Math Mammoth Kindergarten, 2026 edition
Alignment to the Common Core Standards

This document lists the Common Core Standard(s) relevant to each lesson in the two student worktexts, Kindergarten Worktext A and Kindergarten Worktext B (2026 edition). For each chapter, I also list the main standards covered in the chapter, and discuss what students are learning in future grades that ties in with the major topics of the chapter.

Contents

Math Mammoth Kindergarten Worktext A

Chapter 1: Counting & Writing Numbers

The first chapter of *Math Mammoth Kindergarten Worktext A* focuses on counting and learning to write numbers.

Being able to count accurately is not as simple as it seems to us adults. Mastering the act of counting means that the child be able to do *all* these:

- Recite the counting sequence (one, two, three, four, .) in the correct order and without skipping any words
- Match one counting word with exactly one item (one-to-one correspondence). The child needs to learn to pair each object with one and only one number name, and each number name with one and only one object.
- Understand cardinality: that the last word spoken tells us the total number of items in the group. In other words, children need to connect the verbal count (“1, 2, 3, 4”) to the thought of "how many".

  You can test for this by having a child count some objects, and after they have the count, rearrange the *same* objects and ask again how many there are. If the child has to count again, they don’t have the concept of cardinality yet.

Some other goals for this chapter are:

- Connect number words to written numerals.
- Understand that the number of objects is the same regardless of their arrangement or the order in which they were counted. Again, this is the thought of cardinality. To help a child learn it, ask them to count a number of objects twice, but starting from a different object, and help them realize the count is the same.
- Learn that each successive number name refers to a quantity that is *one* larger.
- Learn to count forward beginning from a given number, instead of having to begin at 1.

Counting is foundational to learning addition and subtraction. Many children already learn to count before kindergarten, so feel free to go through this chapter quickly if that is the case.

Children do more counting in chapter 6, where they will learn to count to 100 by ones and by tens. They will learn that it is quicker to count a large number of items if they are grouped into tens first. This prepares them to learn place value with two-digit numbers in first grade.

Relevant kindergarten standards

K.CC.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality. a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object. b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted. c. Understand that each successive number name refers to a quantity that is one larger.
K.CC.5. Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Lesson	page number	Standards
Counting and Sorting Objects	18	K.CC.4
Learning to Write 1	19	K.CC.3, K.CC.4
Learning to Write 2	20	K.CC.3, K.CC.5
Learning to Write 3	22	K.CC.3, K.CC.4
Learning to Write 4	24	K.CC.3,
Practice 1	25	K.CC.3, K.CC.5
Learning to Write 5	27	K.CC.3, K.CC.4
Learning to Write 6	29	K.CC.3, K.CC.5
How Many?	31	K.CC.4, K.CC.5
Learning to Write 7	32	K.CC.3, K.CC.5
Practice 2	34	K.CC.3, K.CC.5
Learning to Write 8	35	K.CC.3, K.CC.4
Learning to Write 9	37	K.CC.3, K.CC.5
Cuisenaire Rods (optional)	39	(K.OA.3)
Learning to Write 10	40	K.CC.3
Counting Practice	41	K.CC.5
Practice 3	42	K.CC.3, K.CC.4, K.CC.5
Practice with Patterns	43	
More Counting	44	K.CC.5
Chapter 1 Review	45	K.CC.3, K.CC.5

Standards for Mathematical Practice

- (MP.6) Here, and in all further studies of mathematics, children need to learn to be accurate and precise in their communication about math. Counting is a topic where it is easy for children to see the need to be accurate. We want an accurate count! True, there is a place for estimation also, but in kindergarten, the emphasis is on counting small quantities, and to learn to count accurately. Understanding one-to-one correspondence is naturally the key to that.

Chapter 2: Groups, Comparing, and Sorting

In the second chapter, we focus on decomposing numbers, comparing quantities and numbers, and sorting.

Decomposing a number or quantity means separating it in parts. Children practice this skill with physical objects and visuals. It is a precursor to adding, which we will go into in the next chapter. Then in first grade, the Math Mammoth curriculum teaches the basic addition facts based on the possible decompositions of number. (For example, students will study sums of 7, which are 7 + 0, 6 + 1, 5 + 2, and 4 + 3.)

The goal here is *not* to memorize the decompositions (though if that happens, that is great), but rather, to become familiar with quantities and with the idea of breaking a number into two (smaller) parts.

Comparing two numbers (numbers that are 10 or less) is an important kindergarten skill. Start teaching this skill with an activity, using physical objects, like instructed in the lesson *More or Less? Part 1*. The goal is to go from the concrete to the abstract, where the child can tell which of the two numbers is greater or smaller without using physical objects. While the symbols < and > are introduced, there is no need to master them, nor learn to write them. That will happen in first grade.

Sorting objects is simple skill that children enjoy doing. The activities in this chapter are not just about sorting but also include counting the number of objects in each category (after sorting is done), and ordering the categories by count. This prepares children for making bar graphs in first and second grades.

The lessons in the chapter often start out with an activity that uses physical objects. **These activities are important** as they are the main part of the actual teaching. Also, most children need to use physical objects to learn the concepts. It is unlikely to happen with bookwork only. So, don't skip them. They are part of the lessons, and help you as the teacher see if the child(ren) have understood the concept.

Also, the activities and games help keep math as fun and playful. We don't want math to be stressful but just the opposite! Preventing math anxiety starts here.

The introduction lists quite a few games and activities. They are referenced in the lessons, but feel free to use them as often as you wish, including sometimes taking a day just to play and do these hands-on activities.

What we are going towards

In first grade, the Math Mammoth curriculum teaches the basic addition facts based on the possible decompositions of number. (For example, they will study sums of 7, which are 7 + 0, 6 + 1, 5 + 2, and 4 + 3.)

In first grade, children will compare two 2-digit numbers, and in second grade, two 3-digit numbers.

Sorting (classifying) objects into categories prepares children for making bar graphs in first and second grades.

Relevant Kindergarten standards

K.CC.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
K.CC.7. Compare two numbers between 1 and 10 presented as written numerals.
K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Lesson	page number	Standards
Making Two Groups	51	K.OA.3
Making 6	52	K.OA.3
Making 7	53	K.OA.3, (K.OA.1)
Making 8	54	K.OA.3
More or Less? Part 1	55	K.CC.6
More or Less? Part 2	56	K.CC.6
Making 9	57	K.OA.3, (K.OA.1)
More Comparisons	58	K.CC.7
Making 10	59	(K.OA.4), (K.OA.1)
Sorting Items	60	K.MD.3
Comparison Practice	62	K.CC.6, K.CC.7
Sort Some More	63	K.MD.3
Mixed Review Chapter 2	64	K.CC.3, K.CC.5
Chapter 2 Review	65	K.OA.3, K.CC.7

Standards for Mathematical Practice

- (MP.7) As children find all the different ways to make 6, 7, 8, 9, and 10, they will see patterns. Mathematics has been called “the science of patterns,” and thus, recognizing patterns and structures is the pure essence of mathematics.

Chapter 3: Addition & Measurement

The third chapter of *Math Mammoth Kindergarten Worktext A* focuses first of all, on the concept of addition, and then secondarily on some foundations for measurement.

We start with the idea that in addition, we put two groups of objects together, and find the total. Then the lessons introduce the symbols + and =. In these first lessons, children are expected to find the sums by counting both groups of objects. But right after that, the lessons *Adding One More* and *Counting On* zero in on the important principle of counting on: there is no need to start counting from one when adding two numbers. For example, to add 4 + 3 by counting, you can count on from 4, three steps.

The number zero is dealt with in a separate lesson, to make sure children can grasp this concept.

Learning to solve word problems is important. We start with the simplest types of problems right here in kindergarten, and children will solve word problems with increasing difficulty in subsequent grade levels. On this level, you as the parent/teacher will probably need to read the problems aloud.

For that purpose, the chapter also includes some photographs of animals, with the idea that the child tells a story about the picture that uses math. We're thinking specifically of addition here, but at the same time, we're not looking for a specific, pre-determined story. So, don't reject what the child comes up with. For example, if in the story something goes away, you can teach the child about subtraction right there.

You can find more photos for such "math talks" at https://www.mathmammoth.com/mathtalks

Understanding what is happening in the problem is crucial. Encourage the child to use objects or drawings to help them make sense of the situation. If the child has difficulty, check that they understand all the words in the problem. Sometimes not knowing just one word throws them off. You can also try rewording the problem.

While this chapter has many lessons about addition, children do not need to memorize all addition facts at this stage. The goal for kindergarten is only that children learn to add fluently within 0-5, and they can take the entire kindergarten year to accomplish that. Then in first grade, children work on fluently adding and subtracting within 0-10, and in second grade, within 0-20.

In the lessons *Adding to Make 6*, *Adding to Make 7*, and so on, the child finds different decompositions of a number. For example, they will find different ways to add two numbers so the sum is 6, and they record these decompositions using drawings or with an equation (e.g. 7 = 3 + 4).

Again, these decompositions don't need to be memorized at this stage, but this work lays a foundation for first and second grades, when children will work on memorizing the basic addition facts based on decompositions. Also, decomposing a number into two parts helps children learn whole-part relationships with numbers.

With measurement, the goal is to understand that objects have the attributes of length, height, and weight, and that the "amount" of length, height, or weight varies among objects. (Weight is covered in chapter 5.) Children compare the length, height, and weight of objects informally, without actually using a measuring unit. They also describe several measurable attributes of a the same object. For example, they might describe a pencil as being both light and long.

I have also included an optional lesson where children measure the length of objects with the nonstandard unit of paperclips. This helps children learn the basic idea in measurement, which is that we repeat the basic unit until reaching the length of the object being measured.

What we are coming from

In chapter 2, children worked with decomposing numbers into two parts, which prepared them to learn addition.

What we are going towards

In first grade, children work on fluently adding and subtracting within 0-10, and in second grade, within 0-20. Working on decompositions of numbers lays a foundation for first and second grades, when children will work on memorizing the basic addition facts based on decompositions. Also, decomposing a number into two parts

helps children learn whole-part relationships with numbers. Children will solve word problems with increasing difficulty in all subsequent grade levels.

In first grade (also in the one optional lesson in this chapter), children encounter the idea of a measurement *unit*. They measure lengths indirectly and by iterating length units. In second and third grades, they learn to measure the length, liquid volume, and mass of objects using basic measurement units.

Relevant kindergarten standards

K.CC.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.OA.5. Fluently add and subtract within 5.
K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*

Note: If a standard is mentioned in parentheses, it means the lesson contains material that approaches that standard or prepares students for it.

Lesson	page number	Standards
Adding as "Putting Together"	73	K.OA.1, K.OA.2
Adding One More	74	K.OA.2
Addition Concept	75	K.OA.1, K.OA.2
Counting On	76	K.CC.3, (K.OA.5)
Adding Two More	77	K.OA.2, (K.OA.5)
The Number Zero	78	K.CC.3, (K.OA.5)
Sums Within 0-5, Part 1	79	K.OA.1
Addition on a Number Path	80	K.OA.2
More Addition on a Number Path	81	K.OA.1, K.OA.5
Addition Word Problems	82	K.OA.2
Sums Within 0-5, Part 2	83	K.OA.1, K.OA.2, K.OA.5
Adding to Make 6	84	K.OA.3, K.OA.5
In Which Order Do You Add?	85	K.OA.2, K.OA.5

Lesson	page number	Standards
Shorter and Longer	86	K.MD.1, K.MD.2
Adding to Make 7	87	K.OA.3, K.OA.2, K.OA.5
Shorter and Taller	88	K.MD.1, K.MD.2
Adding to Make 8	89	K.OA.2, K.OA.3
Comparing Lengths and Heights 1	90	K.MD.2
Comparing Lengths and Heights 2	91	K.MD.2, K.OA.5
Adding to Make 9	92	K.OA.2, K.OA.3, K.OA.5
Measuring Length (optional)	93	1.MD.2
Adding to Make 10, Part 1	94	K.OA.4
Adding to Make 10, Part 2	95	K.OA.4
Mixed Addition Practice	96	K.OA.1, K.OA.2, K.OA.5
Mixed Review Chapter 3	97	K.CC.6, (K.MD.2), (K.OA.4), K.OA.5
Chapter 3 Review	98	K.MD.2, K.OA.2, K.OA.5

Standards for Mathematical Practice

- (MP.1) This chapter introduces word problems. Naturally, they are very easy, but even here in kindergarten, we can help children to become good problem-solvers. One of the major attributes of good problem-solver is that they don’t give up easily. So, don’t help the child too early. Let them struggle a little bit.

  Here are some ideas to (eventually) help a child that is stuck. First make sure they understand what the problem says. You can re-read them problem to them and ask them then to recite the problem back to you. You can ask simple questions related to the facts given in the problem, such as, "How many chickens are there?" Then, you can ask the child to model the story with objects or to draw.

Chapter 4: Subtraction

In chapter 4, we focus on subtraction. Our goals for the child(ren) are:

- understand subtraction as a process of "taking away";
- understand that when two parts make a total, you can subtract one part to find the other part (subtraction as "taking apart");
- tying in with the above, start learning the connection between addition and subtraction;
- be able to subtract within 0-10 with the help of pictures, objects, or a number path;
- be able to solve simple word problems involving subtraction;
- Fluently subtract within 0-5. This is the goal for the entire kindergarten year, not specifically for this chapter, but we want to work towards it here.

The first lesson presents subtraction as a process of "taking away." We work with that understanding for several lessons, and connect counting down with subtraction.

To help children count down to subtract, some lessons use a number path, which is similar to a number line, but is a simpler model for young children to understand. This is because it has actual items (rectangles) they can count, as opposed to a number line where we count the spaces (distances) *between* numbers.

The lessons on number bonds lead us to the thought of having two parts and a total (whole). When two or more parts make a whole, and you know the whole and the other part(s), you can subtract to find the unknown part. This is explained in detail in the lesson "Two Parts and a Total."

Yet another use for subtraction is in the concept of difference, which has to do with comparing two numbers, and finding out how much more (or less) one is than the other. We will not deal with that in kindergarten; it is studied in detail in first grade.

The lessons titled "Subtract from 6," "Subtract from 7," and so on provide more practice and help children understand the connection between addition and subtraction. Even though those lessons have to do with subtracting *from* 6 (or from 7, 8, 9, or 10), the subtractions in the exercises are often tied to the corresponding additions. Children will consolidate understanding this connection in first grade.

By the end of kindergarten, the goal is for the child to fluently add and subtract within 0-5. To that end, continue using the various games listed here (and others). For example, you can sometimes use the day's math lesson just to play games that develop fluency, or add a game to an existing lesson. You can also use the worksheet maker to print addition and subtraction worksheets.

What we are going towards

In first and second grades, students will greatly expand their addition and subtraction skills. They learn various strategies for addition and subtraction, solve word problems involving addition and subtraction, and solve missing number problems involving addition and subtraction. In first grade, students are expected to fluently add and subtract within 0-10, and in second grade, within 0-20.

Relevant Kindergarten standards

K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.OA.5. Fluently add and subtract within 5.

Note: If a standard is mentioned in parentheses, it means the lesson contains material that approaches that standard or prepares students for it.

Lesson	page number	Standards
Subtraction as “Taking Away”	104	K.OA.1, K.OA.2
Subtracting One	105	K.OA.2, K.OA.5
How Many Are Left?	106	K.OA.1, K.OA.2, K.OA.5
Subtracting Two	107	K.OA.1, K.OA.2, K.OA.5
Subtraction on a Number Path 1	108	K.OA.1
Subtraction on a Number Path 2	109	K.OA.1, K.OA.2
Number Bonds 1	110	(K.OA.2)
Number Bonds 2	111	(K.OA.2)
Two Parts and a Total	112	K.OA.1
Two Parts and a Total — More Practice	113	K.OA.1, K.OA.2
Subtraction within 0-5	114	K.OA.1, K.OA.2, K.OA.5
Subtraction within 0-5, Part 2	115	K.OA.1, K.OA.2, K.OA.5
Subtraction within 0-5, Part 3	116	K.OA.1, K.OA.5
Subtract from 6	117	K.OA.2, K.OA.5
Subtract from 7	118	K.OA.1, K.OA.2
Word Problems	119	K.OA.2
Subtract from 8	120	K.OA.2
Subtract from 9	121	K.OA.1, K.OA.2
Subtract from 10	122	K.OA.2
Mixed Review Chapter 4	123	K.OA.2
Chapter 4 Review	124	K.OA.1, K.OA.2

Chapter 5: Shapes & Measurement

In this chapter five, we will study two-dimensional shapes and work on foundations for measurement again. We will encounter shapes again in Chapter 7. The lessons there will also include three-dimensional shapes. For now, the focus is on identifying basic shapes — no matter their orientation or size — and being able to count the sides and the corners each shape has.

We have already looked at measuring length in the worktext part A. We review that topic, and then go on to learn about weight, in a very informal manner. Children don't need to actually measure the weight (or mass) of objects yet. They simply learn what "heavy" and "light" mean by comparing how heavy objects feel, and finding which of two objects is heavier (or lighter). Actually measuring the mass of objects will happen in second and third grades. However, feel free to let the child learn about the basic units for measuring weight/mass (pounds/kilograms) as you have opportunities, such as through everyday life.

Children also describe several measurable attributes of a single object. This means, for example, describing one object as both short and light, or as both tall and light, or as both long and heavy.

The lessons about times of day have to do with morning/afternoon/evening/night. They prepare the child to learn to tell time in first grade.

This chapter has quite a few activities in the lessons themselves. Don't skip them, as they are a major part of learning for the topics of this chapter. Children need to touch and feel the various shapes. They need to experience *light* and *heavy*; bookwork won't substitute for the actual hands-on experiences. You can also turn some of the activities into simple games.

What we are going towards

The work in this chapter and chapter 7 lay groundwork for the student to describe basic attributes of shapes in first and second grades, which in turn prepares them to reason about shapes in a more formal manner later on. For example, in 4th and 5th grades, students will classify two-dimensional figures based on specific attributes related to angles and sides.

In first grade, children encounter the idea of a measurement *unit*. They measure lengths indirectly and by iterating length units. In second and third grades, they learn to measure the length, liquid volume, and mass of objects using basic measurement units.

Relevant Kindergarten standards

K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.
K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*
K.MD.3 Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.
K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
K.G.2 Correctly name shapes regardless of their orientations or overall size.
K.G.4 Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).

Note: If a standard is mentioned in parentheses, it means the lesson contains material that approaches that standard or prepares students for it.

Lesson	page number	Standards
Basic Shapes 1	14	K.G.1, K.G.2, K.G.4
Basic Shapes 2	15	K.G.1, K.G.2, K.G.4
Drawing Shapes	16	(K.G.2) ,(K.G.4)
Shapes and Patterns	17	K.G.2
Sorting Shapes	18	K.MD.3, K.G.2, K.G.4
Mixed Practice 1	19	K.OA.4, K.CC.6, K.OA.2
Measuring Review	20	K.MD.2
Weight	21	K.MD.1
Heavier and Lighter	22	K.MD.2
Times of Day	23	(1.MD.3)
More Practice with Measurable Attributes	24	K.MD.2
Times of Day 2	25	(1.MD.3)
Mixed Review Chapter 5	26	K.OA.1, K.CC.7, K.OA.2
Chapter 5 Review	27	K.G.1, K.MD.1, K.G.2

Chapter 6: Two-Digit Numbers & Money

This chapter focuses on two-digit numbers, and especially on the counting sequence from 1 to 100. We will be using a 100-bead abacus (school abacus) and a visual model of sticks bundled in tens. You're welcome to also use linking cubes (Unifix cubes) and/or base ten blocks to illustrate the numbers.

We start out with numbers from 11 through 20. The child is expected to learn to write these numbers with numerals, and to decompose them as 10 plus some other number. This prepares them to learn place value with tens and ones in first grade.

For numbers from 21 through 100, the main goal is to **learn the counting sequence**. The child(ren) should learn to count from 1 to 100 by ones, and from 10 to 100 by tens — and this can happen just by rote memory. The lessons do use visuals that show the idea of tens and ones (sticks that are bundled into groups of 10), and we do practice making two-digit numbers with the abacus (linking cubes work also), but even so, the child does not have to master the concept of place value with tens and ones in kindergarten. They do not even have to learn to write the numbers from 21 to 100 with numerals. First grade is the time when we really delve into these topics. Right now, the idea is learn to count to 100, while also starting to learn about tens and ones.

The lesson "Counting Groups" is optional, because it practices counting large collections of objects, which is technically a first grade topic. The natural idea is to count these collections by first making groups of ten, but don't let the child know that at first. Let them experiment and even struggle a bit. Typically, if they try to count a large collection by ones, they will ultimately lose track and get confused. That is good in a sense, because once they find the easier way to count (or you tell them how) after struggling, they will remember it much better than if they were told in the beginning how to do it, and they just followed instructions.

The lessons on coins are entirely optional. If your child or students have understood the basic concept of tens and ones, and are comfortable with two-digit numbers, you can proceed to this section. Note that this section does use two-digit numbers written as numerals (e.g. 58). Dimes and pennies give a nice application of tens and ones, but like mentioned earlier, understanding that, say, 42, is made up of 4 tens and 2 ones, is not fully required at kindergarten level.

The lessons that introduce the nickel take the level up yet a notch. So, use your judgment. Children that are doing well with the math concepts will probably enjoy studying coins, but don't feel pressured. This topic will be there in first and second grades also.

What we are coming from

Earlier in kindergarten, children have learned to count to 10.

What we are going towards

In first grade, children delve into two-digit numbers: they learn *place value*: how such numbers are composed of tens and ones (we're touching on that concept here, too), learn to write them, and how to add and subtract them in limited situations, using strategies based on place value. Then in second grade, they learn about three-digit numbers, in third, about four-digit numbers, and in fourth, numbers through one million.

Relevant Kindergarten standards

K.CC.1 Count to 100 by ones and by tens.
K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.

b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.

c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.5 Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

K.NBT.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Note: If a standard is mentioned in parentheses, it means the lesson contains material that approaches that standard or prepares students for it.

Lesson	page number	Standards
Numbers 11 to 15	35	K.NBT.1, K.CC.3, K.CC.5
Numbers 16 to 20	37	K.NBT.1, K.CC.3, K.CC.4, K.CC.5
Counting up to 20	39	K.CC.3, K.CC.5
Teen Numbers & Equations 1	41	K.NBT.1
Teen Numbers & Equations 2	42	K.NBT.1
Mixed Practice 2	43	K.OA.2, K.OA.3
Counting to 40, Part 1	44	K.CC.1
Counting to 40, Part 2	45	K.CC.1
Counting to 100, Part 1	46	K.CC.1, K.CC.2
Counting to 100, Part 2	47	K.CC.1, K.CC.2
Counting Groups (optional)	48	(1.NBT.2)
Mixed Practice 3	49	K.CC.7, K.OA.4, K.G.2, K.MD.1
Counting to 100, Part 3	50	K.CC.1, K.NBT.1
Counting Practice	51	K.CC.1, K.CC.5
More Practice with Numbers	52	K.CC.2, K.CC.5, K.NBT.1
Pennies & Dimes 1 (optional)	53	(2.MD.8)
Practice with Dimes (optional)	54	(2.MD.8)
Pennies & Dimes 2 (optional)	55	(2.MD.8)
How Many Cents? (optional)	56	(2.MD.8)
Mixed Practice 4	57	K.OA.3, K.OA.2
Nickels 1 (optional)	58	(2.MD.8)
Nickels 2 (optional)	59	(2.MD.8)
Counting Cents (optional)	60	(2.MD.8)
Subtracting Cents (optional)	61	(2.MD.8)

Lesson	page number	Standards
Going Shopping (optional)	62	(2.MD.8)
Mixed Review Chapter 6	63	K.G.2, K.OA.3
Chapter 6 Review	64	K.CC.5, K.NBT.1, K.CC.2

Standards for Mathematical Practice

- (MP.7) Patterns are important in mathematics. Make sure children recognize the pattern (the structure) in the counting sequence. It is best if they notice it themselves; give them the opportunity to do so first, before pointing it out.

Chapter 7: Shapes & Position Words

In the seventh chapter children study shapes some more and learn how to describe the position of an object in relation to another object.

Children learn about basic solids (3-D shapes) — specifically cubes, spheres, cylinders, and cones. They work with a set of geometric solids and locate everyday objects in the shape of these solids. They learn to identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Then we also spend some time analyzing and comparing shapes. This means describing the similarities and differences of shapes, such as comparing the number of sides and vertices (corners) the shapes have, comparing their color and overall size, and even checking if a shape has equal sides or not.

Also in this chapter, children will compose new shapes from smaller shapes. In addition to the work in the lessons, I recommend that you also get a set of geometric shapes, such as a tangram set. Look for one that comes with designs that can be built with the shapes (usually a set of cards).

One additional topic for this chapter is ordinal numbers. Most children probably learn these through everyday conversations, but it is good to check that they have indeed learned these basic words.

Again, there are lots of hands-on activities in the lessons of this chapter, and they are important. Besides the lessons, feel free to take a day or two just to play addition and subtraction games for review (see the introductions for earlier chapters).

What we are going towards

Students will continue and advance in describing basic attributes of shapes in first and second grades, preparing them to reason about the shapes in a more formal manner later on. In 4th and 5th grades, they will then classify two-dimensional figures based on specific attributes related to angles and sides.

Relevant Kindergarten standards

K.G.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
K.G.2. Correctly name shapes regardless of their orientations or overall size.
K.G.3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
K.G.4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length).
K.G.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
K.G.6. Compose simple shapes to form larger shapes. *For example, "Can you join these two triangles with full sides touching to make a rectangle?"*

Lesson	page number	Standards
Comparing Shapes 1	74	K.G.4
Comparing Shapes 2	75	K.G.4
Position Words 1	76	(K.G.1)
Position Words 2	77	K.G.1
Mixed Practice 5	78	K.OA.2, K.G.3
Ordinal Numbers 1	79	
Position Words 3	80	K.G.1, K.MD.1
Ordinal Numbers 2	81	
Comparing Shapes 3	82	K.G.4
Drawing Shapes 2	83	K.G.5, K.G.1
Shapes and Order	84	K.G.2, K.G.4, 1.OA.5
Composing Shapes 1	85	K.G.6
Composing Shapes 2	89	K.G.6
Mixed Review Chapter 7	91	K.CC.1, K.G.4, K.CC.5, K.OA.2, K.OA.5, K.OA.3, K.G.2
Chapter 7 Review	93	K.G.4, K.G.6, K.G.1

Standards for Mathematical Practice

- (MP5) As students analyze, compare, and compose shapes, they use a variety of tools (geometric solids, pattern blocks, and shape design cards from a geometric shape set) to help them make sense of geometric attributes.

Chapter 8: More Addition and Subtraction

In this chapter, we circle back to addition and subtraction, and also review two-digit numbers and counting by tens. There are no new concepts in this chapter, which means you can include lessons from here when studying earlier chapters, or omit the chapter (or some of its lessons) if time does not allow.

Relevant Kindergarten standards

K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.
K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.
K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).
K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.
K.OA.5. Fluently add and subtract within 5.
K.CC.1 Count to 100 by ones and by tens.
K.CC.2 Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
K.CC.3 Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).
K.NBT.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.