

Kindergarten Math



Counting & Number Sense: Exploring Numbers Up to 100

Kindergartners will learn to count with confidence — they'll count by ones and tens up to 100, and begin to understand that when we count objects, the last number we say tells how many there are— connecting counting to cardinality. This sets the stage for all mathematics! Children begin to see numbers, sequences, and quantities — the foundational building blocks.

Addition & Subtraction: Putting Together & Taking Apart

In Kindergarten, students will begin to use objects, drawings and simple equations to put together (add) and take apart (subtract) numbers. These experiences help children understand what addition and subtraction mean, not just memorize facts. They learn to think about “how many if we add one” or “how many left if we take away.”



Place Value Beginnings: Understanding “Tens” and “Ones”

Kindergartners will begin the important idea of place value by composing and decomposing numbers 11–19 as a group of ten ones plus some extra ones. This concept is the first step toward understanding base ten systems — a critical idea for all future math (like hundreds, thousands!).

Measurement, Data, Shapes & Comparison

Kindergarten math isn't just numbers — children will identify, describe, and compare measurable attributes (long/short, heavy/light), sort and classify objects, recognize two- and three-dimensional shapes, and use positional words (e.g., behind, beside). These skills help children make sense of their physical world, build vocabulary, and use math as a tool to describe and compare.



Big Ideas & Confidence: Building a Math Mindset

Beyond specific content, learners will use mathematical thinking and reasoning, explore patterns and relationships, and build confidence with numbers and math talk. A positive math mindset early on helps children feel like “I can do math,” ask questions, explore patterns, make mistakes and try again.



First Grade Math

Building Number Sense: Adding and Subtracting Within 10

Students explore how numbers work together using pictures, objects, and stories to solve addition and subtraction problems.



Counting, Comparing, and Ordering Numbers to 120

Learners build confidence counting beyond 100, comparing numbers, and recognizing patterns on number charts.

Making Sense of Word Problems

Students use real-life examples to model and solve addition and subtraction story problems using drawings and equations.

Measuring and Telling Time

Children learn to measure with nonstandard units, compare lengths, and read clocks to the nearest hour and half-hour.



Shapes All Around Us: Geometry in Our World

Students explore two- and three-dimensional shapes, describe their attributes, and build new shapes from existing ones.

Second Grade Math

From Counting to Problem-Solving—Math Learning Takes Off in 2nd Grade

Ohio's Math Standards help students build strong number sense, think critically, and apply what they know to everyday situations. Our young mathematicians are growing their brains—and having fun doing it!



Math Stories Come Alive in Our Classrooms!

In 2nd grade, students dive into solving one- and two-step story problems within 100 using addition and subtraction! They explore different ways to show their thinking—through drawings, equations, and place value reasoning—building strong number sense and real-world math connections.

Fact Fluency: Think Quick, Solve Smart!

Second graders shine as they build speed and accuracy with addition and subtraction facts within 20! Mastering these facts makes problem-solving fun and easy, boosting their confidence and helping them feel like math superstars in every area of learning!



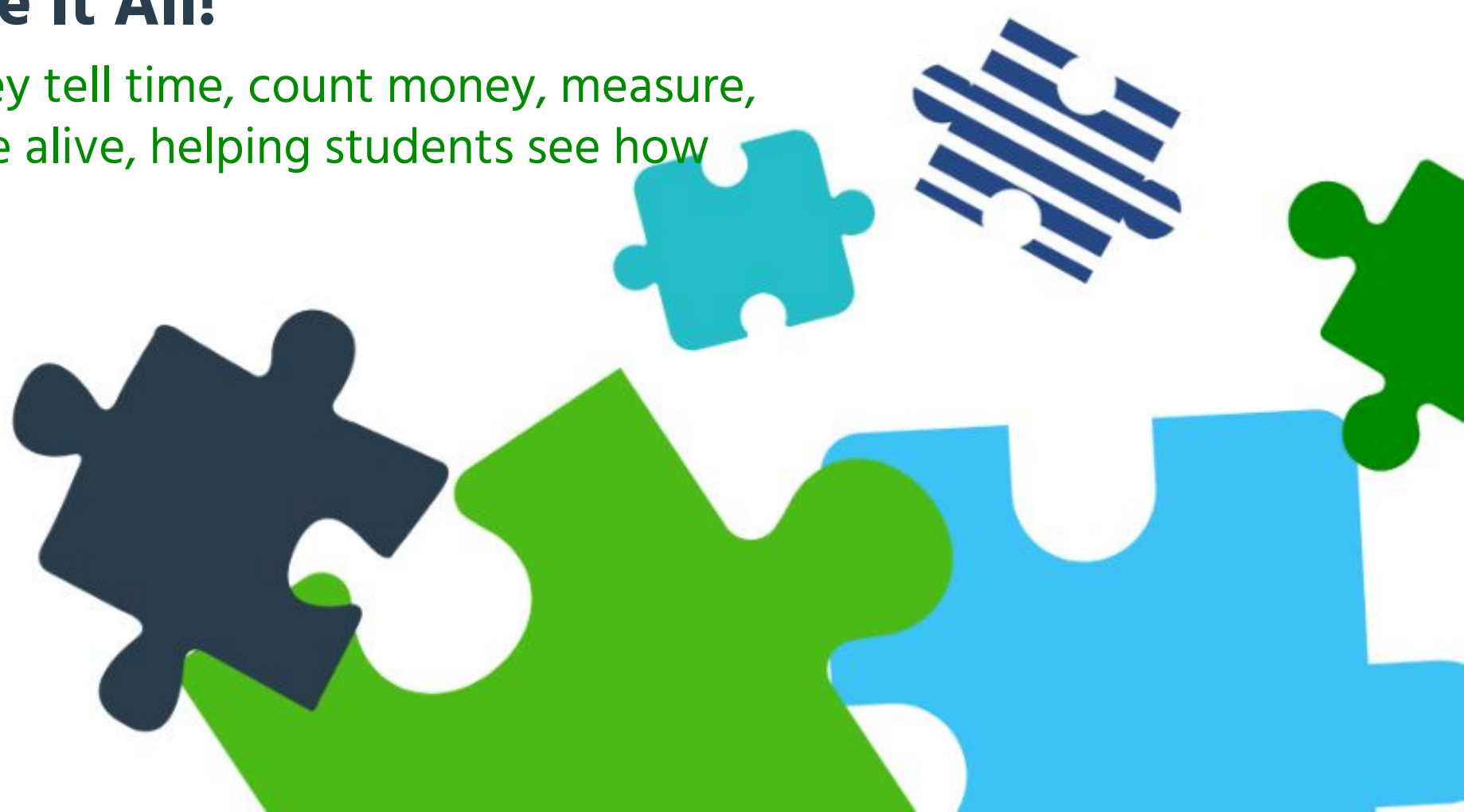
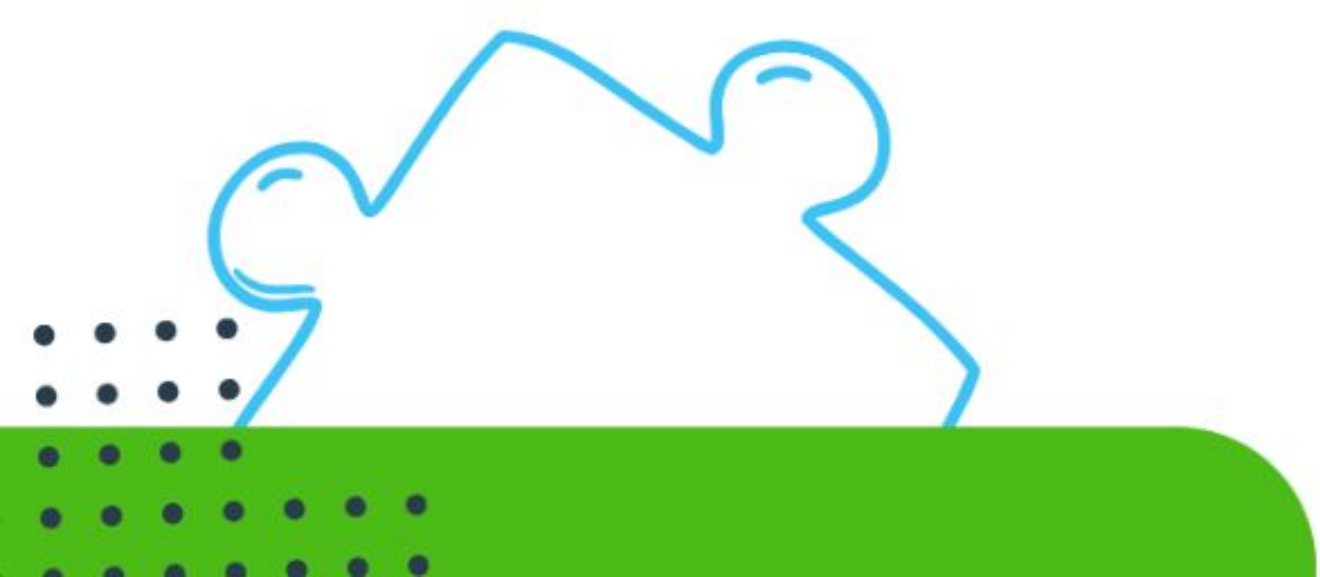
Compose, Decompose, and Master the Math!

Second graders become number wizards as they use regrouping to add and subtract big numbers! By composing and decomposing tens and hundreds, they discover how numbers work together - building confidence and preparing for even bigger math adventures ahead!



From Shapes to Data, Comet Kids Tackle It All!

Second graders become real-world math experts as they tell time, count money, measure, and graph data! These hands-on skills make math come alive, helping students see how math connects to everyday adventures!



Third Grade Math

Multiplication & Division Take Center Stage!

Third graders become multiplication and division masters—learning facts, strategies, and how these operations are connected. This is the year students begin to see themselves as powerful problem solvers who can tackle real-world math!

Fractions Come to Life

Students explore fractions as numbers on a number line and parts of a whole. They compare, model, and make sense of fractions—building a strong foundation for future fraction success!

Building Number Sense & Place Value Power

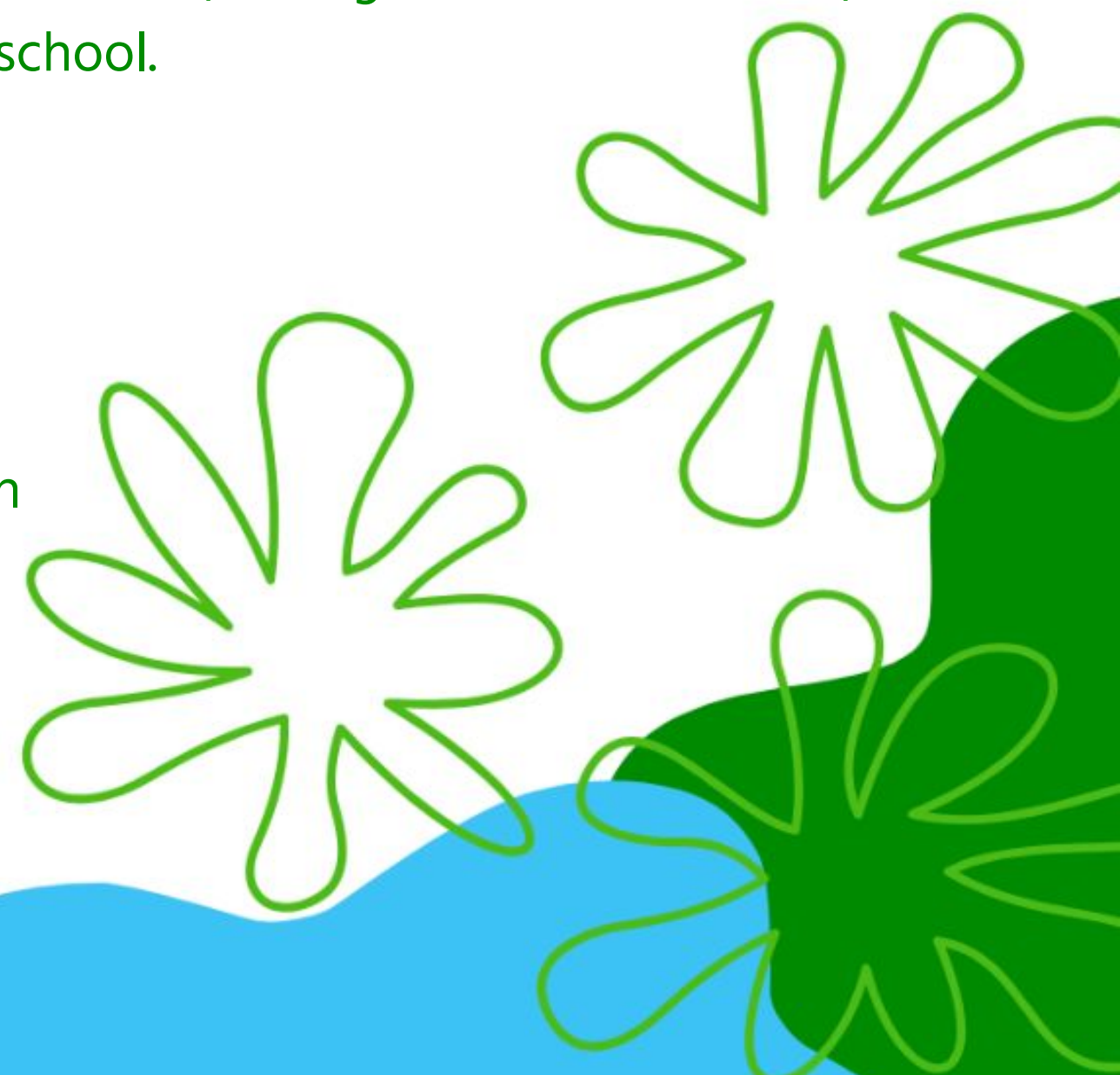
Students deepen their understanding of numbers within 1,000—adding and subtracting with efficiency, using place value strategies, and explaining their thinking. They become confident in making sense of numbers and choosing smart strategies.

Math Meets the Real World

Graphing, measurement, and time help students apply math to everyday life! Be ready to hear about line plots, measuring to the nearest $\frac{1}{2}$ inch, telling time to the minute, and solving real-life math situations at home and school.

Explaining Their Thinking Like Mathematicians

Third graders grow as math communicators—sharing their reasoning, trying multiple strategies, learning from mistakes, and showing grit. Math isn't just about the answer... it's about the thinking behind it!



4th Grade Math



Big Numbers and Place Value Power...

Fourth graders work with numbers up to **1,000,000**! They will compare, round, and write numbers in different forms-mastering how each digit's place gives it value.

- They're exploring the "big number world!"

Multiplication, Division and Problem Solving Super Skills...

Students use all four operations to **solve real-world problems**, multiplying large numbers and dividing with understanding.

- They're becoming confident problem-solvers who see math in everyday life.



Fractions and Decimals Come Alive...

Students learn to find **equivalent fractions**, add and subtract fractions with like denominator and connect fractions to **decimals**.

- They'll see fractions and decimals in cooking, measuring, and sharing!



Measurement, Data and Geometry Everywhere...

Students **convert units**, find **area and perimeter**, make **graphs**, and explore **angles and shapes**.

- They'll notice math in the world all around them-from maps to building blocks!



Growing Mathematical Thinkers...

Fourth graders explain their thinking, use strategies, and check if their answers make sense.

- They're building confidence and reasoning skills that last a lifetime!

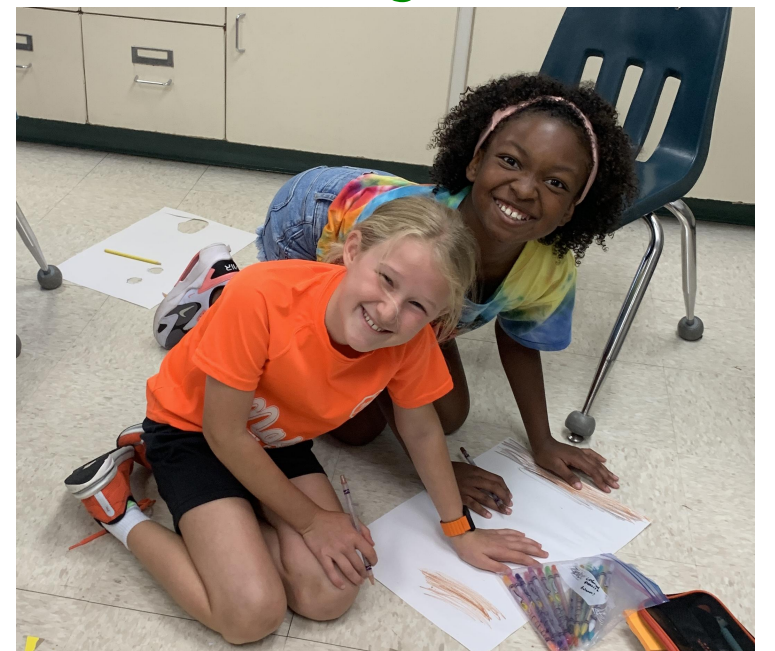
Fifth Grade Math

From Fractions to Functions — Students Build Math Foundations

In 5th grade, students strengthen their understanding of fractions — learning how to add, subtract, multiply, and divide them with confidence. These skills form the foundation for future math concepts, like algebra and functions. Through hands-on activities and real-world examples, students see how fractions connect to everyday life and future learning

Fifth Graders Have the Power — of Powers and Place Value!

Students dive deeper into the number system by exploring place value patterns and powers of ten. They learn how digits shift value based on their position and discover how exponents represent repeated multiplication. This understanding helps them work more efficiently with large and small numbers — a true superpower in math!



Measure, Multiply, and Master the Math Around Us!

Measurement comes alive as students apply multiplication and division to find area, volume, and other real-world measurements. Whether they're designing boxes, comparing containers, or solving word problems, students learn that math is everywhere — and mastering these skills helps them make sense of the world around them.

Data Detectives: Graph It, Read It, Solve It!

Becoming a data detective means learning to interpret line plots, charts, and graphs to uncover what the numbers tell us. Students collect, organize, and analyze data to solve problems — often using fractions to make sense of the information. It's all about turning numbers into stories and solutions.



Problem Solvers in Action — Thinking Like Mathematicians!

Fifth graders take on multi-step problems that challenge their reasoning and critical thinking. They learn to plan, test, and explain their mathematical thinking, just like real mathematicians. This focus on perseverance and strategy helps students grow in confidence and prepares them for middle school problem solving.

Sixth Grade Math



The Number Line: Zero is the Hero

6th grade establishes the groundwork for all future algebra by expanding the number system to include integers and rational numbers (positive and negative). Students master all four operations with these numbers, understanding how absolute value relates to distance and how to use the coordinate plane to represent real-world situations involving debt, elevation, and temperature.

Ratios: Connecting the Pieces

This is the cornerstone of middle school math. Students learn that a ratio is a relationship between two quantities and use unit rates to solve complex problems. We move beyond simple multiplication to apply proportional reasoning using tables, tape diagrams, and double number lines to understand and calculate percents, setting the stage for work with linear equations.



Equations: Finding the X Factor

Students begin their journey into formal algebra by distinguishing between expressions (which can be simplified) and equations (which can be solved). They learn to apply the properties of operations (like the distributive property) and use balancing techniques to solve for unknown variables, preparing them to model and solve real-world problems involving constraints.

Shape Shifters: Measure Up

Geometry in sixth grade focuses on measurement in two and three dimensions. Students determine the area of complex polygons by decomposing them into familiar shapes (rectangles and triangles). They also tackle three dimensional thinking by calculating the surface area and volume of prisms, often by visualizing and using nets.



Data Detectives: Spot the Spread

Students transition from just calculating averages to analyzing data distribution. They learn about measures of center (mean, median, mode) and measures of variability (interquartile range and mean absolute deviation). This unit is about interpreting and critiquing data representations, like dot plots and histograms, to make and justify evidence-based arguments.

7th & 8th Grade Mathematics

The Power of Algebra: Linear Relationships and Equations Unlocked!

Get ready to celebrate the **start of high-level algebra!** Your student is moving from basic arithmetic to solving complex real-world problems using algebraic equations.

- In **7th Grade**, they master solving **two-step algebraic equations and inequalities**. They also begin exploring **proportional relationships** ($y = kx$), a foundational skill for 8th grade!
- In **8th Grade**, they are introduced to **functions**, master **linear relationships** ($y = mx + b$), and solve **systems of equations**. They learn how one variable affects another, a fundamental concept for all future math and science!

Unlocking the Secrets of the Number System

The number world is getting bigger and more fascinating! Your student will **expand their understanding of numbers** far beyond whole numbers and fractions.

- In **7th Grade**, they become masters of the **rational numbers** by confidently adding, subtracting, multiplying, and dividing **positive and negative fractions and decimals**.
- In **8th Grade**, they tackle **irrational numbers** (like π) and learn to use **integer exponents** and **Scientific Notation** to represent and estimate the size of truly enormous or microscopic quantities!



Real-World Superstars: Proportional Reasoning, Probability and Statistics

Math comes alive as students apply it to every corner of the real world, turning them into statistical data detectives!

- In **7th Grade**, they use **ratios and proportional reasoning** to solve problems involving scale drawings, percents, and complex rates. They also **collect, analyze, and interpret data** using samples, compare data distributions, and understand probability through models and simulations to make **informed conclusions about real-world situations**.
- In **8th Grade**, they analyze **bivariate data** (data with two variables) using **scatter plots** to find patterns, trends, and relationships, just like real-world scientists and economists!

Geometric Heroes: Transformations, Pythagorean Theorem, Area and Volume

Get ready to see all kinds of various shapes! Students dive into an exciting new world of **geometry that focuses on space, motion, and measurement**.

- In **7th Grade**, they calculate the area **and circumference of a circle**, and become masters of solving for **surface area and volume of 3D figures**.
- In **8th Grade**, they master geometric **transformations** (reflections, rotations, and translations) and finding **volume of 3D figures**. Most thrillingly, they will conquer the legendary **Pythagorean Theorem** to find unknown lengths and distances in right triangles!

The Math Practice Power-Up: Thinking Like a Pro!

Beyond specific topics, these grades are a powerful *training ground* for **lifelong critical thinking**. Your student is developing the **essential skills needed for success in all subjects**. They are learning to:

- **Make Sense of Problems** (and never give up!).
- **Model with Mathematics** (using math to solve everyday situations).
- **Construct Viable Arguments** (explaining *how* they know the answer is right).

Math in 7th and 8th grade isn't just about the correct answer; it's about the journey to find it! **They are becoming confident thinkers ready for any challenge!** 🎉