

vTPS Mathematics Grade 1 Overview

Narrative:

In grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for addition and subtraction within 20; (2) developing understanding of whole number relationships and place value, including grouping in tens and ones; (3) developing understanding of linear measurement and measuring lengths as iterating length units; and (4) reasoning about attributes of, and composing and decomposing geometric shapes.

1. Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model add-to, take-from, put-together, take-apart, and compare situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (e.g., adding two is the same as counting on two). They use properties of addition to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., “making tens”) to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the relationship between addition and subtraction.

2. Students develop, discuss, and use efficient, accurate, and generalizable methods to add within 100 and subtract multiples of 10. They compare whole numbers (at least to 100) to develop an understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). Through activities that build number sense, they understand the order of the counting numbers and their relative magnitudes.

3. Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as iterating (the mental activity of building up the length of an object with equal-sized units) and the transitivity principle for indirect measurement.

4. Students compose and decompose plane or solid figures (e.g., put two triangles together to make a quadrilateral) and build understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine shapes, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

Unit	Unit Name and Concepts	Pacing	Standards
1	Introduction to 1st Grade (“First 15 Days”) In this introductory unit, students will review, strengthen, and expand numeracy skills learned in Kindergarten. They will be able to compose and decompose numbers, subitize, compare and sequence numbers to twenty, and create complements of ten.	15 Lessons Weeks 1, 2, 3, 4, 5	1.OA.A.1 1.OA.B.3 1.OA.C.5 1.OA.C.6 1.NBT.A.1
2	Operations to 10 - Adding and subtracting within 10 - Answering questions about a given picture graph - Identifying if a given equation is balanced (True or false?) - Comparing numbers up to 10 using $>$, $<$, and $=$ - Solving word problems with the unknown in any position	15 Lessons Weeks 6, 7, 8	1.OA.A.1 1.OA.D.7 1.OA.D.8 1.NBT.B.3 1.MD.C.4
3	Teen Numbers - Comparing teen numbers using $>$, $<$, and $=$ - Answering questions about a given picture graph - Expanded form of teen numbers (place value) - Grouping numbers to 20	9 Lessons Weeks 9, 10	1.NBT.A.1 1.NBT.B.2 1.NBT.B.3 1.MD.C.4
4	Add to 20	16 Lessons	1.OA.B.3

	- Adding to 20 - Identifying if a given equation is balanced (True or false?) - Counting forward and backward within 20	Weeks 11, 12, 13, 14	1.OA.C.6 1.OA.D.7 1.OA.D.8 1.NBT.A.1 1.NBT.B.3
5	Subtract to 20 - Subtracting within 20 - Identifying if a given equation is balanced (True or false?)	8 Lessons Weeks 15, 16	1.OA.B.4 1.OA.C.6 1.OA.D.7 1.OA.D.8 1.NBT.B.3
6	Word Problems to 20 - Solving word problems with numbers up to 20 with the unknown in any position - Answering questions about a given picture graph	13 Lessons Weeks 17, 18, 19, 20	1.OA.A.1 1.OA.A.2 1.MD.C.4
7	Fraction Foundations - Comparing the length of 3 given bars - Dividing shapes into fourths, thirds, and halves - Using the words fourth(s), third(s), half(halves) to describe shapes divided into equal parts	10 Lessons Weeks 21, 22, 23	1.MD.A.1 1.MD.A.2 1.G.A.3
8	Numbers to 50 - Groupitizing numbers to 50 - Writing the expanded form of numbers to 50 - Comparing numbers to 50 using $>$, $<$, and $=$	8 Lessons Weeks 24, 25, 26	1.NBT.A.1 1.NBT.B.2 1.NBT.B.3
9	Numbers to 120 - Groupitizing numbers to 100 - Writing the expanded form of numbers to 120 - Shifting 10 - Counting forward and backward to 120	13 Lessons Weeks 27, 28, 29, 30	1.NBT.A.1 1.NBT.B.2 1.NBT.B.3 1.NBT.C.5
10	Operations to 100 - Adding a 1-digit number to any number (sum does not exceed 100) - Adding multiples of 10 to any number (sum does not exceed 100) - Subtracting multiples of 10 from any number within 100)	13 Lessons Weeks 31, 32, 33	1.NBT.C.4 1.NBT.C.6
11	Measurement - Measuring objects using the same unit (ex. paper clips) - Identifying name and value of U.S. coins - Finding the value of a given set of coins up to \$1.00 - Telling time to the hour and half hour	13 Lessons Weeks 34, 35, 36, 37	1.OA.A.2 1.MD.A.1 1.MD.A.2 1.MD.B.3 1.MD.D.5
12	Geometry	2 Lessons	1.G.A.1

	• Identifying shapes based on given attributes. • Identifying defining attributes of a given shape. • Identifying smaller shapes that make or compose a larger shape.	Week 38	1.G.A.2
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