

CURRICULUM MAP MATH GRADE 1

| August/September | October | November | December |
|--|--|---|---|
| <p>Patterns, Functions, & Algebra 5. Describe orally and model a problem situation using words, objects or number phrase or sentence. 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; $(R + B = B + R)$.</p> <p>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,...</p> <p>Number, Number Sense and Operations 3. <i>Read, and write the numerals for numbers to 100.</i> 10. <i>Model, represent and explain addition as combining sets (part + part = whole) and counting on. For example:</i> a. <i>Model and explain addition using Physical materials in contextual situations.</i> b. <i>Draw pictures to model addition.</i> c. <i>Write number sentences to represent addition.</i> d. <i>Explain that adding two whole numbers yields a larger whole number.</i> 4. <i>Count forward to 100, count backwards from 100, and count forward or backward starting at any number between 1 and 100.</i> 12. Use conventional symbols to represent the operations of addition and subtraction.</p> | <p>Data Analysis & Probability 3. <i>Display data in picture graphs with units of 1 and bar graphs with intervals of 1.</i> 4. <i>Read and interpret charts, picture graphs and bar graphs as sources of information to identify main ideas, draw conclusions, and make predictions.</i> 7. <i>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.</i> 2. <i>Collect and organize data into charts using tally marks.</i> 5. <i>Construct a question that can be answered by using information from a graph.</i> 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>Number, Number Sense & Operations 1. Use ordinal numbers to order objects; e.g., first, second, third. OH pg. 20 11. <i>Model, represent and explain subtraction as take-away and comparison. For example:</i> a. <i>Model and explain subtraction using physical materials in contextual situations.</i> b. <i>Draw pictures to model subtraction.</i> c. <i>Write number sentences to represent subtraction.</i> d. <i>Explain that subtraction of whole numbers yields an answer smaller than the original number.</i> 15. Demonstrate that equal means “the same as” using visual representations. 12. Use conventional symbols to represent the operations of addition and subtraction.</p> | <p>Patterns, Functions, & Algebra 1. <i>Sort, classify and order objects by two or more attributes, such as color and shape, and explain how objects were sorted.</i></p> <p>Number, Number Sense & Operations 4. <i>Count forward to 100, count backwards from 100, and count forward or backward starting at any number between 1 and 100.</i> 16. <i>Develop strategies for basic addition facts, such as:</i> a. <i>counting all;</i> b. <i>counting on;</i> c. <i>one more, two more;</i> d. <i>doubles;</i> e. <i>doubles plus or minus one</i></p> | <p>Measurement 1. <i>Recognize and explain the need for fixed units and tools for measuring length and weight; e.g., rulers and balance scales.</i> 2. <i>Tell time to the hour and half hour on digital and analog (dial) timepieces.</i> 3. Order a sequence of events with respect to time; e.g., summer, fall, winter and spring; morning, afternoon, and night.</p> <p>Number, Number Sense & Operations 5. <i>Use place value concepts to represent whole numbers using numerals, words, expanded notation and physical models with ones and tens. For example:</i> a. Develop a system to group and count by twos, fives and tens.</p> <p>Patterns, Functions, & Algebra 3. Describe orally the basic unit or general plan of a repeating or growing pattern. 2. Extend sequences of sounds, shapes or simple number patterns, and create and record similar patterns. For example: b. Continue repeating and growing patterns with materials, pictures and geometric items; e.g., XO, XOO, XOOO, XOOOO. OH pg. 38</p> <p style="text-align: right;">10/9/09</p> |

Note: Indicators including time, money, seasons, sequencing of events, counting on, place value and patterns should be covered on a daily basis during math meeting.

Indicators should be assessed the month they are introduced and 1-2 times after to check for mastery.

Please use the Ohio-Map For Success when noted.

CURRICULUM MAP MATH GRADE 1

| January | February | March/ April | May |
|--|---|---|---|
| <p>Number, Number Sense and Operations 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. 6. Identify and state the value of a penny, nickel, dime, quarter and dollar.</p> <p>Measurement 1. Recognize and explain the need for fixed units and tools for measuring length and weight; e.g., rulers and balance scales. 4. Estimate and measure weight using non-standard units; e.g., blocks of uniform size. 5. Estimate and measure lengths using non-standard and standard units, i.e., centimeters, inches and feet. OH Book pg. 32</p> <p>Data Analysis & Probability 6. Arrange five objects by an attribute, such as size or weight, and identify the ordinal position of each object.</p> | <p>Geometry & Spatial Sense 3. Identify the shapes of the faces of three-dimensional objects. 5. Copy figures and draw simple two-dimensional shapes from memory OH Book pg. 35.</p> <p>Number, Number Sense and Operations 8. Show different combinations of coins that have the same value. 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> | <p>Number, Number Sense and Operations 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>Number, Number Sense & Operations 5. Use place value concepts to represent whole numbers using numerals, words, expanded notation and physical models with ones and tens. For example: b. Identify patterns and groupings in a 100’s chart and relate to place value concepts. 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>Number, Number Sense and Operations OH Book pg. 22 and 25 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? 14. Model and represent division as sharing equally in contextual situations; e.g., sharing cookies. OH Book pg. 28</p> |

10/9/09

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Benchmarks

Mathematical Processes Standard

Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. The benchmarks for mathematical processes articulate what students should demonstrate in problem solving, representation, communication, reasoning and connections at key points in their mathematics program. Specific grade-level indicators have not been included for the mathematical processes standard because content and processes should be interconnected at the indicator level. Therefore, mathematical processes have been embedded within the grade-level indicators for the five content standards.

By the end of the K-2 program:

- A. Use a variety of strategies to understand problem situations; e.g., discussing with peers, stating problems in own words, modeling problems with diagrams or physical materials, identifying a pattern.
- B. Identify and restate in own words the question or problem and the information needed to solve the problem.
- C. Generate alternative strategies to solve problems.
- D. Evaluate the reasonableness of predictions, estimations and solutions.
- E. Explain to others how a problem was solved.
- F. Draw pictures and use physical models to represent problem situations and solutions.
- G. Use invented and conventional symbols and common language to describe a problem situation and solution.
- H. Recognize the mathematical meaning of common words and phrases, and relate everyday language to mathematical language and symbols.
- I. Communicate mathematical thinking by using everyday language and appropriate mathematical language.

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