identifies materials needed and activities that require pre-planning. For efficiency, gather and organize all materials (including Reproducibles, which may require cutting up) before starting the unit. Students are often happy to help here.

- Consider the suggestions in the Assessment, Follow-up, and Feedback charts (UR→ OR-A) to determine if students are ready for current work. Lesson-by-lesson diagnostic and intervention ideas are included here. Useful resources cited are Pre-Assessments (GR), Getting Started exercises at the beginning of each lesson (TE-AK), Essential Skills (UR→ OR-S), and Skill Boosters (LP).

- The Student Packet includes Review activities for the current unit and a Spiral Review of previous work. Take a close look at these and allocate time for them, as well as a unit quiz.

- As a unit unfolds, use Journals, Monitor Your Progress, and Reflection to formatively assess growth and unfinished learning, and then Quizzes as a summative assessment.

- Try to stick to your plan. If students struggle on a topic, refer to Assessment, Follow-up and Feedback charts for reteaching ideas. This chart identifies when a topic reappears in the course. Knowing this will help make reteaching or review more efficient.

MANAGING STUDENT PACKETS

Many teachers like to organize (or ask students to organize) Student Packets at the beginning of the year. Since each Student Packet is a different color, it makes sorting and identification easy. SPs are typically packed in sets of 10. Consider putting all SPs of the same color together for quick distribution throughout the year. When an SP is complete, some teachers send them home. Others like to keep them and distribute them again as a make-up assignment for substitutes or prior to a periodic assessment for review.

ONCE YOU'VE GOT THE BASICS DOWN

- Build a vocabulary routine using Student Packets. Important vocabulary words are underlined the first time they appear. This is a good time to stop, discuss precise definitions (located in the back of the SP), and support students as they write their own explanations of the word. While we do not recommend that students complete the Word Bank (pg 0) prior to starting the unit because there is no context for the vocabulary, some teachers like to discuss the vocabulary as an informal pre-assessment of the work ahead.

- As a unit unfolds, use Journals, Monitor Your Progress, Unit Reflection, and Quizzes to assess growth and unfinished learning.

- Incorporate more Activity Routines (GR, PI), such as the *MathLinks* Rubric with rubric-worthy problems (SP). Revisit Features to Engage Students and Assessment Options (PI) for details.

- Explore the Unit Resources (UR→ OR-S) in the Teacher Portal. When time permits, use Math Talks, Nonroutine Problems, Tasks, Projects, or Technology Activities. Some teachers find it helpful to print the pages of interest and insert them into their Teacher Edition as reminders. Others just like to poke around on the portal and see what's available. These resources may also be used at the end of the year to review, extend, and enrich.

- Take a closer look at Teaching Tips (TE-UPI). In particular, Developing Language Skills through *MathLinks* and Enrichment and Challenges for Advanced Users suggest ways to differentiate for a range of learners.

- Create routines for student choice. As examples: (1) Those not quite ready for current work may tackle some Essential Skills from a current unit while others do Nonroutine Problems from a previous one. (2) When students do projects, offer options from different units as they tap into different student interests (e.g. games, heritage, environment, data collection, creating a product, etc.). (3) Puzzles and Games are organized by difficulty. Allow students to select puzzles to challenge themselves.

OPTIONS PRIOR TO HIGH-STAKES TESTING

There is strong evidence that distributed practice increases the retention of mathematical ideas (Nazari and Ebsesbach, 2019). In *MathLinks*, concepts, procedures, and applications are revisited through connections of Big Ideas within lessons and carefully designed Spiral Review. In addition, some concentrated review prior to testing may shore up skills and build student confidence.

- Hold completed Student Packets. Prior to testing, return one or two per day (or ask students to keep a binder for Student Packet storage). Revisit pages or problems not completed or where students struggled.

- Use Tasks that focus on major work. As students complete a Task, use the *MathLinks* Rubric to improve students' abilities to communicate solutions effectively.

Because there is ample time, we hope students and teachers will enjoy digging into lessons and resources in the *MathLinks* Program, finding access and success for more students!