Northpoint Horizons

CAVS (Content Academic Vocabulary System) Math K-2
Correlated to the
California State Mathematic Content Standards

Grade 2

This document provides a correlation to the math directives offered throughout the *CAVS Math* program that meet the California Mathematics Content Standards. The n/a signifies the standards that are not directly met for this grade level.

Math Content Standard	***CAVS* Math Grades K-2 Teacher's Guide Lessons**
Number Sense	
1.0 Students understand and use numbers up to 100:	
1.1 Count, read, and write whole numbers to 1,000 and identify the place value for each digit.	Students use the math content words: *number, numeral,* and *digit* while writing numerals with digits, sequencing numbers from 1 to 10, and using numbers to count how many: Lesson 1 – TG p. 1 *How do you count?* Students use the math vocabulary words: *whole number, cardinal number*, and *ordinal number* while using numbers to tell how many, to tell in what position, and by using whole numbers to count from 1 to 10: Lesson 2 – TG p. 7 *What are some kinds of numbers?*
1.2 Use words, models, and expanded forms (e.g., 45 = 4 tens + 5) to represent numbers (to 1,000).	n/a
1.3 Order and compare whole numbers to 1,000 by using the symbols <, =, >.	Students use a number line when comparing numbers 1 through 10: Lesson 3 – TG p. 13 *How do numbers work together?*
2.0 Students estimate, calculate, and solve problems involving addition and subtraction of two-and three-digit numbers:	

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2.1 Understand and use the inverse relationship between addition and subtraction (e.g., an opposite number sentence for 8 + 6 = 14 is 14 - 6 = 8) to solve problems and check solutions.	Students practice subtracting from 20 and write addition facts to go along with each subtraction fact: Lesson 5 – TG p. 25 *Why do you subtract numbers?*
2.2 Find the sum or difference of two whole numbers up to three digits long.	Students find all combinations of 6 and 7 by adding two whole numbers: Lesson 4 – TG p. 19 *Why do you add numbers?* Students practice subtracting from 20 and write addition facts to go along with each subtraction fact: Lesson 5 – TG p. 25 *Why do you subtract numbers?*
2.3 Use mental arithmetic to find the sum or difference of two two-digit numbers.	Students think of situations in which subtraction can be used: Lesson 5 – TG p. 25 *Why do you subtract numbers?*
3.0 Students model and solve simple problems involving multiplication and division:	
3.1 Use repeated addition, arrays, and counting by multiples to do multiplication.	n/a
3.2 Use repeated subtraction, equal sharing, and forming equal groups with remainders to do division.	n/a
3.3 Know the multiplication tables of 2s, 5s, and 10s (to "times 10") and commit them to memory.	n/a
4.0 Students understand that fractions and decimals may refer to parts of a set and parts of a whole:	
4.1 Recognize, name, and compare unit fractions from 1/12 to 1/2.	n/a
4.2 Recognize fractions of a whole and parts of a group (e.g., one-fourth of a pie, two-thirds of 15 balls).	n/a
4.3 Know that when all fractional parts are included, such as four-fourths, the result is equal to the whole and to one.	n/a
5.0 Students model and solve problems by representing, adding, and subtracting amounts of money:	
5.1 Solve problems using combinations of coins and bills.	Lesson 8 –TG p. 43 *How do you use money?*
5.2 Know and use the decimal notation and the dollar and cent symbols for money.	n/a

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6.0 Students use estimation strategies in computation and problem solving that involve numbers that use the ones, tens, hundreds, and thousands places:	
6.1 Recognize when an estimate is reasonable in measurements (e.g., closest inch).	Lesson 12 – TG p. 67 *How do you tell how far or how long?* ("estimate" standard units)
Algebra and Functions	
1.0 Students model, represent, and interpret number relationships to create and solve problems involving addition and subtraction:	
1.1 Use the commutative and associative rules to simplify mental calculations and to check results.	n/a
1.2 Relate problem situations to number sentences involving addition and subtraction.	Radius ™ Math Vocabulary Cards – small group activity: Lesson 4 – TG p. 19 *Why do you add numbers?* Radius ™ Math Vocabulary Cards – small group activity: Lesson 5 – TG p. 25 *Why do you subtract numbers?*
1.3 Solve addition and subtraction problems by using data from simple charts, picture graphs, and number sentences	Lesson 22 – TG p. 127 *How can you show facts?*
Measurement and Geometry	
1.0 Students understand that measurement is accomplished by identifying a unit of measure, iterating (repeating) that unit, and comparing it to the item to be measured:	
1.1 Measure the length of objects by iterating (repeating) a nonstandard or standard unit.	Lesson 11 – TG p. 61 *How far? How long?* Lesson 12 – TG p. 67 *How do you tell how far or how long?*
1.2 Use different units to measure the same object and predict whether the measure will be greater or smaller when a different unit is used	n/a
1.3 Measure the length of an object to the nearest inch and/ or centimeter.	Lesson 12 – TG p. 67 *How do you tell how far or how long?*
1.4 Tell time to the nearest quarter hour and know relationships of time (e.g., minutes in an hour, days in a month, weeks in a year).	Students calculate elapsed time and estimate time: Lesson 9 – TG p. 49 *How do you tell time?* Lesson 10 – TG p. 55

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	When is your birthday?
1.5 Determine the duration of intervals of time in hours (e.g., 11:00 a.m. to 4:00 p.m.).	Lesson 9 – TG p. 49 *How do you tell time?*
2.0 Students identify and describe the attributes of common figures in the plane and of common objects in space:	
2.1 Describe and classify plane and solid geometric shapes (e.g., circle, triangle, square, rectangle, sphere, pyramid, cube, rectangular prism) according to the number and shape of faces, edges, and vertices.	Lesson 19 – TG p. 109 *What are some common shapes?* Lesson 20 – TG p. 115 *How can you describe shapes?*
2.2 Put shapes together and take them apart to form other shapes (e.g., two congruent right triangles can be arranged to form a rectangle).	n/a
Statistics, Data Analysis, and Probability	
1.0 Students collect numerical data and record, organize, display, and interpret the data on bar graphs and other representations:	
1.1 Record numerical data in systematic ways, keeping track of what has been counted.	Lesson 22 – TG p. 127 *How can you show facts?*
1.2 Represent the same data set in more than one way (e.g., bar graphs and charts with tallies).	Lesson 22 – TG p. 127 *How can you show facts?*
1.3 Identify features of data sets (range and mode).	n/a
1.4 Ask and answer simple questions related to data representations.	Lesson 22 – TG p. 127 *How can you show facts?*
2.0 Students demonstrate an understanding of patterns and how patterns grow and describe them in general ways:	
2.1 Recognize, describe, and extend patterns and determine a next term in linear patterns (e.g., 4, 8, 12 ...; the number of ears on one horse, two horses, three horses, four horses).	Lesson 7 – TG p. 37 *What makes a pattern?*
2.2 Solve problems involving simple number patterns.	Lesson 7 – TG p. 37 *What makes a pattern?*
Mathematical Reasoning	
1.0 Students make decisions about how to set up a problem:	
1.1 Determine the approach, materials, and strategies to be used.	During each *CAVS* Math Lesson, the teacher helps students determine the approach, materials, and strategies to be used to solve problems using the *5-E* Instructional Approach while
1.2 Use tools, such as manipulatives or sketches, to	

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model problems.	highlighting math content academic vocabulary. The *5-E* Approach: *Engage*: Concept Posters and Math Vocabulary Cards are used to introduce the math concept and vocabulary as a whole group activity. *Explore* and Learn: Students use hands-on Activity Placemats with manipulatives as a small group inquiry activity. Students complete the Record Sheet – many times, by drawing pictures, and then discuss the activity and compare observations with classmates. *Explain* Concepts and Vocabulary: The teacher leads a discussion and models the use of academic vocabulary words through the Flip Book. Oral Language activities are provided as extensions and for differentiated instruction. *Elaborate*: Students apply newly learned concepts when working with a partner to complete the Concept Webs. As a small group activity, students practice listening to, reading, writing, and speaking each academic vocabulary word with the Radius Audio System™. *Evaluate*: Teachers review the lesson's academic vocabulary words through Interactive Transparencies (whole group activity) and assess each lesson through the Lesson Review sheets (individual activity).
2.0 Students solve problems and justify their reasoning:	
2.1 Defend the reasoning used and justify the procedures selected.	Lesson 23 – TG p. 133 *What do you think will happen?*
2.2 Make precise calculations and check the validity of the results in the context of the problem.	Lesson 24 – TG p. 139 *How do we solve problems?*
3.0 Students note connections between one problem and another.	
Students have opportunities to make connections between one problem and another in the *CAVS* Math program. After the teacher and students read the Flip Book lesson, where the math concept(s) and vocabulary are explained, students are then asked to solve problems/answer questions about the concept(s) introduced under the "Make Connections" section of the lesson.	