

Academic Vocabulary

CONTENT BUILDER FOR THE PLC

MATH
GRADE 4

PLEASE NOTE: The words contained in **Academic Vocabulary** are words/concepts/terms essential for concept development; this list is not intended to be comprehensive. The “new to grade level” vocabulary suggestions are a starting point, and educators are encouraged to refer to their district curriculum resources for additional words/concepts/terms.

Representation and Comparison of Whole Numbers and Decimals

- 4.2 **Number and operations.** The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value.
- 4.3 **Number and operations.** The student applies mathematical process standards to represent and generate fractions to solve problems.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Representation	4.2(A), 4.2(B), 4.2(E), 4.2(H), 4.3(G)	billion decimal* hundredths* millions one-tenth* tenths	expanded notation* hundreds place value* tens ten-times*
Comparison	4.2(C), 4.2(F)		equal to (=) greater than (>) greatest to least* inequality least to greatest* less than* (<)

Fractions

- 4.2 **Number and operations.** The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value.
- 4.3 **Number and operations.** The student applies mathematical process standards to represent and generate fractions to solve problems.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Equivalency	4.2(G), 4.3(C), 4.3(G)	identity property hundredths* improper fraction mixed number tenths	denominator* equal parts/equal shares equivalent fraction* numerator* simplified form whole
Comparison	4.3(D)	common denominator* lowest common denominator	< (less than)* > (greater than)* denominator numerator
Addition/ Subtraction	4.3(A), 4.3(B), 4.3(E), 4.3(F)	benchmark fraction	denominator difference numerator sum unit fraction

Whole Number and Decimal Operations

- 4.2 **Number and operations.** The student applies mathematical process standards to represent, compare, and order whole numbers and decimals and understand relationships related to place value.
- 4.4 **Number and operations.** The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy.
- 4.5 **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Estimation	4.2(D), 4.4(G)	nearest 1,000		compatible number estimate* estimation language (about, a little more/less than, close to, approximately) nearest 10*; 100 round*
Addition/ Subtraction	4.4(A)			difference* sum
Multiplication	4.4(B), 4.4(C), 4.4(D), 4.4(H)	perfect square		area model array associative property commutative property distributive property factor partial products product
Division	4.4(E), 4.4(F), 4.4(H)	partial quotient remainder		area model array dividend divisor quotient
All Operations	4.5(A)	variable		unknown quantity
Numerical Patterns	4.5(B)	position*		input-output* table pattern* rule*

Geometry

- 4.6 **Geometry and measurement.** The student applies mathematical process standards to analyze geometric attributes in order to develop generalizations about their properties.
- 4.7 **Geometry and measurement.** The student applies mathematical process standards to solve problems involving angles less than or equal to 180 degrees.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Two-Dimensional	4.6(A), 4.6(B), 4.6(C), 4.6(D)	acute angle* angle* congruent intersecting lines* line of symmetry* line segment* obtuse angle* parallel*	parallel lines* perpendicular lines* perpendicular* point* ray* right angle* symmetry
Angle Measurements	4.7(A), 4.7(B), 4.7(C), 4.7(D), 4.7(E)	adjacent angle angle* angle vertex center mark degree* inner scale	outer scale protractor* ray* vertex of an angle zero edge

Measurement

- 4.5 **Algebraic reasoning.** The student applies mathematical process standards to develop concepts of expressions and equations.
- 4.8 **Geometry and measurement.** The student applies mathematical process standards to select appropriate customary and metric units, strategies, and tools to solve problems involving measurement.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Perimeter/Area	4.5(C), 4.5(D)	formulas (perimeter): <ul style="list-style-type: none"> • $P = l + l + w + w$ • $P = 2l + 2w$ • $P = 4s$ 	formulas (area): <ul style="list-style-type: none"> • $A = l \times w$ • $A = s \times s$ 	area* dimensions* length* perimeter* square unit (square inch*/square millimeter*) width*
Related Measurement Concepts	4.8(C)	mass*		length* liquid volume
Conversions	4.8(A), 4.8(B)	conversion* relative size		customary (mile/yard*/feet*/inch; gallon/quart/pint/cup/fluid ounce; ton/pound/ounce) equivalent* metric (kilometer/meter/centimeter/millimeter; liter/milliliter; kilogram*/gram*/milligram)

Data Analysis

4.9 Data analysis. The student applies mathematical process standards to solve problems by collecting, organizing, displaying, and interpreting data.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Representation	4.9(A)	stem-and-leaf plot*	data* dot plot* frequency table* scaled intervals
Interpretation	4.9(B)		comparative language (more than*/less than/ equal to/difference*) joining/separating/comparing

Personal Financial Literacy

4.10 Personal financial literacy. The student applies mathematical process standards to manage one's financial resources effectively for lifetime financial security.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Budgets	4.10(A), 4.10(C), 4.10(D), 4.10(E)	certificate of deposit fixed expense* money market fund savings bond variable expense*	borrow* deposit interest* lending/loan*	saving spending/spent* withdrawal*
Economics	4.10(B)	cost* expense* profit* selling price*		