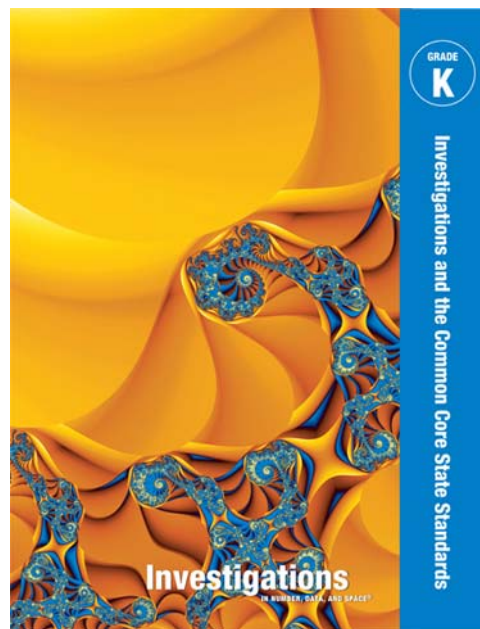


A Correlation of

SCOTT FORESMAN  
**Investigations**  
IN NUMBER, DATA, AND SPACE®

©2012



to the

**Common Core State Standards  
for Mathematics  
Kindergarten**

# **A Correlation of Investigations in Number, Data, and Space, ©2012 to the Common Core State Standards for Mathematics**

## **Introduction**

This document demonstrates how *Investigations in Number, Data, and Space* ©2012 meets the indicators of the Common Core State Standards for Mathematics, Kindergarten. Correlation references are to the unit number and are cited at the session level. This correlation includes Classroom Routines but does not include ongoing review in Daily Practice and Homework.

*Investigations in Number, Data, and Space* supports students in making sense of mathematics and becoming mathematical thinkers. The program is designed to help all elementary children understand the fundamental ideas underlying number and arithmetic, geometry, data, measurement, and algebraic thinking. Students are encouraged to reason mathematically, develop problem-solving strategies, and represent their thinking using models, diagrams, and graphs. In addition to engaging the range of math learners, Investigations communicates mathematics content and pedagogy to teachers, offering them greater support built into every lesson, so that all students are successful.

Each grade level consists of a set of units, presented through investigations that involve students in the exploration of major mathematical ideas. Students gain a greater understanding of math, with meaningful practice and review that result in computational fluency. They build a greater foundation for algebra that prepares them for the challenges in middle and high school math courses.

Approaching the mathematics content through investigations helps student develop flexibility and confidence in approaching problems, fluency in using mathematical skills and tools to solve problems, and proficiency in evaluating their solutions. Students also build a repertoire of ways to communicate about their mathematical thinking, while their enjoyment and application of mathematics grows.

### **New to the program for the Common Core State Standards**

INVESTIGATION and the COMMON CORE STATE STANDARDS Resource Book contains:

- Overview of the Common Core State Standards and Investigations
- Alignment to the Standards for Mathematical Practice
- Correlation to the Standards for Mathematical Content
- Instructional Plan for each Unit
- New Teacher Material for each Unit
- Common Core Student Activity Black Line Masters

## **Curriculum Units**

### **Kindergarten**

**U1** Who Is in School Today?

**U2** Counting and Comparing

**U3** What Comes Next?

**U4** Measuring and Counting

**ICCG:** Investigations and the Common Core State Standards Guidebook

**U5** Make a Shape, Build a Block

**U6** How Many Do You Have?

**U7** Sorting and Surveys

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|--|---|
| <b>Counting and Cardinality K.CC</b>   |   |
| <b>Know number names and the count sequence.</b>   |   |
| 1. Count to 100 by ones and by tens. [K.CC.1.]   | <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7</p> <p><b>U2 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.13</p> <p><b>U3 Sessions:</b> 1.1, 1.3, 1.4, 2.1, 2.2, 2.5, 2.9, 2.10, 3.2, 3.3, 3.4</p> <p><b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.7, 4.2, 4.6, 4.8, 4.9</p> <p><b>U4 ICCG:</b> 1.6C</p> <p><b>U5 Sessions:</b> 1.1, 1.5, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5</p> <p><b>U6 Sessions:</b> 1.1, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5, 4.1, 4.5</p> <p><b>U6 ICCG:</b> 1.3A, 5A.1, 5A.2, 5A.3, 5A.4, 5A.5</p> <p><b>U7 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.3, 2.5, 3.1, 3.3, 3.5</p> <p><b>U7 ICCG:</b> 1.7A</p> |
| 2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1). [K.CC.2.]  | <p><b>U3 Session:</b> 2.10</p> <p><b>U5 Session:</b> 1.3</p> <p><b>U6 Sessions:</b> 1.4, 2.2, 2.6, 3.4, 4.1, 4.5</p> <p><b>U6 ICCG:</b> 1.3A, 5A.1, 5A.2, 5A.3, 5A.4, 5A.5</p> <p><b>U7 Sessions:</b> 1.3, 2.1, 2.3, 2.5, 3.3, 3.5</p> <p><b>U7 ICCG:</b> 1.7A</p>  |
| 3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects). [K.CC.3.]  | <p><b>U1 Sessions:</b> 3.2, 3.3, 3.4, 3.5, 3.6</p> <p><b>U2 Sessions:</b> 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, 1.10</p> <p><b>U4 Sessions:</b> 1.4, 2.1, 2.3, 2.4, 2.5, 3.2, 3.3, 3.4, 4.4</p> <p><b>U6 Sessions:</b> 1.2, 2.6, 3.1, 3.2, 3.3, 3.5, 3.7</p> <p><b>U6 ICCG:</b> 5A.2, 5A.3, 5A.4, 5A.5</p>   |
| <b>Count to tell the number of objects.</b>  |   |
| 4. Understand the relationship between numbers and quantities; connect counting to cardinality. [K.CC.4.]  |   |
| a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. [K.CC.4.a.] | <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7</p> <p><b>U2 Sessions:</b> 1.1, 1.2, 1.3, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.13</p> <p><b>U3 Sessions:</b> 1.1, 1.3, 1.4, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.9, 2.10, 3.2, 3.3, 3.4</p> <p><b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.7, 4.8, 4.9</p> <p><b>U4 ICCG:</b> 1.6A, 1.6B, 1.6C</p>   |

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|---|---|
| <p>(Continued)<br/>a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. [K.CC.4.a.]</p> | <p><b>U5 Sessions:</b> 1.1, 1.2, 1.5, 1.6, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5<br/> <b>U6 Sessions:</b> 1.1, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5, 4.1, 4.5<br/> <b>U6 ICCG:</b> 5A.2, 5A.3, 5A.4, 5A.5<br/> <b>U7 Sessions:</b> 1.1, 1.2, 1.4, 1.5, 1.6, 2.3, 3.1, 3.5<br/> <b>U7 ICCG:</b> 1.7A</p>   |
| <p>b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. [K.CC.4.b.]</p>   | <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7<br/> <b>U2 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.13<br/> <b>U3 Sessions:</b> 1.1, 1.3, 1.4, 2.1, 2.2, 2.3, 2.5, 2.6, 2.9, 2.10, 3.2, 3.3, 3.4<br/> <b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.7, 4.8, 4.9<br/> <b>U4 ICCG:</b> 1.6A, 1.6B, 1.6C<br/> <b>U5 Sessions:</b> 1.1, 1.2, 1.5, 1.6, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5<br/> <b>U6 Sessions:</b> 1.1, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5, 4.1, 4.5<br/> <b>U6 ICCG:</b> 5A.2, 5A.3, 5A.4, 5A.5<br/> <b>U7 Sessions:</b> 1.1, 1.2, 1.4, 1.5, 1.6, 2.3, 3.1, 3.5<br/> <b>U7 ICCG:</b> 1.7A</p> |
| <p>c. Understand that each successive number name refers to a quantity that is one larger. [K.CC.4.c.]</p>  | <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7<br/> <b>U2 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10, 2.13<br/> <b>U3 Sessions:</b> 1.1, 1.3, 1.4, 2.1, 2.2, 2.5, 2.9, 2.10, 3.2, 3.3, 3.4<br/> <b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.7, 4.8, 4.9<br/> <b>U4 ICCG:</b> 1.6C<br/> <b>U5 Sessions:</b> 1.1, 1.2, 1.5, 1.6, 2.1, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5<br/> <b>U6 Sessions:</b> 1.1, 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5, 4.1, 4.5<br/> <b>U6 ICCG:</b> 5A.2, 5A.3, 5A.4, 5A.5<br/> <b>U7 Sessions:</b> 1.1, 1.2, 1.4, 1.5, 1.6, 2.3, 3.1, 3.5<br/> <b>U7 ICCG:</b> 1.7A</p>                  |

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|---|---|
| <p>5. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects. [K.CC.5.]</p>   | <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.6, 2.1, 2.2, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6<br/> <b>U2 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.13<br/> <b>U3 Sessions:</b> 1.3, 2.1, 2.2, 2.5, 2.9, 2.10, 3.2, 3.3, 3.4<br/> <b>U4 Sessions:</b> 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.5, 3.1, 3.2, 3.3, 3.4, 4.8<br/> <b>U4 ICCG:</b> 1.6A, 1.6B, 1.6C<br/> <b>U5 Sessions:</b> 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5<br/> <b>U6 Sessions:</b> 1.4, 1.5, 1.6, 1.7, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.2, 3.3, 3.4, 3.5<br/> <b>U7 Sessions:</b> 1.1, 1.2, 1.4, 1.6, 2.6</p> |
| <b>Compare numbers.</b>   |   |
| <p>6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. <i>(Include groups with up to ten objects.)</i> [K.CC.6.]</p>  | <p><b>U2 Sessions:</b> 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14<br/> <b>U3 Session:</b> 2.2<br/> <b>U4 Sessions:</b> 1.4, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7<br/> <b>U5 Sessions:</b> 2.3<br/> <b>U6 Sessions:</b> 3.2, 3.3, 3.4<br/> <b>U7 Sessions:</b> 2.6</p>   |
| <p>7. Compare two numbers between 1 and 10 presented as written numerals. [K.CC.7.]</p>   | <p><b>U2 Sessions:</b> 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14<br/> <b>U4 Sessions:</b> 3.4, 3.5, 3.6, 3.7<br/> <b>U6 Sessions:</b> 3.2, 3.3, 3.4, 3.5, 3.6, 3.7</p>  |
| <b>Operations and Algebraic Thinking K.OA</b>   |   |
| <b>Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.</b>   |   |
| <p>1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. <i>(Drawings need not show details, but should show the mathematics in the problem. (This applies wherever drawings are mentioned in the Standards.))</i> [K.OA.1.]</p> | <p><b>U4 Sessions:</b> 2.2, 2.3, 2.4, 2.5, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 4.2, 4.4, 4.5<br/> <b>U6 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 2.4, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6<br/> <b>U6 ICCG:</b> 5A.2</p>  |
| <p>2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem. [K.OA.2.]</p>  | <p><b>U4 Sessions:</b> 2.2, 2.3, 2.4, 2.5, 3.2, 3.3, 3.5, 3.7, 4.2, 4.5<br/> <b>U6 Sessions:</b> 3.1, 3.3, 3.4, 3.5, 3.6, 3.7, 4.1, 4.4, 4.5</p>  |

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|--|--|
| 3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$ and $5 = 4 + 1$ ). [K.OA.3]   | <b>U4 Sessions:</b> 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9<br><b>U6 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6<br><b>U6 ICCG:</b> 5A.2, 5A.4, 5A.5 |
| 4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation. [K.OA.4.]   | <b>U4 Sessions:</b> 4.3, 4.4, 4.5, 4.6, 4.7, 4.9<br><b>U6 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6<br><b>U6 ICCG:</b> 5A.2, 5A.4, 5A.5                |
| 5. Fluently add and subtract within 5. [K.OA.5.]   | <b>U6 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6<br><b>U6 ICCG:</b> 5A.2, 5A.4, 5A.5  |
| <b>Number and Operations in Base Ten K.NBT</b>   |  |
| <b>Work with numbers 11–19 to gain foundations for place value.</b>  |  |
| 1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., $18 = 10 + 8$ ); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones. [K.NBT.1] | <b>U6 ICCG:</b> 5A.2, 5A.4, 5A.5   |
| <b>Measurement and Data K.MD</b>   |  |
| <b>Describe and compare measurable attributes.</b>   |  |
| 1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. [K.MD.1.]   | <b>U2 Sessions:</b> 2.1, 2.2, 2.3<br><b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5<br><b>U4 ICCG:</b> 1.6A, 1.6B, 1.6C<br><b>U6 Sessions:</b> 2.3, 2.4, 2.5, 2.6                             |
| 2. Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. [K.MD.2.]   | <b>U2 Sessions:</b> 2.1, 2.2, 2.3, 2.4, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.13, 2.14<br><b>U4 Sessions:</b> 1.4<br><b>U4 ICCG:</b> 1.6A, 1.6B, 1.6C  |

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|--|---|
| <b>Classify objects and count the number of objects in each category.</b>  |   |
| 3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. ( <i>Limit category counts to be less than or equal to 10.</i> ) [K.MD.3.]  | <b>U1 Sessions:</b> 3.1, 3.3, 3.4, 3.5, 3.6, 3.7<br><b>U2 Sessions:</b> 1.3, 1.6, 1.9, 2.1, 2.2, 2.3, 2.5, 2.8, 2.11, 2.14<br><b>U3 Sessions:</b> 1.2, 1.5, 2.3, 2.6, 3.1, 3.5<br><b>U4 Sessions:</b> 1.3, 1.6B, 2.2, 3.1, 3.5, 4.2, 4.4, 4.6<br><b>U5 Sessions:</b> 1.2, 1.6, 2.4, 3.2, 3.6<br><b>U6 Sessions:</b> 1.2, 1.6, 2.3, 3.1, 3.5, 4.2, 4.6<br><b>U7 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5 |
| <b>Geometry K.G</b>  |   |
| <b>Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).</b>   |   |
| 1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as <i>above, below, beside, in front of, behind,</i> and <i>next to.</i> [K.G.1.]  | <b>U1 Sessions:</b> 1.1, 1.6, 2.2, 2.3, 2.4, 3.4<br><b>U2 Session:</b> 1.2<br><b>U3 Session:</b> 1.2<br><b>U4 Session:</b> 4.1<br><b>U5 Sessions:</b> 1.1, 1.2, 1.3, 1.5, 1.6, 2.1, 3.1, 3.3  |
| 2. Correctly name shapes regardless of their orientations or overall size. [K.G.2.]  | <b>U1 Sessions:</b> 2.4, 3.4<br><b>U3 Session:</b> 1.2<br><b>U5 Sessions:</b> 1.2, 1.3, 1.4, 1.5  |
| 3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid"). [K.G.3.]  | <b>U5 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8  |
| <b>Analyze, compare, create, and compose shapes.</b>   |   |
| 4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length). [K.G.4.] | <b>U5 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8   |
| 5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes. [K.G.5.]   | <b>U5 Sessions:</b> 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.5, 3.4, 3.7   |
| 6. Compose simple shapes to form larger shapes. [K.G.6.]   | <b>U5 Sessions:</b> 1.2, 1.3, 1.4, 1.5, 1.6, 2.1, 2.5, 3.4, 3.7   |



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|---|--|
| <b>Math Practices</b>   |  |
| <p>1. Make sense of problems and persevere in solving them.</p> | <p>A major goal of <b>Investigations in Number, Data, and Space</b> is to support students to make sense of mathematics and learn that they can become mathematical thinkers. To this end, students create, use, and share contexts and representations to make sense of problems. Classroom discussions highlight different ways of interpreting a problem, solving it, and using representations to communicate the pertinent mathematical ideas. Students persevere in solving problems by investigating and practicing problem-solving strategies.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U2 Sessions:</b> 1.9, 1.10<br/> <b>U4 Sessions:</b> 3.2, 3.3<br/> <b>U5 Sessions:</b> 1.1, 1.2<br/> <b>U6 Session:</b> 2.3<br/> <b>U7 Sessions:</b> 3.1, 3.2, 3.3</p>   |
| <p>2. Reason abstractly and quantitatively.</p>                 | <p>Another major goal of <b>Investigations</b> is to provide a curriculum that emphasizes reasoning about mathematical ideas. Students move between concrete examples with specific quantities, objects, or data and generalizations about what works in similar situations. They express these generalizations in words, with variables, and with various representations including contexts, diagrams, and manipulatives. Abstract and quantitative reasoning are reinforced in strategically challenging games as well as Classroom Routines (Grades K–2). Students flexibly use different properties of operations to solve problems.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U2 Sessions:</b> 2.1, 2.2, 2.3, 2.4, 2.5, 2.6<br/> <b>U3 Sessions:</b> 3.3, 3.4<br/> <b>U4 Sessions:</b> 3.1, 4.4<br/> <b>U5 Sessions:</b> 3.5, 3.6<br/> <b>U1–U7 Classroom Routines:</b> Attendance</p> |

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| <p>3. Construct viable arguments and critique the reasoning of others.</p>                 | <p>The program provides ongoing opportunities for students to express and defend mathematical arguments. Students use a variety of representations, contexts, and examples to “prove” their conclusions and provide feedback about the arguments made by their classmates. The program emphasizes that there is often more than one strategy for solving a problem. Students defend their strategies as they listen to and evaluate the choices made by others. Students’ strategies are often recorded on a chart and posted so that all students can analyze, review, and use their classmates’ ideas.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U1 Sessions:</b> 2.5, 3.1, 3.5<br/> <b>U2 Sessions:</b> 1.6, 2.1, 2.12<br/> <b>U4 Sessions:</b> 1.5, 2.2, 3.4, 3.7, 4.5<br/> <b>U6 Sessions:</b> 4.2, 4.3, 4.4, 4.5</p> |
| <p>4. Model with mathematics.</p>  | <p>Throughout the curriculum, students use representations and contexts to visualize, describe, and analyze mathematical relationships. Using these models allows students to express and further develop their ideas, and to engage in the ideas of others. They develop a repertoire of models they know well and can apply when faced with unfamiliar problem situations. Students use representations and contexts judiciously and with purpose.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U1 Session:</b> 2.5<br/> <b>U2 Sessions:</b> 1.1, 1.2, 2.7, 2.8, 2.9<br/> <b>U4 Session:</b> 4.7<br/> <b>U6 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 3.3</p>   |

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| <p>5. Use appropriate tools strategically.</p>   | <p>Students have access to an array of tools, such as connecting cubes, pattern blocks, 100 charts, and technology. Students use other tools, such as drawings, the number line, or a rectangular array. Mathematical tools are introduced that are useful for a whole class of problems and can be extended to accommodate more complex problems and/or students' expanding repertoire of numbers. Analysis of the solution to a problem includes consideration of the effectiveness and choice of the tools. During Math Workshops, students continue to use tools to foster mathematical understanding and to practice skills.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U1 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6<br/> <b>U2 Session:</b> 1.7<br/> <b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5<br/> <b>U5 Sessions:</b> 1.2, 1.3, 1.5, 3.1</p> |
| <p>6. Attend to precision.</p>   | <p>Every session requires students to communicate with precision. The Student Math Handbook provides support in this endeavor. Strategies that students use are often named by the mathematics used in order to foster precise communication. Many of the sessions' focal points stress the use of "clear and concise" notation. Students are expected to solve problems efficiently and accurately.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U2 Sessions:</b> 1.1, 1.2, 1.3<br/> <b>U4 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5<br/> <b>U5 Sessions:</b> 1.1, 1.2, 1.3, 1.4, 1.5, 1.6<br/> <b>U6 Sessions:</b> 2.6, 3.3</p>   |

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| <p>7. Look for and make use of structure.</p>  | <p>In each unit, students work between the concrete to the abstract, from numerical and geometrical patterns to general representations. Students are given opportunities and support to investigate, discover, conjecture, and make use of commonalities among related problems. Students use the structure of carefully chosen contexts and representations that embody important characteristics of mathematical relationships. Classroom Routines (Grades K–2) afford more situations in which students discover and use the various structures of mathematics.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U1 Sessions:</b> 2.2, 2.3, 2.4<br/> <b>U3 Sessions:</b> 1.3, 1.4, 1.5<br/> <b>U4 Sessions:</b> 2.2, 2.3, 4.2, 4.5<br/> <b>U5 Sessions:</b> 1.1, 2.2, 3.2<br/> <b>U7 Sessions:</b> 1.3, 1.4, 1.5, 1.6<br/> <b>U3–U7 Classroom Routines:</b> Patterns on the Pocket Chart</p> |
| <p>8. Look for and express regularity in repeated reasoning.</p>                           | <p>A hallmark of the <b>Investigations</b> program is its emphasis on helping students become mathematical thinkers as they explore and practice strategies for solving problems. Through repeated application and comparison of various strategies and algorithms, students develop an understanding of which method is efficient for a particular type of problem. Each Investigations unit on numbers and operations includes a focus on reasoning and generalizing about number and operations and highlights what students already notice in regularities about numbers and operations.</p> <p>Please find representative examples from the Kindergarten program:</p> <p><b>U2 Session:</b> 1.1<br/> <b>U4 Sessions:</b> 3.5, 3.7<br/> <b>U6 Sessions:</b> 2.4, 2.5, 3.5, 3.6, 3.7<br/> <b>U7 Sessions:</b> 1.2, 1.3, 1.4, 1.5, 1.6</p>  |