West Virginia math4life

Content and Timeline for Mathematics

Grade 3

West Virginia DEPARTMENT OF EDUCATION

Grade 3

The West Virginia College- and Career-Readiness Standards for mathematics emphasize key content, skills, and Mathematical Habits of Mind at each grade level. The focus of instruction is placed on grade-level standards. Instruction should be attentive to learning across all early and elementary learning grades and link major topics within grades. Instruction should develop conceptual understanding, procedural skill and fluency, and application.

Students in the third grade will focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, especially unit fractions (fractions with numerator 1); (3) developing understanding of the structure of rectangular arrays and of area; and (3) describing and analyzing two-dimensional shapes.

The following table highlights the content at the cluster level for third grade standards. The bulk of instructional time should be given to the clusters and the standards within them. Standards should not be neglected; to do so would result in gaps in students' learning, including skills and understandings they may need in later grades. Instruction should reinforce standards within the clusters by including problems and activities that support natural connections between clusters. **Teachers and administrators alike should note that the standards are not topics to be checked off after being covered in isolated units of instruction;** rather, they provide content to be developed throughout the school year through rich instructional experiences presented in a coherent manner.

Explanations

Domains are broad components that make up a content area. Domains in mathematics vary by grade-level and by course. For example, the five domains for mathematics in Grade 3 are Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations-Fractions, Measurement and Data, and Geometry.

Clusters are groups of standards that define the expectations students must demonstrate to be college- and career-ready.

Standards are expectations for what students should know, understand and be able to do; standards represent educational goals.

Grade 3 Cluster-Level Emphasis	West Virginia College- and Career-Readiness Standards
Operations and Algebraic Thinking	
• Represent and solve problems involving multiplication and division. • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide within 100. • Solve problems involving the four operations, and identify and explain patterns in arithmetic.	M.3.1- M.3.4 M.3.5 – M.3.6 M.3.7 M.3.8 – M.3.9
Number and Operations in Base Ten	
• Use place value and properties of operations to perform multi-digit arithmetic.	M.3.10 - M.3.12
Number and Operations- Fractions	
• Develop an understanding as fractions as numbers.	M.3.13 - M.3.15
Measurement and Data	
• Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. • Represent and interpret data. • Geometric measurement: understand concepts of area and relate area to multiplication and to addition. • Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	M.3.16 – M.3.17 M.3.18 – M.3.19 M.3.20 – M.3.22 M.3.23
Geometry	
• Reason with shapes and their attributes.	M.3.24 – M.3.25

Adapted from California Mathematics Framework

Grade 3 Sample Content Plan

Curricula and how and when to teach certain topics are the responsibility of the classroom teacher. The following chart is an example of how a teacher might structure the school year to ensure all grade-level standards are taught. Teachers must provide students the opportunity to master each of the grade-level content standards. **It is important to understand that neglecting grade-level content standards, will leave gaps in students' skills and understandings and will leave students unprepared for the challenges they face in later grades.** Any content plan must demonstrate a means by which students can be provided the opportunity to address all grade-level content standards and to revisit and practice skills and strengthen understandings throughout the school year. The information below is an example of how to address all Grade 3 mathematics standards in a school year.

DOMAIN TOPIC	Numbers and Operations in Base Ten *Understanding place value and operations to perform arithmetic*	Measurement and Data *Understanding the connection between area and multiplication*	Geometry *Understanding the properties of shape*	Operations and Algebraic Thinking *Understanding Patterns and Relationships*	Numbers and Operations Fractions *Understanding Fractions*
SAMPLE TIMELINE	August/ September	September/ November	December/January	January/March	April/May
CONTENT STANDARDS	M.3.10 M.3.11 M.3.12	M.3.16 M.3.17 M.3.18 M.3.19 M.3.20 M.3.21 M.3.22 M.3.23	M.3.24 M.3.25	M.3.1 M.3.2 M.3.3 M.3.3 M.3.5 M.3.6 M.3.7 M.3.8 M.3.9	M.3.13 M.3.14 M.3.15
RATIONALE	In the sample above, Grade 3 mathematics begins with students supporting previous learning by solving word problems using addition, subtraction multiplication and division.				

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