

NCTM Standard**Houghton Mifflin *MATHEMATICS***

Number and Operations Standard	
Understand numbers, ways of representing numbers, relationships among numbers, and number systems	
<ul style="list-style-type: none"> count with understanding and recognize "how many" in sets of objects; 	TE: 191A–195B, 191–195, 201B, 201–202, 203B, 203–204, 223A–223B, 223–224 PE: 191–195, 201–204, 223–224
<ul style="list-style-type: none"> use multiple models to develop initial understandings of place value and the base-ten number system; 	TE: 191A–195B, 191–195, 205A–205B, 205–206 PE: 191–195, 197, 205–206
<ul style="list-style-type: none"> develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections; 	TE: 215A–215B, 215–216, 225A–229B, 225–230 PE: 215–216, 225–230
<ul style="list-style-type: none"> develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers; 	TE: 191A–191B, 191–192, 195A–197B, 195–198, 201A–201B, 201–202, 205A–205B, 206–206, 281A–281B, 281–282 PE: 191–192, 195–198, 201–202, 205–206, 281–282
<ul style="list-style-type: none"> connect number words and numerals to the quantities they represent, using various physical models and representations; 	TE: 191A–191B, 191–192, 194, 197B, 197–198 PE: 191, 193, 197–198, 201–202
<ul style="list-style-type: none"> understand and represent commonly used fractions, such as $\frac{1}{4}$, $\frac{1}{3}$, and $\frac{1}{2}$. 	TE: 373A–375B, 373–376 PE: 375–376
Understand meanings of operations and how they relate to one another	
<ul style="list-style-type: none"> understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations; 	TE: 13A–13B, 13–14, 97A–97B, 97–98, 125A–125B, 125–126, 129, 251A–251B, 251–252, 275A–279B, 275–280, 411A–415B, 411–417, 425A–429B, 425–430, 575A–575B, 575–576 PE: 13–14, 97–98, 125–126, 129, 251–252, 275–280, 411–417, 425–430, 575–576
<ul style="list-style-type: none"> understand the effects of adding and subtracting whole numbers; 	TE: 9A–15B, 9–16, 25A–31B, 25–32, 35A–35B, 35–37, 55A–61B, 55–62, 71A–73B, 71–74, 97A–97B, 97–98, 117A–119B, 117–120, 251A–253B, 251–254, 256 PE: 9–16, 25–31, 35–37, 55–62, 71–74, 97–98, 117–120, 251–254, 256
<ul style="list-style-type: none"> understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally. 	TE: 193A–193B, 193–194, 209A–211B, 209–212 PE: 193–194, 209–212
Compute fluently and make reasonable estimates	
<ul style="list-style-type: none"> develop and use strategies for whole-number computations, with a focus on addition and subtraction; 	TE: 97A–107B, 97–108, 111A–117B, 111–118, 129A–129B, 129–130, 251A–251B, 251–252, 267A–267B, 267–268, 399A–405B, 399–406, 411A–411B, 411–412, 429A–429B, 429–430, 547A–547B, 547–548, 553A–553B, 553–554, 563A–563B, 563–564,

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard

Houghton Mifflin *MATHEMATICS*

	569A–569B, 569–570 PE: 97–108, 111–118, 129–130, 251–252, 267–268, 399–406, 411–412, 429–430, 547–548, 553–554, 563–564, 569–570
<ul style="list-style-type: none"> develop fluency with basic number combinations for addition and subtraction; 	TE: 27A–29B, 27–30, 71A–73B, 71–74, 125A–127B, 125–128, 253A–255B, 253–256, 269A–271B, 269–272, 275A–279B, 275–280, 413–417B, 413–418, 425A–427B, 425–428 PE: 27–30, 71–74, 125–128, 253–256, 269–272, 275–280, 413–418, 425–428
<ul style="list-style-type: none"> use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators. 	TE: 9A–13A, 9–14, 19A–19B, 19–21, 33A–33B, 33–34, 55A–59A, 55–60, 65A–65B, 65–67, 75A–75B, 75–76, 105A–105B, 105–106, 115A–115B, 115–116, 547A–547B, 547–548, 563A–563B, 563–564 PE: 9–14, 19–21, 33–34, 55–60, 65–67, 75–76, 105–106, 115–116, 547–548, 563–564
Algebra Standard	
Understand patterns, relations, and functions	
<ul style="list-style-type: none"> sort, classify, and order objects by size, number, and other properties; 	TE: 151A–151B, 151–152, 349A, 355A–355B, 355–356, 359A–361B, 359–362, 451A–45B, 451–452, 465A–467B, 465–466, 473B, 473–474 PE: 151–152, 355–356, 359–362, 451–452, 465–466, 473–474
<ul style="list-style-type: none"> recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another; 	TE: 34, 152, 192, 194, 198, 209B, 209–210, 213A–213B, 213–214, 217A–217B, 217–218, 282, 309A–309B, 309–310, 363A–363B, 363–365, 374 PE: 34, 152, 192–194, 198, 209–210, 213–214, 217–218, 282, 309–310, 363–365, 374
<ul style="list-style-type: none"> analyze how both repeating and growing patterns are generated. 	TE: 34, 192, 209–210, 213A–213B, 213–214, 217A–217B, 309A–309B, 309–310, 363A–363B, 363–365, 374 PE: 34, 192, 209–210, 213–214, 217–218, 309–310, 363–365
Represent and analyze mathematical situations and structures using algebraic symbols	
<ul style="list-style-type: none"> illustrate general principles and properties of operations, such as commutativity, using specific numbers; 	TE: 17A–17B, 17–18, 63A–63B, 63–64, 99A–99B, 99–100, 127A–127B, 127–128, 257A–257B, 257–258, 277A–277B, 277–278, 407A–407B, 407–408, 425A–425B, 425–426 PE: 17–18, 63–64, 99–100, 127–128, 257–258, 277–278, 407–408, 425–426
<ul style="list-style-type: none"> use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic 	TE: 9A–15B, 9–16, 55A–61B, 55–62, 225A–227B, 225–228, 373A–375B, 373–376, 402

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard

Houghton Mifflin *MATHEMATICS*

notations.	PE: 9–16, 55–62, 225–228, 373–376, 402
Use mathematical models to represent and understand quantitative relationships	
<ul style="list-style-type: none"> model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols. 	TE: 9B–15B, 9–16, 19A–19B, 19–21, 35A–35B, 35–37, 55B–61B, 55–62, 65A–65B, 65–67, 77A–77B, 77–79, 105A–105B, 105–106, 115A–115B, 115–116, 131A–131B, 131–133, 283A–283B, 283–285, 419A–419B, 419–421, 431A–431B, 431–433 PE: 9–16, 19–21, 35–37, 55–62, 65–67, 77–79, 105–106, 115–116, 131–133, 283–285, 419–421, 431–433
Analyze change in various contexts	
<ul style="list-style-type: none"> describe qualitative change, such as a student's growing taller; 	TE: 515B, 515–516 PE: 515–516
<ul style="list-style-type: none"> describe quantitative change, such as a student's growing two inches in one year. 	TE: 515B, 517B, 515–519 PE: 515–519
Geometry Standard	
Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships	
<ul style="list-style-type: none"> recognize, name, build, draw, compare, and sort two- and three-dimensional shapes; 	TE: 353A–355B, 353–356, 359A–361B, 359–362 PE: 353–356, 359–362
<ul style="list-style-type: none"> describe attributes and parts of two- and three-dimensional shapes; 	TE: 353A–355B, 353–356, 359A–361B, 359–362 PE: 353–356, 359–362
<ul style="list-style-type: none"> investigate and predict the results of putting together and taking apart two- and three-dimensional shapes. 	TE: 353A–353B, 354, 361A–361B, 361–362, 371B, 373B PE: 354, 361–362
Specify locations and describe spatial relationships using coordinate geometry and other representational systems	
<ul style="list-style-type: none"> describe, name, and interpret relative positions in space and apply ideas about relative position; 	TE: 349A–349B, 349–350 PE: 349–350
<ul style="list-style-type: none"> describe, name, and interpret direction and distance in navigating space and apply ideas about direction and distance; 	TE: 349A–349B, 349–350 PE: 349–350
<ul style="list-style-type: none"> find and name locations with simple relationships such as "near to" and in coordinate systems such as maps. 	TE: 351A–351B, 351–352 PE: 351–352
Apply transformations and use symmetry to analyze mathematical situations	
<ul style="list-style-type: none"> recognize and apply slides, flips, and turns; 	TE: See Level 3. PE: See Level 3.
<ul style="list-style-type: none"> recognize and create shapes that have symmetry. 	TE: 369A–369B, 369–370 PE: 370
Use visualization, spatial reasoning, and geometric modeling to solve problems	

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard

Houghton Mifflin *MATHEMATICS*

<ul style="list-style-type: none"> create mental images of geometric shapes using spatial memory and spatial visualization; 	TE: 152, 363A–363B, 363–365, 369B PE: 152, 363–365
<ul style="list-style-type: none"> recognize and represent shapes from different perspectives; 	TE: 354, 355–356, 361A–361B, 361–362 PE: 354–356, 361–362
<ul style="list-style-type: none"> relate ideas in geometry to ideas in number and measurement; 	TE: 353–354, 372, 379B, 379–380 PE: 353, 372, 379–380
<ul style="list-style-type: none"> recognize geometric shapes and structures in the environment and specify their location. 	TE: 350, 351B, 351–352, 354, 359B, 360, 379B, 379–380 PE: 349–350, 351–352, 354, 359–360, 379–380
Measurement Standard	
Understand measurable attributes of objects and the units, systems, and processes of measurement	
<ul style="list-style-type: none"> recognize the attributes of length, volume, weight, area, and time; 	TE: 451A–457B, 451–458, 465A–469B, 465–470, 475A–477B, 475–478, 499A–505B, 499–506, 509A–515B, 509–516 PE: 451–458, 465–470, 475–478, 499–506, 509–516
<ul style="list-style-type: none"> compare and order objects according to these attributes; 	TE: 451A–451B, 451–452, 465A–465B, 465–466, 473A–473B, 473–474 PE: 451–452, 465–466, 473–474
<ul style="list-style-type: none"> understand how to measure using nonstandard and standard units; 	TE: 453A–457B, 453–458, 475A–475B, 475–476 PE: 453–458, 475–476
<ul style="list-style-type: none"> select an appropriate unit and tool for the attribute being measured. 	TE: 479A–479B, 479–481 PE: 479–481
Apply appropriate techniques, tools, and formulas to determine measurements	
<ul style="list-style-type: none"> measure with multiple copies of units of the same size, such as paper clips laid end to end; 	TE: 453–454 PE: 453–454
<ul style="list-style-type: none"> use repetition of a single unit to measure something larger than the unit, for instance, measuring the length of a room with a single meterstick; 	TE: 453A–453B, 455B, 457B
<ul style="list-style-type: none"> use tools to measure; 	TE: 455B, 455–458 PE: 455–458
<ul style="list-style-type: none"> develop common referents for measures to make comparisons and estimates. 	TE: 451A–451B, 451–452, 465A–467B, 465–466, 473B, 473–474 PE: 451–452, 465–468, 473–474
Data Analysis and Probability Standard	
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	
<ul style="list-style-type: none"> pose questions and gather data about themselves and their surroundings; 	TE: 153A–153B, 153–154, 157A–157B, 157–158, 167A–167B, 167–168, 379B PE: 153–154, 157–158, 167–168

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard

Houghton Mifflin *MATHEMATICS*

<ul style="list-style-type: none"> sort and classify objects according to their attributes and organize data about the objects; 	<p>TE: 153A–153B, 153–154, 157A–157B, 157–158, 169A–169B, 169–170, 379B, 453B PE: 153–154, 157–158, 169–170</p>
<ul style="list-style-type: none"> represent data using concrete objects, pictures, and graphs. 	<p>TE: 153A–153B, 153–154, 157A–157B, 157–158, 167A–169B, 167–170, 379B PE: 153–154, 157–158, 169–170</p>
<p>Select and use appropriate statistical methods to analyze data</p>	
<ul style="list-style-type: none"> describe parts of the data and the set of data as a whole to determine what the data show. 	<p>TE: 153A–157B, 153–158, 165A–171B, 165–173 PE: 153–158, 165–173</p>
<p>Develop and evaluate inferences and predictions that are based on data</p>	
<ul style="list-style-type: none"> discuss events related to students' experiences as likely or unlikely. 	<p>TE: 377A–377B, 377–378 PE: 377–378</p>
<p>Understand and apply basic concepts of probability</p>	<p>TE: 377A–377B, 377–378 PE: 377–378</p>
<p>Problem Solving Standard</p>	
<p>Instructional programs from prekindergarten through grade 12 should enable all students to—</p>	
<ul style="list-style-type: none"> build new mathematical knowledge through problem solving; 	<p>TE: 19A–19B, 19–21, 35A–35B, 35–37, 65A–65B, 65–67, 77A–77B, 77–79, 119A–119B, 119–121, 131A–131B, 131–133, 159A–159B, 159–161, 171A–171B, 171–173, 217A–217B, 217–219, 231A–231B, 231–233, 261A–261B, 261–263, 283A–283B, 283–285, 319A–319B, 319–321, 329A–329B, 329–331, 363A–363B, 363–365, 379A–379B, 379–381, 419A–491B, 419–421, 431A–431B, 431–433, 459A–459B, 459–461, 479A–479B, 479–481, 517A–517B, 517–519, 527A–527B, 527–529, 557A–557B, 557–559, 581A–581B, 581–583 PE: 19–20, 35–37, 65–67, 77–79, 119–121, 131–133, 159–161, 171–173, 217–219, 2231–233, 2661–263, 283–285, 319–321, 329–331, 363–365, 379–381, 419–421, 431–433, 459–461, 479–481, 517–519, 527–529, 557–559, 581–583</p>
<ul style="list-style-type: none"> solve problems that arise in mathematics and in other contexts; 	<p>TE: 77A–77B, 77–79, 119A–119B, 119–121, 171A–171B, 171–173, 231A–231B, 231–233, 283A–283B, 283–285, 329A–329B, 329–331, 379A–379B, 379–381, 431A–431B, 431–433, 479A–479B, 479–481, 527A–527B, 527–529, 581A–581B, 581–583 PE: 77–79, 119–121, 171–173, 231–233, 283–285, 329–331, 379–381, 431–433,</p>

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard	Houghton Mifflin <i>MATHEMATICS</i>
	479–481, 527–529, 581–583
<ul style="list-style-type: none"> apply and adapt a variety of appropriate strategies to solve problems; 	TE: 19A–19B, 19–21, 35A–35B, 35–37, 65A–65B, 65–67, 131A–131B, 131–133, 159A–159B, 159–161, 217A–217B, 217–219, 261A–261B, 261–263, 319A–319B, 319–321, 363A–363B, 363–365, 419A–491B, 419–421, 459A–459B, 459–461, 517A–517B, 517–519, 557A–557B, 557–559 PE: 19–20, 35–37, 65–67, 131–133, 159–161, 217–219, 261–263, 319–321, 363–365, 419–421, 459–461, 517–519, 557–559
<ul style="list-style-type: none"> monitor and reflect on the process of mathematical problem solving. 	TE: 19A–19B, 19–21, 35A–35B, 35–37, 65A–65B, 65–67, 131A–131B, 131–133, 159A–159B, 159–161, 217A–217B, 217–219, 261A–261B, 261–263, 319A–319B, 319–321, 363A–363B, 363–365, 419A–491B, 419–421, 459A–459B, 459–461, 517A–517B, 517–519, 557A–557B, 557–559 PE: 19–20, 35–37, 65–67, 131–133, 159–161, 217–219, 261–263, 319–321, 363–365, 419–421, 459–461, 517–519, 557–559
Reasoning and Proof Standard	
Instructional programs from prekindergarten through grade 12 should enable all students to—	
<ul style="list-style-type: none"> recognize reasoning and proof as fundamental aspects of mathematics; 	TE: 56, 74, 82, 116, 194, 204, 214, 256, 270, 312, 362, 400, 406, 414, 454, 476, 548, 556, 580 PE: 55, 73, 81, 115, 193, 203, 213, 255, 261, 311, 361, 401, 405, 413, 453, 475, 547, 555, 581
<ul style="list-style-type: none"> make and investigate mathematical conjectures; 	TE: 20, 36, 66, 132, 160, 218, 262, 320, 364, 420, 460, 518, 558 PE: 19, 35, 65, 131, 159, 217, 261, 319, 363, 419, 459, 517, 557
<ul style="list-style-type: none"> develop and evaluate mathematical arguments and proofs; 	TE: 58, 74, 252, 304, 312, 378, 430, 468, 476, 512, 570 PE: 57, 73, 251, 303, 311, 377, 429, 467, 475, 511, 569
<ul style="list-style-type: none"> select and use various types of reasoning and methods of proof. 	TE: 62, 108, 130, 159A–159B, 159–161, 168, 212, 350, 426, 452, 459A–459B, 459–461 PE: 62, 108, 130, 159–161, 168, 212, 350, 426, 452, 459–461
Communication Standard	
Instructional programs from prekindergarten through grade 12 should enable all students to—	
<ul style="list-style-type: none"> organize and consolidate their mathematical thinking through communication; 	This standard is addressed throughout the entire text. These are a few of the many examples. TE: 192, 210, 278, 304, 318, 378, 400, 430, 468,

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard	Houghton Mifflin <i>MATHEMATICS</i>
	516, 566, 578 PE: 192, 210, 278, 304, 318, 378, 400, 430, 468, 516, 566, 578
<ul style="list-style-type: none"> communicate their mathematical thinking coherently and clearly to peers, teachers, and others; 	This standard is addressed throughout the entire text. These are a few of the many examples. TE: 32, 106, 194, 228, 252, 360, 370, 430, 514 PE: 31, 105, 193, 227, 251, 359, 369, 429, 513
<ul style="list-style-type: none"> analyze and evaluate the mathematical thinking and strategies of others; 	This standard is addressed throughout the entire text. These are a few of the many examples. TE: 25, 99, 213, 227, 253, 317, 355, 417, 479, 527, 553 PE: 25, 99, 213, 227, 253, 317, 355, 417, 479, 527, 553
<ul style="list-style-type: none"> use the language of mathematics to express mathematical ideas precisely. 	<i>Math Vocabulary Reviews</i> begin every lesson. These are a few of the pages on which they appear. TE: 19A31A, 61A, 75A, 101A, 125A, 153A, 169A, 201A, 223A, 253A, 279A, 315A, 371A, 407A, 425A, 453A, 475A, 501A, 523A, 551A, 575A
Connections Standard	
Instructional programs from prekindergarten through grade 12 should enable all students to—	
<ul style="list-style-type: none"> recognize and use connections among mathematical ideas; 	TE: 125A–127A, 125–128, 275A–279B, 305–306, 309–310, 353–354, 372, 379B, 379–380, 425A–427A, 425–428, 575A–577B, 575–578 PE: 125–128, 275–280, 305–306, 309–310, 353, 372, 379–380, 425–428, 575–578
<ul style="list-style-type: none"> understand how mathematical ideas interconnect and build on one another to produce a coherent whole; 	TE: 11A–15B, 11–16, 55A–61B, 55–62, 127A–127B, 127–128, 191A–197B, 191–198, 201A–203B, 201–204, 275A–279B, 275–280, 425A–427B, 425–428, 503A–505B, 503–506, 547A–551B, 547–552, 563A–567B, 563–568 PE: 11–16, 55–62, 127–128, 191–198, 201–204, 275–280, 425–428, 503–506, 547–552, 563–568
<ul style="list-style-type: none"> recognize and apply mathematics in contexts outside of mathematics. 	TE: 7–8, 53–54, 95–96, 149–150, 189–190, 249–250, 301–302, 347–348, 397–398, 449–450, 497–498, 545–546 PE: 1–8, 47–54, 89–96, 143–150, 183–190, 243–250, 295–302, 341–348, 391–398, 443–450, 491–498, 539–546
Representation Standard	
Instructional programs from prekindergarten through grade 12 should enable all students to—	

Houghton Mifflin *MATHEMATICS*

Level 1

correlated to

NCTM Standards 2000

NCTM Standard

Houghton Mifflin *MATHEMATICS*

<ul style="list-style-type: none"> create and use representations to organize, record, and communicate mathematical ideas; 	<p>TE: 19A–19B, 19–21, 65A–65B, 65–67, 131A–131B, 131–133, 153A–153B, 153–154, 157A–157B, 157–158, 167A–169B, 167–170, 261A–261B, 261–263, 319A–319B, 319–321, 379B, 419A–419B, 419–421, 517A–517B, 517–519, 557A–557B, 557–559</p> <p>PE: 19–21, 65–67, 131–133, 153–154, 157–158, 169–170, 261–263, 319–321, 419–421, 517–519, 557–559</p>
<ul style="list-style-type: none"> select, apply, and translate among mathematical representations to solve problems; 	<p>TE: 77A–77B, 77–79, 153A–157B, 153–158, 165A–171B, 165–173, 283A–283B, 283–285, 329A–329B, 329–331, 379A–379B, 379–381, 431A–431B, 431–433, 527A–527B, 527–529</p> <p>PE: 77–79, 153–158, 165–173, 283–285, 329–331, 379–381, 431–433, 527–529</p>
<ul style="list-style-type: none"> use representations to model and interpret physical, social, and mathematical phenomena. 	<p>TE: 19A–19B, 19–21, 65A–65B, 65–67, 131A–131B, 131–133, 153A–153B, 153–154, 157A–157B, 157–158, 167A–169B, 167–170, 261A–261B, 261–263, 319A–319B, 319–321, 379B, 419A–419B, 419–421, 517A–517B, 517–519, 557A–557B, 557–559</p> <p>PE: 19–21, 65–67, 131–133, 153–154, 157–158, 169–170, 261–263, 319–321, 419–421, 517–519, 557–559</p>