

Program Overview Guide







Our Vision

At MIND Education, our mission is to ensure all students are mathematically equipped to solve the world's most challenging problems.

MIND Education is the leading curriculum developer creating math programs entirely based on how the brain naturally learns. Backed by over 25 years of applied research and classroom experience, we design student-centered programs rooted in visual learning, spatial-temporal reasoning, and structured problem solving.

By focusing on conceptual understanding from the very beginning, we help prevent learning gaps before they start—giving every student the opportunity to grow into a confident, capable mathematical thinker.

Our belief is simple and powerful: when we design learning to match how the brain learns, every student can thrive in math.

Table of Contents

InsightMath California Grade 1

Welcome to InsightMath California!	4
What's in InsightMath California?	5
Grade 1 Program Components	6
Grade 1 Scope and Sequence	8
• Unit Structure	10
Grade 1 Pacing Guide	11
What is InsightMath California?	
• A Visual Approach to Math Instruction Based on How the Brain Learns	12
Reaching All Learners	14
Differentiation in InsightMath California	16
Meeting the Needs of Special Populations	17
Building Mathematical Progressions Within and Across Grade Levels	18
• Insight into Student Thinking with Digital Planning Guide	20
Puzzle-Based Learning and Practice	22
Assessments and Formative Feedback	24
Student Metacognition and Self-Assessment	26

Welcome to InsightMath California!

You're about to teach math in a whole new way—one that brings learning to life—for your students and for you.

InsightMath California is designed with the brain in mind. That means more visual thinking, more student voice, and more moments where real understanding clicks into place.

What to expect:



Your students will:

- Jump into puzzles that get them thinking right away
- Talk about math—out loud, with each other, and with you
- Build real understanding, as they develop computational fluency and procedures



You will:

- See your students engaged, curious, and persistent
- Facilitate rich conversations using built-in supports
- Get everything you need—organized, clear, and ready to go



Your classroom will:

- Come alive with mathematical thinking
- Support every learner, every day
- Feel like a community where math makes sense

This guide walks you through the year. We're excited for everything you and your students are about to discover.

Let's do this!

-The Team at MIND Education

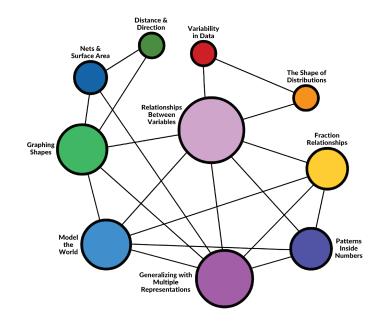
What's in **InsightMath California?**

InsightMath California is not just aligned with the new California Mathematics framework—it brings its vision to life. Students experience math as a coherent, sense-making journey built on Big Ideas, visual reasoning, and student-driven inquiry. Grounded in neuroscience and designed for all students from the start, InsightMath aligns with the Five Components of Equitable and Engaging Teaching for All Students:

- planning around big ideas
- using open and engaging tasks
- teaching for social justice
- inviting student questions and conjectures
- prioritizing reasoning and justification

Our visual-first program supports deep understanding, encourages mathematical discourse, and helps students develop the confidence to persevere through challenging problems.

From its rigorous, grade-level curriculum and dynamic problem-solving process



to its robust teacher support and inclusive assessments, the program fosters critical thinking, positive math identities, and lasting learning. InsightMath California empowers all students to see themselves as mathematical thinkers - ready to tackle the challenges of tomorrow.

Projects

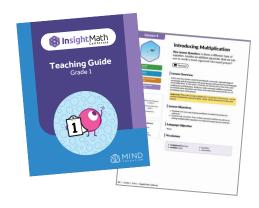
InsightMath California includes projects in each grade level that can be flexibly implemented by teachers at any appropriate time during the school year. The projects focus heavily on interweaving **Data and Statistics** with the **Environmental Principles** & Concepts, helping students explore connections between math, their classroom, and the world around them.

| Grade 1 Program Components



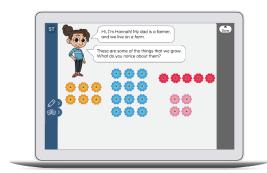
Digital Planning Guide

All Program Resources



Teaching Guide

Digital/Print Resources for Daily Instruction



Digital Student Edition

Student Portal into the Lessons



Playbook

Digital/Print Student **Activity Pages**



Tools, Tasks, and **Templates**

Digital/Print Teacher **Blackline Masters**



Classroom Manipulative Kit

Grade Level Manipulative Kit



Practice Book

Digital/Print Daily **Practice Pages**



Classroom Poster Pack

Classroom Character and Strengths Posters

Grade 1 Scope and Sequence

Unit 0 **Doing Mathematics**

(Big Idea) All students are doers, knowers, and sensemakers of mathematics.

Cluster1 Collaborating to Do Mathematics

Cluster2 Persevering to Do Mathematics

Adding and Subtracting Within 10 Unit 1

Big Idea Addition and subtraction are the mathematics of parts and totals.

Cluster1 **Active Addition**

Cluster2 **Active Subtraction**

Cluster3 Composing and Decomposing

Cluster4 The Addition-Subtraction Relationship

Unit 2 **Building Approaches to Problem Solving**

Big Idea Addition and subtraction can help to describe and solve word problems.

Cluster1 Part-Part-Total Word Problems

Cluster2 Active Addition and Subtraction Word Problems

Unit 3 **Comparing and Measuring Length**

Big Idea Comparing and measuring length helps to describe and analyze objects and their relationships among other objects.

Cluster1 Comparing Lengths

Cluster2 Measuring Lengths

Exploring Place Value Within 100 Unit 4

(Big Idea) The base-ten place value system provides a structure to represent all numbers symbolically using the same 10 digits.

Cluster1 Ten and Some More

Cluster2 Representing Tens and Ones

Cluster3 Patterns in the Number Sequence

Unit 5 Adding and Subtracting Within 20

Big Idea Reasoning about equality helps to add and subtract efficiently.

Cluster1 Reasoning about Equality

Cluster2 Adding and Subtracting by Making a Ten

Cluster3 **Choosing Efficient Solving Strategies**

Unit 6 **Investigating Data**

Big Idea Asking questions, and using data to critically answer those questions, help to make sense of the world.

Cluster1 Displaying and Comparing Data Categories

Cluster2 The Data Investigation Process

Cluster3 Planning and Conducting a Data Investigation

Unit 7 **Extending Approaches to Problem Solving**

Big Idea Addition and subtraction can help to describe and solve word problems.

Cluster1 Modeling and Solving Additive Comparison Problems

Cluster2 Modeling and Solving Addition and Subtraction Problems

Unit 8 **Extending Place Value Within 100**

Big Idea Understanding the value of a two-digit number relies on understanding the value of each digit.

Cluster1 Connecting Place Value to Addition and Subtraction

Cluster2 Using Place Value to Compare Two-Digit Numbers

Building Place Value Strategies Unit 9

(Big Idea) Applying place value understanding helps to add and subtract efficiently and use estimation to determine reasonableness.

Cluster1 Grouping 10s and 1s

Cluster2 Composing 10s to Add

Cluster3 **Reasoning About Equality**

Unit 10 Composing and Decomposing Shapes

Big Idea Names and defining attributes of shapes are determined by how their component parts are put together.

Cluster1 Identifying 2-D and 3-D Shapes

Cluster2 Composing 2-D and 3-D Shapes

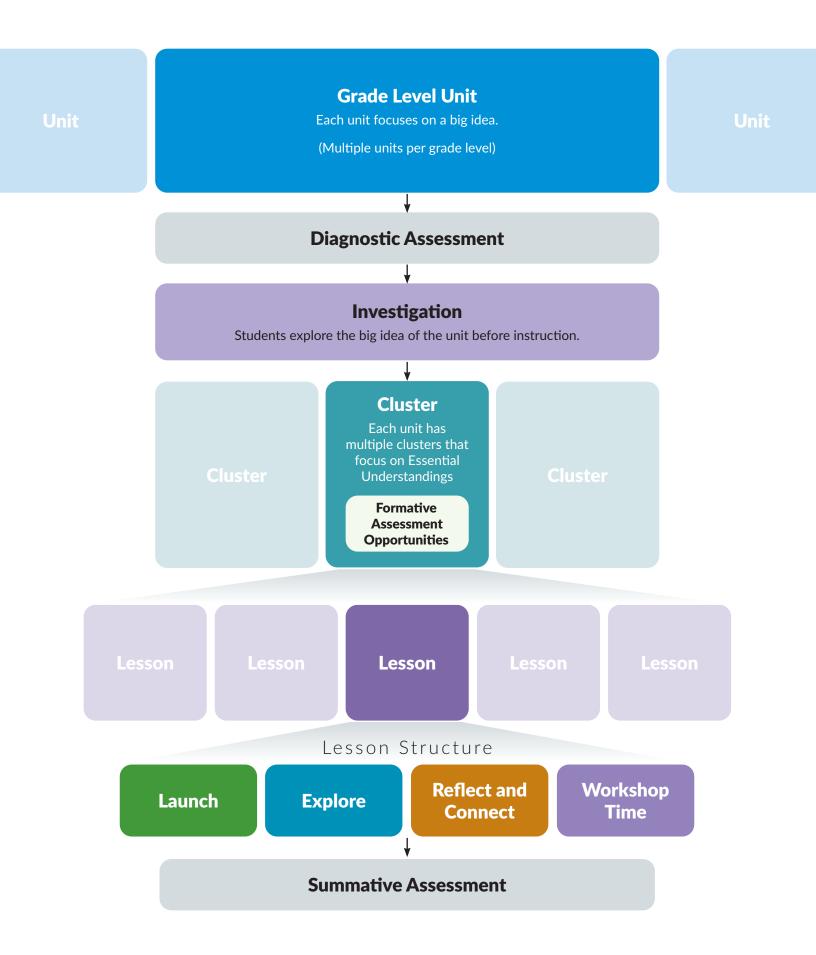
Unit 11 Partitioning Shape and Time

Big Idea Wholes and parts of wholes can be named by the number of equal-size parts which compose them.

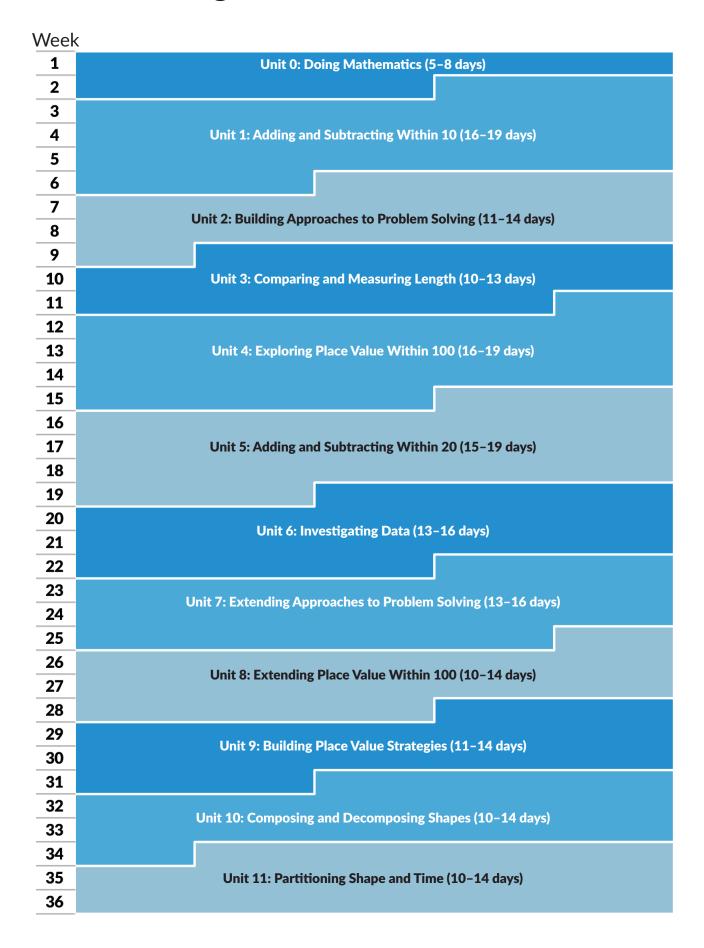
Cluster1 **Equal Shares and Parts**

Cluster2 Telling and Writing Time

Unit Structure



Grade 1 Pacing Guide



A Visual Approach to Math Instruction **Based on How the Brain Learns**

Changing the Math Story for Every Student

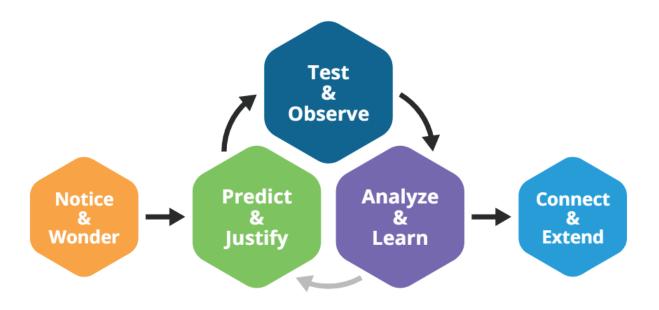
Developed by MIND Education, InsightMath California is a core program grounded in how the brain learns. It brings visual-first, spatial-temporal, and problem-based learning into the classroom.

InsightMath California builds deep understanding from the start through visual and manipulative-based activities—helping all students become confident math thinkers. Computation strategies, written language, and procedural fluency are developed on top of this strong foundation.

With digital and optional print formats, **InsightMath California** supports flexible teaching, equipping teachers to prioritize student thinking.

Instruction Designed Around How Students Learn Best

At the center of **InsightMath California** is the MIND Education Problem-Solving Process—a flexible, neuroscience-based routine, that supports open-ended questioning and deep exploration. Teachers guide students to reflect, reason, and connect their thinking with peers—promoting meaningful understanding and growing confident math thinkers.



An Asset-Based Approach

InsightMath California focuses on harnessing students' strengths. By starting with what students know, and giving them a chance to bring themselves and their thinking into the lessons, you will use their ideas as a launchpad for growth.

Every child has mathematical insight—InsightMath California helps you uncover and nurture it.



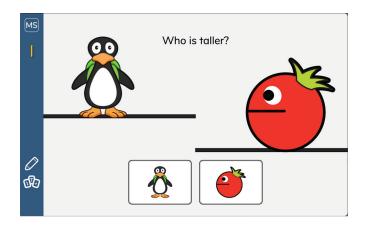
Unit 0 Starts the Year

Unit 0 is a weeklong introduction at the start of each grade level to establish classroom listening, speaking, collaborating and thinking routines to be used throughout the year.

Students are also introduced to a cast of characters who encourage students to bring their experiences into the classroom as they see themselves in the math.

Investigations Build Mathematical Thinkers from the Beginning

In **InsightMath California** classrooms, students don't just follow steps—they think like mathematicians. Every unit opens with an Investigation where students explore new ideas before the content is formally introduced. Students see patterns, explain ideas, and gain confidence and flexibility as mathematical thinkers.

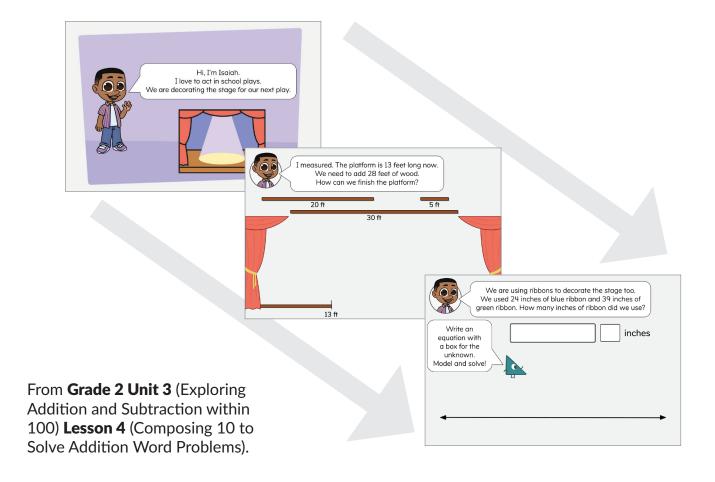


Reaching All Learners

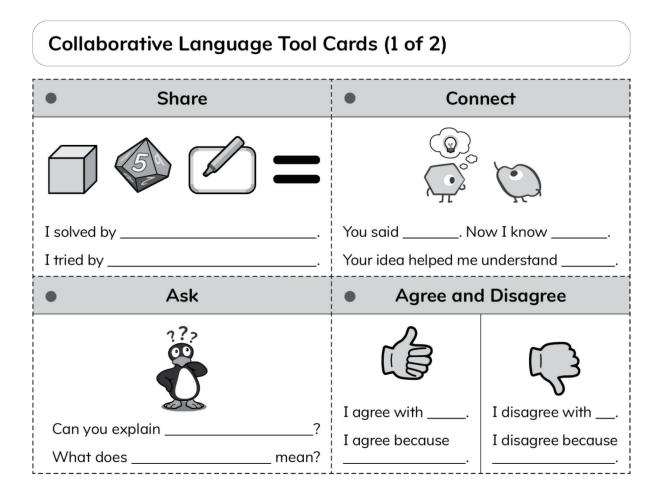
InsightMath California is built on Universal Design for Learning (UDL) principles to ensure all students can access meaningful, engaging math. Units follow researchbased learning progressions and are rooted in relevant contexts that connect to what students already know, supporting deeper understanding.

Students have choices in tools, models, and strategies, building confidence and ownership. Lessons develop conceptual understanding before introducing symbols. Vocabulary is introduced intentionally—students first describe ideas in their own words, then learn the formal math terms.

Problem solving is taught through a structured path focused on **real-world meaning**, not just word problem practice. Visual models support understanding and allow students to move between **concrete**, **representational**, and abstract forms. strengthening both content and language skills.



The program highlights connections across big ideas and includes built-in complexity so all students can access core learning, with optional extensions for deeper exploration. Tools like the Collaborative Language Tool encourage discussion and teamwork, helping students learn from one another.

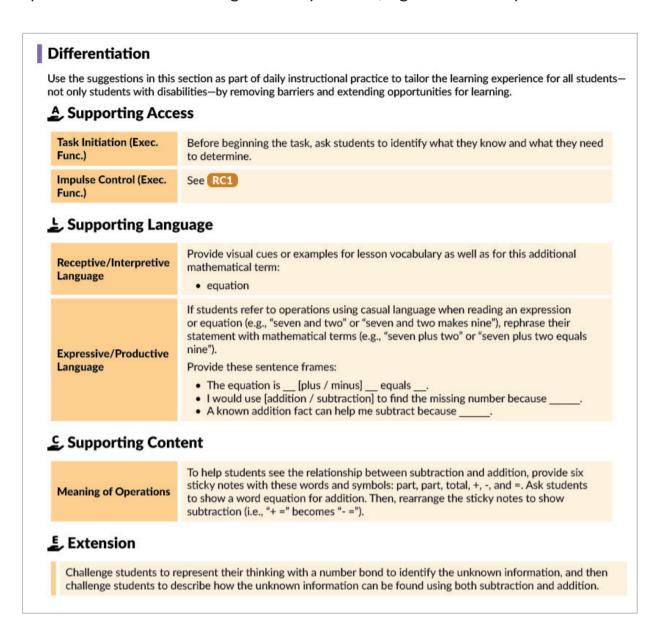


Students are supported in showing what they know in multiple ways. **Academic** language scaffolds help with math vocabulary and text structure. Most importantly, the program is designed with access and opportunity in mind, helping teachers recognize and apply UDL strategies in every lesson.

Differentiation in InsightMath California

InsightMath California is designed with built-in supports to ensure that all students can access rigorous, grade-level math content. These supports help meet the diverse needs of learners—whether a student needs a little extra help to stay engaged or is ready to be challenged with deeper thinking.

The program offers four types of differentiation that can be used flexibly with any student who needs support. These tools are designed to promote meaningful participation and understanding for every learner, right where they are.



Meeting the Needs of **Special Populations**

Many students belong to one or more special populations, and their needs are unique and varied. All students—whether identified as part of a special population or not—will need support at times and enrichment at others. InsightMath California is designed with flexibility in mind, using Universal Design for Learning (UDL) and differentiation to help every student engage and grow in math.

Multilingual Learners

All students build language skills, but Multilingual Learners may need extra support. UDL and language differentiation are key tools, offering scaffolded sentence frames that vary in support so students can choose what fits their readiness. Language objectives guide instruction, and lesson-specific supports help students understand and express math ideas.

Students Receiving Special Education Services

InsightMath California provides multiple access points and built-in depth to support varied learning needs. Differentiation tools address content, language, and participation challenges so students can engage in grade-level math with meaningful support.

Gifted and Talented (GT) Students

Students ready for more advanced work benefit from layered complexity and built-in extensions. These provide deeper challenges and opportunities to apply thinking in new ways.

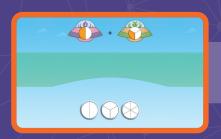
Students with Unfinished Learning

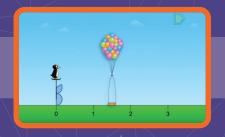
Some students have learning gaps for various reasons. Low-floor, high-ceiling activities allow access to grade-level content while targeted supports address unfinished learning. Formative assessments include guidance to help teachers support students struggling with specific concepts.

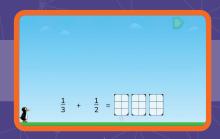
Building Mathematical Progressions Within and Across Grade Levels

Visual-First Learning That Makes Math Click

InsightMath California is built around a patented visual-first approach that helps students see and understand math. Interactive visuals activate students' spatial-temporal reasoning, building deep understanding even before introducing formal language or procedures.







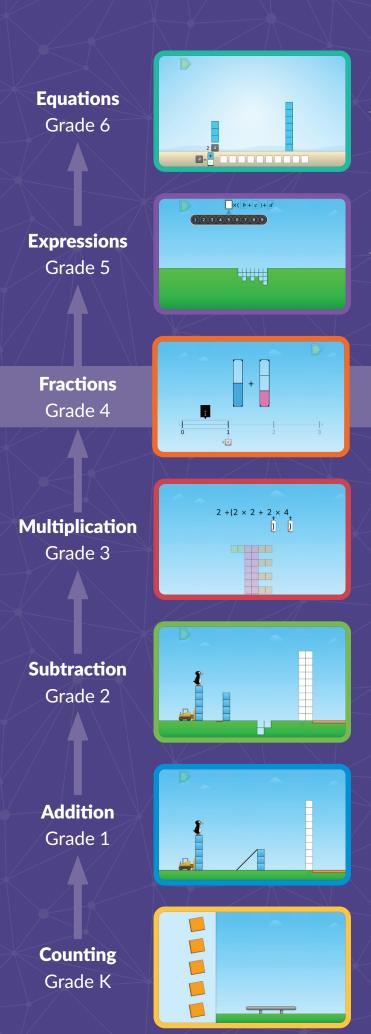
Multiple models for every concept within a grade level



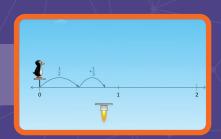
These scaffolded models support problemsolving, strategy sharing, and big-picture thinking—making math feel coherent and connected across and within grade levels.

To deepen learning, lessons use multiple representations—visuals, numbers, words, and symbols—helping students form a rich network of ideas they can apply to new problems.

With **InsightMath California** students go beyond memorization. They develop a connected understanding of math concepts, apply their learning flexibly, and build lasting confidence.

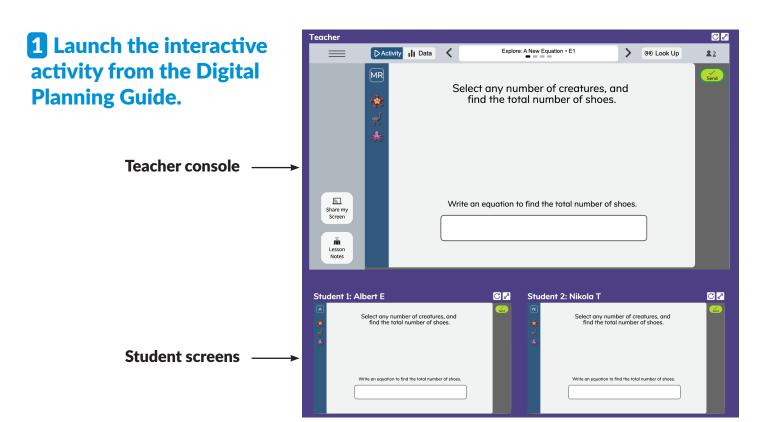


Connected visual models build in complexity across grade levels



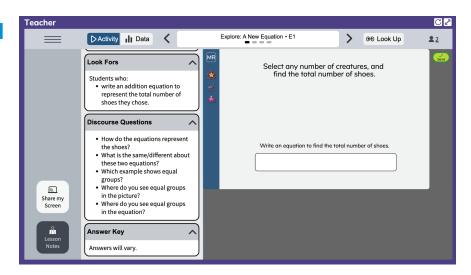
Insight into Student Thinking with Digital Planning Guide

InsightMath California lessons contain whole class activities that equip elementary educators with tools to teach math with confidence and clarity. The program blends technology, high quality mathematical content and practical support to make every teaching moment count.



2 Teachers access detailed notes including insights, "look fors," and discourse prompts.

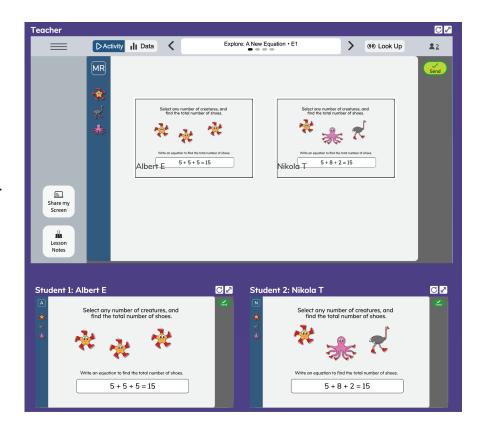
Support is available for every stage at point of use-unit, cluster, and lesson. These tools help create a classroom where students are seen. heard, and eager to engage with math.



3 Students submit responses, visible to teachers in real time.

The built-in data dashboard shows real-time student progress, making it easy to adjust instruction and keep every learner moving forward.

Teachers can project student work, and compare and contrast up to four different solution paths for whole-class discussion.



4 Teachers guide class discussion using selected student responses or **Argumenteers.**

In-Lesson Argumenteers

Argumenteers are sample student responses that can be used to spark discussion, inspire curiosity, showcase varied problem-solving approaches and highlight common misconceptions.

Look Up

The "look up" button allows teachers to instantly direct student attention to the main screen-ideal for focusing during key moments.



Puzzle-Based **Learning and Practice**

Personalized Learning Through Game-Based Puzzles

In InsightMath California, personalized instruction is powered by game-based puzzles built on patented Spatial-Temporal (ST) models. These puzzles present nonroutine problems that promote deep thinking and offer visual, immediate feedback supporting reflection, productive struggle and helping students revise their thinking in real time.



Ten Frame Addition

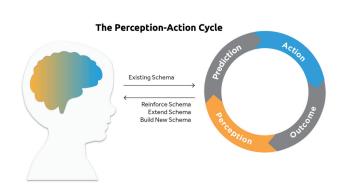
Students engage with puzzles independently during lessons or practice, applying learning in new contexts and extending their thinking. Because puzzles use visual models, they offer language-free access—making them especially effective for diverse learners before mathematical vocabulary is introduced.

Integrated into lessons, the visual interactive puzzles help students build conceptual

understanding and **perseverance**. Teachers also gain real-time performance data, offering insight into student thinking and guiding targeted support.

Immediate Formative Feedback for Students

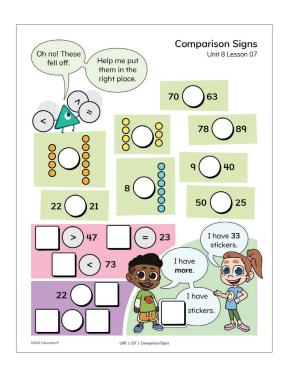
The game-based puzzles provide instant, visual feedback, engaging students' **Perception-Action Cycle**, the brain's natural mechanism active when learning-by-doing.

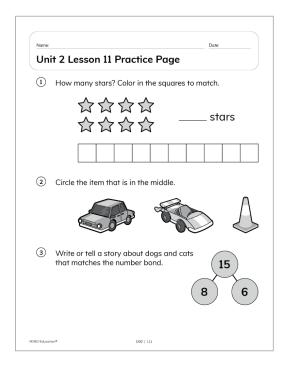


Student Playbooks: A Playground for **Math Thinking**

In addition to puzzle-based games, **InsightMath California** features a printed student **Playbook**—a hands-on space where students explore and extend their math thinking. It's a creative "math playground" that deepens understanding and encourages ownership.

Playbook activities connect the visual models from puzzles to lesson concepts, helping students test strategies, build connections, and grow their reasoning skills in a student-friendly format.





Student Practice Books

Each lesson includes a student Practice Page with a balanced mix of:

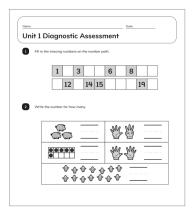
- Spiral review to strengthen prior learning
- Targeted practice aligned to the day's focus
- Real-world word problems for application in varied contexts

This structure ensures students consistently practice, reflect, and transfer learning—building confidence and fluency over time.

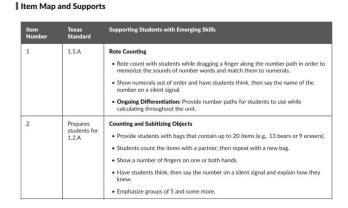
Assessments and Formative Feedback

Assessment That Supports and Celebrates Learning

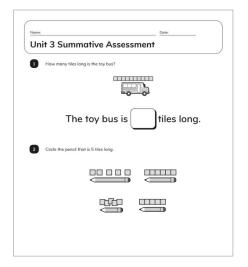
InsightMath California features a comprehensive, embedded assessment system that informs instruction and celebrates growth, making ongoing assessments a seamless part of teaching and learning. Tools include diagnostic, formative, and **summative** assessments, all aligned to grade-level standards.



Diagnostic Assessments at the start of each unit quickly check key prerequisite skills to see what students already know and what they may need help with.



The **Assessment Guide** connects each question to helpful routines and activities teachers can use to build those skills as students begin the new unit.

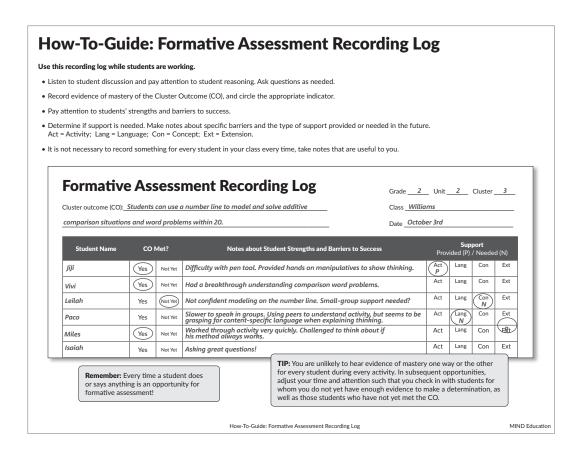


Summative Assessments at the end of each unit check for mastery through both skill and problem-solving tasks. In grades K-2, they are read aloud and look like regular class activities. Kindergarten uses one-on-one interviews with manipulatives and pictures, gradually adding more writing as students grow.

Formative Assessment in Action

InsightMath California includes built-in formative assessment opportunities in every lesson. Each activity features "Look Fors" to help teachers spot how students are thinking and support their learning. Teachers can check student work in real time or review it later to give feedback and plan next steps.

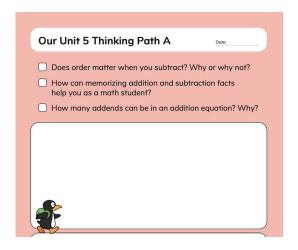


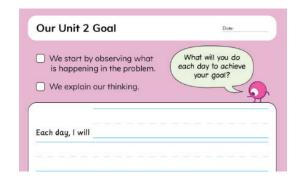


The Supporting Students After This Unit resource offers follow-up activities and routines to help students strengthen and maintain their skills.

Student Metacognition and Self-Assessment

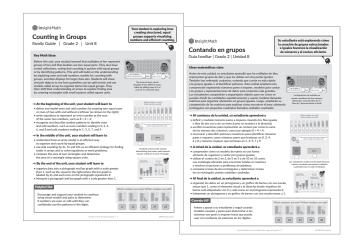
Students use the **Thinking Path** to reflect on conceptual understandings and skills that they've gained across each unit.





Our **Unit Goal** supports the class in noticing their growing strengths in thinking like mathematicians.

Each InsightMath California unit includes a bilingual English/Spanish Family Guide with activities to support and extend student learning at home











© 2025 MIND Education®. All Rights Reserved.