



SCHOLASTIC



## DynaMath® Meets Common Core State Standards

*DynaMath* features motivating, skill-building activities that show students timely real-world applications of 3rd- through 6th-grade math curricula and the Common Core State Standards for Mathematics. Subscriptions come with a Teacher’s Guide, which includes a chart describing how each article correlates with the standards, additional reproducible activities, and an answer key for all the activities in the student and Teacher’s Guides. Also included are digital editions of each issue for use with whiteboards, LCD projectors, and classroom computers.

The chart below specifically outlines how *DynaMath* aligns to the following Common Core State Standards for Mathematics, grades 3 to 6:

- Operations and Algebraic Thinking (standards 3.OA, 4.OA, and 5.OA)
- Number and Operations in Base Ten (standards 3.NBT, 4.NBT, and 5.NBT)
- Number and Operations—Fractions (standards 3.NF, 4.NF, and 5.NF)
- Measurement and Data (standards 3.MD, 4.MD, and 5.MD)
- Geometry (standards 3.G, 4.G, 5.G, and 6.G)
- Ratios and Proportional Relationships (standard 6.RP)
- The Number System (standard 6.NS)
- Expressions and Equations (standard 6.EE)
- Statistics and Probability (standard 6.SP)

### Anchor Standards for Math

### DynaMath

#### Operations and Algebraic Thinking

3.Oa

Represent and solve problems involving multiplication and division.

- “Numbers in the News” word problems in both the print and online editions give students the opportunity to interpret whole number products and quotients in different real-world contexts.
- Articles featuring problem-solving lessons highlight different ways products and quotients can be interpreted and help students develop strategies for making connections between real-world contexts and computation.
- Consumer math, career features, and other articles provide additional practice for students to recognize and use multiplication and division of whole numbers in real-world contexts.

3.Oa

Understand properties of multiplication and the relationship between multiplication and division.

- Students use properties of multiplication to solve number puzzles and multistep word problems.
- Activities in the magazine and at its website highlight when students might think of division as unknown-factor problems.

## Operations and Algebraic Thinking

3.Oa

Multiply and divide within 100.

- Articles featuring problem-solving lessons give students practice multiplying and dividing within 100.

4.Oa

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

- Questions in articles that include problem-solving lessons and other real-world applications of math give students practice solving word problems using all four operations.
- Explicit articles addressing estimation help students develop familiarity with using estimation to assess reasonableness of answers.
- Students solve problems involving generating and identifying arithmetic patterns.

4.Oa

Use the four operations with whole numbers to solve problems.

- “Numbers in the News” word problems give students the opportunity to interpret whole number products and quotients in different contexts, including multiplicative comparison problems.
- Articles featuring problem-solving lessons highlight different ways all four operations can be interpreted and help students develop strategies for making connections between real-world contexts and computation.
- Questions in articles that include problem-solving lessons and other real-world applications of math provide additional practice for students to recognize and use the four operations for whole numbers in real-world contexts.

4.Oa

Gain familiarity with factors and multiples.

- Feature articles explicitly address finding factors (including greatest common factor) and identifying multiples (including least common multiple).

4.Oa

Generate and analyze patterns.

- Students solve problems involving generating and identifying patterns, including using function tables.

5.Oa

Write and interpret numerical expressions.

- Students write numerical expressions with guidance for activities found at the magazine’s website.
- Students have opportunities to practice writing and evaluating numerical expressions (including those involving parentheses or brackets).

5.Oa

Analyze patterns and relationships.

- Students generate and analyze two related numerical patterns using function tables.
- Articles and puzzles support students in looking at patterns in problems involving rate and other linear relationships.

## Number and Operations in Base Ten

3.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.

- Rounding and estimating sums and differences are covered explicitly in articles.
- Use of rounding techniques is encouraged as students check over their work.
- Addition and subtraction of whole numbers up to 1,000 appears throughout.

4.NBT

Generalize place value understanding for multi-digit whole numbers.

- Students use concepts of place value to solve problems adding, subtracting, multiplying, and dividing numbers that are multiples of powers of ten in articles and reproducible activities found at the magazine's website.
- Students read and write multi-digit whole numbers in various forms (numeral, names, expanded form) for different types of problems.
- Rounding and estimation is covered explicitly in articles.

5.NBT

Use place value understanding and properties of operations to perform multi-digit arithmetic.

- Problems involving addition and subtraction of multi-digit whole numbers give students ample practice using the standard algorithms.
- Problems involving multiplication and division of whole numbers (including products/quotients of numbers with up to four digits by numbers with up to two digits) give students practice using different strategies and opportunities to explain their calculations.

5.NBT

Understand the place value system.

- Students develop understandings of place value solving problems with numbers that are multiples of powers of ten and numbers with decimals in recurring features such as consumer math activities.
- Articles focus explicitly on rounding and comparing decimals.

5.NBT

Perform operations with multidigit whole numbers and with decimals to hundredths.

- Students practice all four operations with decimals up to the hundredths place often in articles that include problem-solving lessons and other real-world applications of math.
- Students have many opportunities to practice multiplication and division of multi-digit numbers using the standard algorithm and other strategies.

## Number and Operations—Fractions

3.NF

Develop understanding of fractions as numbers.

- Introductory fraction activities in the magazine and online help students develop understanding of fractions as equal parts of wholes and as equally partitioned intervals on a number line between 0 and 1.

4.NF

Extend understanding of fraction equivalence and ordering.

- Activities found at the magazine's website help students understand equivalent fractions and ordering fractions.

4.NF

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

- Articles focused on fraction operations in real-world contexts promote student understanding of adding and subtracting fractions with like denominators and multiplying a fraction by a whole number.
- Students practice writing equivalent mixed numbers and improper fractions by doing a variety of problems with fractions.

4.NF

Understand decimal notation for fractions, and compare decimal fractions.

- Students are asked to write equivalent fractions and decimals and compare decimals.

5.NF

Use equivalent fractions as a strategy to add and subtract fractions.

- Students practice solving word problems involving the addition and subtraction of fractions with unlike denominators in contexts such as comparing two equal-sized trays of food cut into different numbers of equal pieces.

5.NF

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

- Activities focused on fraction operations provide students with sensible contexts for fraction multiplication and division, supporting their understandings of computations with fractions.

## Measurement and Data

3.MD

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

- Problems involving estimating, adding, subtracting, multiplying, and dividing time intervals, masses, and volumes appear throughout the magazine.

3.MD

Represent and interpret data.

- Students are asked to interpret and solve problems using tables, bar graphs, pictographs, line graphs, and circle graphs.

## Measurement and Data

3.MD

Geometric measurement: Understand concepts of area and relate area to multiplication and to addition.

- Solving area problems using meaningful contexts and representational strategies supports students' understanding of area as the sum of square units and as the product of side lengths.
- Reproducible activities at the magazine's website use visual models to increase conceptual understanding of area.

3.MD

Geometric measurement: Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

- Students solve problems finding perimeters and producing rectangles with a given perimeter.

4.MD

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

- Various feature articles and "Numbers in the News" puzzles ask students to convert measures within the same system of units.
- Students solve problems involving measures of distance, volumes, masses, money, and intervals of time, using all four operations in targeted articles.
- Students find area and perimeter within real-world contexts in features such as math-in-careers activities and related reproducibles.

4.MD

Represent and interpret data.

- Students are asked to interpret and solve problems using charts and graphical representation.

4.MD

Geometric measurement: Understand concepts of angle and measure angles.

- Problems involving estimating angle measures and classifying angles promote student understanding of angles and angle measure.

5.MD

Convert like measurement units within a given measurement system.

- Various activities involving real-world contexts ask students to convert measures within the same system.

5.MD

Represent and interpret data.

- Students are asked to complete or make a variety of types of graphs given a set of data.
- Certain activities require students to collect and graph data sets.

5.MD

Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

- Students are given meaningful contexts and representational support for finding volume.
- Students practice decomposing shapes to find volume.
- Students find the volume of right rectangular prisms by adding cubic units and by multiplying edge lengths.

## Geometry

3.G

Reason with shapes and their attributes.

- Students identify and categorize shapes by sides, edges, vertices, and arcs.

4.G

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

- In articles such as those featuring consumer math issues, students are asked to identify lines and angles on the plane and as parts of two dimensional objects.

4.G

Graph points on the coordinate plane to solve real-world and mathematical problems.

- In select activities, students must graph points and equations in the first quadrant of the coordinate plane using ordered pairs of coordinates.

5.G

Classify two-dimensional figures into categories based on their properties.

- Students identify and categorize shapes based on attributes and properties, including sides, angles, edges, and vertices.

6.G

Solve real-world and mathematical problems involving area, surface area, and volume.

- Students are given meaningful contexts and representational support for finding area, surface area, and volume.
- Students practice decomposing shapes to find area and volume.
- Students find the volume of right rectangular prisms by adding cubic units and by multiplying edge lengths.

## Ratios and Proportional Relationships

6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

- Problems involving scaling and converting between units in “Numbers in the News” and other articles support proportional reasoning and give students practice solving these types of problems.
- Activities specifically target rates, including pricing, speed, and percents.

## The Number System

6.NS

Compute fluently with multi-digit numbers and find common factors and multiples.

- Various types of problems provide students with opportunities to practice the standard algorithm for all four operations with multi-digit whole numbers and decimals.
- Consumer math articles provide money as a context for operations with decimals to the hundredths place.
- Some articles explicitly address finding factors (including greatest common factors) and identifying multiples (including least common multiples).

## Expressions and Equations

6.EE

Apply and extend previous understandings of arithmetic to algebraic expressions.

- Opportunities for students to write and evaluate numerical expressions (including those in which letters stand for numbers) are embedded throughout, especially in online activities that encourage students to express questions from the magazine as variable expressions.
- Articles featuring problem-solving lessons explicitly guide students in writing, interpreting, and evaluating numerical expressions, including evaluation at specific values of the variable.
- Online activities have students use order of operations to solve for a variable in equivalent expressions.

6.EE

Reason about and solve one-variable equations and inequalities.

- Opportunities for students to write and solve one-variable equations are embedded throughout.
- Problems involving solving one-variable equalities and inequalities are available in reproducibles.

6.EE

Represent and analyze quantitative relationships between dependent and independent variables.

- Pre-algebra online features support students in writing equations with variables representing two quantities in real-world contexts.

## Statistics and Probability

6.SP

Develop understanding of statistical variability.

- Articles such as math-in-careers articles and sports-related features help teachers support student understanding of measures of center and variability.

6.SP

Summarize and describe distributions.

- Articles focusing on statistical data ask students to find measures of center in real-world contexts using lists and graphical displays of data.

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