

Houghton Mifflin *MATHSTEPS*
 Level 3
 correlated to
 Chicago Academic Standards and Framework
 Grade 3

Curriculum Framework Statement

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State Goal 6: <i>Demonstrate and apply a knowledge and sense of numbers, including basic arithmetic operations, number patterns, ratios and proportions.</i>	
CAS A. Relate counting, grouping, and place-value concepts to whole numbers and simple decimals.	
1. Count, read, write, and interpret whole numbers to 100,000 and identify the value of each digit.	TE: T20, T38 PE: 3–6, 10, 48, 62
2. Compare whole numbers, using the symbols (< , > , =).	TE: T16–19, T21 PE: 7–8
3. Use and explain equivalent forms of the same number.	TE: T20, T38 PE: 3, 5–6, 48, 62
4. Read and write number words.	TE: T20 PE: 6
5. Devise situations that demonstrate understanding of simple decimals in the context of money.	TE: T40–41, T52, T54, T165–166 PE: 55–56, 58–60, 75–76, 81, 291–298
6. Model the meaning of multiplication (repeated addition, counting by multiples, finding areas, counting elements in an array) and division (equal sharing, equal groups).	TE: T64–66, T68, T78, T120 PE: 92–93, 97–98, 100, 107, 115–116, 200
7. Estimate, approximate, round or use exact numbers as appropriate.	TE: T39–40, T53 PE: 49–54, 79–80
CAS B. Add, subtract, multiply, and divide whole numbers and add and subtract simple decimals and fractions with accuracy, using a variety of appropriate strategies.	
1. Using place-value concepts, add and subtract numbers with more than 3 digits, regrouping when necessary.	TE: T32–35, T41, T46–49, T54 PE: 57–58, 81–82
2. Multiply and divide one- and two-digit numbers by factors/divisors of 6–10.	TE: T60–63, T68, T116–122 PE: 107–108, 197–200, 203–206
3. Add and subtract simple decimals in the context of dollars and cents with and without regrouping.	TE: T32–35, T41, T46–49, T52 PE: 55–56, 75–76
4. Identify and use the relationship between multiplication and division to develop strategies to multiply and divide and to solve problems (e.g., $5 \times 6 = 30$, $30 \div 6 = 5$, $30 \div 5 = 6$).	TE: T80–82, T120–122 PE: 125–126, 129–134, 197–200, 203–206
5. Add and subtract proper fractions having like denominators of 10 or less.	TE: T102–105, T109 PE: 185–186

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 Grade 3

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CAS C. Solve one- and two-step problems using addition, subtraction, multiplication, and/or division of whole numbers with a variety of appropriate strategies such as estimation, mental computation, paper and pencil, and calculators.	
1. Analyze problem situations/contexts and identify when to multiply or divide.	TE: T74–77, T83 PE: 137–138
2. Use addition, subtraction, multiplication, and division to solve one- and two-step problems taken from story situations and contexts familiar to students.	TE: T20, T24, T81, T83, T121, T123, T139, T166 PE: 4, 22, 127–128, 137–138, 201–202, 209–210, 245–246, 295–296
3. Use mathematical symbols (+, −, ×/÷, <, >) correctly in number sentences and expressions.	TE: T21, T66, T106–107, T150 PE: 7–8, 31–32, 99–100, 175–176, 178, 261
4. Justify that computational results are correct or that estimates are reasonable.	TE: T32–35, T40, T46–49, T53 PE: 53–54, 79–80, 257
CAS D. Describe and compare fractions and solve problems involving proportional reasoning or simple ratios using appropriate strategies (manipulatives, drawings, diagrams, graphs, and models).	
1. Demonstrate meaning of fractions and name, read and write any fraction.	TE: T106–109 PE: 173–182, 185–188, 191–192, 194
2. Recognize unit fractions as equivalent to division (e.g., $1/4$ of something is the same as dividing by 4).	TE: T102–105, T108 PE: 181–182
3. Identify and name other than unit fractions from given regions.	TE: T107 PE: 177–178
4. Compare fractional parts of a set or of a whole with denominators of up to 12, using concrete or real-world models or symbols (e.g., there are more objects in $1/3$ of a set of 12 objects than in $1/4$ of the set; $1/4 < 1/3$).	TE: T106 PE: 175–176
CAS E. Recognize and use properties of numbers and operations.	
1. Find, identify, and sort numbers by their properties (even, odd, multiples).	These pages prepare students to meet this objective: TE: T16–19, T21 PE: 7–8
2. Use and explain the use of the identity property of zero in addition and subtraction.	See Level 1
3. Use and explain the use of the identity property of one in multiplication and division.	TE: T65 PE: 95–96
State Goal 7: Estimate, make, and use measurements of objects, quantities, and relationships, and determine acceptable levels of accuracy.	

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 Grade 3

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Houghton Mifflin *MATHSTEPS*

CAS A. Use nonstandard units (e.g., hands, feet, strips of paper, paper clips, etc.) to measure objects and distances.	
1. Use standard units of measure in both the customary and metric systems to measure objects and distance, use the correct unit of measure in responses (e.g., 24 cm wide, 8 yards long).	TE: T148, T150 PE: 251–254, 259–262
CAS B. Make reasonable estimates when measuring objects, distances, time, and temperature.	
1. Estimate weight/mass, quantity, or temperature by reading and interpreting dials (e.g., timers, water meters and scales).	TE: T144–148, T150 PE: 251–252, 259–260
2. Discuss ways to make estimates closer to actual measurements.	These pages prepare students to meet this objective: TE: T144–148, T150 PE: 251–252, 259–260
CAS C. Measure length, width, perimeter, area, liquid, volume, temperature, and mass of objects using customary and metric systems.	
1. Devise story situations for which measurements and comparison of measurements must occur and the most appropriate tool, and units of measure must be identified and used.	TE: T144–153 PE: 251–274
2. Measure and tell time using instruments (e.g., analog and digital clocks, calendars) and units (e.g., seconds, minutes, hours, days, years) and determine elapsed time between events.	TE: T16–19, T26–26 PE: 23–30
3. Use contemporary and metric rulers to draw line segments of a given length.	TE: T88–91, T93 PE: 147–148
4. Measure the length of an object using customary and metric units to the nearest part of a unit (e.g., 1/8 inch, 1/2 centimeter),	TE: T144–148, T150 PE: 251–252, 259–260
5. Determine the perimeter of an object with straight sides by measuring.	TE: T144–147, T151 PE: 265–266
6. Determine the area of a figure by covering it with square units.	TE: T144–147, T152 PE: 267–268
7. Use Celsius and Fahrenheit thermometers to measure and compare to the nearest degree at, above or below zero.	TE: T144–147, T149, T151 PE: 255–256, 263–264
8. Estimate the appropriate temperature for a given situation (e.g., a summer day).	TE: T144–147, T149, T151 PE: 255–256, 263–264, 280
9. Convert between closely associated units of time (hour, days, weeks, months, and years) or length (e.g., inches, feet, yards).	TE: T24–26, T148–151 PE: 23–24, 28–30, 252, 256, 260, 264

Houghton Mifflin *MATHSTEPS*
 Level 3
 correlated to
 Chicago Academic Standards and Framework
 Grade 3

Curriculum Framework Statement

Houghton Mifflin *MATHSTEPS*

10. Measure liquid volume in customary and metric units.	TE: T153 PE: 271–272
CAS D. Identify coins and represent and use their value to answer questions involving sums of money.	
1. Use appropriate money values in story situations (e.g., savings: \$6.00 to put in a bank that holds dimes).	TE: T20, T164 PE: 4, 270, 287–288
2. Make change for purchases costing less than \$10.00.	TE: T16–19, T22 PE: 19–20
3. Represent money correctly using the symbols (¢) for amounts under \$1.00 or (\$) for amounts \$1.00 and higher.	TE: T16–19, T22–23, T32–35, T40, T158–161, T165 PE: 13–20, 26, 31, 55–56, 58, 61, 75–76, 85, 293–294, 297
<i>State Goal 8: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems, and predict results.</i>	
CAS A. Recognize, describe, create, replicate, and extend a variety of patterns including attribute, number, and geometric patterns using manipulatives (e.g., blocks and shapes), diagrams, and symbols.	
1. Follow a set of instructions to create a pattern.	TE: T22 PE: 12
2. Recognize, describe, and extend geometric and simple number patterns (3,6,10,15,21).	TE: T21, T95 PE: 10, 157–158
CAS B. Use language, symbols (<, >, ÷, =, ≠, +, etc.), tables, and graphs to represent operations and relationships.	
1. Generate and write number sentences vertically and horizontally.	TE: T60–64, T66 PE: 38, 89–90, 98, 100–102, 105–108, 112, 197, 209–210, 213, 215
2. Use all operational symbols and (relational symbols (=, o, <, >)) appropriately.	TE: T21, T66, T106–107, T150 PE: 7–8, 31–32, 99–100, 175–176, 178, 191, 261
3. Solve one-step linear equations with one missing by appealing to a related equation.	See Level 4
4. Locate objects in a array, given the row and column, and graph ordered pairs of whole numbers derived from simple functions and relationships.	TE: T88–91, T96 PE: 159–160
CAS C. Model the concepts of variable, expression, equal, and unequal using concrete materials.	
1. Model the concepts of equal and unequal groups and known and unknown quantities using objects, drawings, symbols, and words.	TE: T21, T66, T106–107, T150, T163 PE: 7–8, 31–32, 99, 175–176, 178, 261 285–286

Houghton Mifflin *MATHSTEPS*
 Level 3
 correlated to
 Chicago Academic Standards and Framework
 Grade 3

Curriculum Framework Statement

Houghton Mifflin *MATHSTEPS*

2. Demonstrate understanding that an equality relationship between two qualities remains the same as long as the same change is made to both quantities.	These pages prepare students to meet this objective: TE: T21, T106–107, T150 PE: 7–8, 175–176, 178, 261
CAS D. Create and solve problems involving simple number patterns by using words, symbols, drawings, and concrete objects.	
1. Make up a story that could be derived from a picture, a set of data, or a graph.	These pages prepare students to meet this objective: TE: T24, T38, T41, T54, T82, T94, T96, T107, T121, T137, T163 PE: 21–22, 33, 45–46, 58, 82, 135, 153–154, 161–162, 180, 201–202, 237–238, 286
2. Select and use an appropriate operation to solve problems involving multiplication and simple division that involve number patterns (e.g., saving 1 penny the first day and doubling the amount each following day for 10 days).	TE: T21–22, T24, T68, T83, T95, T121, T134, T152, T163 PE: 10–12, 22, 107, 137–138, 157–158, 202, 224, 268, 286
State Goal 9: Use geometric methods to analyze, categorize, and draw conclusions about points, lines, planes, and space.	
CAS A. Identify and describe various plane and solid shapes and figures (e.g., segment/line, plane, circle/sphere, square/cube, triangle/pyramid, rectangle/rectangular solid) by their attributes (e.g., number of edges, faces, bases, corners, dimensions).	
1. Create three-dimensional shapes from mats, name and classify them according to several different characteristics (e.g., sides, edges).	These pages prepare students to meet this objective: TE: T88–91, T95 PE: 155–156
2. Name and describe attributes.	TE: T88–93, T95 PE: 143–144, 147–148, 155–156
3. Identify, name and describe polygons that have 3, 4, 5, 6, or 8 sides.	TE: T88–92 PE: 143–144
4. Draw line segments of various lengths and circles of various radii using appropriate tools.	TE: T88–91, T93 PE: 147–148
CAS B. Describe and give examples of geometric concepts that show relationships between and among figures, including symmetry, congruence, size, and location.	
1. Identify shapes that are the same and put two or more shapes together to create a shape which is the same size and shape as a given shape	TE: T88–91, T94 PE: 151–152
2. Measure and create rectangular scale drawings based on work with concrete objects and graph paper.	See Level 5

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 Grade 3

Curriculum Framework Statement

Houghton Mifflin *MATHSTEPS*

State Goal 10: <i>Collect, organize, and analyze data, using statistical methods to predict results and interpret uncertainty and chance in practical applications.</i>	
CAS A. Collect, organize, and display a set of data using pictures, tallies, tables, charts, lines, or bar graphs, noting patterns, relationships, and changes over time.	
1. Read and interpret information on various kinds of graphs and draw/construct various kinds of graphs from data, objects and drawings.	TE: T38, T41, T54, T68, T96–97, T121, T137, T149, T163 PE: 45–46, 58, 82, 109–110, 135, 161–162, 165–166, 201–202, 237–238, 256, 286
2. Compare sets of data (e.g., more girls walk to school than boys in the 3rd grade; in our class the favorite color was blue, but it was red in Mrs. Frank's class) from tallies, charts, line, and bar graphs.	TE: T38, T41, T54, T68, T96–97, T121, T137, T149, T163 PE: 45–46, 58, 82, 109–110, 135, 161–162, 165–166, 201–202, 237–238, 256, 286
3. Describe and explain data, graphs, patterns, and relationships clearly and logically and support statements by linking them to the data.	TE: T38, T41, T54, T68, T96–97, T121, T137, T149, T163 PE: 45–46, 58, 82, 109–110, 135, 161–162, 165–166, 201–202, 237–238, 256, 286
CAS B. Formulate questions of interest; design surveys or experiments to answer the questions, gather data, explain how the data will answer the question, and communicate results.	
1. Develop questions that are clear and answerable (e.g., daily temperature, lunch count, attendance).	This page prepares students to meet this objective: TE: T96 PE: 161
2. Identify data needed to answer questions.	TE: T38, T41, T54, T68, T96–97, T121, T137, T149, T163 PE: 45–46, 58, 82, 109–110, 135, 161–162, 165–166, 201–202, 237–238, 256, 286
3. Create effective and efficient methods for collecting and recording data gathered.	TE: T38, T41, T54, T68, T82, T96, T137 PE: 45–46, 58, 82, 109–110, 161–162, 237–238
4. Communicate the results of a survey or experiment.	TE: T96 PE: 161
CAS C. Describe and use the concept of probability in relationship to likelihood and chance.	
1. Relate the concept of a fractional part or a part of a group to the likelihood that something will happen (e.g., there are two possible outcomes on a coin so it should land on heads about 1/2 of the time; a spinner divided into 4 colors of equal size is likely to stop on yellow about 5 times out of 20 trys).	These pages prepare students to meet this objective: TE: T97 PE: 163–164, 166