MIDDLE SCHOOL MATHEMATICS

CORE MATH 6

FOCUS OF MIDDLE SCHOOL MATHEMATICS LEARNING

- To build on students' concrete reasoning experiences developed in the elementary grades
- To construct through active learning experiences a more advanced understanding of mathematics
- To develop deep mathematical understandings required for success in abstract learning experiences
- To apply mathematics as a tool in solving real-world problems

Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.

COURSE DESCRIPTION

Core Math 6 is a mathematics course for sixth grade students who are transitioning from the emphasis placed on whole number arithmetic in elementary school to a more in-depth study of rational numbers and the preliminary foundations of algebra. The course focuses on the development of problem-solving skills and the acquisition of mathematical vocabulary and symbols. The active engagement of students along with the use of manipulatives and technology, such as calculators, computers, and spreadsheets, will allow students to develop an understanding of the mathematical principles they are learning. Facility in the use of technology will not be a substitute for students' understanding of quantitative concepts and proficiency in basic computations. During this course students will be: performing operations with rational numbers; performing operations with integers; developing concepts involving exponents; identifying and extending sequences; solving one-step linear equations; developing measurement concepts and applications in the U.S. Customary and metric systems including perimeter and area; finding the volume and surface area of rectangular prisms; exploring basic geometric concepts in the coordinate plane; and exploring topics in probability and statistics.

PREREQUISITE
Mathematics 5

OPTION FOR NEXT COURSE
Core Math 7

REQUIRED STUDENT TEXTBOOK
Math Connects Course 1 (Virginia Edition). John A. Carter, Ph.D., Gilbert J. Cuevas, Ph.D., Roger Day, Ph.D., and Carol Malloy, Ph.D. Glencoe McGraw-Hill, 2012

RECOMMENDED CALCULATOR
TI-30Xa SEVA

VBO #	Objective
Number and Number Sense	
MA.C6.NS.6.1	The student will describe and compare data, using ratios, and will use appropriate notations, such as $\frac{a}{b}$, *a* to *b*, and *a:b*. **(SOL 6.1)**
MA.C6.NS.6.2	The student will investigate and describe fractions, decimals, and percents as ratios. **(SOL 6.2a)**
MA.C6.NS.6.3	The student will demonstrate equivalent relationships among fractions, decimals, and percents. **(SOL 6.2c)**
MA.C6.NS.6.4	The student will identify a given fraction, decimal, and/or percent from a representation. **(SOL 6.2b)**
MA.C6.NS.6.5	The student will compare and order fractions, decimals, and percents. **(SOL 6.2d)**
MA.C6.NS.6.6	The student will identify and represent integers. **(SOL 6.3a)**
MA.C6.NS.6.7	The student will order and compare integers. **(SOL 6.3b)**
MA.C6.NS.6.8	The student will identify and describe absolute value of integers. **(SOL 6.3c)**
MA.C6.NS.6.9	The student will demonstrate multiple representations of multiplication and division of fractions. **(SOL 6.4)**
MA.C6.NS.6.10	The student will investigate and describe concepts of positive exponents and perfect squares. **(SOL 6.5)**
Computation and Estimation	
MA.C6.CE.6.11	The student will multiply and divide fractions and mixed numbers. **(SOL 6.6a)**
MA.C6.CE.6.12	The student will estimate solutions and then solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of fractions. **(SOL 6.6b)**
MA.C6.CE.6.13	The student will solve single-step and multistep practical problems involving addition, subtraction, multiplication, and division of decimals. **(SOL 6.7)**
MA.C6.CE.6.14	The student will evaluate whole number numerical expressions, using the order of operations. **(SOL 6.8)**
Measurement	
MA.C6.ME.6.15	The student will make ballpark comparisons between measurements in the U.S. Customary System of measurement and measurements in the metric system. **(SOL 6.9)**
MA.C6.ME.6.16	The student will define π (pi) as the ratio of the circumference of a circle to its diameter. **(SOL 6.10a)**
MA.C6.ME.6.17	The student will solve practical problems involving circumference and area of a circle, given the diameter or radius. **(SOL 6.10b)**
MA.C6.ME.6.18	The student will solve practical problems involving area and perimeter. **(SOL 6.10c)**
MA.C6.ME.6.19	The student will describe and determine the volume and surface area of a rectangular prism. **(SOL 6.10d)**
Geometry	
MA.C6.GE.6.20	The student will identify the coordinates of a point in a coordinate plane. **(SOL 6.11a)**
MA.C6.GE.6.21	The student will graph ordered pairs in a coordinate plane. **(SOL 6.11b)**
MA.C6.GE.6.22	The student will determine congruence of segments, angles, and polygons. **(SOL 6.12)**

MA.C6.GE.6.23	The student will describe and identify properties of quadrilaterals. **(SOL 6.13)**
	Probability and Statistics
MA.C6.PS.6.24	The student, given a problem situation, will construct circle graphs and draw conclusions and make predictions using circle graphs. **(SOL 6.14a, b)**
MA.C6.PS.6.25	The student, given a problem situation, will compare and contrast graphs that present information from the same data set. **(SOL 6.14c)**
MA.C6.PS.6.26	The student will describe mean as balance point and decide which measure of center (mean, median, or mode) is appropriate for a given purpose. **(SOL 6.15a, b)**
MA.C6.PS.6.27	The student will compare, contrast, and determine probabilities for dependent and independent events. **(SOL 6.16a, b)**
	Patterns, Functions, and Algebra
MA.C6.PF.6.28	The student will identify and extend geometric and arithmetic sequences. **(SOL 6.17)**
MA.C6.PF.6.29	The student will solve one-step linear equations in one variable involving whole number coefficients and positive rational solutions. **(SOL 6.18)**
MA.C6.PF.6.30	The student will investigate and recognize the identity properties for addition and multiplication. **(SOL 6.19a)**
MA.C6.PF.6.31	The student will investigate and recognize the multiplicative property of zero. **(SOL 6.19b)**
MA.C6.PF.6.32	The student will investigate and recognize the inverse property for multiplication. **(SOL 6.19c)**
MA.C6.PF.6.33	The student will graph inequalities on a number line. **(SOL 6.20)**

VIRGINIA BEACH CITY PUBLIC SCHOOLS
A H E A D   O F   T H E   C U R V E

MISSION STATEMENT
The Virginia Beach City Public Schools, in partnership with the entire community, will empower every student to become a life-long learner who is a responsible, productive and engaged citizen within the global community.

Dr. James G. Merrill, Superintendent

DEPARTMENT OF CURRICULUM AND INSTRUCTION
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For further information on notice of non-discrimination, visit http://wdcrobcolp01.ed.gov/CFAPPS/OCR/contactus.cfm for the address and phone number of the office that serves your area, or call 1-800-421-3481.

Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Curriculum and Instruction, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone (757) 263-1070 or (757) 263-1429; fax (757) 263-1424; TDD (757) 263-1240

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