

Mathematics – Kindergarten

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: *Number and Number Systems*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
1. Compare and order whole numbers up to 10.	<p>1. Teacher models comparing sets of more and less students will practice more and less.</p> <ul style="list-style-type: none"> • Houghton Mifflin Lesson 13, p. 244. <p>2. Student will work with number cards from 0 to 10.</p> <p>3a. Teacher models how to use a number line. Teacher will model identifying and supplying missing number. Students will practice identifying and supplying missing number.</p> <p>3b. Student will explain how they come to the answer. “How do you know it’s that number?”</p>	<p>1. Houghton Mifflin Teacher’s Edition Lesson</p> <p>2. Houghton Mifflin Teacher Resource Book, p. 8</p>	<p>1. Teacher observation or resources. (Student Workbook - p. D37, Practice Workbook - p. 48, Challenge Workbook - p. 48)</p> <p>2. Student will correctly place number cards from 0-10 in order.</p> <p>3a. Student will complete page 45 in Practice Workbook.</p> <p>3b. Have student verbalize their explanation of how they came to their conclusion.</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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Benchmark: F. Count, using numerals and ordinal numbers.

Content Organizer: *Number and Number Systems*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
2. Explain the rules of counting, such as each object should be counted once and that order does not change the number.	<ol style="list-style-type: none"> 1. Teacher models counting one-to-one (counters and pictures on paper). Houghton Mifflin Lesson 1, 3, 4, 5 – pp. 128-146. 2. Teacher models finding sets that have the same number. <ul style="list-style-type: none"> • Houghton Mifflin Lesson 2, pp. 130-133. 3. Saxon supplemental Lesson 8, 9, 12. 	<ol style="list-style-type: none"> 1 & 2. Houghton Mifflin Teacher’s Edition 3. Saxon Lesson Book <ul style="list-style-type: none"> -Teddy Bear Counters -Mats (optional) -Pattern Blocks -Linking Cubes 	<ol style="list-style-type: none"> 1. Teacher observation 2. Assessment Guide p. 5, 6 or Practice Workbook - p. 24 3. Saxon Lesson # 28, Assessment #4.

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
5. Relate, read and write numerals for single-digit numbers (0 to 9).	1. Point and read number chart/number book. 2. Teacher models correct formation of numbers 0 to 9. 3. Teacher uses number cards and students place that number of objects on mat. Teacher places a set of objects and students count and find the number card. <ul style="list-style-type: none"> • Houghton Mifflin, Practice Workbook – p. 33 • Houghton Mifflin, Student Workbook – pp. C29-C30. • Houghton Mifflin, Student Workbook – p. D19 	1. Number cards & number chart. 2. Number rhymes -Resource book, p. 25-30 To reteach individual numbers use Practice Workbook. 3. Practice Workbook - P. 33, Student Workbook – p.. C29-C30, and D19.	1. Student correctly identifies each given number. 2. Student writes numbers 0 to 9. 3. Saxon Assessment # 5 Practice Workbook P. 33 or Student Workbook P. C29-C30 and D19.

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Benchmark: I. Model, represent and explain multiplication as repeated addition, rectangular arrays and skip counting.

Content Organizer: *Number and Number Systems*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
6. Construct multiple sets of objects each containing the same number of objects.	<ol style="list-style-type: none"> 1. Teacher shows a set of objects and students create a matching set. 2. Students match dot/picture cards with equal set; i.e. match 5 dot card with 5 dot card. 3. Various activities on equal sets. (Chapter 3, Lesson 2, pp. 130-133) 	<ol style="list-style-type: none"> 1. Manipulatives (mats are optional). 2. Dot/picture number cards (teacher made or purchased). 3. Houghton Mifflin Teacher’s Edition -Saxon Lesson Book (Lesson 28) -Cubes 	<ol style="list-style-type: none"> 1. Student individually creates a matching set and concludes why it’s a matching set. 2. Students completes page 24 in Challenge Workbook. 3. Teacher observation Saxon Lesson, Assessment #4.

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>7. Compare the number of objects in two or more sets when one set has one to two more, or one to two fewer objects.</p>	<p>1. Various activities from Houghton Mifflin Teacher’s Edition, Pp. 134-147, Lesson 3-5.</p> <ul style="list-style-type: none"> • Practice Workbook and Challenge Workbook, pp. 25-27. • Student Workbook, pp. C11-C17. <p>2. Teacher uses vocabulary more, less, same when discussing graphs and/or comparing sets of objects. (can be done during morning exercise; i.e., weather graph).</p> <p>3. Saxon Lessons 81, 82, 85.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Houghton Mifflin Every Day Counts</p> <ul style="list-style-type: none"> • Saxon Lesson Book, Assessment # 9 <p>3. Saxon Lesson Book</p> <ul style="list-style-type: none"> • Playing cards (war) 4-5 sets. 	<p>1. Practice Workbook 27 and Challenge Workbook 27 or Student Workbook C15, C16</p> <p>2. Saxon Assessment # 9 or observation.</p> <p>3. Observation</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: G. Model, represent and explain addition as combining sets and counting on. H. Model, represent and explain subtraction as comparison, take-away and part-to-whole. K. Demonstrate fluency in addition facts with addends through 9 and corresponding subtractions.

Content Organizer: *Number and Number Systems*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>8. Represent and use whole numbers in flexible ways, including relating, composing and decomposing numbers; e.g., 5 marbles can be 2 red and 3 green or 1 red and 4 green.</p>	<p>1. Various activities Houghton Mifflin, pp. 208-213, Lesson 5 and pp. 226-229, Lesson 9.</p> <p>2. Teacher holds up number card, students use manipulatives to show the different way to make that amount; i.e., 7 yellow bears and 2 blue bears make 9 bears or 5 yellow bears and 4 red bears make 9 bears.</p> <p>3. Combinations of Five Booklets (Appendix D – cut to make 4 booklets)</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Manipulatives</p> <ul style="list-style-type: none"> • Number cards (Teacher resource book, P. 8-9). <p>3. Booklets for each students.</p> <ul style="list-style-type: none"> • Cups of 2-color sided beans (5 per cup). 	<p>1. Any activity sheets from Houghton Mifflin for Lessons 5 and 9.</p> <p>2. One-to-one teacher observation.</p> <p>3. Teacher’s observation.</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>10. Model and represent addition as combining sets and counting on, and subtraction as take-away and comparison. For Example:</p> <p>a. Combine and separate small sets of objects in contextual situations; e.g., add or subtract one, two, or another small amount.</p> <p>b. Count on (forward) and count back (backward) on a number line between 0 and 10.</p>	<p>1. Houghton Mifflin Teachers Edition</p> <ul style="list-style-type: none"> • Chapter 7, Lessons 1-11, Pp. 398-455 • Chapter 8, Lessons 1-12, Pp. 456-517 <p>2. Present join/separate CGI problems for students to demonstrate with manipulatives.</p> <ul style="list-style-type: none"> • Teacher models problem situation using vocabulary such as: decompose, combine, compose, sum, difference, numeral, number sentence. <p>3. Demonstrate counting on by:</p> <ul style="list-style-type: none"> • Recording number of days of school • Through read alouds – such as Big Book, “Ten Little Ducks.” <p>4. Demonstrate counting back through:</p> <ul style="list-style-type: none"> • Read alouds such as – “Five Little Monkeys, Roll Over”. • “Counting 10 to Blast Off” 	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. CGI template of problems, Appendix C</p> <p>3. Trade Books: “Ten Little Ducks” by Hammond “Mouse Count” by Walsh</p> <p>3 & 4. Number Line in Houghton Mifflin Teacher Resource, p. 11</p> <p>4. Trade Books: “Five Little Monkeys” by Christelow “Roll Over” by Peek</p>	<p>1 & 2. Illustrate a subtraction and addition sentence to find the sum and the difference. (Format similar to Student Workbook, G29-G30, Appendix E)</p> <p>1 & 2. Saxon Assessment # 10, Lesson 91</p> <p>3 & 4. Student individually counts on and back from a given number to several numbers away. (0-10)</p>

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
11. Demonstrate joining multiple groups of objects, each containing the same number of objects; e.g., combining 3 bags of candy, each containing 2 pieces.	1. Houghton Mifflin Teacher’s Edition, Lesson 8, pp. 436-439 (This is a starting lesson; needs to increase in complexity to involve more groups being combined). 2. Present and demonstrate CGI multiplication problems (see template, Appendix C). 3. Teacher reads then demonstrates combining sets using Trade Book.	1. Houghton Mifflin Teacher’s Edition 2. CGI template. 3. Trade Book, “The M & M Counting Book” by McGrath	1. One-on-one observation of child joining several groups of same numbered sets of manipulatives to discover product. 2 & 3. When orally given a simple multiplication word problem, the student will draw the groups of sets and discover the product; e.i., word problem: Charlie had 3 bags, in each bag there were 3 pieces of candy. How many pieces in all? (See Appendix C; CGI template; multiplication)

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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: J. Model, represent and explain division as sharing equally, repeated subtraction and rectangular arrays. Content Organizer: <i>Meaning of Operations</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
12. Partition or share a small set of objects into groups of equal size; e.g., sharing 6 stickers equally among 3 children.	1. Saxon lesson 85 and Saxon supplemental sheet 85 2. CGI partitive division problems presented by teacher.	1. Saxon lesson book <ul style="list-style-type: none"> • Saxon supplemental book • playing cards 2. CGI template – Appendix C	1. Supplemental sheet 85 2. Observation

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<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
13. Recognize the number or quantity of sets up to 5 without counting; e.g., recognize without counting the dot arrangement on a domino as 5.	1. Daily or weekly review of dot arrangement or number fingers held up or up to 5 manipulatives.	1. Dot arrangement cards (similar to dice or dominoes – teacher made). Various manipulatives	1. Teacher one-on-one assessment using dot cards or number of fingers or various manipulatives.

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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: B. Select appropriate units for length, weight, volume (capacity) and time, using: objects; i.e., non-standard units; U.S. customary units: inch, foot, yard, ounce, pound, cup, quart, gallon, minute, hour, day, week and year; metric units: centimeter, meter, gram and liter. 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(s)</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
1. Identify units of time (day, week, month, year) and compare calendar elements; e.g., weeks are longer than days.	<p>1. Houghton Mifflin Teacher’s Edition Chapter 5, Lesson 1-3, pp. 260-279 & Lesson 7-12, pp. 294-319.</p> <p>2. Calendar Discussion (See Houghton Mifflin Every Day Counts)</p> <p>3. Teacher demonstrates sequencing cards.</p> <p>4. Teacher describes and explains calendar elements during calendar time and gives examples of events that happen weekly/daily/monthly/yearly. (Ex: lunch, recess, library visits, superstar/helper change, snack chart, birthdays).</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>1 & 2. Houghton Mifflin Assessment Guide, pp. 21-23</p> <p>2. Houghton Mifflin Every Day Counts</p> <p>3. Sequencing cards (3-4 step cards).</p> <p>4. Calendar materials</p>	<p>1 & 2. Houghton Mifflin Assessment Guide, pp. 21-23, Chapter 5 test.</p> <p>3. Sequencing cards with one-on-one assessments.</p> <p>4. Student will compare days, weeks, months, years and select the appropriate time element for various events.</p>

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<i>Grade Level Indicator(s)</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>2. Compare and order objects of different lengths, areas, weights or capacities; and use relative terms, such as longer, shorter, bigger, smaller, heavier, lighter, more, or less.</p>	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 6, Pg. 322.</p> <ul style="list-style-type: none"> • Length – lesson 1-6 • pp. 330-355 (terms to use: longer, shorter) • Weight – lesson 7 and 8 pp. 356-363 (terms to use lighter, heavier) • Capacity – lesson 9 and 10 pp. 364-371 (terms to use: more, less) <p>2. Area: Explore area (filling in shape) of design using tangrams, pattern blocks, etc. (See Saxon Lessons 13, 15, 30, 68, 93, 95, 105)</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <ul style="list-style-type: none"> • Houghton Mifflin Assessment Guide <p>2. Saxon Lesson Book</p> <ul style="list-style-type: none"> • Pattern Blocks • Tangrams 	<p>1. Houghton Mifflin Assessment Guide, pp. 24-26, Chapter 6 test or use manipulatives along with objects.</p> <p>2. Saxon Lesson 105 Assessment # 13</p>

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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(s)</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
3. Measure length and volume (capacity) using uniform objects in the environment. For example, find: (a) how many paper clips long, is a pencil; (b) how many small containers it takes, to fill one big container using sand, rice, beans.	1. Houghton Mifflin Teacher’s Edition <ul style="list-style-type: none"> • Chapter 6, Lesson 4-6, pp. 342-355 (length) • Chapter 6, Lesson 9-11, pp. 364-375 (capacity) 2. Saxon Lesson 88 (length) Saxon Lesson 66 (capacity)	1. Houghton Mifflin Teacher’s Edition <ul style="list-style-type: none"> • Houghton Mifflin Practice Workbook 2. Saxon lessons and Saxon supplemental sheets <ul style="list-style-type: none"> • Containers • Uniform manipulatives • Linking cubes 	1. Length Houghton Mifflin Practice Workbook or Challenge Workbook, pp. 66 or Houghton Mifflin Student Book, pp. F13-F14 Capacity Houghton Mifflin Practice Workbook, p. 73 2. Length – Saxon supplemental sheet Lesson 88 Capacity – Given a few containers the student measures using uniform manipulatives – one-on-one teacher observation.

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<i>Grade Level Indicator(s)</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>4. Order events based on time. For example:</p> <p>(a) activities that take a long or short time;</p> <p>(b) review what we do first, next last;</p> <p>(c) recall what we did or plan to do yesterday, today, tomorrow.</p>	<p>1. Houghton Mifflin Lessons</p> <p>a. Houghton Mifflin Teacher’s Edition, Chapter 5, Lesson 4, 7, 8, pp. 280-283; 294-301</p> <p>b. Houghton Mifflin Teacher’s Edition, Chapter 5, Lesson 5, pp. 284-287</p> <p>c. Houghton Mifflin Teacher’s Edition, Chapter 5, Lesson 2, pp. 272-275</p> <p>2. Teacher models and explains sequencing events. Students practice. (Ex. Classroom schedule/activities)</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Sequence picture cards (3-4 steps)</p>	<p>1. (a.) Houghton Mifflin Practice Workbook or Challenge Workbook, p. 54 or p. 57; Student Workbook, Pp. E11, 12</p> <p>(b.) Houghton Mifflin Practice Workbook or Challenge Workbook, pg. 55; Student Workbook E13, 14</p> <p>(c.) One-on-one ask student to identify if given event happened yesterday, today, or will happen tomorrow.</p> <p>2. Student sequences steps with sequence picture cards (one-on-one). Student describes steps in an event.</p>

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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. Content Organizer: <i>Data Collection</i>			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
1. Gather and sort data in response to questions posed by teacher and students; e.g., how many sisters and brothers, what color shoes.	1. Houghton Mifflin Teacher’s Edition, Chapter 1, Lesson 12-13, pp. 56-63. 2. Saxon lessons 5, 26, 27, 41, 50, 57, 71, & 110. <ul style="list-style-type: none"> • Supplemental sheet # 5 	1. Houghton Mifflin Teacher’s Edition 2. Saxon Lesson Book <ul style="list-style-type: none"> • Saxon supplement book • Large graphing grids • Linking cubes/unifix cubes • Individual student graphing grids (Houghton Mifflin Teacher Resource Book p. 17) 	1. Houghton Mifflin Challenge Workbook, p. 13 or student workbook, p. A31 or A32 2. Given a grid have each student individually collect data by asking other students the question posed by the teacher. Then each student individually forms a graph from the grid. Sample questions: What is your favorite ice cream flavor? What is your favorite color? Shape?...

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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: *Data Collection*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
2. Arrange objects in a floor or table graph according to attributes, such as use, size, color or shape.	1. Houghton Mifflin Teacher’s Edition, Chapter 1, Lesson 10-13, pp. 48-67 & Chapter 6, Lesson 6, pp. 350-353. 2. Saxon Lessons # 11 & 17 <ul style="list-style-type: none"> • Saxon supplemental sheet # 11 	1. Houghton Mifflin Teacher’s Edition 2. Saxon Lesson Book <ul style="list-style-type: none"> • Saxon supplement book • Manipulatives: Ex. teddy bear counters, pattern blocks, unifix cubes/linking cubes (optional) 	1. <ul style="list-style-type: none"> • Houghton Mifflin Practice Workbook p. 10 - 13 • Houghton Mifflin Challenge Workbook p. 12 2. Saxon Lesson 77, Assessment # 9

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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>3. Select the category or categories that have the most or fewest objects in a floor or table graph.</p>	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 3, Lesson 13, pp. 176-179 (C33, C34); Chapter 4, Lesson 15, pp. 252-255 (D39, D40); Chapter 10, Lesson 7, pp. 618-621 (J19, J20).</p> <p>2. Saxon Lessons # 5, 11, 17, 20, 26, 27, 41, 50, 57, 71, & 110.</p> <ul style="list-style-type: none"> • Saxon supplemental sheets # 17 & 20 <p>3. Daily review and discussion of weather graph or other graph (See Every Day Counts)</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Saxon Lesson Book</p> <ul style="list-style-type: none"> • Large graphing grid • Linking cubes/unifix cubes • Individual student grid • Manipulatives: Ex. teddy bear counters and pattern blocks. • Saxon supplemental book <p>3. Every Day Counts Calendar Math Book</p> <ul style="list-style-type: none"> • graph 	<p>1. Houghton Mifflin Student workbook, pp. C33, C34, D39, D40, J19, or J20</p> <p>2. Saxon Lesson 77, Assessment # 9</p> <p>3. Teacher observation</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.. 20

Mathematics – Kindergarten

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: Characteristics and Properties			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>1. Identify and sort two- dimensional shapes and three- dimensional objects. For example:</p> <p>(a) Identify and describe two-dimensional figures and three- dimensional objects from the environment using the child’s own vocabulary.</p> <p>(b) Sort shapes and objects into groups based on student-defined categories.</p> <p>(c) Select all shapes or objects of one type from a group.</p> <p>(d) Build two-dimensional figures using paper shapes or tangrams; build simple three-dimensional objects using blocks.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p style="padding-left: 20px;">a. (identify/describe) Chapter 9, Lessons 1, 2, 5, 8, 9, pp. 526-533, 544-547, 556-564.</p> <p style="padding-left: 20px;">b-c. (sort) Chapter 1, Lesson 8-10, pp. 38-52; Chapter 9, Lesson 3 & 6, pp. 534-537, 548-551.</p> <p style="padding-left: 20px;">d. (build) Chapter 9, Lesson 7, pp. 552-555.</p> <p>2. Trade Books – (See resources)</p> <p>3. Shape matrix: Saxon Lesson 1, 2, 22, 52, 74, 13, 15, 16, 19, 20, 22, 30, 31, 32, 98, 78, 83, 87.</p> <p>4. Review shapes/solids during morning exercises.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Trade Books: Color Zoo by Ehlert The Shape of Things by Dodds What is Round by Dotlich What is Square by Dotlich</p> <p>3. Tangrams Pattern blocks Shape pieces/Attribute blocks Saxon Lesson and Supplement Books</p> <p>3 & 4. Solid and shape pieces.</p>	<p>1. (a.) Houghton Mifflin Practice Workbook p. 101, 102 2-dimensional shapes. One-on-one teacher observation for 3-dimensional shapes. (b.-c.) Houghton Mifflin Practice Workbook p. 103 Houghton Mifflin Practice Workbook or Challenge Workbook p. 106 (d.) Houghton Mifflin Practice Workbook p. 107 or one-on-one</p> <p>2 & 4. Teacher observation with 3-dimensional blocks - using 2-dimensional shapes student makes a design (place and/or paste)</p> <p>3. Saxon supplemental sheet #19 & 31 - sorting – Saxon lesson 17 one-on-one</p>

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Mathematics – Kindergarten

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: 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>
<p>2. Name and demonstrate the relative position of objects as follows:</p> <p>(a) place objects over, under, inside, outside, on, beside, between, above, below, on top of, upside-down, behind, in back of, in front of;</p> <p>(b) describe placement of objects with terms such as on, inside, outside, above, below, over, under, beside, between, in front of, behind</p>	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 1, Lesson 1-4, pp. 6-24.</p> <p>2. Teacher uses language daily (over, under, inside, outside, above, below, on top of, behind, upside-down, in back of, in front of.) Teacher prompts students to use language.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Paper, pencil/crayons</p>	<p>1. Houghton Mifflin Student workbook quick check A15</p> <ul style="list-style-type: none"> • One-on-one by having student place object in correct position stated by teacher • Houghton Mifflin Practice Workbook or Challenge Workbook pg. 1-4 <p>2. One-on-One or teacher directed drawing. Ex: “Draw a circle in the middle of a paper. Draw lines above the circle, draw waves inside the circle.</p>

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Mathematics – Kindergarten

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: A. Sort, classify, and order objects by size, number, and other properties, and describe the attributes used. Content Organizer: Use Patterns, Relations, and Functions			
<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
<p>1. Sort, classify and order objects by size, number and other properties. For example:</p> <p>(a) Identify how objects are alike and different.</p> <p>(b) Order three events or objects according to given attribute, such as time or size.</p> <p>(c) Recognize and explain how objects can be classified in more than one way.</p> <p>(d) Identify what attribute was used to sort groups of objects that have already been sorted.</p>	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 1, Lesson 6-12, pp. 30-59 Chapter 6, Lesson 1-3 & Lesson 7-10, pp. 330-341 & 356-371.</p> <p>2. Saxon Matrix Lessons 22, 52, 74.</p> <p>3. Sort, as a class pictures (magazine cut outs, clip-art) by various attributes (color, size, real picture vs. drawing, living vs. non-living etc.)</p> <p>4. Teacher sorts shapes, objects, or pictures and students name attribute.</p> <p>5. During morning exercises discuss differences and similarities in students, clothing, etc.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Saxon Lesson Book</p> <p>3. Pictures, magazine clippings, clip-art, etc.</p> <p>4. Manipulatives such as teddy bear sized counters, attribute blocks, tangrams, etc.</p>	<p>1. Houghton Mifflin Practice Workbook or Challenge Workbook, p. 10 or 12</p> <ul style="list-style-type: none"> • Houghton Mifflin student workbook quick check, p. A27 • Houghton Mifflin Challenge Workbook, p. 70 & 72 • Houghton Mifflin Chapter 5, Lesson 5 <p>2. Saxon Assessment # 6, Lesson 49</p> <p>3 & 4. Given a set of manipulatives/pictures have student sort at least 2 ways according to teacher directed sorting rule. OR student sort and explain the sorting rule or reasoning.</p> <p>5. Observation.</p>

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Mathematics – Kindergarten

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>
<p>2. Identify, create, extend and copy sequences of sounds (such as musical notes), shapes (such as buttons, leaves or blocks), motions (such as hops or skips), and numbers from 1 to 10.</p>	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 2, Lessons 1-9, pp. 70-117</p> <ul style="list-style-type: none"> • (Numbers) Chapter 4 Lesson 11 <p>2. Saxon Lessons # 10, 23, 24, 51, 53, & 83.</p> <p>3. Model various patterns with manipulatives, pictures, etc. have students copy, extend and name type of pattern (AB, ABB) or rule by which the pattern occurs. Have student then create a pattern and name type or rule.</p> <p>4. Calendar/morning exercise patterns (done daily) (See Houghton Mifflin Everyday Counts)</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Saxon Lesson Book</p> <p>2 & 3. Manipulatives: Ex: teddy bear counters, unifix cubes/linking cubes, colored tiles, beads, pattern blocks, etc.</p> <p>4. Houghton Mifflin Every Day Counts Calendar math book</p>	<p>1. Extending Houghton Mifflin Challenge Workbook, pp. 14-17; Houghton Mifflin Practice Workbook, pp. 16-17</p> <ul style="list-style-type: none"> • Identify Houghton Mifflin Practice Workbook, p. 18 or find patterns in the environment. • Copy Houghton Mifflin Practice Workbook, p. 18 or copy a given pattern or drawn pattern. • Number Houghton Mifflin Student Workbook, pgs. D31-32 <p>2. Saxon Assessment # 7, Lesson 63</p> <p>3. One-on-One observation</p>

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Mathematics – Kindergarten

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: C. Create and extend patterns and describe the rule in words.

Content Organizer: *Use Patterns, Relations, and Functions*

<i>Grade Level Indicator</i>	<i>Instructional Activities/Strategies</i>	<i>Resources</i>	<i>Assessment</i>
3. Describe orally the pattern of a given sequence.	<p>1. Houghton Mifflin Teacher’s Edition, Chapter 2, Lessons 1-9, pp. 78-101.</p> <p>2. Saxon Lessons # 10, 23, 24, 53, & 83.</p> <p>3. Daily Calendar/Morning Exercise patterns.</p>	<p>1. Houghton Mifflin Teacher’s Edition</p> <p>2. Saxon Lesson Book Manipulatives: Ex: teddy bear counters, unifix cubes/linking cubes, colored tiles, beads, pattern blocks, etc.</p> <p>3. Every Day Counts Calendar Math Book</p>	<p>1 & 3. Oral Assessment – One-on-One</p> <p>2. Saxon Lesson # 7, Assessment 63 Have student describe each pattern.</p>

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Mathematics – Kindergarten

Adams County/Ohio Valley
Course of Study

Content Standard: Students develop number sense; understand number and number systems; understand the meaning of operations and how they relate to one another; and gain fluency in computation and estimation. Students estimate and compute using a variety of strategies including technology supported methods. 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. Model a problem situation using physical materials.	1. Houghton Mifflin Teacher’s Edition <ul style="list-style-type: none"> • Chapter 5, Lesson 12, pp. 314-317 • Chapter 6, Lesson 11, pp. 372-375 • Chapter 8, Lesson 5, pp. 480-483 2. CGI problems presented to class along with various manipulatives to use in problem solving to arrive at a solution. 3. Saxon Lessons # 18, 25, 43, 80, 104, & 109. Saxon supplemental sheets # 18, 25, 43, 80, 104, & 109.	1. Houghton Mifflin Teacher’s Edition 2. CGI philosophy and/or template. 3. Saxon Lesson Book <ul style="list-style-type: none"> • Saxon supplemental book 	1. Observation 2. Observation 3. Saxon Lesson 91 Assessment # 10

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