

Northpoint Horizons

CAVS™ (Content Academic Vocabulary System) Math – K-2
Correlated to the
Texas State Mathematics Standards for Texas Essential Knowledge and Skills

Grade K

This document provides a correlation to the extensive math directives offered throughout the *CAVS* program that meet the Texas Mathematics Standards for TEKS.

Texas Essential Knowledge and Skills	CAVS Math Grades K-2 Teacher’s Guide Lessons
Knowledge and Skills	
K.1 Number, operation, and quantitative reasoning. The student uses numbers to name quantities.	
<p>a. use one-to-one correspondence and language such as more than, same number as, or two less than to describe relative sizes of sets of concrete objects</p>	<p>Lesson 1 – TG pp. 1-6 <i>How do you count?</i></p> <p>Lesson 2 – TG pp. 7-12 <i>What are some kinds of numbers?</i></p> <p>Lesson 3 – TG pp. 13-18 <i>How do numbers work together?</i></p>
<p>b. use sets of concrete objects to represent quantities given in verbal or written form (through 20)</p>	<p>Students use the math content words: <i>number, numeral, and digit</i> while representing numbers with objects; writing numerals with digits; sequencing numbers from 1 to 10; and using numbers to count how many: Lesson 1 – TG pp. 1-6 <i>How do you count?</i></p> <p>Students use the math vocabulary words: <i>whole number, cardinal number, and ordinal number</i> 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 pp. 7-12 <i>What are some kinds of numbers?</i></p> <p>Students count to 50:</p>

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<p>c. use numbers to describe how many objects are in a set (through 20) using verbal and symbolic descriptions.</p>	<p>Lesson 8 – TG pp. 43-48 <i>How do you use money?</i></p> <p>Students use the math content words: <i>number</i>, <i>numeral</i>, and <i>digit</i> while representing numbers with objects; writing numerals with digits; sequencing numbers from 1 to 10; and using numbers to count how many: Lesson 1 – TG pp. 1-6 <i>How do you count?</i></p> <p>Students use the math vocabulary words: <i>whole number</i>, <i>cardinal number</i>, and <i>ordinal number</i> 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 pp. 7-12 <i>What are some kinds of numbers?</i></p> <p>Students count to 50: Lesson 8 – TG pp. 43-48 <i>How do you use money?</i></p>
<p>K.2 Number, operation, and quantitative reasoning. The student describes order of events or objects.</p>	
<p>a. use language such as before or after to describe relative position in a sequence of events or objects</p>	<p>Students have opportunities to use “before” and “after” when describing position in a sequence of numbers or events in: Lesson 1 – TG pp. 1-6 <i>How do you count?</i></p> <p>Lesson 2 – TG pp. 7-12 <i>What are some kinds of numbers?</i></p> <p>Lesson 3 – TG pp. 13-18 <i>How do numbers work together?</i></p> <p>Lesson 10 – TG pp. 55-60 <i>When is your birthday?</i></p>
<p>b. name the ordinal positions in a sequence such as first, second, third, etc</p>	<p>Students use the math vocabulary words: <i>whole number</i>, <i>cardinal number</i>, and <i>ordinal number</i> while using numbers to tell how many; to tell in what position; to differentiate between cardinal and ordinal numbers; and by using whole numbers to</p>

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	count from 1 to 10: Lesson 2 – TG pp. 7-12 <i>What are some kinds of numbers?</i> Lesson 10 – TG pp. 55-60 <i>When is your birthday?</i>
K.3 Number, operation, and quantitative reasoning. The student recognizes that there are quantities less than a whole.	
a. share a whole by separating it into two equal parts	This standard is addressed in the <i>CAVS</i> Math program Grades 3-5.
b. explain why a given part is half of the whole	This standard is addressed in the <i>CAVS</i> Math program Grades 3-5.
K.4 Number, operation, and quantitative reasoning. The student models addition (joining) and subtraction (separating). model and create addition and subtraction problems in real situations with concrete objects.	
a. model and create addition and subtraction problems in real situations with concrete objects	Lesson 4 - TG pp. 19-24 <i>Why do you add numbers?</i> Lesson 5 – TG pp. 25-30 <i>Why do you subtract numbers?</i>
K.5 Patterns, relationships, and algebraic thinking. The student identifies, extends, and creates patterns.	
a. identify, extend, and create patterns of sounds, physical movement, and concrete objects	Lesson 7 – TG pp. 37-42 <i>What makes a pattern?</i>
K.6 Patterns, relationships, and algebraic thinking. The student uses patterns to make predictions.	
a. use patterns to predict what comes next, including cause-and-effect relationships	Lesson 7 – TG pp. 37-42 <i>What makes a pattern?</i>
b. count by ones to 100	Students sequence numbers from 1 to 10 and use whole numbers to count how many (1-10): Lesson 1 – TG pp. 1-6 <i>How do you count?</i> Students use whole numbers to count from 1 to 10: Lesson 2 – TG pp. 7-12 <i>What are some kinds of numbers?</i> Students count to 50: Lesson 8 – TG pp. 43-48 <i>How do you use money?</i>

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K.7 Geometry and spatial reasoning. The student describes the relative positions of objects.	
a. describe one object in relation to another using informal language such as over, under, above, and below	Lesson 16 – TG pp. 91-96 <i>Where are you?</i> Lesson 17 – TG pp. 97-102 <i>Where are you now?</i> Lesson 18 – TG pp. 103-108 <i>Which way do you go?</i>
b. place an object in a specified position	Lesson 16 – TG pp. 91-96 <i>Where are you?</i> Lesson 17 – TG pp. 97-102 <i>Where are you now?</i> Lesson 18 – TG pp. 103-108 <i>Which way do you go?</i>
K.8 Geometry and spatial reasoning. The student uses attributes to determine how objects are alike and different.	
a. describe and identify an object by its attributes using informal language	Students use the math vocabulary words: <i>sort</i> and <i>group</i> to sort attribute blocks by color, shape, or size: Lesson 6 – TG pp. 31-36 <i>How are objects the same?</i>
b. compare two objects based on their attributes	Students use the math vocabulary words: <i>sort</i> and <i>group</i> to sort attribute blocks by color, shape, or size: Lesson 6 – TG pp. 31-36 <i>How are objects the same?</i>
c. sort a variety of objects including two- and three-dimensional geometric figures according to their attributes and describe how the objects are sorted	Students use the math vocabulary words: <i>sort</i> and <i>group</i> to sort attribute blocks by color, shape, or size: Lesson 6 – TG pp. 31-36 <i>How are objects the same?</i> Students have opportunities to sort common geometric shapes in: Lesson 19 – TG pp. 109-114 <i>What are some common shapes?</i>
K.9 Geometry and spatial reasoning. The student recognizes attributes of two- and three-dimensional geometric figures.	

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a. describe and compare the attributes of real-life objects such as balls, boxes, cans, and cones or models of three-dimensional geometric figures	3-dimensional shapes are introduced in the <i>CAVS</i> Math program Grades 3-5.
b. recognize shapes in real-life three-dimensional geometric figures or models of three-dimensional geometric figures	3-dimensional shapes are introduced in the <i>CAVS</i> Math program Grades 3-5.
c. describe, identify, and compare circles, triangles, rectangles, and squares (a special type of rectangle)	Lesson 19 – TG pp. 109-114 <i>What are some common shapes?</i>
K.10 Measurement. The student directly compares the attributes of length, area, weight/mass, capacity, and/or relative temperature. The student uses comparative language to solve problems and answer questions.	
a. compare and order two or three concrete objects according to length (longer/shorter than, or the same)	Lesson 11 – TG pp. 61-66 <i>How far? How long?</i> Lesson 12 – TG pp. 67-72 <i>How do you tell how far or how long?</i>
b. compare the areas of two flat surfaces of two-dimensional figures (covers more, covers less, or covers the same)	Students use the math vocabulary words: <i>area</i> , <i>measuring cup</i> , and <i>volume</i> to practice measuring area and volume: Lesson 13 – TG pp.73-78 <i>How much space does it take up?</i>
c. compare two containers according to capacity (holds more, holds less, or holds the same)	Students use the math vocabulary words: <i>area</i> , <i>measuring cup</i> , and <i>volume</i> to practice measuring area and volume; to understand appropriate uses of a measuring cup; and to compare two types of volume measurements: Lesson 13 – TG pp.73-78 <i>How much space does it take up?</i>
d. compare two objects according to weight/mass (heavier than, lighter than or equal to)	Students use the math vocabulary words: <i>weight</i> and <i>pound</i> to use a balance scale to measure objects and to compare weights of different objects: Lesson 14 – TG pp. 79-84 <i>How much does it weigh?</i>
e. compare situations or objects according to relative temperature (hotter/colder than, or the same as)	Students use the math vocabulary words: <i>temperature</i> and <i>estimate</i> to discuss ways to keep the body warm or cool; when using background knowledge of temperature to identify appropriate seasonal clothing; and to make a chart: Lesson 15 – TG pp. 85-90 <i>How hot or cold is it?</i>
K.11 Measurement. The student uses time to describe, compare, and order events and situations.	

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a. compare events according to duration such as more time than or less time than	<p>Students use the math vocabulary words: <i>clock, hour, minute,</i> and <i>second</i> to make a clock; to tell time by using an analog clock; to calculate elapsed time; and to estimate time: Lesson 9 – TG pp. 49-54 <i>How do you tell time?</i></p> <p>Students use the vocabulary words: <i>calendar, year, month, week,</i> and <i>day</i> to sequence days of the week; to understand whole-to-part relationships; and to understand the length of a day, a week, a month, and a year: Lesson 10 – TG pp. 55-60 <i>When is your birthday?</i></p>
b. sequence events (up to three)	<p>Students have opportunities to sequence events in the following lessons: Lesson 9 – TG pp. 49-54 <i>How do you tell time?</i></p> <p>Lesson 10 – TG pp. 55-60 <i>When is your birthday?</i></p>
c. read a calendar using days, weeks, and months	<p>Students use the vocabulary words: <i>calendar, year, month, week,</i> and <i>day</i> to sequence days of the week; to understand whole-to-part relationships; and to understand the length of a day, a week, a month, and a year: Lesson 10 – TG pp. 55-60 <i>When is your birthday?</i></p>
K.12 Measurement. The student reads and writes time and measures temperature in degrees Fahrenheit to solve problems.	
a. use a thermometer to measure temperature	<p>Students use the math vocabulary words: <i>temperature</i> and <i>estimate</i> to discuss ways to keep the body warm or cool; when using background knowledge of temperature to identify appropriate seasonal clothing; and to make a chart: Lesson 15 – TG pp. 85-90 <i>How hot or cold is it?</i></p>
b. tell and write time shown on analog and digital clocks	<p>Students use the math vocabulary words: <i>clock, hour, minute,</i> and <i>second</i> to make a clock; to tell time by using an analog clock; to calculate elapsed time; and to estimate time: Lesson 9 – TG pp. 49-54</p>

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	<i>How do you tell time?</i>
K.13 Underlying processes and mathematical tools. The student applies Kindergarten mathematics to solve problems connected to everyday experiences and activities in and outside of school.	
a. identify mathematics in everyday situations	<p>In the <i>CAVS</i> program there are many examples of using mathematics for everyday situations to help students apply their math skills and solve problems. Some examples:</p> <p>Lesson 8 – TG pp. 43-48 <i>How do you use money?</i></p> <p>Lesson 9 – TG pp. 49-54 <i>How do you tell time?</i></p> <p>Lesson 13 – TG pp. 73-78 <i>How much space does it take up?</i></p>
b. solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness	<p>During each <i>CAVS</i> Math lesson, the teacher helps students determine the approach, materials, and strategies to be used to solve problems using the <i>5-E</i> Instructional Approach while highlighting math content academic vocabulary. The <i>5-E</i> Approach:</p>
c. select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking, or acting it out in order to solve a problem	<p><i>Engage:</i> Concept Posters and Math Vocabulary Cards are used to introduce the math concept and vocabulary as a whole group activity.</p> <p><i>Explore and Learn:</i> 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.</p> <p><i>Explain</i> 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.</p> <p><i>Elaborate:</i> 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™.</p> <p><i>Evaluate:</i> Teachers review the lesson's academic vocabulary</p>

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	<p>words through Interactive Transparencies (whole group activity) and assess each lesson through the Lesson Review sheets (individual activity). Some examples: Lesson 7 – TG pp. 37-42 <i>What makes a pattern?</i></p> <p>Lesson 6 – TG pp. 31-36 <i>How are objects the same?</i></p> <p>Lesson 24 – TG pp. 139-144 <i>How do we solve problems?</i></p>
<p>d. use tools such as real objects, manipulatives, and technology to solve problems</p>	<p>In the <i>CAVS</i> Math program, students use real objects, manipulatives, and technology in each lesson. During the <i>Explore and Learn</i> section of each lesson, children use real objects and manipulatives such as crayons, pencils, beans, coins, stickers, interlocking cubes, bear counters, etc. in hands-on, small group, inquiry activities. During the <i>Elaborate</i> section of each lesson, students practice listening to, reading, writing, and speaking each academic vocabulary word with the Radius Audio System™. Children then complete one or more of the small group activities in their Math Journals using the lesson's math vocabulary. Some examples: Lesson 1 – TG pp. 1-6 <i>How do you count?</i></p> <p>Lesson 5 – TG pp. 25-30 <i>Why do you subtract numbers?</i></p> <p>Lesson 9 – TG pp. 49-54 <i>How do you tell time?</i></p>
<p>K.14 Underlying processes and mathematical tools. The student communicates about Kindergarten mathematics using informal language.</p>	
<p>a. communicate mathematical ideas using objects, words, pictures, numbers, and technology</p>	<p>Students communicate mathematical ideas and relate everyday language to mathematical language in each <i>CAVS</i> lesson. They have opportunities to communicate in whole group, small group, and individual/teacher activities. Each section of the lesson includes the following materials:</p>
<p>b. relate everyday language to mathematical language and symbols</p>	

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	<p><i>Engage:</i> Concept Posters and Math Vocabulary Cards. <i>Explore and Learn:</i> Activity Placemats with manipulatives, Record Sheet (where students are often asked to draw pictures) <i>Explain</i> Concepts and Vocabulary: Flip Book and Math Content Picture Dictionary <i>Elaborate:</i> Concept Webs. And Radius Audio System™ and Math Journals <i>Evaluate:</i> Interactive Transparencies and Lesson Review sheets Some examples: Lesson 3 – TG pp. 13-18 <i>How do numbers work together?</i></p> <p>Lesson 18 – TG pp. 103-108 <i>Which way do you go?</i></p> <p>Lesson 22 – TG pp. 127-132 <i>How can you show facts?</i></p>
K.15 Underlying processes and mathematical tools. The student uses logical reasoning.	
a. justify his or her thinking using objects, words, pictures, numbers, and technology	Lesson 23 - TG pp. 133-138 <i>What do you think will happen?</i>