

Curriculum Framework Statement

Houghton Mifflin MATHEMATICS

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, and write, whole numbers to 10,000 and identify the value of each digit.	TE: These pages involve numbers to 1,000; see Level 3 for 10,000. 65B, 65–66, 67B, 67–68, 69B, 69–70, 89, 505B, 505–514, 513B, 513–514, 531B, 531–534 PE: These pages involve numbers to 1,000; see Level 3 for 10,000. 65–66, 67–68, 69–70, 89, 505–514, 513–514, 531–534
2. Compare whole numbers up to 1,000, using words and symbols (<, >, =).	TE: These pages involve numbers to 100; see Level 3 for 1,000. 13–14, 31–32, 85B, 85–86, 117–118, 225–228, 303A, 327A, 402, 525B, 525–526 PE: These pages involve numbers to 100; see Level 3 for 1,000. 13–14, 31–32, 85–86, 117–118, 225–228, 402, 525–526
3. Represent equivalent forms of the same number through the use of physical models, word names, and symbols.	TE: 65B, 65–66, 67B, 67–68, 69B, 69–70, 73B, 73–74, 326B, 326–330, 331B, 331–332, 350, 505B, 505–514, 523B, 523–524 PE: 65–66, 67–68, 69–70, 73–74, 326–330, 331–332, 350, 505–514, 523–524
4. Read and write number words.	TE: 67B, 67–68, 73B, 73–74, 523B, 523–524 PE: 67–68, 73–74, 523–524
5. Read, write, and order simple decimals in the context of dollars and cents.	TE: 171B, 171–172, 531B, 531–534, 553B, 553–554, 579B, 579–580 PE: 171–172, 531–534, 553–554, 579–580
6. Demonstrate the meaning of addition (putting together, increasing) and subtraction (take away, comparing).	TE: 9B, 9–10, 11B, 11–12, 13B, 13–14, 15B, 15–16, 17B, 17–18, 21B, 21–23, 25B, 25–26, 27B, 27–28, 29B, 29–30, 31B, 31–32, 39B, 39–40, 42B, 42–43, 201B, 201–202, 203B, 203–204, 223B, 223–224, 225B, 225–226, 229B, 229–230, 259B, 259–260, 261B, 261–262, 269B, 269–270, 271B, 271–272, 279B, 279–280, 281B, 281–282, 285B, 285–286, 361B, 361–362, 387B, 387–388, 389B, 389–390, 553B, 553–554, 573B, 573–574, 575B, 575–576 PE: 9–10, 11–12, 13–14, 15–16, 17–18, 21–23, 25–26, 27–28, 29–30, 31–32, 39–40, 42–43, 201–202, 203–204, 223–224, 225–226, 229–230, 259–260, 261–262, 269–270, 271–272, 279–280, 281–282, 285–286, 361–362, 387–388, 389–390, 553–554, 573–574, 575–576
7. Estimate and use exact numbers in appropriate situations.	TE: 215B, 215–216, 275B, 275–276, 577B, 577–578 PE: 215–216, 275–276, 577–578
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.	

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1. Add whole numbers up to 3 digits, using place-value concepts to regroup when necessary.	TE: 553B, 553–554, 555B, 555–556, 557B, 557–558 PE: 553–554, 555–556, 557–558
2. Subtract two whole numbers having up to three digits, using place-value concepts to regroup to the tens place.	TE: 563B, 563–564, 565B, 565–566, 573B, 573–575 PE: 563–564, 565–566, 573–575
3. Multiply and divide one- and two-digit numbers by factors/divisors of 2 to 5.	TE: 359B, 359–360, 361B, 361–364, 365B, 365–366, 367B, 367–368, 377B, 377–378, 387B, 387–388, 389B, 389–390 PE: 359–360, 361–364, 365–366, 367–368, 377–378, 387–388, 389–390
4. Add and subtract amounts of money given as dollars and cents.	TE: 227B, 227–228, 231B, 231–232, 283B, 283–284, 579B, 579–580 PE: 227–228, 231–232, 283–284, 579–580
5. Identify and use the relationship between addition and subtraction to develop strategies to add and subtract whole numbers and to solve problems.	TE: 11B, 11–12, 27B, 27–29, 31B, 31–32, 43B, 43–44 PE: 11–12, 27–29, 31–32, 43–44
6. Name and identify fractions with denominators less than 10.	TE: 325B, 325–326, 327B, 327–328, 329B, 329–330, 333B, 333–334, 335B, 335–336 PE: 325–326, 327–328, 329–330, 333–334, 335–336
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 add or subtract.	TE: 45B, 45–47, 393B, 393–395, 567B, 567–568 PE: 45–47, 393–395, 567–568
2. Use multiplication to solve simple problems.	TE: 360, 362, 366, 374, 378, 379B, 379–380 PE: 360, 362, 366, 374, 378, 379–380
3. Demonstrate and use the multiplication symbol, the less than and greater than, and not equals symbols.	TE: 85B, 85–86, 331B, 331–332, 365B, 365–366, 367B, 367–368, 369B, 369–370, 373B, 373–374, 375B, 375–376, 377B, 377–378, 525B, 525–526 PE: 85–86, 331–332, 365–366, 367–368, 369–370, 373–374, 375–376, 377–378, 525–526
4. Justify that computational results are correct.	TE: 12, 14, 26, 29, 32, 39, 70, 72, 150, 152, 153, 157, 167, 172, 197, 216, 224, 228, 253, 256, 259, 281, 284, 285, 312, 315, 317, 329, 335, 359, 385, 389, 391, 415, 418, 422, 442, 469, 506, 509, 525, 526, 527, 530, 531, 555, 558, 561 PE: 12, 14, 26, 29, 32, 39, 70, 72, 150, 152, 153, 157, 167, 172, 197, 216, 224, 228, 253, 256, 259, 281, 284, 285, 312, 315, 317, 329, 335, 359, 385, 389, 391, 415, 418, 422, 442, 469, 506, 509, 525, 526, 527, 530, 531, 555, 558, 561
CAS D. Describe and compare fractions and solve problems involving proportional reasoning or simple ratios using appropriate strategies (manipulatives, drawings, diagrams, graphs, and models).	

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1. Identify and name fractional parts of a whole, using any unit fraction.	TE: 325B, 325–326 PE: 325–326
2. Divide a whole into a specified number of equal parts and name those parts as a fraction.	TE: 325B, 325–326 PE: 325–326
3. Identify fractional parts of given regions.	TE: 327B, 327–328, 329B, 329–330 PE: 327–328, 329–330
4. Compare fractional parts of a set or of a whole with denominators of up to 5, using concrete or real-world models or symbols.	TE: These pages involve denominators up to 4; see Level 3 for denominators up to 5. 333B, 333–334, 335B, 335–336 PE: These pages involve denominators up to 4; see Level 3 for denominators up to 5. 333–334, 335–336
5. Identify the part of a set or a region that represents the sum or difference of two fractional parts of the set or region.	TE: 327B, 327–328, 329B, 329–330 PE: 327–328, 329–330
CAS E. Recognize and use properties of numbers and operations.	
1. Count by 2's up to 50 and 3's up to 30.	TE: These pages involve counting by 2s; see Level 3 for 3s. 359B, 359–360 PE: These pages involve counting by 2s; see Level 3 for 3s. 359–360
2. Identify and name odd and even numbers.	TE: 81B, 81–82, PE: 81–82
3. Demonstrate understanding of the identity property of zero in addition and subtraction.	TE: 9–10, 14, 17–18 PE: 9–10, 14, 17–18
<i>State Goal 7: Estimate, make, and use measurements of objects, quantities, and relationships, and determine acceptable levels of accuracy.</i>	
CAS A. Use nonstandard units (e.g., hands, feet, strips of paper, paper clips, etc.) to measure objects and distances.	
1. Compare, using nonstandard units of measure.	TE: 413B, 413–414, 415B, 415–416 PE: 413–414, 415–416
CAS B. Make reasonable estimates when measuring objects, distances, time, and temperature.	
1. Estimate weight/mass or volume of given objects and containers.	TE: 430, 431B, 431–432 PE: 430, 431–432
2. Determine whether an estimate is more, less, or equal to the actual measure.	TE: 413B, 413–414, 415B, 415–416 PE: 413–414, 415–416
CAS C. Measure length, width, perimeter, area, liquid, volume, temperature, and mass of objects using customary and metric systems.	

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1. Use measurement tools to compare measures.	TE: 413B, 413–414, 415B, 415–416, 417B, 417–418, 419B, 419–420, 421B, 421–422, 429B, 429–430, 431B, 431–432, 433B, 433–434, 435B, 435–436, 439B, 439–440, 441B, 441–442, 443–444 PE: 413–414, 415–416, 417–418, 419–420, 421–422, 429–430, 431–432, 433–434, 435–436, 439–440, 441–442, 443–444
2. Measure and tell time using instruments (e.g., analog and digital clocks) to the nearest five and single minutes.	TE: These pages involve 5 minutes; see Level 3 for single minutes. 465B, 465–466, 467B, 467–468, 469B, 469–470, 471B, 471–472, 473B, 473–474, 475B, 475–476 PE: These pages involve 5 minutes; see Level 3 for single minutes. 465–466, 467–468, 469–470, 471–472, 473–474, 475–476
3. Use a ruler to measure the length of a given line segment in both customary and metric units.	TE: 417B, 417–418, 419B, 419–420 PE: 417–418, 419–420
4. Measure the length of an object using customary and metric units to the nearest 1/2 inch.	TE: These pages involve nearest inch; see Level 3 for <u> </u> inch. 417–418, 419–420 PE: These pages involve nearest inch; see Level 3 for <u> </u> inch. 417–418, 419–420
5. Determine the perimeter of a drawn figure by measuring.	TE: 421B, 421–422 PE: 421–422
6. Use Celsius and Fahrenheit thermometers to measure and compare to the nearest degree at or above zero.	TE: These pages involve Fahrenheit; see Level 3 for Celsius. 439B, 439–440 PE: 439–440
7. Associate familiar situations with appropriate temperatures.	TE: 439B, 439–440 PE: 439–440
8. Demonstrate and discuss relationships between associated units (e.g., hour, days, months, and years).	TE: 481B, 481–482, 483B, 483–484 PE: 481–482, 483–484
9. Measure liquid volume in customary units.	TE: 433B, 433–434, 435B, 435–436 PE: 433–434, 435–436
CAS D. Identify coins and represent and use their value to answer questions involving sums of money.	
1. Convert between all money values.	TE: 149B, 149, 151B, 151–152, 153B, 155B, 155–156, 169B, 169–170, 171B, 171–172, 186 PE: 149, 151–152, 155B, 155–156, 169–170, 171–172, 186
2. Represent up to \$5.00 as combinations of money values.	TE: 149B, 149–150, 151B, 151–152, 153B, 153–154, 155B, 155–156, 157B, 157–158, 159B, 159–160, 161, 162–164, 165B, 165–166, 167B, 167–168, 169B, 169–170, 171B, 171–172, 173B, 173–174, 175–176, 178–184, 186 PE: 149–150, 151–152, 153–154, 155–156, 157–158, 159–160, 161, 162–164, 165–166, 167–168, 169–170, 171–172, 173–174, 175–176, 178–184, 186

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3. Make change for purchases costing less than \$5.00.	TE: 159B, 159–161, 163, 173B, 173–174, 175–177 PE: 159–161, 163, 173–174, 175–177
4. Use the dollar sign appropriately for amounts exceeding \$1.00.	TE: 171B, 171–172, 173B, 173–174, 227B, 227–228, 283B, 283–284, 531B, 531–532, 579B, 579–580 PE: 171–172, 173–174, 227–228, 283–284, 531–532, 579–580
State Goal 8: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems, and predict results.	
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. Create simple patterns, using shapes and be able to explain and justify the patterns.	TE: 84, 319B, 319–320 PE: 84, 319–320
2. Extend number patterns formed by addition and subtraction.	TE: 66, 82, 83B, 83–84, 91B, 91–92, 212, 280, 506, 518B, 518–519 PE: 66, 82, 83–84, 91–92, 212, 280, 506, 518–519
CAS B. Use language, symbols (<, >, ÷, =, ≠ +, etc.), tables, and graphs to represent operations and relationships.	
1. Use =, ≠ symbols to show equal and unequal portions.	TE: 157B, 157–158, 525B, 525–526, 528 PE: 157–158, 525–526, 528
2. Create stories/situations from which simple multiplication and division sentences can be written.	TE: 12, 28, 40, 88, 124, 158, 168, 282, 286, 470, 562 PE: 12, 28, 40, 88, 124, 158, 168, 282, 286, 470, 562
3. Select appropriate symbols (<, >, =) to make a number sentence true.	TE: 9, 45B, 45–46, 393B, 393–394 PE: 9, 45–46, 393–394
4. Solve missing subtrahend problems.	TE: 27B, 27–28, 43B, 43–44, 274, 576 PE: 27–28, 43–44, 274, 576
5. Identify and represent whole numbers on a number line.	TE: 11B, 11–12, 25B, 25–26, 89B, 89–90, 215B, 215–216, 275B, 275–276, 577B, 577–578 PE: 11–12, 25–26, 89–90, 215–216, 275–276, 577–578
6. Locate objects in an array given the row and column.	TE: See Level 3. PE: See Level 3.
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: 157B, 157–158, 525B, 525–526, 528 PE: 157–158, 525–526, 528
2. Demonstrate, using a balance, what happens to an equality relationship when change occurs to one side.	TE: 429B, 429–430, 431B, 431–432 PE: 429–430, 431–432
CAS D. Create and solve problems involving simple number patterns by using words, symbols, drawings, and concrete objects.	
1. Make up a story that would involve a pattern that could be derived from a table or chart.	TE: 83B, 84, 91–92, 212, 319–320, 470, 517–518 PE: 84, 91–92, 212, 319–320, 470, 517–518

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2. Solve problems involving addition/subtraction–based number patterns.	TE: 66, 82, 83B, 83–84, 91B, 91–92, 212, 280, 506, 518B, 518–519 PE: 66, 82, 83–84, 91–92, 212, 280, 506, 518–519
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. Identify, sort, classify, and compare three-dimensional shapes, using concrete materials.	TE: 311B, 311–312 PE: 311–312
2. Describe various geometric shapes in words according to their properties and characteristics.	TE: 307A–307B, 307–308, 309A–309B, 309–310, 311–313, 313A–313B, 313–314, 315B, 315–316, 319–321 PE: 307–308, 309–310, 311–313, 313–314, 315B, 315–316, 319–321
3. Draw line segments of various lengths.	TE: See Level 3. PE: See Level 3.
CAS B. Describe and give examples of geometric concepts that show relationships between and among figures, including symmetry, congruence, size, and location.	
1. Identify and complete figures which are symmetric along a line and draw the line of symmetry.	TE: 317B, 317–318 PE: 317–318
State Goal 10: Collect, organize, and analyze data, using statistical methods to predict results and interpret uncertainty and chance in practical applications.	
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 from a line graph and use objects and drawings to form line graphs.	TE: 127B, 127–128 PE: 127–128
2. Analyze data gathered from tallies and charts, and draw reasonable conclusions.	TE: 91B, 91–92, 111B, 111–112, 113B, 113, 115B, 115–116, 123B, 123–124, 125B, 125–126, 127B, 127–128, 337–338, 517–518 PE: 91–92, 111–112, 113–114, 115–116, 117–118, 123–124, 125–126, 127–128, 337–338, 517–518
3. Read and interpret a schedule.	TE: 473B, 473–474 PE: 473–474
CAS C. Describe and use the concept of probability in relationship to likelihood and chance.	
1. List the possible outcomes of a simple event (e.g., choosing a sock, tossing a coin).	TE: 337B, 337–338 PE: 337–338