Make a world of difference in your students’ **math skills** with a versatile program that has **proven results** in the classroom.
Number Worlds is an intensive intervention program that focuses on students who are one or more grade levels behind in elementary mathematics. It provides all the tools teachers need to assess students’ abilities, individualize instruction, build foundational skills and concepts, and make learning fun. And only Number Worlds includes a prevention program for Grades Pre-K-1. It’s a unique course full of activities that builds foundational math skills and prepares younger children to understand more complex concepts later.

**Targeted instruction for faster assimilation**

Through intense identification and development of core concepts, Number Worlds creates competency that quickly puts students on-level with their peer groups. The program provides hands-on activities proven effective with even the lowest-level students, including:

- Computer activities
- Discussion activities
- Paper-and-pencil activities

**Precise assessment for personalized guidance**

Number Worlds’ easy-to-use assessment component pinpoints the exact unit in which students should begin the curriculum. Weekly and unit tests monitor progress with open response and/or multiple-choice questions to identify when students are ready to return to the main math curriculum.

**Flexibility for teachers and students**

Number Worlds’ lessons are flexible for use in many settings:

- Resource room
- After school
- Summer school

Teachers’ aides and parents can use Number Worlds after class or at home.

**Comprehensive, fully integrated program**

Complete Number Worlds program kits are available at every level and include:

- Teacher Edition
- Student Workbooks (Levels C-H)
- Student worksheet Blackline Masters
- Manipulatives (Levels A-F)
- Software for assessment, placement, professional development, and activities
Get students back on track with confidence

**Number Worlds** is the only program that includes a prevention instruction section for students in **Grades Pre-K-1**. This unique 30-week course of daily instruction improves students’ grasp of the world of math so they can move forward with the head start they need.

For students in **Grades 2-6** who are one or more grade levels behind in math, the **Number Worlds** intervention program is an invaluable tool. It builds on students’ current level of understanding with six 4-week intensive units per grade.

With each daily lesson, teachers have the opportunity to reach the program’s knowledge objectives through problem-solving activities, small-group interaction, and discussion. By asking good questions in the classroom, teachers can encourage learning while defining areas that require extra work, ultimately helping to bring students to their appropriate grade level.

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**Fundamental Concepts Levels A–C**

<table>
<thead>
<tr>
<th>Level A</th>
<th>Level B</th>
<th>Level C</th>
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<tbody>
<tr>
<td>Children acquire well-developed counting and quality schemas</td>
<td>Children develop a well-consolidated central conceptual structure for single-digit numbers</td>
<td>Children link their central conceptual structure of number to the formal symbol system</td>
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**Core Content Topics Levels D–H**

<table>
<thead>
<tr>
<th>Level D</th>
<th>Level E</th>
<th>Level F</th>
<th>Level G</th>
<th>Level H</th>
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<tbody>
<tr>
<td>Number Sense</td>
<td>Number Sense</td>
<td>Number Sense</td>
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<tr>
<td>Number Patterns and Relationships (Algebra)</td>
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<tr>
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<td>Addition</td>
<td>Addition &amp; Subtraction</td>
<td>Multiplication</td>
<td>Fractions, Decimals &amp; Percents</td>
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<td>Multiplication</td>
<td>Division</td>
<td>Multiplication &amp; Division</td>
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<tr>
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<tr>
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</table>
Engage your students with step-by-step lessons

**Number Worlds’ Lesson Planner** provides a wide array of helpful information before lessons even begin. Background overviews, activity ideas, and tips prepare teachers to the fullest extent.

Weekly Planners map out an entire week of lessons, complete with pacing options, goals, and the resources necessary to get the most out of every class period.

Manipulative-rich lessons are proven to help students turn abstract concepts into concrete understanding.

Building Blocks’ research-based software gives teachers over 150 activity choices that go hand in hand with the lessons.

Math Background gives teachers math context for the lesson.

Get insight into your students’ capabilities and how their minds work.

Define key vocabulary words in English or Spanish to improve students’ understanding of concepts.

Math at Home extends learning to provide the extra practice students need and encourage support at home.
Every comprehensive **Number Worlds** lesson is divided into four distinct sections for simplified time management in the classroom. Whether it’s time for concept building or skill building, in-depth discussion or assessment, **Number Worlds** always helps you keep learning objectives within reach.

**Program Components**
- Teacher Edition
- Student Workbooks
- Assessment
- Manipulatives
- Games
- Technology featuring Building Blocks software

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**Set the stage for learning** with Warm-Up Activities before every lesson.

**Creative ways to monitor progress of individual students** and the group as a whole are suggested.

**Help English learners understand** both the math, vocabulary, and the context of the lesson.

**Introduce and develop concepts** with engaging activity cards.

**Encourage summarizing and critical thinking** in a unique way with **Number Worlds’** exclusive Reflect section.

**Have students demonstrate understanding** through engaging paper-and-pencil activities.

**Assess student progress** after each lesson.
**Number Worlds Results**

Number Worlds has been developed and refined since the mid-1980s and has been the only such program to show proven results through years of rigorous field testing. These tests show how students who began at a disadvantage surpassed the performance of students who began on-level with their peers, simply with the help of the Number Worlds program.

One of the tests was a longitudinal study conducted to measure the progress of three groups of children from the beginning of Kindergarten to the end of Grade 2. The treatment and control groups both tested one to two years behind normative measures in mathematical knowledge, while the normative group was on track. The treatment group received the Number Worlds program while the other two groups used a variety of other mathematical programs during the entire course of the study.

The chart below shows the progress of each group in mean developmental mathematics-level scores as measured by the Number Worlds test. The treatment group using the Number Worlds program met and exceeded normative mean developmental-level scores by the end of Grade 2. Meanwhile, the control group continued to fall behind their peers.

![Number Worlds Results chart](image)

**Building Blocks Software Results**

The Building Blocks software, incorporated into the Number Worlds program, is the result of National Science Foundation-funded research. Building Blocks includes research-based computer tools with activities and a management system that guides children through research-based learning trajectories.

The program is designed to:
- Build upon young children’s experiences with mathematics with activities that integrate ways to explore and represent mathematics
- Involve children in “doing mathematics”
- Establish a solid foundation
- Develop a strong conceptual framework
- Emphasize children’s mathematical thinking and reasoning abilities
- Encourage learning in line with state and national standards

In research studies, Building Blocks software was shown to increase young children’s knowledge of multiple essential mathematical concepts and skills. One study tested Building Blocks against a comparable preschool math program and a no-treatment control group. All classrooms were randomly assigned, the “gold standard” of scientific evaluation. Building Blocks children significantly outperformed both the comparison group and control group of children. Results indicate strong positive effects with achievement gains near or exceeding those recorded for individual tutoring.

![Building Blocks Results](image)
Sharon Griffin is a Professor of Education and Psychology at Clark University in Worcester, Massachusetts. She received a B.A. in Psychology from McGill University, an M.A. in Education from the University of New Hampshire, and a Ph.D. in Cognitive Science from the University of Toronto. Before coming to Clark University in 1989, she worked as a Research Associate at the Ontario Institute for Studies in Education.

During the past 15 years, she has received several research awards to use the findings of cognitive science to (a) improve mathematics learning and achievement for at-risk children, (b) teach number sense, and (c) foster the development of professional teachers of young children.

Dr. Griffin is the author of *Number Worlds*, a mathematics curriculum for young children; co-author of the book, *What Develops in Emotional Development?*; and author of numerous articles in the fields of cognitive development, emotional development, and mathematics education.

Dr. Griffin has also served on several national advisory boards in Canada and the United States on projects designed to enhance the cognitive, mathematical, and language development of “high need” children from birth to seven years.

Douglas H. Clements, Professor of Early Childhood, Mathematics, and Computer Education at the University at Buffalo, State University of New York, has conducted research and published widely on the learning and teaching of geometry, computer applications in mathematics education, the early development of mathematical ideas, and the effects of social interactions on learning. Along with Julie Sarama, Dr. Clements has directed several research projects funded by the National Science Foundation and the U.S. Department of Education’s Institute of Educational Sciences, one of which resulted in the mathematics software and activities included in *Building Blocks*.

Julie Sarama is an Associate Professor of Mathematics Education at the University at Buffalo, State University of New York. She conducts research on the implementation and effects of software and curricula in mathematics classrooms, young children’s development of mathematical concepts and competencies, implementation and scale-up of educational reform, and professional development. Dr. Sarama has taught secondary mathematics and computer science, gifted mathematics at the middle school level, and preschool and kindergarten mathematics methods and content courses for elementary to secondary teachers.

Sherry Booth is a mathematics curriculum specialist. Her past projects include the JASON Web-based mathematics courses, the ATLAS Project, and the Math Partners project funded by the National Science Foundation. She has collaborated with researchers and designers to develop mathematics curricula that include software, video, teacher guides, and student materials.