![Investigations in Number, Data, and Space®]

Using *Investigations* to Teach the Common Core State Standards at Grade 4

Investigations is a focused and coherent K-5 curriculum, intentionally designed and sequenced to promote a deep understanding of mathematics. The curriculum units at each grade level represent a cohesive whole, not separate parts. Each successive unit builds on the previous unit, both within and across strands, and across grades. The geometry and measurement, data, and patterns and functions units focus on foundational mathematical ideas and practices and also support work in the number and operations units. By teaching the *Investigations* curriculum as written, students go deeply into mathematical practices and content.

The CCSS in Grade 4. Most of the CCSS content standards are met by teaching the fourth grade units, in order, as is. *Investigations and the Common Core State Standards at Grade 4* provides new content so that all standards are covered.[1] In most cases, these Standards are also addressed by existing material in the *Investigations* curriculum. New activities and Sessions build on what is in the curriculum to introduce new ideas or extend existing ones. New Math/Teaching Notes, Ten-Minute Math activities, and pages for additional practice address language, vocabulary, notation, or levels of fluency specific to the CCSS.

Additional Content That Extends the Mathematics in *Investigations* Grade 4

Math Idea(s)[2]	CCSS Standard	Additional Content	Unit
"Interpret a multiplication equation as comparison" and "solve word problems involving multiplicative comparison."	4.OA.1-2	1 Session Daily Practice/Homework	1 1
"Determine whether a given number is prime or composite."	4.OA.4	Teaching Notes	1
Understand place value of numbers of up to 1,000,000. Read and write numbers using expanded form. Round whole numbers to any place. Compare numbers using >, <, =.	4.NBT.2-3	2 Sessions Ten-Minute Math: *Practicing Place Value* Teaching Notes Daily Practice/Homework	5 5, 6, 7 5 5
"Subtract multi-digit whole numbers using the standard algorithm."	4.NBT.4	1 Session Daily Practice/Homework	5 5
Multiply and divide four-digit numbers by one-digit numbers.	4.NBT. 5-6	2 Sessions Daily Practice/Homework	8 9
Subtract fractions with like denominators. Add and subtract mixed numbers with like denominators.	4.NF.3a, 3c	2 Sessions Daily Practice/Homework	6 6
Multiply a fraction and a whole number.	4NF.4a-c	1 Investigation (3 Sessions) Ten-Minute Math: *Counting Around the Class* Daily Practice/Homework	6 6 6

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[1] All the necessary information and materials are included in *Investigations and the Common Core State Standards*. For more information, see: http://assets.pearsonschool.com/asset_mgr/current/20119/InvestigationsCCBrochure.pdf.

[2] These ideas, which paraphrase the CCSS Standards, may reflect only a portion of one standard, or several standards combined.

7/6/2011

Math Idea(s)[2]	CCSS Standard	Additional Content	Unit
"Know relative sizes of measurement units within one system of units." Solve word problems involving time, liquid volume and mass.	4.MD.1-2	2 Sessions	7
"Make a line plot to display a data set of measurements in fractions of a unit."	4.MD.4	Included in Session on mixed numbers	6
Recognize angles as shapes formed by two rays. Understand angle measurement in reference to a circle. Use a protractor to measure angles. Use addition and subtraction to find unknown angles.	4.MD.5a-b 4.MD.6–7	1 Session Teaching Notes	4 4
"Draw point, lines, line segments, rays, angles and perpendicular lines." Classify shapes by whether they include parallel lines, perpendicular lines or whether they are right triangles or not.	4.G.1-2	1 Session Teaching Notes	4 4

Pacing in Grade 4. Most of the CCSS content standards are met by teaching the fourth grade units, in order, as written. *Investigations and the Common Core State Standards at Grade 4* includes 15 new Sessions which are incorporated into the nine original units. In order to keep the total number of Sessions manageable, omit the 13 Sessions listed in the table below. While they do not focus explicitly on CCSS content, they broaden the mathematics experience for fourth graders and can be taught if time permits.

Unit	Original # of Sessions	New Sessions	Sessions to be Omitted	Total # of Sessions
1	14	1 (4.OA.1-2)		15
2	17		4 (probability, 3.1-3.4)	13
3	20			20
4	20	2 (4.MD.5a-b, 4.MD.6–7; 4.G.1-2)		22
5	24	3 (4.NBT.2-4)		27
6	20	5 (4.NF.3a, 3c, 4a-c; 4.MD.4)		25
7	14	2 (4.MD.1-2)	9 (solids, 1.1-1.4; silhouettes, 2.1-2.5)	7
8	16	2 (4.NBT.5-6)		18
9	15			15
	160	**15**	**13**	**162**