

Mathematics Standard Progressions

Skill Progressions in West Virginia College- and Career-Readiness Standards for Mathematics

The following pages outline the skill progressions found in the West Virginia College- and Career-Readiness Standards for Mathematics. In Mathematics, the sequence of topics follow a programmatic progression that are reflected in the domains. These domains have been organized into programmatic levels where grade-level clusters provide detail about the skill progressions. The language of the clusters illustrates the advancing rigor and complexity of the expectations for what students should know, understand, and be able to do.

This document is intended to be a resource that fosters and supports discussion among teachers as they look at the vertical alignment found within the standards that creates a meaningful progression of skills toward college- and career-readiness.

Mathematics Skills Progressions – Kindergarten through Grade 5

Domain: Number – Counting and Cardinality

Grade	Clusters
Kindergarten (Only)	<ul style="list-style-type: none">• Know number names and the count sequence.• Counting to tell the number of objects.• Compare numbers.

Domain: Operations and Algebraic Thinking

Grade	Clusters
Kindergarten	<ul style="list-style-type: none">• Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.
Grade 1	<ul style="list-style-type: none">• Represent and solve problems involving addition and subtraction.• Understand and apply properties of operations and the relationship between addition and subtraction.• Add within 20.• Work with addition and subtraction equations.
Grade 2	<ul style="list-style-type: none">• Represent and solve problems involving addition and subtraction.• Add and subtract within 20.• Work with equal groups of objects to gain foundations for multiplication.
Grade 3	<ul style="list-style-type: none">• 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.
Grade 4	<ul style="list-style-type: none">• Use the four operations with whole numbers to solve problems.• Gain familiarity with factors and multiples.• Generate and analyze patterns.
Grade 5	<ul style="list-style-type: none">• Write and interpret numerical expressions.• Analyze patterns and relationships.

Domain: Number – Base Ten

Grade	Clusters
Kindergarten	<ul style="list-style-type: none">• Work with numbers 11-19 to gain foundations for place value
Grade 1	<ul style="list-style-type: none">• Extend the counting sequence.• Understand place value.• Use place value understanding and properties of operations to add and subtract
Grade 2	<ul style="list-style-type: none">• Understand place value.• Use place value understanding and properties of operations to add and subtract.
Grade 3	<ul style="list-style-type: none">• Use place value understanding and properties of operations to perform multi-digit arithmetic.
Grade 4	<ul style="list-style-type: none">• Generalize place value understanding for multi-digit whole numbers.• Use place value understanding and properties of operations to perform multi-digit arithmetic.
Grade 5	<ul style="list-style-type: none">• Understand the place value system.• Perform operations with multi-digit whole numbers and with decimals to hundredths.

Domain: Number – Fractions

Grade	Clusters
Kindergarten	Initial focus begins in Grade 3
Grade 1	Initial focus begins in Grade 3
Grade 2	Initial focus begins in Grade 3
Grade 3	<ul style="list-style-type: none">• Develop understanding of fractions as numbers.
Grade 4	<ul style="list-style-type: none">• Extend understanding of fraction equivalence and ordering.• Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.• Understand decimal notation for fractions, and compare decimal fractions.
Grade 5	<ul style="list-style-type: none">• Use equivalent fractions as a strategy to add and subtract fractions.• Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Domain: Measurement and Data

Grade	Clusters
Kindergarten	<ul style="list-style-type: none">• Describe and compare measurable attributes.• Classify objects and count the number of objects in categories.
Grade 1	<ul style="list-style-type: none">• Measure lengths indirectly and by iterating length units.• Tell and write time.• Represent and interpret data.
Grade 2	<ul style="list-style-type: none">• Measure and estimate lengths in standard units.• Relate addition and subtraction to length.• Work with time and money.• Represent and interpret data.
Grade 3	<ul style="list-style-type: none">• Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.• Represent and interpret data.

	<ul style="list-style-type: none"> • 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.
Grade 4	<ul style="list-style-type: none"> • Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. • Represent and interpret data. • Geometric measurement: understand concepts of angle and measure angles.
Grade 5	<ul style="list-style-type: none"> • Convert like measurement units within a given measurement system. • Represent and interpret data. • Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

Domain: Number – Geometry

Grade	Clusters
Kindergarten	<ul style="list-style-type: none"> • Identify and describe shapes. • Analyze, compare, create, and compose shapes.
Grade 1	<ul style="list-style-type: none"> • Reason with shapes and their attributes.
Grade 2	<ul style="list-style-type: none"> • Reason with shapes and their attributes.
Grade 3	<ul style="list-style-type: none"> • Reason with shapes and their attributes.
Grade 4	<ul style="list-style-type: none"> • Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
Grade 5	<ul style="list-style-type: none"> • Graph points on the coordinate plane to solve real-world and mathematical problems. • Classify two-dimensional figures into categories based on their properties