

Major Work of Grade 4

The purpose of this document is to provide a brief overview of the most essential content in the grade level along with a progression of how the content was addressed in the prior grade level and will prepare students for content in the future grade level. This is not a comprehensive list of content in the grade level as defined in the Utah Core Standards, but rather highlights the major work of the grade level.

Major Work of Grade Band: Grades 3 - 5		
3	4	5
Represent and understand multiplication and division		
Develop understanding of fractions		
	Generalize and use place value understanding	
Solve problems involving measurement		Understand concepts of volume

Vertical Alignment of Major Work

Major Work: Represent and Understand Multiplication and Division

Prior grades: Develop an understanding of the meanings of multiplication and division and represent and solve multiplication and division problems within 100 (3.OA.1-6). By the end of Grade 3, know from memory all products of two one-digit numbers (3.OA.7.b).

Grade 4: Understand multiplication as comparison (4.OA.1-2). Use strategies based on place value and the properties of operations to multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers (4.NBT.5). Use strategies based on place value, the properties of operations, and the relationship between multiplication and division to divide up to four-digit dividends and one-digit divisors (4.NBT.6).

Future grades: Fluently multiply multi-digit whole numbers using the standard algorithm (5.NBT.5). Divide whole numbers with up to four-digit dividends and two-digit divisors (5.NBT.6). Multiply and divide decimals to hundredths (5.NBT.7).

Major Work: Develop Understanding of Fractions

Prior grades: Students develop an understanding of fractions as numbers with 2, 3, 4, 6, and 8 as denominators. This includes understanding unit fractions as one part of the whole written with a numerator and denominator (3.NF.1; 3.G.2). Students represent a fraction as a number on a number line (3.NF.2), understand fraction equivalence with visual models and number lines, and compare two fractions with the same numerator or same denominator (3.NF.3).

Grade 4: In fourth grade, denominators extend to include 5, 10, 12, and 100. Students continue to work with equivalence by reasoning about the number and size of the parts (4.NF.1) and compare two fractions with different numerators and different denominators (4.NF.2). Understand fractions as sums

of unit fractions. Add and subtract fractions and mixed numbers with like denominators (4.NF.3). Multiply a fraction by a whole number (4.NF.4). Understand decimal notation to the hundredths and compare decimal fractions with denominators of 10 and 100 (4.NF.5-7).

Future grades: Students use equivalent fractions as a strategy to add and subtract fractions with unlike denominators including mixed numbers (5.NF.1-2). Fractions are interpreted as division of the numerator by the denominator (5.NF.3). Multiply a fraction or whole number by a fraction including real-world problems (5.NF.4,6). Interpret multiplication as scaling (5.NF.5). Divide unit fractions by whole numbers and whole numbers by unit fractions using reasoning about the relationship between multiplication and division (5.NF.7).

Major Work: Generalize and Use Place Value Understanding

Prior grades: Students understand that the digits of a number represent the amount of ones, tens, and hundreds (2.NBT.1). Fluently add and subtract within 1,000 using strategies and algorithms based on place value (3.NBT.2).

Grade 4: Students extend understanding of place value to 1,000,000 understanding the relative sizes of numbers in each place (4.NBT.1-2). Fluently add and subtract multi-digit whole numbers using the standard algorithm (4.NBT.4).

Future grades: Students understand patterns in place value including decimals and powers of ten (5.NBT.1-3). Add, subtract, multiply and divide decimals to hundredths (5.NBT.7).