

Want to turn struggling math students into star performers?

Engage them in *Number Worlds* ←

- Built-in flexibility for teachers and students
- Lesson plans make learning easy and fun
- Accurate assessment for correct placement
- Targeted instruction for faster assimilation
- All-inclusive, fully integrated program

For placement tests, sample lessons, and much more . . . visit SRAnumberworlds.com.

SRA Number Worlds is also available for Pre-K–Grade 6



SRA

Making the Difference

1-800-201-7103

Resources and ordering information at SRAonline.com

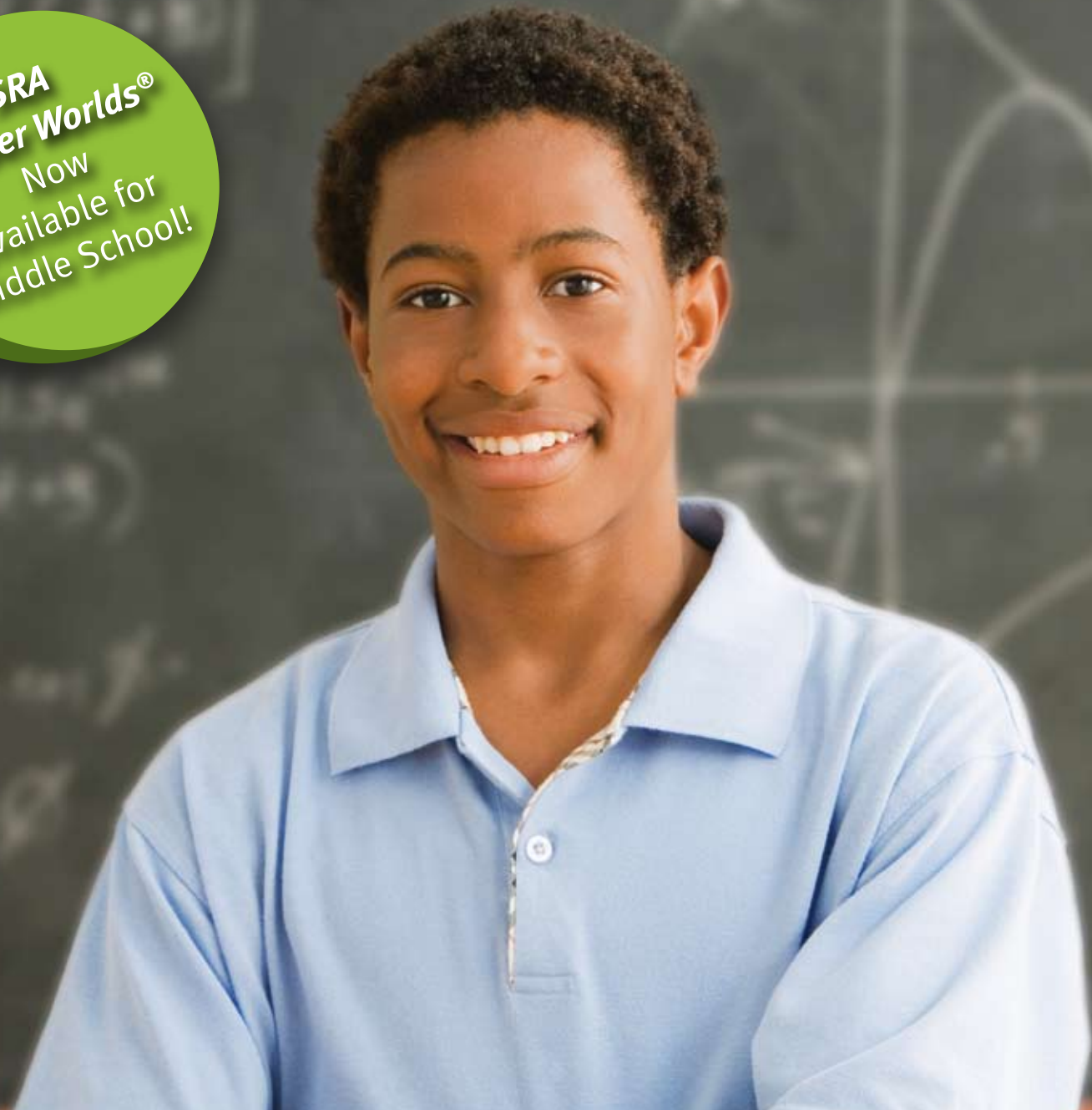
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The McGraw-Hill Companies

McGraw Hill **SRA**

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SRA Number Worlds®
Now available for Middle School!



NUMBER WORLDS®

A powerful program to help teachers improve students' Middle School math skills.



You've seen their faces. To them, you're speaking a foreign language when you discuss math concepts. The fact is, too many students enter Middle School without having a solid math foundation. From the onset, they're destined to struggle and fall behind their peers.

How can you get through to them?

SRA Number Worlds® Middle School intervention math program successfully brings challenged students in Grades 6–8 up to grade level performance.

A complete curriculum of engaging workbooks, games, manipulatives, and software helps you meet each individual student's needs.

Number Worlds' comprehensive **Teacher Editions** provide the background information, lesson plans, and resources for success.

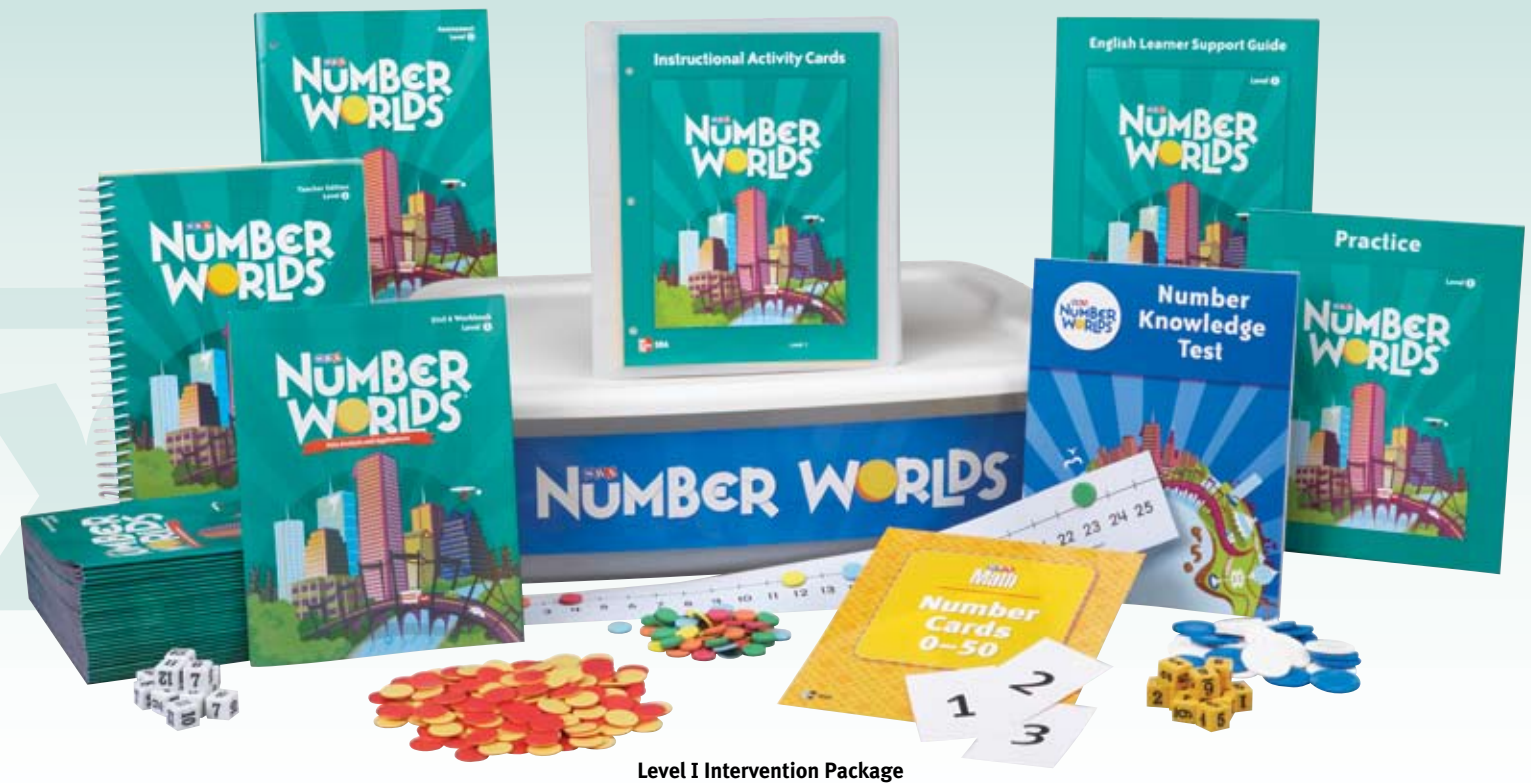
Number Worlds Scope and Sequence

Number Worlds provides instruction for students who are one to two grade levels behind their peers in mathematics. With lessons designed to take 45–60 minutes, it is highly recommended that

intervention students spend at least one hour a day using **Number Worlds**, which can be taught in addition to regular math instruction. The Placement Test combined with the Number Knowledge Test will help you effectively place students in the appropriate level and unit.

Intervention Levels H–J

At Grades 6–8, students may have difficulty with one, two, or many different math concepts. The goal of the **Number Worlds** units is to develop foundational understandings in each concept so that students develop on-level mathematical proficiency. **Number Worlds** builds on students' current level of understanding with six, 4-week intensive units per grade.



Level I Intervention Package

Number Worlds and Student Engagement

A hallmark of **SRA Number Worlds** is that students who participate in the program become more engaged in mathematics. When students are engaged in learning, both students and teachers are more successful.

Number Worlds effectively engages students in the following ways:

Variety

Instead of a predictable pattern of activity in math class of studying an example and practicing that model, **Number Worlds** provides a variety of instructional techniques appropriate for the concept being taught. This maintains student interest in mathematics. Techniques include:

- Guided Discussion
- Hands-On Activities
- Response Activities
- Computer Activities

Emphasis on Thinking and Understanding

Instead of emphasizing memorization of skills and procedures accompanied by drill and practice, **Number Worlds** engages students in thinking about mathematics and challenges them to gain insight through effective questions. Understanding is highly motivating!



Level H (Grades 5–6)	Level I (Grades 6–7)	Level J (Grades 7–8)
<ul style="list-style-type: none"> • Number Sense • Number Patterns and Relationships • Fractions, Decimals, and Percents • Multiplication and Division • Geometry and Measurement • Data Analysis and Applications 	<ul style="list-style-type: none"> • Number Sense • Operation Sense and Computation • Proportional Reasoning • Algebra • Geometry and Measurement • Data Analysis and Applications 	<ul style="list-style-type: none"> • Number Sense • Expressions and Equations • Proportional Reasoning • Algebra • Geometry and Measurement • Data Analysis and Applications

Number Worlds Teacher Support



The **Planner** is a snapshot view of the program activities for the week, including learning goals, materials needed, and technology for each day.

LESSON	LEARNING GOAL	MATERIALS	TECHNOLOGY	NTCM STANDARDS
Lesson 1 pages 2-3	Students will identify factors with and without using factor trees.	Program Materials • Activity Card 1 • Practice, p. 9 Additional Materials • Graph paper • Colored pencils	Math Tools Array	• Number and Operations • Communication • Representation
Lesson 2 pages 4-5	Students will explore prime factors and decompose numbers into their prime factorizations.	Program Materials • Activity Card 2 • Practice, p. 10 • Vocabulary Card 28, Prime Number	Math Tools Calculator	• Number and Operations • Problem Solving • Connections
Lesson 3 pages 6-7	Students will use the prime factorizations of numbers to determine the greatest common factor, or GCF.	Program Materials • Activity Card 3 • Practice, p. 11	Math Tools Calculator	• Number and Operations • Communication • Representation
Lesson 4 pages 8-9	Students will use the prime factorizations of numbers to determine the least common multiple, or LCM.	Program Materials • Activity Card 3 • Practice, p. 12 Additional Materials • Colored pencils • Unlined 8 1/2" x 11" paper	Math Tools Calculator	• Number and Operations • Problem Solving • Communication
Lesson 5	Review and Assess Students review skills learned this week and complete the weekly assessment.	Materials will be selected from Lessons 1-4. • Weekly Test, Assessment, pp. 32-33	Review previous activities.	• Number and Operations • Communication • Connections • Representation • Problem Solving

Math Background provides an overview of what the students are learning and how this will be applied to future concepts.

Week 1 Parts of a Number

Week at a Glance
This week, students begin Number Worlds, Level I, Number Sense. Students will explore the parts of a number. Students will compute the prime factorizations of many numbers, and use prime factorization to determine the GCF and the LCM.

Math Background
Numbers can be classified, described, and represented in many different ways. One way of classifying numbers is based on their factors. Prime numbers are numbers greater than 1 whose only factors are 1 and itself. Composite numbers have more than two factors. Every integer greater than one can be expressed as a product of prime factors. Prime numbers are often thought of as the building blocks of all positive integers. Within a prime factorization, a number that is repeatedly multiplied by itself can be represented using an exponent.

Skills Focus
• Decompose a number into its factors, recognizing that some numbers are prime and have only two factors
• Use the factors of a number to determine the prime factorization
• Use prime factorization to determine the GCF and the LCM

How Students Learn
Often students spend untold hours learning to find the Least Common Multiple (LCM) and Greatest Common Factor (GCF) of two or more numbers without ever knowing how or when they can be applied. Begin by helping students understand the relationship between multiples and factors and explore applications of both. Then provide opportunities for students to investigate the usefulness of LCM in finding a common denominator and of GCF in reducing fractions, as well as other real-world applications of these concepts.

Math at Home
Give one copy of the Letter to Home, page A1, to each student. Encourage students to share and complete the activity with their caregivers.

English Learners
For language support, use the English Learner Support Guide, pp. 24-25, to preview lesson concepts and teach academic vocabulary.

Spanish Cognates
English decimal denominator color fraction percent to compare to substitute
Spanish decimal denominator color fracción porcentaje comparar sustituir

Math at Home includes minis of materials you'll be sending home.

Academic Vocabulary provides words and definitions.

Technology is fully integrated to bolster instruction and practice in each day's lesson.

How Students Learn provides a refresher of math principles relevant to the unit.

English Learners provides Spanish cognates and alternative vocabulary.

Warm Up
Before instruction begins, teachers get students started thinking with a whole-group activity to provide practice and review.

Lesson 1 Parts of a Number

Objective
Students will identify factors with and without using factor trees.

Materials
Program Materials
Practice, p. 9
Additional Materials
• Graph paper, 1 piece per student
• Colored pencils

Access Vocabulary
draw cards. Select playing cards from a stack; draw does not mean illustrate here vice versa. The opposite

Creating Context
An English Learners work to list prime factors in order from the smallest number to the largest number, review with them the English pattern of comparatives and superlatives, such as small, smaller, and smallest.

Engage 20 minutes
Concept Building
Show Me the Factors
"Today we will explore how numbers break down into their factors." Follow the instructions on the Activity Card Show Me the Factors. As students complete the activity, be sure to use the Questions to Ask.
Alternative Groupings
Whole Class: Write a large number on the board. Have students work as a class to identify all of the factors of the number. Include an occasional large prime number.
Pair: Have one student create a rectangular array and the second student identify both the number and the factors drawn of that number.

Warm Up 5 minutes
Skill Building
Review with students the fact that numbers can be broken into parts.
• What two numbers can be multiplied together to equal 12? 3 and 4, 2 and 6, 1 and 12
• What two numbers can be multiplied together to equal 14? 1 and 14, 2 and 7
• How many factors does the number 14 have? 4
• What two numbers can be multiplied together to equal 15? 1 and 15
• How many factors does the number 15 have? 2

Progress Monitoring
If... students are having trouble recalling the division facts to determine factors.
Then... review multiplication facts and relate them to division.

Using Student Pages
Have students complete Workbook, pages 2-3.
Problem Solving Discuss the strategies students used to solve Problem 15.

Engage
The core of lesson instruction. Effective, engaging activities give students a firm foundation of the lesson concepts.

Lesson 2 Parts of a Number

Objective
Students will use the prime factorizations of numbers to determine the greatest common factor, or GCF.

Materials
Program Materials
Practice, p. 10
Additional Materials
• Graph paper, 1 piece per student
• Colored pencils

Engage 20 minutes
Concept Building
Show Me the Factors
"Today we will explore how numbers break down into their factors." Follow the instructions on the Activity Card Show Me the Factors. As students complete the activity, be sure to use the Questions to Ask.
Alternative Groupings
Whole Class: Write a large number on the board. Have students work as a class to identify all of the factors of the number. Include an occasional large prime number.
Pair: Have one student create a rectangular array and the second student identify both the number and the factors drawn of that number.

Warm Up 5 minutes
Skill Building
Review with students the fact that numbers can be broken into parts.
• What two numbers can be multiplied together to equal 12? 3 and 4, 2 and 6, 1 and 12
• What two numbers can be multiplied together to equal 14? 1 and 14, 2 and 7
• How many factors does the number 14 have? 4
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• How many factors does the number 15 have? 2

Progress Monitoring
If... students are having trouble recalling the division facts to determine factors.
Then... review multiplication facts and relate them to division.

Using Student Pages
Have students complete Workbook, pages 2-3.
Problem Solving Discuss the strategies students used to solve Problem 15.

Reflect
Provides opportunities for students to summarize and apply lesson concepts and for teachers to informally assess student understanding.

Practice
Practice Blackline Masters are provided for those students who may need additional skills practice.

Lesson 3 Parts of a Number

Objective
Students will use the prime factorizations of numbers to determine the least common multiple, or LCM.

Materials
Program Materials
Practice, p. 12
Additional Materials
• Colored pencils
• Unlined 8 1/2" x 11" paper

Engage 20 minutes
Concept Building
Show Me the Factors
"Today we will explore how numbers break down into their factors." Follow the instructions on the Activity Card Show Me the Factors. As students complete the activity, be sure to use the Questions to Ask.
Alternative Groupings
Whole Class: Write a large number on the board. Have students work as a class to identify all of the factors of the number. Include an occasional large prime number.
Pair: Have one student create a rectangular array and the second student identify both the number and the factors drawn of that number.

Warm Up 5 minutes
Skill Building
Review with students the fact that numbers can be broken into parts.
• What two numbers can be multiplied together to equal 12? 3 and 4, 2 and 6, 1 and 12
• What two numbers can be multiplied together to equal 14? 1 and 14, 2 and 7
• How many factors does the number 14 have? 4
• What two numbers can be multiplied together to equal 15? 1 and 15
• How many factors does the number 15 have? 2

Progress Monitoring
If... students are having trouble recalling the division facts to determine factors.
Then... review multiplication facts and relate them to division.

Using Student Pages
Have students complete Workbook, pages 2-3.
Problem Solving Discuss the strategies students used to solve Problem 15.

Lesson 4 Parts of a Number

Objective
Students will use the prime factorizations of numbers to determine the least common multiple, or LCM.

Materials
Program Materials
Practice, p. 12
Additional Materials
• Colored pencils
• Unlined 8 1/2" x 11" paper

Engage 20 minutes
Concept Building
Show Me the Factors
"Today we will explore how numbers break down into their factors." Follow the instructions on the Activity Card Show Me the Factors. As students complete the activity, be sure to use the Questions to Ask.
Alternative Groupings
Whole Class: Write a large number on the board. Have students work as a class to identify all of the factors of the number. Include an occasional large prime number.
Pair: Have one student create a rectangular array and the second student identify both the number and the factors drawn of that number.

Warm Up 5 minutes
Skill Building
Review with students the fact that numbers can be broken into parts.
• What two numbers can be multiplied together to equal 12? 3 and 4, 2 and 6, 1 and 12
• What two numbers can be multiplied together to equal 14? 1 and 14, 2 and 7
• How many factors does the number 14 have? 4
• What two numbers can be multiplied together to equal 15? 1 and 15
• How many factors does the number 15 have? 2

Progress Monitoring
If... students are having trouble recalling the division facts to determine factors.
Then... review multiplication facts and relate them to division.

Using Student Pages
Have students complete Workbook, pages 2-3.
Problem Solving Discuss the strategies students used to solve Problem 15.

Reflect 10 minutes
Extended Response
Review students' answers to the Reflect prompt at the bottom of student page 3, and then review the Engage activity.
Discuss the Reflect section to reinforce the concept of prime factorization charts. Keeping the prime factors lines up together will help students in the next two lessons when determining GCF and LCM.
Real-World Application
Factors help us when dividing large amounts of items into smaller groups. Two sixth grade classes are going to work together on a project. If one class has 24 students and one class has 30 students, we can find the factors that are common to both 24 and 30, or we can find the factors of 54, which is 24 and 30 combined.

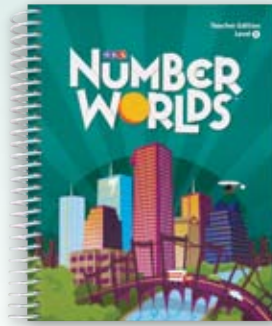
Assess
Informal Assessment
Use eAssess or the Student Assessment Record, Assessment, page 130, to record informal observations.
Understanding: Prime Factorization
Did the student
□ make important observations?
□ extend or generalize learning?
□ provide insightful answers?
□ pose insightful questions?
Practice
For additional practice, have students complete Practice, p. 10.

Level I Teacher Edition

Assess
Teachers can informally assess student progress.

Number Worlds Program Components

SRA Number Worlds helps you develop the core concepts students need for success in mathematics. The program provides hands-on activities, computer activities, group discussion, and paper and pencil exercises that are all-inclusive and fully integrated so students understand the ideas presented in the lesson.



Level I

Teacher Editions are the heart of the curriculum. They include math background, lesson plans, and instructions, including when and how to use program resources.

Student Workbooks include exercises for students to practice basic skills. They also include problem-solving activities to master higher-order thinking skills.

English Learner Support Guide includes strategies for developing academic vocabulary.



Level J

Instructional Activity Cards are designed to provide teachers with explicit instructions and questioning strategies for all activities.

Manipulative Modules provide a wide array of tools to help students get a good feel for math concepts.



Intervention Packages include everything small groups need for implementing a level of the program, including manipulatives and student and teacher materials. All conveniently packaged!



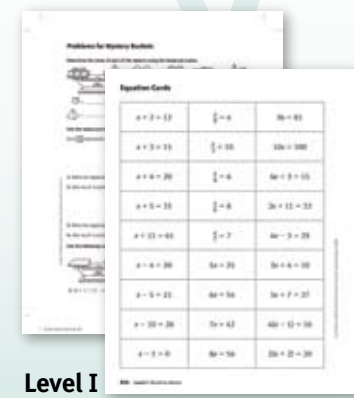
Level I

Flexible Assessment allows for correct placement within the program and provides progress monitoring to ensure students are mastering concepts and skills. Each level includes:

- **Placement Tests** to identify where students should begin within the curriculum
- **Weekly Tests** to measure student comprehension of the week's daily lessons
- **Unit Tests** to evaluate concept acquisition for the unit
- **Rubrics** to informally evaluate student understanding of each lesson
- **The Number Knowledge Test** to measure students' intuitive knowledge of numbers



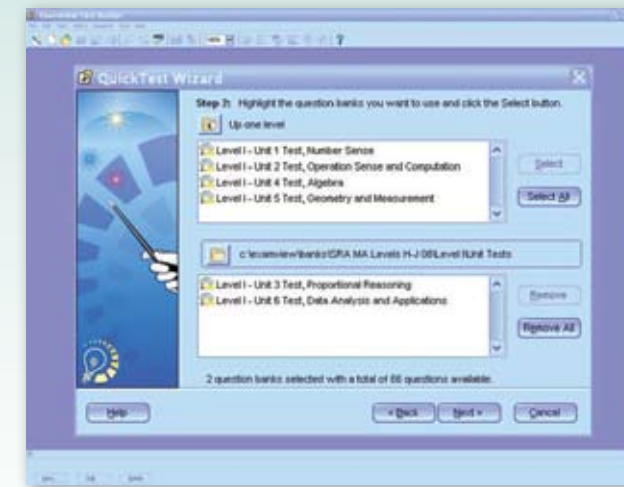
Vocabulary Cards include visuals and definitions of academic vocabulary in multiple languages.



Level I

Practice Blackline Masters provide extra practice or homework.

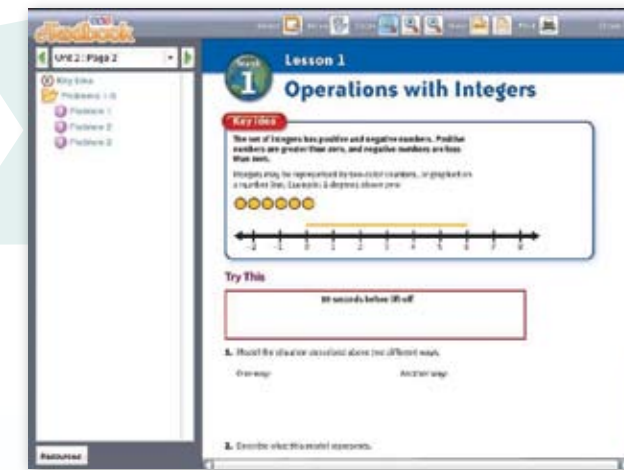
Technology is fully integrated into the program to bolster instruction and provide practice.



eAssess CD-ROM is a time-saving tool used to create a variety of tests, including State Test Practice. Student and class reports can be printed to determine where additional instruction is needed.



eMathTools CD-ROM integrates multimedia math tools and includes data organization and display tools, such as a spreadsheet tool, measurement and conversion tools, geometric exploration tools, and interactive calculation and counting tools.



eTextbook CD-ROM is an electronic version of the Student Workbook that includes a zoom feature to highlight specific exercises.

For an interactive demo, visit SRAnumberworlds.com



Yes, I want to learn more about **SRA Number Worlds!**

___ Please send me **SRA Number Worlds** information for:

___ Grades Pre-K–6

___ Grades 6–8

___ I would like a personal presentation of **Number Worlds**.

Best time to contact me is _____.

___ Please send me an SRA catalog.

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Job Title

School

Address

City/State/ZIP

School Phone

E-mail Address

Grade Level(s) of Interest

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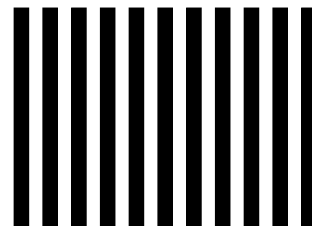


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