

6th Grade DESK
Suggested Math Curriculum Map
1st Quarter

April 2009

Use this suggested curriculum map judiciously when you plan instruction to ensure that essential and important curricula is explicitly taught and practiced by the students.

DESK Objective/Knowledge/Skill	Houghton Mifflin Lessons <small>Teachers are not obligated to complete all lessons listed.</small>	Additional Resources
Week 1: Number Sense		
NS b. Represent rational numbers in a variety of ways including standard, expanded exponential form, and scientific notation.	1.1 word form, standard form 1.2 exponential form 7.3 and p. 175 scientific notation needs support	Administer yearly inventory test before starting week one instruction.
NS c. Change numbers with exponents to standard form including any whole number to zero power equals 1 (e.g., $2^4=16$; $90=1$)	1.2 teaches power of 10; needs support for ^ see p. 175; 7.3	Vocabulary imbedded in each lesson. CA 2005 Scientific Notation
Week 2: Number Sense		
NS g. Use estimation to determine if an answer is reasonable	1.4; 1.5; 1.9; 2.1; 5.1; 6.1; 17.4	
NS h. Determine whether estimation or calculation is most appropriate to solve problem	1.9; 2.9	
NS e. Find prime factorization of composite numbers through 100	3.1 prime/composite; 3.2; 3.3	
Week 3: Number Sense / Decimals		
NSD a. Compare and order decimals using a variety of methods and symbols (e.g., number line)	1.3 more detail for number lines use problem solving worksheet; 4.2 differentiated instruction/ getting started; 4.3 decimals; 17.3; 22.1; 22.2	R2.1
NSD c. Add and subtract decimals	1.6	R2.1 (needs more support) R3.3, R3.4, R3.5, R3.6
Week 4: Number Sense / Decimals		
NSD d. Multiply and divide multi-digit whole numbers and decimals by a two-digit number	2.2 whole numbers only; 2.3; 7.1; 7.2; 7.3; 7.7; 18.1; 18.2 (if simplified)	
NSD e. Divide decimals and <i>whole numbers</i> ; giving decimal and <i>remainder</i> solutions to division problems with whole numbers	2.4 remainders; 7.1; 7.3; 7.4; 7.5; 7.7; 18.2	

GS - Getting Started; PS - Problem Solving; HW – Homework; DI – Differentiated Instruction; CA-Core Academy R--Reteach; AR--Algebra Readiness

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Week 5: Number Sense / Decimals and Number Sense Fractions		
NSD b. Relate percents <1% or >100% to equivalent decimals	4.4 needs more practice;17.3	
NSF b. Find equivalent forms for common fractions including simplest terms	4.1; 5.2; 5.3; 5.4; 6.2; 6.3; 6.4; 6.5	
Week 6: Number Sense / Fractions		
NSF c. Relate percents <1% or >100% to equivalent fractions and mixed numeral	16.1 bridge to ratios; 17.3; 18.1	
NSF a. Compare and order positive and negative mixed fractions using a variety of methods and symbols	4.2 Intervention; 4.3; 22.1; 22.2	
Week 7: Number Sense / Fractions and Number Sense		
NSF d. Add and subtract fractions and mixed numbers	5.1; 5.2; 5.3; 5.4; 5.5	R1.6 (weak connection) R3.1, R3.2, R3.4, R3.5,R3.6
NS f. Find LCM, LCD, and GCF for two numbers using variety of methods (e.g., rules of divisibility)	3.1 divisibility; 3.4 GCF; 3.5 LCM; 4.3 LCD/LCM; 5.3 LCM; 5.4 LCM	R1.5 (very basic level, day 2 only do ½ of #s7 &9) R3.1 (Review)
Week 8: Number Sense / Fractions and Number Sense		
NSF f. Relate fractions to multiplication and division (e.g., $a/b \times b/a = 1$; $a/b = a \div b$)	Teach division concept $a/b = a \div b$ in chapter 2; 6.4 GS $a/b \times b/a = 1$	
NS d. Find equivalent forms for common fractions, decimals, percents, ratios including repeating and terminating decimals	4.1 fractions; 4.2; 4.4 decimals and percents; 7.6; 16.1 % as ratio; 16.2; 17.1; 17.2; 18.2	R1.1 (pp.5-7-DO #s1-6, SKIP #5) R1.3 (DO #s 3 & 5, Wipe Out game ONCE) R1.7(Fractions to real-life) R2.1 (#4 All & game), R2.2 R3.3
Week 9: Number Sense / Fractions		
NSF e. Multiply and divide fractions and mixed numbers	6.2; 6.3; 6.4; 6.5	There are 10 weeks in the first term, but week one is used for assessments.

6th Grade DESK
Suggested Math Curriculum Map
2nd Quarter

April 2009

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Objective/Knowledge/Skill	Houghton Mifflin Lessons <small>Teachers are not obligated to complete all lessons listed.</small>	Additional Resources
Week 1: Number Sense / Fractions and Number Sense		
NSF g. Give mixed number or improper fraction solutions to division problems with whole numbers	6.4; 6.5	
NS a. Recognize a rational number as ratio of two integers, a to b, where b is not equal to zero	Introduce at the beginning of chapter 4	
NS i. Place rational numbers on a number line	1.3 use problem solving worksheet; 4.1 GS; 4.2 DI & GS; 4.3; 5.2; 11.1 integers; 11.2 integers; 17.3; 22.1; 22.2	R2.1 R3.5
Week 2: Data Analysis & Probability		
DAP b. Recognize that ratios derive from pairs of rows in multiplication table; connect with equivalent fractions (e.g., $3/4=12/16$)	4.1 supplement with multiplication table	R3.3
DAP a. Find equivalent forms for ratios	16.1	
Week 3: Data Analysis & Probability		
DAP c. Solve problems involving ratios and proportions	16.2; 16.3; 16.4; 16.5; 17.5; 18.2; 18.3; 20.8	(Allowed extra time this week for catch-up due to conferences)
Week 4: Algebraic Reasoning		
AR e. Recognize and use variables to rewrite expressions in equivalent forms (e.g., $3y$ means 3 times the quantity y ; $3y = 3 \bullet y$)	1.7 limited variable and only addition and subtraction; 2.6; 2.7; 6.7 different ways to show x ; 12.1; 12.2; 13.1; 13.2; 23.2	AR1.1, AR1.2, AR1.3 (*AR=Algebra Readiness Calendar Math)
AR d. Solve single variable linear equations using a variety of strategies (e.g., order of operations)	2.5; 2.7 order of operations; 2.8 mental math; 6.7; 12.3; 12.4; 13.3; 13.4; 18.5; 23.1; 23.3	AR3.2 (5 th grade core), AR1.3, AR1.4, AR2.1 (pre-algebra core), AR2.2, AR2.4 (two variables), AR3.3, AR3.5
AR f. Evaluate and simplify expressions and formulas using substitution (e.g., $2x+4$; $x=2$; therefore, $2(2)+4=8$)	2.6 multiplication only; 2.8; 6.7; 23.2	AR1.3

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Week 5: Algebraic Reasoning		
AR a. Analyze algebraic expressions, tables, graphs to determine patterns, functions, relations, rules, and solve problems	1.5 just patterns; 3.6 patterns and relations HW; 12.2; 12.3; 12.5; 13.2 patterns & sequence; 13.3 functions; 13.5	AR1.3, AR1.4, AR3.1(geometric patterns), AR3.2, AR3.3, AR3.4
Week 6: Algebraic Reasoning		
AR b. Using a table of values draw a graph and write an equation	12.3; 13.3 write equations; 13.4; 18.7	AR1.1, AR1.3, AR1.4, AR3.2, AR3.3, AR 3.5
AR c. Using an equation draw a graph and create a table of values	12.3; 12.4 just create a table; 13.3; 13.4; 18.7	AR1.3, AR3.5
Week 7: Number Sense / Integers		
NSI a. Recognize that the sum of an integer and its additive inverse is zero	11.1; 11.4; 22.3; 23.2	
NSI b. Add integers using a variety of methods	11.4	
Week 8: Integers		
NSI c. Subtract integers using a variety of methods	11.5	
Week 9		
Review and Catch-Up		

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3rd Quarter

April 2009

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Objective/Knowledge/Skill	Houghton Mifflin Lessons <small>Teachers are not obligated to complete all lessons listed.</small>	Additional Resources
Week 1: Measurement		
M g. Recognize that measurements are approximations and describe how size of unit used in measuring affects precision	8.1 8.3 (enrichment)	R2.3
M h. Determine when appropriate to use estimation or precise measurement in solving problems	8.1; 20.8	R2.3
Week 2: Measurement		
M d. Convert units of measurement within customary system	8.2; 8.3; 20.1	R1.4 (only do on your own) R1.5 R3.1 (review)
Week 3: Measurement		
M c. Convert units of measurement within the metric system	8.4 reteach worksheet recommended, also see 5 th grade books lessons 6.4 and 6.5	R1.4 (Review chart, race to a meter) R1.5
Week 4: Measurement		
M e. Compare meter to yard, liter to quart, kilometer to mile (e.g., liter \approx quart)	8.5 need to just compare instead of compute	R1.4 (needs support of customary review)
M a. Develop the formula for area of a circle by decomposing circle using wedges	20.7	
Week 5: Measurement and Geometry		
M b. Describe and find the circumference and area of circle using formulas including pi (π) as ratio of C/d	20.2; 20.7	
G f. Identify and compare parts of circle including radius, diameter, center, and circumference	14.8	

GS - Getting Started; PS - Problem Solving; HW – Homework; DI – Differentiated Instruction; CA-Core Academy R--Reteach; AR--Algebra Readiness

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3rd Quarter Continued

April 2009

Week 6: Measurement		
M f. Derive and use the formula to determine surface area and volume of cylinder	21.6 needs support, teach cylinder's only; 21.7 touches on how to teach surface area, needs support	
Week 7: Geometry		
G a. Identify the midpoint of a line segment	15.7	
G b. Identify and develop properties of vertical, adjacent, complementary, and supplementary angles to solve problems	14.2; 15.2	
Week 8: Geometry		
G c. Solve problems involving an unknown angle in a triangle or quadrilateral using properties of complementary and supplementary angles and the sum of angles	14.5; 14.6	
Week 9: Geometry		
G d. Apply transformation by rotating a polygon about the origin by a multiple of 90° and identify new vertices	15.4	
G e. Apply transformation by translating and reflecting polygons on a coordinate plane and locate new vertices	15.8	

6th Grade DESK
Suggested Math Curriculum Map
4th Quarter

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Objective/Knowledge/Skill	Houghton Mifflin Lessons <small>Teachers are not obligated to complete all lessons listed.</small>	Additional Resources
Week 1: Data Analysis & Probability		
DAP g. Apply basic concepts of probability and justify outcomes (e.g., experimental vs. theoretical)	19.1; 19.2 theoretical; 19.3 experimental; 19.4; 19.5; 19.6; 19.7	
Week 2: Data Analysis & Probability		
DAP d. Design investigations to answer questions using statistical methods to make predictions and inferences based on data	9.1 needs support Gifted and Talented; 9.2; 9.6; 19.5	
DAP f. Recognize that changing the scale influences the appearance of display of data	10.7	
Week 3: Data Analysis & Probability		
DAP e. Extend data display to include scatter plots and circle graphs	9.4 only covers data display; 10.3; 10.5; 10.6; 10.8; 20.3; p. 262 scatter plots needs more practice	R1.2 (do % circle one per group/do percent strip, turn into circle) R3.4 (percent game if time & verbally p.12)
Week 4-9: Review & End of Level Testing (see DESK Matrix for extension ideas)		