

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students demonstrate number sense, including an understanding of number systems and operations and how they relate to one another. Students compute fluently and make reasonable estimates using paper and pencil, technology-supported and mental methods. Benchmark: B. Recognize, classify, compare and order whole numbers. Content Organizer: <i>Number and Number Systems</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
1. Use ordinal numbers to order objects; e.g., first, second, third.	<p>A. <u>Introduction</u> Have students “act out” ordinal numbers. Students will line up in ordinal position while holding cards labeled 1st, 2nd, etc.</p> <p>B. <u>Practice</u> Daily practice using the Math calendar. (Example – using a row of shapes ask students which one is first, second, etc.)</p> <p>C. <u>Additional Practice</u> Ordinal numbers and independent practice activity sheets.</p>	<p>A. Houghton Mifflin Teacher’s Edition p. 215 (ch. 5). Ordinal number cards.</p> <p>B. Math calendar, shapes</p> <p>C. Houghton Mifflin Student workbook pp. 215-216</p>	<p>*Assess orally using observations by asking students standing in line “Who is 2nd, 4th, etc.”</p> <p>*Practice 5-11 activity sheet (Houghton Mifflin Teacher’s Edition p. 215B and practice workbook p. 57).</p> <p>*Reteach 5-11 activity sheet (see Houghton Mifflin Teacher’s Edition p. 215 B and reteach workbook p. 57).</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

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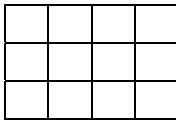
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2. Recognize and generate equivalent forms for the same number using physical models, words and number expressions; e.g., concept of ten is described by “10 blocks,” full tens frame, numeral 10, $5 + 5$, $15 - 5$, one less than 11, my brother’s age.	A. Various activities from Houghton Mifflin Teacher’s Edition pp. 191A-192 (Ch. 5), 195A-198 (Ch.5), 201A-206 (Ch. 5). B. <u>Center Idea</u> Have students draw a number and then rename the number using a different form (ex. 5-five, $2+3$, etc.).	A. See Houghton Mifflin Teacher’s Edition p. 191A-192, 195A-198, and 201A-206. B. Number cards, white boards or paper.	*Quick check assessment – Houghton Mifflin student workbook p. 199. * Quick check assessment – Houghton Mifflin student workbook p. 207. *Chapter 5 test- Houghton Mifflin Assessment Guide pp. 43-44

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>3. Read, and write the numerals for numbers to 100.</p>	<p>A. <u>Introduction</u> “Party Under The Sea” (read aloud story). As you read this story students will record the missing numbers in the story. This activity will help you know what students understand about counting, ordering, and writing numbers.</p> <p>B. <u>Practice</u> Daily practice in reading numbers 1-100 using the Math calendar.</p> <p>C. <u>Practice</u> As a center have children practice writing numbers allowing them to use a hundreds chart to check themselves.</p>	<p>A. Houghton Mifflin Teacher’s Edition p. 189, Student workbook pp. 183-189</p> <p>B. Hundreds chart</p> <p>C. Grid paper individual hundreds chart.</p> <div style="text-align: center;">  </div>	<p>*Orally observe students counting 1-100.</p> <p>*Have students write 1-100 on grid paper refer to 1st grade assessment notebook.</p> <p>*1st Grade assessment notebook.</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
4. Count forward to 100, count backwards from 100, and count forward or backward starting at any number between 1 and 100.	A. <u>Daily Practice</u> Using the math calendar: Have students count 1-100, backward, or starting with different numbers. B. <u>Center</u> Have students count pennies using a hundreds chart by placing a penny on each number as they count.	A. Hundreds number chart B. Pennies, hundreds chart.	*Orally observe students counting 1-100, backwards and counting forward and backward starting with different numbers. *Write backwards from a given number.

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<p>5. Use place value concepts to represent whole numbers using numerals, words, expanded notation and physical models with ones and tens. For example:</p> <p style="padding-left: 20px;">b. Identify patterns and groupings in a 100's chart and relate to place value concepts.</p> <p style="padding-left: 20px;">c. Recognize the first digit of a two-digit number as the most important to indicate size of a number and the nearness to 10 or 100.</p>	<p>5b.1. <u>Math Calendar</u> Use 100's hundred chart to identify 2's, 5's, or 10's pattern.</p> <p>Discuss, locate and highlight numbers in the 10's and 1's place on the 100's chart.</p> <p>5b.2. Houghton Mifflin Teacher's Edition Two Minute Math.</p> <p>5c. Use cubes or base 10 blocks to represent various numbers. Then have students use their cubes/base 10 blocks to help them determine if the numb is closer to 10 or 100.</p>	<p>5b.1. Hundreds chart, crayon, highlighter or dry erase marker.</p> <p>5b.2. See p. 195A Houghton Mifflin Teacher's Edition.</p> <p>5c. Cubes or base 10 blocks.</p>	<p>5b. *Have students mark a 2's, 5's, 10's pattern on a hundreds chart. Then ask students questions like "which numbers are always on the right then counting by the 2's pattern" or have them mark these numbers.</p> <p>5c. Use manipulatives (if needed) to determine if the 10's place value of a number is closer to 10 or 100.</p>

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Content Standard: Students demonstrate number sense, including an understanding of number systems and operations and how they relate to one another. Students compute fluently and make reasonable estimates using paper and pencil, technology-supported and mental methods Benchmark: D. Determine the value of a collection of coins and dollar bills. Content Organizer: <i>Number and Number Systems</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>6. Identify and state the value of a penny, nickel, dime, quarter and dollar.</p>	<p>A. <u>Introduction</u> Read aloud the story “Yard Sale” in Houghton Mifflin student workbook pp. 295-301 while students do the interactive activities.</p> <p>B. <u>Math Calendar</u> Use calendar to identify coins/dollars and their values each day.</p> <p>C. <u>Practice</u> Center Idea: Money memory game: students match money amounts and the correct coins.</p> <p>D. Use Math calendar to do extended practice with money. (Example: put up a penny for each day of school. When 5 pennies are up put up a nickel also, etc. You may also have a coin cup where you identify and count the coins in the cup each day.</p>	<p>A. See Houghton Mifflin Teachers Edition pp. 295-301.</p> <p>B. Money patterns on coins/dollars for Math calendar.</p> <p>C. Cards with various coins and their values.</p> <p>D. Money patterns or coins for Math Calendar.</p>	<p>*Have students orally identify coins and their values.</p> <p>* Refer to 1st grade assessment notebook.</p> <p>*Houghton Mifflin Ch. 7 Performance Assessment – Assessment Guide p. 141</p> <p>*Houghton Mifflin Ch. 7 test assessment guide pp.58 or 61.</p> <p>*Houghton Mifflin Ch. 7 test: Houghton Mifflin student workbook pp. 337-338</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
7. Determine the value of a small collection of coins (with a total value up to one dollar) using 1 or 2 different type coins, including pennies, nickels, dimes and quarters.	<p>A. Houghton Mifflin Teacher’s Edition pp. 303A-316 and pp. 319A-340 Lessons: 1, 2, 3, 4, 5, 6, 8, 9, 10, and 11</p> <p>B. <u>Practice</u> Classroom store: Have students practice buying items at a pretend class store.</p> <p>C. Math Calendar: Practice counting money.</p> <p>D. Center Idea: Beginning Money Bingo</p>	<p>A. See pp. 303A-340</p> <p>B. Empty food containers, price tags, and coins.</p> <p>C. Money patterns or coins.</p> <p>D. Beginning Money Bingo board game.</p>	<p>*Refer to 1st grade assessment notebook.</p> <p>*Orally observe students counting a collections of coins.</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>8. Show different combinations of coins that have the same value.</p>	<p>A. Houghton Mifflin Teacher’s Edition pp. 317A-318 Lesson7</p> <p>B. <u>Practice</u> During Math Calendar students put up coins for each day. Have them show ways to make the money amounts in different ways. (ex. 5 cents = 5 pennies or 1 nickel.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 317A-318.</p> <p>B. Money patterns</p>	<p>*Orally observe students making money amounts in various activities.</p> <p>* Houghton Mifflin Teacher’s Edition Reteach 7-7 worksheet (reteach workbook p. 84).</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>9. Represent commonly used fractions using words and physical models for halves, third and fourths, recognizing fractions are represented by equal size parts of a whole and of a set of objects.</p> <p>NOTE: - this strand is taught along with identifying shapes, solids, position words and symmetry in the Houghton Mifflin Math series. Therefore the chapter test for this strand also includes these items.</p>	<p>A. <u>Introduction</u> Read Hershey’s Milk Chocolate Fractions book and have students do the fraction activities with Hershey bars.</p> <p>B Houghton Mifflin Teacher’s Edition pp. 371A-376. Chapter 8: Lesson 9, 10 and 11.</p> <p>C. <u>Extra Practice</u> Have food taste test day where the whole class must share the food by cutting it into fractions.</p>	<p>A. Hershey Bar Fraction book Hershey candy bar for each student.</p> <p>B. See Houghton Mifflin Teacher’s Edition 371A-376</p> <p>C. Various food items, knife, cutting board.</p>	<p>*Refer to 1st grade assessment notebook.</p> <p>*Houghton Mifflin Chapter 8 chapter test – assessment guide pp. 68-70 or pp. 71-73</p> <p>*Houghton Mifflin Chapter test (Ch. 8) student workbook pp. 387-388.</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
10. Model, represent and explain addition as combining sets (part + part = whole) and counting on. For example: <ul style="list-style-type: none"> (a) Model and explain addition using physical materials in contextual situations. (b) Draw pictures to model addition. (c) Write number sentences to represent addition. (d) Explain that adding two whole numbers yields a larger whole number. 	A. <u>Introduction</u> Read “Off to School”. Have students do interactive activities as you read. B. Houghton Mifflin Teacher’s guide pp. 9A-16, pp. 25A-30 and pp. 101A-102. Ch. 1 Lessons 1-4, 7-9 and Ch. 3 Lesson 3. C. <u>Extra Practice</u> After addition is introduced give students oral addition problems and have them solve them using any means they can (cubes, paper, etc.) CGI D. Center Idea – use an apple pattern divided in half to create number sentences. E. Mat journals (see meaning of operations-12)	A. Houghton Mifflin Student workbook pp. 1-7 B. See Houghton Mifflin Teachers Guide pp. 9A-36 C. Manipulatives such as cubes, white boards, dominoes, etc. D. Laminated apple pattern, dry erase markers. E. (See meaning of operations – 12)	*Refer to 1 st grade assessment notebook. *Chapter test Houghton Mifflin Assessment Guide pp. 11-12 or 13-15 *Ch. 1 performance assessment Houghton Mifflin assessment guide p. 129 *Ch. 1 test student workbook pp. 43-44

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
11. Model, represent and explain subtraction as take-away and comparison. For example: <ul style="list-style-type: none"> a. Model and explain subtraction using physical materials in contextual situations. b. Draw pictures to model subtraction. c. Write number sentences to represent subtraction. d. Explain that subtraction of whole numbers yields an answer smaller than the original number. 	A. <u>Introduction</u> Read The Carrot Countdown B. Various activities from Houghton Mifflin Teacher’s Edition pp. 55A-58, 61A-62, 65A-67, 71A-74, and 77A-79 Ch. 2 Lessons 1, 2, 4, 6, 7, 8, 10 C. <u>Extra Practice</u> After introducing subtraction give oral story problems to students and have them solve them using any thing they need (cubes, paper, etc.) CGI D. Have students act out subtraction story problems. E. Make number lines readily available throughout all subtraction activities.	A. Houghton Mifflin Students workbook pp. 47-53 B. See Houghton Mifflin Teacher’s Edition pp. 55A-58, 61A-62, 65A-67, 71A-74, and 77A-79. C. Manipulatives cubes, counters, white boards, etc. D. none E. Number lines.	*Refer to 1 st grade assessment notebook. *Quick check assessment p. 69 Houghton Mifflin Student workbook. *Fast Facts Houghton Mifflin Teacher’s Edition p. 80 Ch. 2 assessment guide pp. 18-19 or pp. 20-22 *Houghton Mifflin Ch. 2 test. Student workbook pp. 85-86

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>12. Use conventional symbols to represent the operations of addition and subtraction.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s Edition pp. 13A-14, pp. 59A-60</p> <p>B. <u>Extra practice</u> Practice using + and – symbols during math calendar by making number sentences and having students solve them based on which sign is used.</p> <p>C. <u>Math Journals</u> Have students practice solving addition stories and write addition sentences in individual spiral bound notebooks.</p>	<p>A. See Houghton Mifflin Teacher’s Edition.</p> <p>B. White board or chalkboard.</p> <p>C. Notebooks for each student.</p>	<p>*Houghton Mifflin Ch. 1 test-assessment guide pp. 13-15 or pp. 11-12</p> <p>*Refer to 1st grade assessment notebook.</p> <p>*Houghton Mifflin Ch. 1 test student workbook pp. 43-44</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
13. Model and represent multiplication as repeated addition and rectangular arrays in contextual situations; e.g., four people will be at my party and if I want to give 3 balloons to each person, how many balloons will I need to buy?	<u>CGI Practice</u> Give students a multiplication word problem orally and have them solve it using any materials or methods that they need to use.	Manipulative: ex. cubes, white boards, counters, etc.	*Observe students as they attempt to solve a CGI multiplication problem. *Have students work out a CGI multiplication problem on paper.

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
14. Model and represent division as sharing equally in contextual situations; e.g., sharing cookies.	<p>A. Read the story <u>When The Doorbell Rang</u> Have students act out story problems involving sharing cookies using real cookies or counters.</p> <p>B. <u>CGI Practice</u> Give students a division story problems orally and allow them to solve them using any methods and materials needed.</p>	<p>A. Book: <u>When The Doorbell Rang</u>. Cookies or counters.</p> <p>B. <u>Manipulatives</u> Ex. cubes, counters, white boards, etc.</p>	<p>*Have students draw a picture showing how they would share different amounts of cookies.</p> <p>*Observe students as they solve CGI problems.</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
15. Demonstrate that equal means “the same as” using visual representations.	A. Various activities from: Houghton Mifflin Teacher’s Edition pp. 13A-14 (Ch. 1) B. Use manipulatives or visual aids to match sets of objects.	A. See Houghton Mifflin teacher’s edition pp. 13A-14 B. Manipulatives	*Houghton Mifflin Ch. 1 Chapter test student workbook pp. 43-44

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>16. Develop strategies for basic addition facts, such as:</p> <p style="padding-left: 20px;">a. counting all;</p> <p style="padding-left: 20px;">b. counting on;</p> <p style="padding-left: 20px;">c. one more, two more;</p> <p style="padding-left: 20px;">d. doubles;</p> <p style="padding-left: 20px;">e. doubles plus or minus one;</p>	<p>16 a. 1. Various activities from Houghton Mifflin Teacher’s Edition pp. 9A-12 (Ch. 1)</p> <p>16 a. 2. <u>CGI Practice</u> Give students CGI addition story problems and have them solve them in any way they can.</p> <p>16 b. 1. Various activities from Houghton Mifflin Teacher’s Edition pp. 97A-98 (Ch. 3), 251A-252 (Ch. 6), and 579A-580 (Ch. 12)</p> <p>16 c. 2. CGI practice see above.</p> <p>16d.1. Various Activities form Houghton Mifflin Teacher’s Edition pp. 103A-104 and pp. 399-400 (Ch. 9)</p> <p>16 d. 2. CGI practice See above</p> <p>16 e. Various activities form Houghton Mifflin Teacher’s Edition pp. 103A-104 (Ch. 3)</p> <p>16 f. Make number lines readily available to students during addition activities.</p>	<p>16 a. 1. See Houghton Mifflin Teacher’s Edition pp. 9A-12</p> <p>16 a. 2. Manipulatives cubs, counters, white boards, etc.</p> <p>16 b. 1. See Houghton Mifflin Teacher’s Edition pp. 97A-98, 251A-252, and 579A-580</p> <p>16 c. 1. See Houghton Mifflin Teacher’s Edition pp. 213A-241</p> <p>16 d. 1. See Houghton Mifflin Teacher’s Edition pp. 103A-104 and pp. 399-400</p> <p>16 d. 2. See Above</p> <p>16 e. See Houghton Mifflin Teacher’s Edition pp. 103 A-104</p> <p>16 f. Number lines (rulers can be used for a number line).</p>	<p>16 a *Quick check Assessment – Houghton Mifflin student workbook p. 23 (Ch. 1)</p> <p>16a* Chapter 1 test p. 43-44 Houghton Mifflin Student workbook.</p> <p>16 b * Quick Check Assessment student workbook p. 109 (Ch. 3)</p> <p>16 b* Fast Facts Houghton Mifflin Teacher’s Edition p. 264</p> <p>16 c *See 1st grade assessment notebook.</p> <p>16 d *Quick Check Assessment Houghton Mifflin student workbook p. 109 (Ch. 3)</p> <p>*Quick Check assessment Houghton Mifflin student workbook p. 109 (Ch. 3)</p>

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students demonstrate number sense, including an understanding of number systems and operations and how they relate to one another. Students compute fluently and make reasonable estimates using paper and pencil, technology-supported and mental methods</p> <p>Benchmark: K. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions. L. Demonstrate fluency in adding and subtracting multiples of 10, and recognize combinations that make 10.</p> <p>Content Organizer: <i>Computation and Estimation</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>17. Develop strategies for basic subtraction facts, such as:</p> <p>a. relating to addition (for example, think of $7 - 3 = ?$ as “3 plus ? equals 7”);</p> <p>b. one less, two less;</p> <p>c. all but one (for example, $8 - 7$, $5 - 4$);</p> <p>d. using tens frames;</p>	<p>17 a. Various activities from Houghton Mifflin Teacher’s Edition pp. 125A-126 (Ch. 3), pp. 275A-280 (Ch. 6)</p> <p>17 b.1. Various activities from Houghton Mifflin Teacher’s Edition pp. 125A-126 (Ch. 3), pp. 275A-280 (Ch. 6)</p> <p>17 b. 2. Practice – Use hundred number chart on math calendar to practice locating numbers that are one more or one less.</p> <p>17 c. Have students use manipulatives to take away all but one. Relate to 0 concept.</p> <p>17. d. Various activities from Houghton Mifflin Teacher’s Edition pp. 563A-564</p>	<p>17 a. See Houghton Mifflin Teacher’s Edition pp. 125A-126 and pp. 275A-280</p> <p>17 b. 1. See Houghton Mifflin Teacher’s Edition pp. 213A-214</p> <p>17 b.2. Hundred number chart.</p> <p>17 c. Manipulatives</p> <p>17 d. See Houghton Mifflin Teacher’s Edition pp. 563A-564</p>	<p>17 a *Quick check assessment (Ch. 6) p. 287 Houghton Mifflin student workbook</p> <p>17 a. and 17b. *Chapter 6 test Houghton Mifflin student workbook pp. 291-292</p> <p>17 b. Observe students as they subtract.</p> <p>17 c. Observe student as they subtract.</p> <p>17 d. * Quick Check assessment (Ch. 12) p. 573 in Houghton Mifflin student workbook. -NOTE: Only part of this assessment assesses this objective.</p> <p>17d*Chapter 12 test Houghton Mifflin student workbook p. 589-590 NOTE: Only part of this assessment assesses this objectives.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 18

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies. Benchmark: A. Explain the need for standard units of measure. C. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates. D. Apply measurement techniques to measure length, weight and volume (capacity). Content Organizer: <i>Measurement Units</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>1. Recognize and explain the need for fixed units and tools for measuring length and weight; e.g., rulers and balance scales.</p>	<p>A. <u>Introduction to Measurement</u> Read “Let’s Paint” Houghton Mifflin Student workbook pp. 443-449</p> <p>B. To show students the importance of fixed units of measure have them pretend that they are working at a lumber yard measuring boards using only their feet. Have several students measure the same pretend board and discuss why their measurements were different and why a fixed unit would be better.</p> <p>C. Various activities from Houghton Mifflin Teacher’s Edition pp. 455A-458 (Ch. 10), 467A-470 (Ch. 10)</p>	<p>A. See Houghton Mifflin student workbook pp. 443-449</p> <p>B. Yard stick or some other item to use as a pretend board.</p> <p>C. See Houghton Mifflin Teacher’s Edition pp. 455A-458 and 467A-470.</p>	<p>*Have students tell you why it’s important to have a fixed unit of measure.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 19

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies. Benchmark: C. Develop common referents for units of measure for length, weight, volume (capacity) and time to make comparisons and estimates. Content Organizer: Measurement Units			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
2. Tell time to the hour and half hour on digital and analog (dial) timepieces.	A. <u>Introduction to Time</u> Read “ <u>My Big Night</u> ” – Houghton Mifflin student workbook pp. 491-497 while students do the activities (Ch. 11) B. Various activities from Houghton Mifflin Teacher’s Edition pp. 502A-514 (Ch. 11) C. Practice making times, telling times, and writing times daily during math calendar. Practice identifying the parts of a clock and their functions during math calendar.	A. Houghton Mifflin student workbook pp. 491-497 B. See Houghton Mifflin Teacher’s Edition pp. 502A-514 C. Large practice clock. Chalkboard or white board.	*Refer to 1 st grade assessment notebook. *Chapter 11 test Houghton Mifflin student workbook pp. 535-536 – NOTE: Only part of this assessment assesses this objective. *Observe students as they make and tell time.

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 20

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies. Benchmark: Content Organizer: <i>Measurement Units</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
3. Order a sequence of events with respect to time; e.g., summer, fall, winter and spring; morning, afternoon, and night.	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. <u>Center Idea</u> Have students find pictures in a magazine or have them draw three pictures and put them in order to show three things that happened (ex. seasonal pictures, times of day, etc.).</p> <p>C. Read <u>The Season’s of Arnold’s Apple Tree</u> Make a picture about the seasons of an apple tree.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 499A-500</p> <p>B. Old magazines Paper Scissors Glue</p> <p>C. Book – <u>The Season’s of Arnold’s Apple Tree</u>, paper, art supplies.</p>	<p>*Have student draw pictures to show 3 events that would happen during the morning, afternoon, and night.</p> <p>C. This could also be used as an assessment.</p>

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies. Benchmark: Content Organizer: Use Measurement Techniques and Tools			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
4. Estimate and measure weight using non-standard units; e.g., blocks of uniform size.	A. Various activities from Houghton Mifflin Teacher’s Edition (Ch. 10) B. <u>Center Idea</u> Have students estimate how many blocks various items will weigh and then test their guesses using a balance and cubes.	A. See Houghton Mifflin Teacher’s Edition pp. 465A-466 B. Various classroom items (ex. pencil, eraser, etc.), linking cubes.	*Have students estimate how much various items will weigh in cubes and then weight the items using a balance and cubes. Have students record their answers.

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies. Benchmark: D. Apply measurement techniques to measure length, weight and volume (capacity). Content Organizer: Use Measurement Techniques and Tools			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>5. Estimate and measure lengths using non-standard and standard units, i.e., centimeters, inches and feet.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s edition (Ch. 10)</p> <p>B. <u>Center Idea</u> Have students estimate the length of various objects using both non-standard and standard units of measure. Then have students measure the items.</p> <p>C. Measure students using standard and nonstandard units and compare the differences.</p> <p>D. <u>Center Idea</u> Have students measure a variety of objects using nonstandard units, and record their results.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 453A-458</p> <p>B. -Various classroom items (ex. pencil, eraser, etc.) cubes, paper clips, etc. to measure with, rulers. - Cubes, paper clips, etc. to measure with - Rulers</p> <p>C. Tape measure or yard stick, string and/or other nonstandard units of measure.</p> <p>D. Classroom objects nonstandard units such as paper clips, string, blocks, etc.</p>	<p>*Quick check assessment – Houghton Mifflin student workbook p. 463</p> <p>*Chapter 10 test – Houghton Mifflin Student workbook pgs 487-488. -NOTE: Only part of this assessment assesses this objective.</p> <p>*Refer to 1st grade assessment notebook.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: A. Pose questions and gather data about everyday situations and familiar objects. B. Sort and classify objects by attributes, and organize data into categories in a simple table or chart. Content Organizer: <i>Data Collection</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
1. Identify multiple categories for sorting data.	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. Practice - When calling students to their seats, to get in line, etc. sort students by different attributes and discuss how they could be sorted.</p> <p>C. Sort buttons and discuss how the same buttons could be sorted another way.</p> <p>D. Sorting attribute blocks.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 151A-152</p> <p>B. None</p> <p>C. Buttons</p> <p>D. Attribute blocks</p>	<p>*Have students sort a group of buttons in 2 or 3 different ways explaining each rule.</p> <p>D. Sort and explain how they sorted their blocks.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data.</p> <p>B. Benchmark: B. Sort and classify objects by attributes, and organize data into categories in a simple table or chart.</p> <p>Content Organizer: <i>Data Collection</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>2. Collect and organize data into charts, using tally marks.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. Construct a class graph using tally marks. (ex. favorite colors, foods, etc.).</p> <p>C. <u>Lost tooth chart</u> Record how many children lost teeth and record it on a chart during Math calendar.</p> <p>D. Have students keep score using tally marks while they play games.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 153A-154, pp. 167A-170</p> <p>B. Chart paper Marker Graph tags Graph</p> <p>C. Chart</p> <p>D. none</p>	<p>*Quick check assessment Houghton Mifflin student workbook p. 163</p> <p>*Quick check assessment Houghton Mifflin student workbook p. 175</p> <p>*Chapter 4 chapter test Houghton Mifflin student workbook pp. 179-180</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: C. Represent data using objects, picture graphs and bar graphs. Content Organizer: <i>Data Collection</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
3. Display data in picture graphs with units of 1 and bar graphs with intervals of 1.	A. Various activities from Houghton Mifflin Teacher’s Edition. B. Make a class graph big book. Include a variety of graphs (bar, picture, etc.) about different topics (ex. eye color, birthdays, favorite pets, etc.).	A. See Houghton Mifflin Teacher’s Edition pp. 155A-158, 167A-170 B. Poster board, chart paper, markers, poster board sized graph, graph tags.	*Quick check assessment Houghton Mifflin student workbook p. 163 *Quick check assessment Houghton Mifflin student workbook p. 175. *Chapter 4 test Houghton Mifflin student workbook pp. 179-180.

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: C. Represent data using objects, picture graphs and bar graphs. Content Organizer: <i>Data Collection</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>4. Read and interpret charts, picture graphs and bar graphs as sources of information to identify main ideas, draw conclusions, and make predictions.</p>	<p>A. Various activities Houghton Mifflin Teacher’s Edition</p> <p>B. Practice – As you make the class graph big book (see standard number 3) have students write their own observations about each graph.</p> <p>C. Utilize weather graph on the Math calendar to have students explain the graph and answer questions.</p> <p>D. Construct graphs to correspond to thematic units. Have students interpret these graphs and answer questions about them.</p>	<p>A. See Houghton Mifflin Teacher’s Edition – pp. 153A-158, pp. 165A-173</p> <p>B. Class graphs, markers</p> <p>C. Math Calendar Weather graph</p> <p>D. Created graphs</p>	<p>*Quick check assessment – Houghton Mifflin student workbook p. 163.</p> <p>*Quick check assessment Houghton Mifflin student workbook p. 175.</p> <p>*Chapter 4 test – Houghton Mifflin student workbook pp. 179-180</p> <p>*Refer to 1st grade assessment notebook.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data.</p> <p>Benchmark:</p> <p>Content Organizer: <i>Data Collection</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>5. Construct a question that can be answered by using information from a graph.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. Practice have each student write a question about one of the graphs in the class graph big book (see standards 3 and 4).</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 167-168 and p. 170.</p> <p>B. Class graph big book, paper, pencils</p>	<p>*Ch. 4 test – Houghton Mifflin student workbook pp. 179-180.</p> <p>*Observe as students write their own questions about the class graph big book.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: B. Sort and classify objects by attributes, and organize data into categories in a simple table or chart. Content Organizer: <i>Statistical Methods</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
6. Arrange five objects by an attribute, such as size or weight, and identify the ordinal position of each object.	A. Various activities from Houghton Mifflin Teacher’s Edition. NOTE: This section teaches ordinal position but not arranging objects by an attribute. B. Center Idea Give students five objects that differ in size or weight and have them practice arranging them and labeling them 1 st , 2 nd , 3 rd , 4 th , and 5 th .	A. See Houghton Mifflin Teacher’s Edition pp. 215A-216, B. 5 objects; balance (optional if you want students to check themselves). Ordinal position tags (1 st , 2 nd , etc.)	*Observe students as they arrange 5 objects according to one attribute and label them according to ordinal position.

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

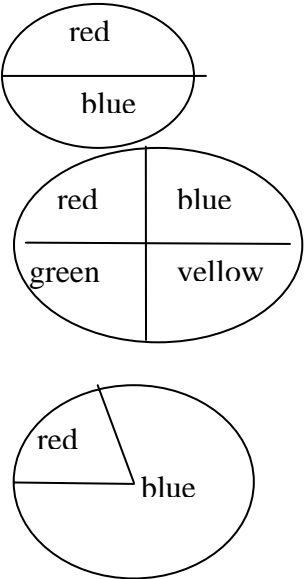
Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: B. Sort and classify objects by attributes, and organize data into categories in a simple table or chart. Content Organizer: <i>Statistical Methods</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>7. Answer questions about the number of objects represented in a picture graph, bar graph or table graph; e.g., category with most, how many more in a category compared to another, how many altogether in two categories.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. Have students work together to answer the questions they wrote about the class graph big book (see standard 5)</p> <p>C. Utilize weather graph on the Math calendar to have students explain the graph and answer questions.</p> <p>D. Construct graphs to correspond to thematic units. Have students interpret these graphs and answer questions about them.</p>	<p>A. See from Houghton Mifflin Teacher’s Edition pp. 155A-158 and 165A-172</p> <p>B. Class graph big book, questions about the graphs</p> <p>C. Math Calendar Weather graph</p> <p>D. Created graphs</p>	<p>*Quick check assessment Houghton Mifflin student workbook p. 163.</p> <p>Quick check assessment Houghton Mifflin student workbook p. 175.</p> <p>*Chapter 4 test – Houghton Mifflin student workbook pp. 179-180.</p> <p>*Refer to 1st grade assessment notebook.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 30

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data. Benchmark: D. Describe the probability of chance events as more, less or equally likely to occur. Content Organizer: Probability			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>8. Describe the likelihood of simple events as possible/impossible and more likely/less likely; e.g., when using spinners or number cubes in classroom activities.</p>	<p>A. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>B. Center Idea Give students a variety of spinners ex:</p> <div style="text-align: center;">  </div> <p>Have them predict which color they will land on the most, least, etc. and then test their predictions.</p>	<p>A. See Houghton Mifflin Teacher’s Edition pp. 377A-378</p> <p>B. Spinners, paper, pencils</p>	<p>*Quick check assessment – student workbook p. 383 NOTE: This assessment also includes fractions.</p> <p>*Chapter 8 chapter test – Houghton Mifflin student workbook pp. 387-388 NOTE: this assessment also includes position words, fraction, patterns and sorting.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 31

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two-, and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects and transformations to analyze mathematical situations and solve problems. Benchmark: C. Sort and compare two-dimensional figures and three-dimensional objects according to their characteristics and properties. Content Organizer: <i>Characteristics and Properties</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>1. Identify, compare, and sort two-dimensional shapes; i.e., square, circle, ellipse, triangle, rectangle, rhombus, trapezoid, parallelogram, pentagon, and hexagon. For Example:</p> <p>(a) Recognize and identify triangles and rhombuses independent of position, shape or size;</p> <p>(b) Describe two-dimensional shapes using attributes such as number of sides and number of vertices (corners, or angles).</p>	<p>A. <u>Introduction to Shapes</u> Read <u>A Picnic in Space</u> -Houghton Mifflin Student workbook. Have students do interactive activities with story.</p> <p>B. Various activities from Houghton Mifflin Teacher’s Edition. NOTE: this section does not cover rhombuses.</p> <p>C. Introduce the rhombus shape. Have students search for this shape in the classroom.</p> <p>D. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>E. Practice – Have students sort a variety of shapes and graph their results.</p>	<p>A. See Houghton Mifflin student workbook pp. 341-348</p> <p>B. See Houghton Mifflin Teacher’s Edition pp. 353A-356</p> <p>C. Rhombus pattern blocks</p> <p>D. See Houghton Mifflin Teacher’s Edition pp. 353A-354</p> <p>E. Pattern blocks graphing grid.</p>	<p>*Refer to 1st grade assessment notebook.</p> <p>*Quick check assessment Houghton Mifflin student workbook p. 357 – NOTE: This assessment also includes position words.</p>

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two-, and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects and transformations to analyze mathematical situations and solve problems. Benchmark: A. Describe and create plane figures: circle, rectangle, square, triangle, hexagon, trapezoid, parallelogram and rhombus, and identify them in the environment. Content Organizer: <i>Characteristics and Properties</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>2. Create new shapes by combining or cutting apart existing shapes.</p>	<p>A. Independent Practice - Houghton Mifflin student workbook.</p> <p>B. Center Idea Have students create an animal, picture, etc. using pattern blocks. You could also have them graph the pattern blocks they used.</p>	<p>A. See Houghton Mifflin student workbook p. 354.</p> <p>B. Pattern blocks, work mats, graphing grids.</p>	<p>*Observe students as they work with pattern blocks (you might give them directions telling them which shape you want them to make.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two-, and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects and transformations to analyze mathematical situations and solve problems. Benchmark: A. Describe and create plane figures: circle, rectangle, square, triangle, hexagon, trapezoid, parallelogram and rhombus, and identify them in the environment. B. Describe solid objects: cube, rectangular prism, sphere, cylinder, cone and pyramid, and identify them in the environment. Content Organizer: <i>Characteristics and Properties</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
3. Identify the shapes of the faces of three-dimensional objects.	A. Various activities from Houghton Mifflin Teacher’s Edition B. Have students start a collection of geometric solids and examine the solids.	A. See Houghton Mifflin Teacher’s Edition pp. 361A-362 B. Geometric solids.	*Quick check assessment – Houghton Mifflin student workbook p. 367. *Show students a solid shape and have them tell you the shapes they see, or have students find the solid with a certain shape on it.

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 34

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Content Standard: Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two-, and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects and transformations to analyze mathematical situations and solve problems. Benchmark: F. Describe location, using comparative (before, after), directional (above, below), and positional (first, last) words. Content Organizer: <i>Spatial relationships</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
4. Extend the use of location words to include distance (near, far, close to) and directional words (left, right).	A. Various activities from Houghton Mifflin Teacher’s Edition B. Practice – Have students write directions to a certain area or item and have a classmate read and follow their directions.	A. See Houghton Mifflin Teacher’s Edition pp. 349A-352 B. Paper, pencils	*Quick check assessment Houghton Mifflin student workbook p. 357. *Chapter 8 test Houghton Mifflin student workbook pp. 387-388. -NOTE: This assessment also includes plane shapes, symmetry and solid shapes.

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two-, and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects and transformations to analyze mathematical situations and solve problems. Benchmark: D. Identify, explain and model (superposition, copying) the concept of shapes being congruent and similar. E. Recognize two- and three-dimensional objects from different positions. G. Identify and draw figures with line symmetry.</p> <p>Content Organizer: <i>Spatial relationships</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>5. Copy figures and draw simple two-dimensional shapes from memory.</p>	<p>A. Have students make their own shape book. Have them draw each shape, name them, and include pictures of real objects that are that shape.</p> <p>B. Extra Practice – Using white boards call out a shape and have students draw the shape as quick as they can or give clues about a shape (ex. I have 4 sides and they are all the same length what am I) and have students draw that shape.</p>	<p>A. Paper, construction paper, markers/pencils, old magazines to clip pictures.</p> <p>B. White boards, dry erase markers.</p>	<p>*Have students draw each shape on paper.</p>

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations. Benchmark: A. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used. Content Organizer: <i>Use Patterns, Relations, and Functions</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>1. Sort, classify and order objects by two or more attributes, such as color and shape, and explain how objects were sorted.</p>	<p>A. <u>Introduction</u> Read “From Here To There,” Houghton Mifflin student workbook pp. 143-149</p> <p>B. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>C. Practice – Read <u>The Button Box</u> Have students practice sorting buttons. You could pair students and have them guess their partner’s sorting rule. You could also have them graph the buttons they sorted.</p>	<p>A. See Houghton Mifflin student workbook pp. 143-149</p> <p>B. See Houghton Mifflin Teacher’s Edition pp. 151A-152 , pp. 355A-356 , and pp. 359A-362.</p> <p>C. <u>The Button Box</u> book, a variety of buttons and graphing grid.</p>	<p>*Quick check assessment Houghton Mifflin student workbook p. 163- NOTE: this assessment also includes tally marks, making graphs, and reading graphs.</p> <p>*Have students sort a variety of objects (ex. buttons) and explain how they sorted them.</p> <p>*Chapter 4 test – Houghton Mifflin student workbook pp. 179-180 NOTE: this assessment also includes tally marks, making graphs and reading graphs.</p>

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks.

Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations. Benchmark: B. Extend sequences of sounds and shapes or simple number patterns, and create and record similar patterns. Content Organizer: Use Patterns, Relations, and Functions			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
2. Extend sequences of sounds, shapes or simple number patterns, and create and record similar patterns. For example: (a) Analyze and describe patterns with multiple attributes using numbers and shapes; e.g., AA, B, aa, b, AA, B, aa, b,... (b) Continue repeating and growing patterns with materials, pictures and geometric items; e.g., XO, XOO,XOOO, XOOOO.	A. Various activities from Houghton Mifflin Teacher’s B. Practice – Do a pattern of the day each day during math calendar. Vary the pattern to include numbers, shapes, etc. C. Various activities from Houghton Mifflin Teacher’s Edition D. Center Idea Have students experiment with making patterns using pattern blocks.	A. See Houghton Mifflin Teacher’s Edition pp. 363A-365 B. White board or chalkboard. C. Houghton Mifflin Teacher’s Edition pp. 209A-241 pp. 217A-218. D. Pattern blocks	*Refer to 1 st grade assessment notebook. *Have students create and extend a pattern using pattern blocks.

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

<p>Content Standard: Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations.</p> <p>Benchmark: C. Create and extend patterns and describe the rule in words.</p> <p>Content Organizer: <i>Use Patterns, Relations, and Functions</i></p>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>3. Describe orally the basic unit or general plan of a repeating or growing pattern.</p>	<p>A. Counting pairs or hundred chart activity</p> <p>B. Various activities from Houghton Mifflin Teacher’s Edition</p> <p>C. Practice each day during math calendar discuss orally the pattern of the day.</p>	<p>A. See Houghton Mifflin Teacher’s Edition p. 209</p> <p>B. See Houghton Mifflin Teacher’s Edition pp. 217A-218</p> <p>C. White board or chalkboard.</p>	<p>*Have students explain how a pattern repeats.</p>

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Mathematics – Grade 1

Adams County/Ohio Valley
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Content Standard: Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations. Benchmark: D. Model problem situations using objects, pictures, tables, numbers, letters, and other symbols. Content Organizer: Use Algebraic Representations			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
4. Solve open sentences by representing an expression in more than one way using the commutative property; e.g., $4 + 5 = 5 + 4$ or the number of blue balls plus red balls is the same as the number of red balls plus blue balls; $(R + B = B + R)$.	A. Various activities from Houghton Mifflin Teacher’s Edition B. Using a laminated apple cut-out have students move a number sentence in different ways in order to see that it has the same answer. $3+2=5$ $2+3=5$	A. See Houghton Mifflin Teacher’s Edition pp. 31A-32, 99A-100, and 127A-128 B. Laminated apple cut-out, dry erase marker.	*Quick check assessment Houghton Mifflin student workbook p. 109. *Chapter 3 test Houghton Mifflin student workbook pp. 139-140 NOTE: this assessment also includes addition in vertical form, and subtraction in vertical form.

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Mathematics – Grade 1

Adams County/Ohio Valley
Course of Study

Content Standard: Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations. Benchmark: E. Solve open sentences and explain strategies. Content Organizer: Use Algebraic Representations			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
5. Describe orally and model a problem situation using words, objects or number phrase or sentences.	A. Various activities from Houghton Mifflin Teacher’s Edition B. Practice - CGI Give students oral word problems and allow them to use any methods or materials to solve them. C. Math Journals (See meaning of operations -12)	A. See Houghton Mifflin Teacher’s Edition pp. 19A-20, 65A-67, pp. 131A-133, 319A-321, 419A-421, and 517A-518 B. Manipulatives – ex. cubes, counters, white boards, etc. C. (See meaning of operations – 12)	*Quick check assessment – Houghton Mifflin student workbook p. 23 *Chapter 1 test Houghton Mifflin student workbook pp. 43-44 *Observe students as they work CGI problems or have students work these problems on paper.

Mathematical Processes Standard – Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. Mathematical processes are used in all content areas and should be incorporated within instruction and assessment of the content-specific standards and benchmarks. 41