

10 Math Activities

for toddlers to
2nd graders and
everyone in between



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How to Use:

- The activities in this set are designed to provide hands-on, real-world math experiences for young children.
- They do not comprise a full year's math curriculum. Therefore, this resource should be used to enhance, not replace a math curriculum.
- The age levels are designed to correspond to a widely-used set of standards in the U.S., the Common Core State Standards. All children and all schools are different. If an activity seems too hard for your child, move to the prior grade level's version. Likewise, if an activity seems too easy, move to the next grade level's version.

For more activities, visit
[Counting With Kids on Instagram](#)
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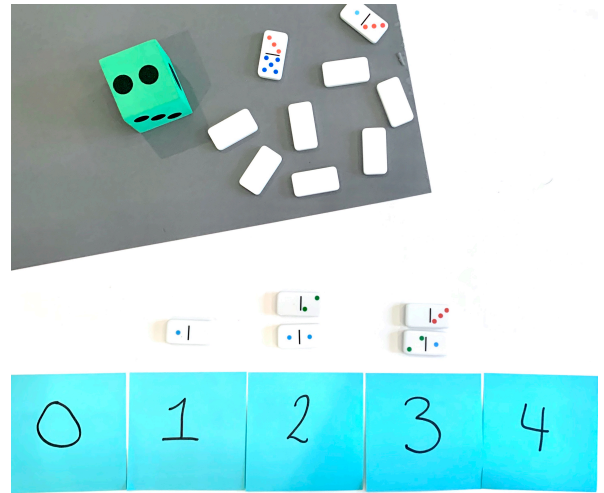
Domino Roll

Counting and Addition

Materials Needed:

1. Dominoes
2. Set of small papers (post-it notes work great) numbered 0 through 12
3. Dice
4. Piece of paper and pencil for older children to record

**No dominoes? Draw dots on small slips of papers to look like dominoes.*



Age:	Way to Play:	Goal:
Toddler	<p>Let your toddler roll the dice and count the dots (likely with your help). If they're ready, they could try turning over the same number of dominoes as the number on their dice.</p> <p><i>*You could also add in a favorite set of toys. Let your child count out the same number of toys as they rolled on the dice.</i></p>	<p>During the toddler years, your goal is exposure to counting.</p> <p>Counting numbers on the dice and counting out sets of dominoes are both easy ways to do that.</p>
Pre-K	<ol style="list-style-type: none"> 1. Turn the dominoes face down. 2. Let your child roll the dice and turn over that many dominoes. 3. Count how many total dots appear on the domino (both sides included). 4. Place the domino by the written numeral that represents the total number of dots (as pictured above). 	<p>In this activity, you're building two skills: 1) counting and 2) seeing that two smaller quantities (the parts on each side of the domino) can come together to form a larger quantity (the whole).</p>

Age:	Way to Play:	Goal:
Kindergarten	<ol style="list-style-type: none"> 1. Play the exact same way as the pre-K version. 2. In addition, for each domino, let your child record a written addition sentence to explain how they knew the total. <i>(For example: if a domino has 2 dots on one side and 1 dot on the other, they would place it above the 3 and write $2 + 1 = 3$ on their paper)</i> 	<p>Represent addition with objects, verbal explanations, and equations. (Common Core standard K.OA.A.1)</p>
1st Grade	<p><i>No dice needed for 1st grade.</i></p> <ol style="list-style-type: none"> 1. Your child will pick 2 dominoes and turn them over. 2. Add those totals together. <i>(For example: one domino with a total of 8 and another with a total of 5 added together is a total of 13)</i> 3. For each <i>pair</i> of dominoes, let your child record the written addition sentence to explain how they knew the total. (ex: $8 + 5 = 13$) 4. When your child is easily doing this with two dominoes, you can increase the number to adding 3 dominoes together or even 4 together. <p><i>Note: In the 1st grade, students add using a variety of strategies like counting on their fingers, mental math, counting the dots on the dominoes, or drawing a picture.</i></p>	<p>Addition within 20. Try to help your child think of ways to add the number strategically, for example, $8 + 5$ can also be thought of as $8 + 2$ more to make 10 and then $10 + 3$. (Common Core standard 1.OA.C.6)</p> <p>Addition within 100. (Common Core standard 1.NBT.C.4)</p>
2nd Grade	<ol style="list-style-type: none"> 1. Do the 1st grade version exactly as written, encouraging your child to use <i>only</i> mental math strategies when adding. <p><i>Examples of mental strategies:</i></p> <ul style="list-style-type: none"> • <i>Rearrange as a 10 fact ($8 + 6$ is the same as $10 + 4$ which is 14)</i> • <i>Rearrange as doubles fact ($8 + 6$ is the same as $7 + 7$ which is 14)</i> • <i>Doubles plus 1 facts ($8 + 7$ is the same as $7 + 7$ which is 14 plus 1 more is 15)</i> 	<p>Add within 20 using mental strategies, meaning solving only in their head instead of a written strategy. Examples to the left. (Common Core standard 2.OA.B.2)</p>

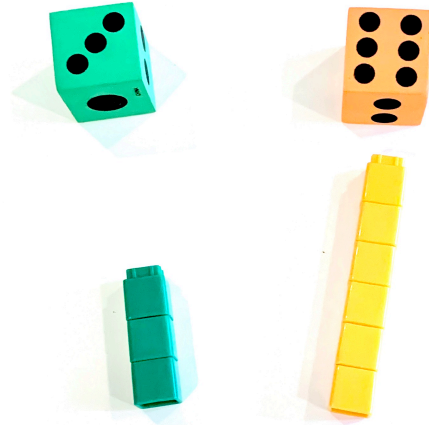
Tower Time

Count, Add, and Compare

Materials Needed:

1. Dice
2. Set of equally-sized blocks like snap cubes, Legos, Duplo blocks or wooden blocks
3. Piece of paper and pencil (for older children to record)

**No blocks? Let children build towers with post-it notes or small squares of paper.*



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. <i>Roll:</i> Roll the dice and count the number it landed on. 2. <i>Build:</i> Count out and then build a block tower equal to the number on the dice. 	As previously noted, during the toddler years, your goal is exposure to counting. If your toddler is only interested for a round or two, let them play with the blocks. Free play with blocks builds wonderful spatial thinking skills.
Pre-K	<ol style="list-style-type: none"> 1. <i>Roll & Build:</i> Repeat the toddler version above two times to build two block towers (as pictured above). 2. <i>Combine:</i> Count the total number of blocks all together in the two towers. 3. <i>Compare:</i> Figure out which tower has more blocks. 	This game has it all for preschoolers! Practice counting and set the foundation for addition by combining to find the total number of blocks used. When comparing, the goal in the year before kindergarten is for children to see that a number later in the counting sequence represents a larger quantity. For example, 6 is more than 3 because 6 comes later in the sequence.

Way to Play:	Way to Play:	Goal:
Kinder	<ol style="list-style-type: none"> 1. <i>Roll & Build:</i> Repeat the toddler version above two times to build two block towers. 2. <i>Combine:</i> Count the total number of blocks all together in the two towers <i>and represent with a written addition sentence.</i> ($3 + 6 = 9$) 3. <i>Compare:</i> Figure out which tower has more blocks and <i>figure out how many more blocks are in the larger tower.</i> <p>Differences between pre-K and K highlighted in blue</p>	<p>Represent addition with objects, verbal explanations, and equations. (Common Core K.OA.A.1)</p> <p>Compare two objects and describe the difference. (Common Core K.MD.A.2)</p>
1st Grade	<p><i>No blocks for 1st graders; just the dice and paper for writing.</i></p> <ol style="list-style-type: none"> 1. Roll the dice twice. The first roll is the number of tens and the second roll is the number of ones. (<i>For example: Roll 2 and then 3, then write the number 23</i>) 2. Repeat part 1 to get a second two-digit number. (<i>For example: Roll 5 and then 6 and write the number 56</i>) 3. Compare the two numbers by comparing the number of tens and then the number of ones. Use less than ($<$), greater than ($>$), or equal ($=$) to compare. 	<p>In 1st grade, students are comparing by reasoning about how many tens are in a number and how many ones. (<i>For example: 23 is 2 tens and 3 ones and 56 is 5 tens and 6 ones so $23 < 56$ because 50 is more than 20.</i>) A common strategy is to draw out pictures of base ten blocks and then compare tens and compare ones. (Common Core 1.NBT.B.3)</p>
2nd Grade	<p><i>No blocks for 2nd graders; just the dice and paper for writing.</i></p> <ol style="list-style-type: none"> 1. Roll the dice three times. The first roll is the number of hundreds, the second roll is the number of tens, and the third roll is the number of ones. (<i>For example: Roll 2, then 3, then 4. Write the number 234</i>) 2. Repeat part 1 to get a second number. 3. Compare the two numbers by comparing the number of hundreds, then tens and then ones, use less than ($<$), greater than ($>$), or equal ($=$) to compare. 	<p>In 2nd grade, students are comparing by reasoning the number of hundreds, then tens, then ones. <i>Example: $561 > 234$ because 561 has 5 hundreds which is 500 and 234 has 2 hundreds which is 200 and 500 is more than 200.</i> (Common Core 2.NBT.B.4)</p>

Subtract a Snack

Materials Needed:

1. Any snack with lots of little pieces (blueberries, goldfish, pretzels, raisins...)
2. Piece of paper and pencil (for older children to record)



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Put 5 pieces of the same type of snack on their plate. Count to 5 together, point to each piece, saying the number out loud as you count. 2. Then let your child eat one piece and say, "We just ate one piece. We had 5 and ate 1. Let's count to see how many we have now." Then count again (like step 1). 3. Say, "We had 5 and ate 1. Now there are only 4 left." 4. Repeat until there are 0 snacks left. 	<p>This activity helps your child build an understanding of basic counting principles. Each time you count the set of snacks, you're helping them learn one-to-one correspondence, the number sequence, and cardinality. They are also building the larger understanding that when we take things away, the quantity we started with gets smaller.</p>
Pre-K	<ol style="list-style-type: none"> 1. Play the toddler version above. 2. When your child is able to independently draw conclusions like, "I had 4 goldfish and I ate 1, now I have 3 goldfish," add a layer by starting with 5, have them eat 2 or 3, then figure out how many are left. 3. Keep playing with all kinds of combinations within 5. (For example: "I have 4 and eat 2," or "I have 3 and eat 3.") 4. As your child gains mastery, you can increase to a total of 10. 	<p>This activity is helping your child learn "one less." When they have 5 and take 1 away, they learn that 4 is one less than 5, 3 is one less than 4, and so on. As they begin to take away a variety of combinations, you are building a foundation for work with subtraction that happens in kindergarten.</p>

Way to Play:	Way to Play:	Goal:
Kinder	<ol style="list-style-type: none"> 1. Let your child count out 5 pieces of snack onto their plate (gradually move up to 10). 2. Pick a number for them to eat. 3. Child explains what they notice (<i>I had 5 goldfish and I ate 4. Now I have 1</i>). 4. Child records the written subtraction sentence to explain what just happened ($5 - 4 = 1$). 	<p>Represent subtraction with objects, acting out situations, verbal explanations, and equations. (<i>Common Core K.OA.A.1</i>)</p>
1st Grade	<ol style="list-style-type: none"> 1. Tell your child a subtraction sentence and let them write it on their paper and show it with their snack (<i>start within 10, for example $10 - 4 = ?$</i>). 2. After they find the answer, ask your child to write an addition sentence that describes the same scenario (<i>if $10 - 4 = 6$ is the subtraction, you'd want them to write either $4 + 6 = 10$ or $6 + 4 = 10$</i>). 3. Use the snack to show the 10 split into two parts of 4 and 6. 4. Encourage your child to explain to you how these two number sentences (addition and subtraction) relate. (<i>If I take 4 away from 10, I'm left with 6. If I put 4 and 6 back together, I get 10 again.</i>) 	<p>Model the inverse relationship between addition and subtraction. Children in 1st grade are working to solve subtraction such as $10 - 4 = ?$ by thinking of the inverse addition fact: $4 + ? = 10$. (<i>Common Core 1.OA.B.4 & 1.OA.C.6</i>)</p> <p>In order to do this with just the written fact, children need to first visualize this relationship by working with hands-on materials.</p>
2nd Grade	<ol style="list-style-type: none"> 1. Tell your child a subtraction problem within 20, such as $14 - 8 = \underline{\quad}$. 2. Let your child solve using mental math and explain how they knew. (<i>For example, "I know $14 - 7$ is 7 but I'm taking away 8 not 7, so I need to take away 1 more and I get 6" OR "8 is also 4 and 4, $14 - 4$ is 10 and $10 - 4$ is 6 so $14 - 8$ is 6."</i>) 3. After your child explains a mental math strategy, they can build the problem with their snacks to check to see if they're correct. 	<p>Fluently subtract within 20 using mental math strategies. (<i>Common Core 2.OA.B.2</i>)</p>

Keep on Counting

Seeing Patterns in the Number System

Materials Needed:

1. A set of small objects (toy cars or dolls, buttons, Cheerios, pencils, etc.) Quantity varies by age level
2. Printed 100 chart on the next page

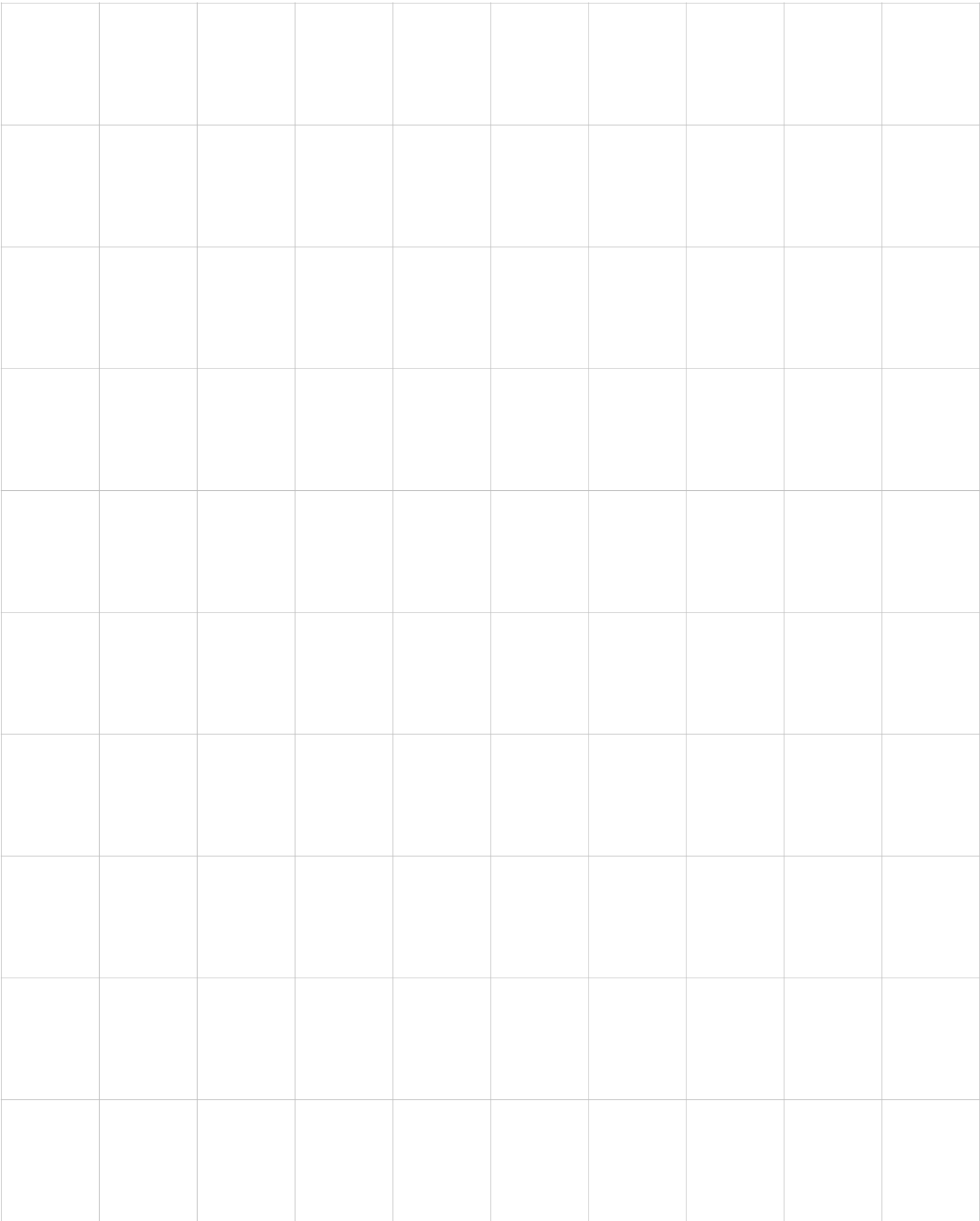
**No printer? Draw a 100 chart like the one on the next page using pen and paper.*



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Start with a small collection of 3 objects. 2. Point to each object as you count aloud with your toddler. 3. If your child is old enough to start reciting some numbers on their own, let them count the objects on their own. 4. When they are finished counting, ask, "How many did you count?" <p><i>Keep increasing the number of objects by just 1 or 2 more than they've already shown the ability to do independently.</i></p>	<p>You are exposing your child to three main ideas:</p> <ol style="list-style-type: none"> 1) The number sequence 2) One-to-one correspondence (each object goes with one number) 3) Cardinality (the last number counted tells the size of the group)
Pre-K	<ol style="list-style-type: none"> 1. Give your child a group of objects to count. Try to make the group slightly larger than what you know they can do independently. 2. As they count, place the objects on the 100 chart as they say each number. <p><i>Keep increasing the number of objects to just 1 or 2 more than they've already shown the ability to do independently.</i></p>	<p>The pre-K goals include the toddler ones above. In addition, by placing the objects on the 100 chart, your child is starting to see numbers organized into groups of 10 and the pattern of numbers repeating within each new 10.</p>

Age:	Way to Play:	Goal:
Kinder	<ol style="list-style-type: none"> 1. Give your child a group of 100 objects. As they count out loud, place each object on a number on the 100 chart. 2. When they're comfortable counting to 100 by 1s, use the red numbers at the end of each row to count by 10s to 100. 	<p>Count to 100 by 1s or by 10s. In order for children to understand <i>why</i> we can count by 10s, they need to see that what they're doing is simply counting <i>groups</i> of 10 at a time.</p> <p>(Common Core K.CC.A.1, K.CC.B.4a, K.CC.B.4c)</p>
1st Grade	<ol style="list-style-type: none"> 1. Give your child a group of 100 objects. 2. Tell them to count and place objects on the chart until they reach _____. (pick any number). 3. Then ask them how many they would have if they got 10 more (alternate with 10 less). 4. If they can do it mentally, ask them to explain their thinking. If they aren't ready to do it mentally, let them count out 10 more (or 10 less) on the 100 chart to find the answer. 	<p>Mentally figure out 10 more or 10 less than any number within 100. Children will learn the pattern that 10 more is the same ones digit and just up one 10 (<i>for example, 10 more than 58 would still have 8 ones and is one more ten so 68</i>) and 10 less is the same ones digit and just back one 10. Modeling it on a 100 chart is a great way to visualize this relationship.</p> <p>(Common Core 1.NBT.C.5)</p>
2nd Grade	<p>Make a 1,000 book with 10 pages of 100 on each.</p> <ol style="list-style-type: none"> 1. Print one copy of the 100 chart on the next page and 9 copies of the blank 100 chart on the following page. (<i>No printer? Your child can make their own with pencil and paper, drawing 10 rows of 10 on each page.</i>) 2. Let your child count by 5s and 10s on the 100 chart. 3. Then they complete the next 9 pages going all the way to 1,000, so page 2 starts with 101 and goes to 200, page 3 starts with 201 and goes to 300, and so on. <p><i>I suggest having the child only fill in the numbers when counting by 5s and 10s to 1,000 (ex: 105, 110, 115, 120...) because writing out every number by 1s to 1,000 is time consuming. If time/interest allows, they can complete all numbers by 1 after 5s and 10s.</i></p>	<p>Count within 1,000. Skip-count by 5s, 10s, and 100s.</p> <p>(Common Core 2.NBT.A.2)</p> <p>The patterns that exist within 100 repeat in each new hundred. So if I can skip-count 10, 20, 30, 40, 50, 60, 70, 80, 90, 100...then I can also skip-count 110, 120, 130, 140 and so on...</p>

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Money Math

Recognize & Count with Coins

Materials Needed:

1. As many coins as you can find in your house

**No coins? Cut out circles of paper and label some with 1¢ for pennies, 5¢ for nickels, 10¢ for dimes, and 25¢ for quarters (or relevant values for coins in your country if outside of the US).*



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Find two containers that can be sealed. Small plastic Tupperware, sippy cups, or sandwich bags work. 2. Fill one with coins and the other with a soft object such as cotton balls or pompoms. <i>(These objects are all choking hazards, so seal tightly and monitor closely in case a container opens during the activity.)</i> 3. Let your toddler shake each container. Talk about what is the same (both are filled with an object) and what is different (the objects are made of different materials so the sounds they make are different). Work with your toddler to describe the sounds they hear. 4. To extend, repeat with different materials and group materials by whether they make a loud sound or a quiet sound. <p><i>Coins are a choking hazard if swallowed. If your toddler is still putting things in their mouth, follow this version. If your child is not putting things in their mouths, you may choose to follow the Pre-K version under close adult supervision.</i></p>	This activity helps your toddler think about things that are the same and different and begin to form explanations about why things are the same or different. This sets a foundation for classifying objects in the pre-K years.
Pre-K	<ol style="list-style-type: none"> 1. Give your child a collection of coins and let them count how many total coins they have. 2. After they count, place one of each coin type in front of them. Ask them to sort the rest of the coins into the pile that matches. (Sort pennies with pennies, dimes with dimes, etc). 3. As they sort, talk with them about the different coin names to introduce the vocabulary. 	This activity supports your child's development of counting skills and provides practice sorting and classifying coins by type.

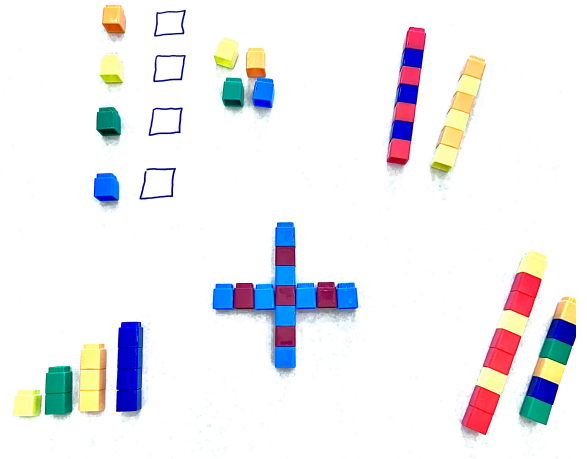
Age:	Way to Play:	Goal:
Kinder	<ul style="list-style-type: none"> If your kindergartener already knows coin names and can sort coins by type using the correct name, play the 1st grade version. If your kindergartener doesn't yet know coin names and cannot yet sort coins by type using the correct coin name, play the Pre-K version. 	<p><i>There is no standard in Common Core on money until 2nd grade, but exposure before 2nd grade will help make the 2nd grade money work easier for children.</i></p>
1st Grade	<ol style="list-style-type: none"> Give your child a collection of coins and have them sort the coins by type, using the correct coin name as they sort. Now talk with your child about how many cents each coin is worth and label the piles with the coin value. <i>(For example: Above the pile of nickels, write a post-it that says 5¢.)</i> Ask your child to count the value of each pile, skip-counting by the value of the coin. <i>(Count pennies by 1 since they're worth 1¢ each, count nickels by 5 since they're worth 5¢ each, and so on.)</i> If your child is ready for more, talk about ways to make equal amounts of money using different coins. <i>(For example, say, "I want 10¢ but I only have pennies. How many pennies will I need?" or "I want 10¢ but I only have nickels. How many nickels will I need?")</i> 	<p>Determine the value of a set of coins that are the same type.</p> <p><i>There is no standard in Common Core on money until 2nd grade, but exposure before 2nd grade will help make the 2nd grade money work easier for children.</i></p>
2nd Grade	<p><i>If your child needs more practice determining the value of a group of same-type coins (such as 5 nickels), start with the 1st grade version.</i></p> <ol style="list-style-type: none"> Give your child a set of coins, and let them count up the total value of the coins. <i>(Ex: 1 quarter and 1 dime is 25¢ and 10¢ more which is 35¢ all together)</i> Let your child count up the coin value in the way that feels easiest for them. If you notice a more efficient way <i>(such as grouping two nickels together to make a dime or 5 pennies together to make a nickel)</i> you can say, "That's a great way to count. I saw it a different way. Here's how I counted." When your child is ready, you can begin introducing dollar bills. 	<p>Determine the value of a mixed set of currency (different types of coins and dollar bills).</p> <p><i>(Common Core 2.MD.C.8)</i></p>

Pattern Practice

Exploring Repeated Reasoning

Materials Needed:

1. A set of different colored toys or art supplies (like snap cubes (pictured), counting bears, dot stickers, markers, or dot paints)



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Set out objects that are different colors (such as a red bear, a yellow bear, and a blue bear), then ask your child to find the other items in your group that are the same color. (See top left of the picture above.) 2. You could also 1) draw circles using different colored markers, then 2) let your child put the toys in the circle of the same color 	Before your child can complete a color pattern, they must first learn to recognize when things are the same and when they are different.
Pre-K	<ol style="list-style-type: none"> 1. Begin a color pattern for your child (using toys or drawing colored dots). <i>Possible Pattern Types</i> (top right and bottom right above): <ul style="list-style-type: none"> • AB (red, blue, red, blue, red, blue...) • ABB (red, blue, blue, red, blue, blue...) • ABC (red, blue, yellow, red, blue, yellow...) 2. Give your child a set of objects or markers of the same color as the pattern. Then ask them to complete what comes next. <p><i>If your child is ready for a harder challenge, you can try 1) including objects they won't need for their pattern as a distractor or 2) placing an error in the pattern for them to fix.</i></p>	When your child is in school, they will learn to see repeated patterns in numbers (such as seeing that 4, 8, 12, 16, 20 is a pattern of adding 4 each time). Working with color patterns in the Pre-K years, helps build the foundation.

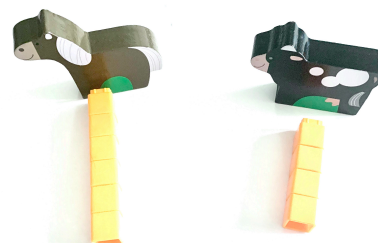
Age:	Way to Play:	Goal:
Kinder	<p>Kindergarten is a great age to extend color patterns and also move to number patterns.</p> <ol style="list-style-type: none"> 1. <i>Color Pattern:</i> Try a color pattern that extends in all 4 directions like the one in the middle of the picture above. You can also use this opportunity to introduce new vocabulary: North, South, East, and West. 2. <i>Number Pattern:</i> Build or draw a set of 3. Make the next set 4 and the next 5. Let your child figure out that the sets are growing by 1, then have them complete the pattern by building the next few sets (6, 7, 8...). Repeat with a new starting number and still increase by 1. 3. <i>Written Number Pattern:</i> Pick a number your child can count to and write it and the next few numbers. Let your child write the following numbers or even some numbers in between. (For example: 14, 15, 16, ____, ____, ____ or 31, 32, ____, 34, 35, ____, ____, ____) 	<p>Count forward by 1 starting at a number other than 1. (Common Core K.CC.A.2)</p>
1st Grade	<ol style="list-style-type: none"> 1. <i>Number Pattern:</i> Build or draw a set of 2. Make the next set 4 and the next 6. Let your child figure out that the sets are growing by 2 and complete the pattern by drawing the next few sets (8, 10, 12...). Repeat with 5 and 10. 2. <i>Written Number Pattern:</i> Repeat the process above, but now use written numbers instead of blocks or dots. Change up the number you start with and whether it's counting by 2s, 5s or 10s (For example: 4, 6, 8, ____, ____, ____ or 5, 10, ____, 20, 25, ____, ____, ____) <p><i>To make written number patterns more hands-on, you can write the patterns on post-its and put up on a wall.</i></p>	<p><i>There is no skip-counting in Common Core until 2nd grade. However, in 2nd grade it is all the way to 1,000. This is a big jump if a child hasn't done any skip-counting. You can use number patterns as a way to practice skip counting by 2s, 5s, and 10s in 1st grade with smaller numbers.</i></p>
2nd Grade	<p><i>If your child has not yet started to skip-count by 2s, 5s and 10s, do the 1st grade version first.</i></p> <ol style="list-style-type: none"> 1. Write out a pattern of numbers that is increasing by 5s, 10s, or 100s. Mix up location of empty spaces. (For example: 10, 20, ____, 40, 50, ____, 70, ____, ____ or 115, 120, 125, ____, ____, 140, ____, ____) 2. You can increase the challenge by making the numbers even bigger (such as 410, 420, 430...) or skip-counting by different numbers like 3 or 4, which will help build a foundation for multiplication in 3rd grade. <p><i>To make written number patterns more hands-on, you can write the patterns on post-its and put up on a wall.</i></p>	<p>Skip-count by 5s, 10s, and 100s to 1,000. (Common Core 2.NBT.A.2)</p>

Toy Stories

Bringing Word Problems to Life

Materials Needed:

1. Your child's favorite toy characters
2. Large set of ~50-100 counters such as snap cubes, counting bears, buttons, or a snack food (*For K, 1st and 2nd only*)
3. Pencil and paper (*For K, 1st, and 2nd*)



Age:	Way to Play:	Goal:
Toddler	<p>Using your child's favorite toys, act out a story in which toys are joined or separated.</p> <p>Examples:</p> <ul style="list-style-type: none"> • <u>Join with unknown result:</u> "Thomas the Tank Engine and his friend Percy are driving along the tracks." (<i>Pause and put the two trains on the track and count 1 train, 2 trains</i>). "Their friend, James, comes to drive with them." (<i>Pause to put James on the track.</i>) "How many trains are on the tracks now?" (<i>If your child is counting independently, let them answer. If not, you can show them how you know by counting all three trains: 1, 2, 3 trains now!</i>) • <u>Separate with unknown result:</u> (<i>Think: the reverse of joining.</i>) "Thomas, Percy, and James are driving on the tracks. James goes into the shed to rest. How many trains are still driving on the tracks?" <p><i>Start with problems with a total of only 3, then move up to totals of 4 and 5 as your child gets more comfortable.</i></p>	<p>When our children start school, they'll be asked to solve real-world problems using addition and subtraction. In the years before kindergarten, you can build a foundation for real-world math problems by counting to solve story problems that relate to their interests.</p>
Pre-K	<ul style="list-style-type: none"> • Follow the toddler version above, but let your child solve rather than you acting it out. (<i>If they get stuck, you can act it out together.</i>) • Start with problems with a total of 5 or less, then move up to 10 as your child gets more comfortable. • You can also add in grouping problems in which they find the total of two types in a group. (<i>For example: "I have 4 red M&Ms and 3 yellow M&Ms. How many M&Ms do I have all together?"</i>) 	

Age:	Way to Play:	Goal:
Kinder	<p>1. Let your child pick two of their favorite character toys. Create one of the following story types about the toys and let your child use snap cubes, counting bears, base ten blocks, or even Cheerios to act out the story about their toys (as pictured above).</p> <p>Examples:</p> <ul style="list-style-type: none"> • <u>Join with unknown result:</u> You have one set. Another set is joined to the original. How many do you have now? (Ex: "My horse has 6 orange slices. Her friend, the cow, gives her 4 more orange slices. How many orange slices does my horse have now?") • <u>Separate with unknown result:</u> (Think: the reverse of joining.) You have a set. Some of the set goes away. How many are left in the original set? (Ex: "My horse has 10 orange slices. She gives 4 orange slices to her friend, the cow. How many orange slices does the horse have left?") • <u>Grouping with unknown whole:</u> (Think: two parts of the same whole) I have a group of things. One part is this and the other part is that. How many are in my group all together? (Ex: "I have 4 red M&Ms and 3 yellow M&Ms. How many M&Ms do I have all together?") <p>2. When your child is solving these problems easily, let them start recording a written number sentence that matches such as 6 orange slices and 4 orange slices is $6 + 4 = 10$</p> <p>Click here for a worksheet from www.commoncoresheets.com that has great example problems. You can modify the story so your child can act them out with toys.</p>	<p>Use addition and subtraction to solve word problems within 10. Children solve using objects, drawings and equations. (Common Core K.OA.A.2)</p>
1st Grade	<p>Follow the kindergarten version, but make the total of the problems go up to 20 (rather than only 10 in kindergarten).</p> <ul style="list-style-type: none"> • When your child is ready for more, change where the missing number is. For example, instead of having 6 orange slices and 4 more orange slices and asking your child to find the total, make the start or change unknown. (Ex of start unknown: "My horse has some orange slices. [start] Her friend, the cow, gives her 4 more orange slices. [change] Now my horse has 10 orange slices. [result/total] How many orange slices did she start with?") <p>Click here for a worksheet from www.commoncoresheets.com that has great example problems. You can modify the story so your child can act them out with toys.</p>	<p>Use addition and subtraction within 20 to solve word problems. The unknown is in all positions. Children solve using objects, drawings, and equations. (Common Core 1.OA.A.1)</p>

Age:	Way to Play:	Goal:
2nd Grade	<p>Follow the kindergarten version, but make the total of the problems go up to 100 (rather than only 10 in kindergarten). By this age, many children are using written (pencil and paper) strategies to solve rather than acting out the whole story with objects. Making the story about their toys is still a fun way to connect to their interests.</p> <ul style="list-style-type: none"> • When your child is ready for more, change where the missing number is. For example, instead of having 26 orange slices and 14 more orange slices and asking your child to find the total, make the start or change unknown: (Ex of start unknown: "My horse has some orange slices. [start] Her friend, the cow, gives her 14 more orange slices. [change] Now my horse has 40 orange slices. [result/total] How many orange slices did she start with?") <p><u>Click here for a worksheet from www.commoncoresheets.com that has great example problems.</u> You can modify the story so your child can act them out with toys.</p> <ul style="list-style-type: none"> • When they're ready for even more, you can add in two-step word problems like the ones in the example below: <u>Click here for a worksheet from www.commoncoresheets.com that has great example problems.</u> You can modify the story so your child can act them out with toys. 	<p>Use addition and subtraction within 100 to solve word problems. The unknown is in all positions. Children solving using drawings and equations. (Common Core 2.OA.A.1)</p>

**Important note: In 1st and 2nd grades, children are also using addition and subtraction to solve problems in which they compare two sets of objects. (Ex: "I have 14 M&Ms and you have 10 M&Ms. How many more M&Ms do I have?") If you're looking for more, these are great stories to add in with toys too.*

Shapes

Scavenger Hunt

Shapes Are All Around Us



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> Pick one shape, such as a circle or a square, and let your house look for other things that are the same shape. 	Match shapes. Recognize whether two objects are the same or different shapes.
Pre-K	<ol style="list-style-type: none"> Draw the following four types of shapes on paper: square, triangle, rectangle, and circle. Let your child search around the house for objects (books, toys, kitchen supplies, etc) that look like one of those four shapes and sort them into the correct pile. <p><i>Note: They may find objects that are really 3D objects and call them a 2D object, such as calling a cube block a square. It's OK to sort it as a square for now and say, "That's great. This block is made up of lots of squares." They'll learn to be more specific about 3D vs. 2D in kindergarten.</i></p>	Sort basic two-dimensional shapes by type. Find real-world examples of shapes.
Kinder	<p>Follow the pre-K version and add in these 3D shapes: cubes, cones, spheres, and cylinders.</p> <p><i>Note: In many kinder curricula, 3D shapes are referred to as solid shapes and 2D shapes are referred to as flat shapes.</i></p>	Find objects in the environment and describe their shape. (Common Core K.G.A.1)
1st Grade	<p>Follow the kinder version above and, afterwards, talk about what defines that type of shape:</p> <p><i>For example: all triangles in our group have 3 sides and 3 angles, but they're all different colors and sizes. So all triangles have to have 3 sides and 3 angles, but they can be different colors/sizes.</i></p>	Determine the attributes that define a type of shape (ex: number of sides) vs. attributes that don't define a shape (ex: color). (Common Core 1.G.A.1)
2nd Grade	<p><i>A 2nd grader would benefit from the 1st grade version too. If the 1st grade version seems too easy, go here next:</i></p> <p>Collect objects around the house and sort by number of sides/number of angles (3 sides/angles [triangles], 4 sides/angles [quadrilaterals], 5 sides/angles [pentagon] and 6 sides/angles [hexagon])</p>	Recognize shapes having given number of sides and angles. (Common Core 2.G.A.1)

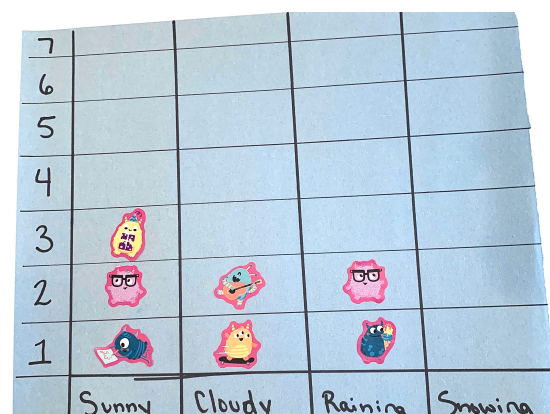
Weather Graphs

Collecting Data about Real Life

Materials Needed:

1. Piece of paper and a marker to make graph shown in picture
2. Stickers

**No stickers? Color a picture (like a star, heart, flower, etc) instead.*



Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Each day, look outside with your toddler and talk about what type of weather you see. 2. Put a sticker in that column of the graph. 3. Each day, practice counting the number of days of each type of weather. 	Through this activity, your child is learning to observe their surroundings and record what they see. They're also continuing to build counting skills.
Pre-K	Follow the toddler version, then add in finding the total number of days shown on the graph by asking, "How many total days are shown on the graph?"	In addition to the toddler goals, your child is learning to see that smaller quantities (parts) can be put together to form larger quantities (wholes).
Kinder	Use the toddler and Pre-K versions, then add in simple comparison questions about the graph: <ol style="list-style-type: none"> 1. Which type of weather have we had the most? 2. Which type of weather have we had the least? 	In addition to the above goals, your child is learning to see that a taller column of data means we have more and a smaller column of data means we have less. <i>(Common Core K.MD.A.2)</i>

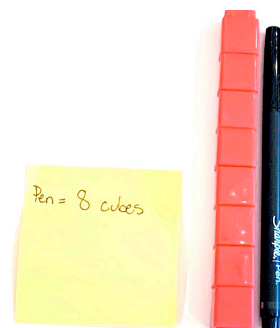
Age:	Way to Play:	Goal:
1st Grade	<p>Follow all steps and questions in the three versions above. Then ask them to find how many more or how many less are in one category than the other.</p> <p><i>Examples:</i></p> <ol style="list-style-type: none"> 1. How many more sunny days have we had than cloudy days? 2. How many fewer days of snow have we had than days of rain? <p><i>Work with your 1st grader to help them make the graph themselves.</i></p>	<p>Organize and analyze data about how many total data points, how many in each category, and how many more/less in a category. (Common Core 1.MD.C.4)</p>
2nd Grade	<p>Follow all steps and questions in the versions above. Then ask them two-step questions about how many more or how many less are in one category than the other.</p> <p><i>Examples:</i></p> <ol style="list-style-type: none"> 1. How many more sunny and cloudy days have we had than rainy days? 2. Have we had more days of rain and clouds or days of sun? How many more? <p><i>Work with your 2nd grader to help them make the graph themselves.</i></p>	<p>Draw a picture graph and solve simple word problems about the data. (Common Core 2.MD.D.10)</p>

Measure around the House

Measuring & Comparing Lengths

Materials Needed:

1. For K: Straw, pen, marker or stick
2. For 1st: Any set of objects that are all the same size, such as snap cubes, counting bears, paper clips, or Cheerios
3. For 2nd: Ruler or tape measurer



**No ruler or tape measurer? Skip the 2nd grade version and do the 1st grade. It's aligned to 2nd grade Common Core as well.*

Age:	Way to Play:	Goal:
Toddler	<ol style="list-style-type: none"> 1. Search around the house for favorite stuffed animals or other favorite toys. 2. Sort the toys into a group of big toys and a group of small toys. <p><i>Try to make the toys very obviously fit into one of the two categories—either very big or very small.</i></p>	Sort objects by size.
Pre-K	<ol style="list-style-type: none"> 1. Search around the house for favorite stuffed animals or other favorite toys. 2. Line up animals side-by-side (<i>make sure the bottom of the toys are at the same spot so you can accurately compare size</i>) and arrange them in a line from the shortest to the longest. 	Compare lengths of objects and organize by length.
Kinder	<ol style="list-style-type: none"> 1. Give your child a pen, straw, marker, or stick. Let them go around the house comparing the length of different objects with their “measuring tool.” 2. Make sure they line up the ends of their tool and the object so that they can accurately compare. 3. Describe the objects they measure as longer, shorter, or the same as my pen (or whatever tool they use). 4. Sort the objects into three categories with the same descriptions as above: longer than pen, shorter than pen, same length as pen. 5. Count how many objects are in each category. <p><i>The pre-K version above is also good practice for a kindergarten student.</i></p>	Compare measurable attributes of objects and sort them into categories. <i>(Common Core K.MD.A.2 & K.MD.B.3)</i>

Age:	Way to Play:	Goal:
1st Grade	<ol style="list-style-type: none"> 1. Let your child collect 10 or so small-to-medium size toys or objects around the house (<i>toy cars, action figures, small dolls, pens, etc</i>). 2. Measure each object with their repeating unit (repeating unit can be blocks, counting bears, paper clips, Cheerios...), and record the weight on their paper (<i>as shown in the picture above</i>). 3. Make sure your child includes the units of measurement. If a pen measures 5 paper clips long, they should write “5 paper clips,” not simply “5.” <p><i>Before children learn to measure with standard units like inches or centimeters, it helps to practice with non-standard units of measurement. This helps build a hands-on understanding that measuring an object’s length simply means counting how many units it takes to equal the length of that object.</i></p>	<p>Use a smaller, repeating object (a length unit) to measure a larger object. (Common Core 1.MD.A.2)</p>
2nd Grade	<p>Follow the 1st grade version above, but instead use a ruler or tape measurer to measure and record the lengths of objects.</p> <p><i>If your child has never used a ruler, try the 1st grade version first to solidify their concrete understanding of what it means to measure length. Then work with them to understand how to use a ruler.</i></p> <p>For more, let them measure an object using both inches and centimeters and then compare the lengths. Ask them to think about why each object measures a greater number of centimeters than inches. This will help them discover that when we use a smaller unit of measurement (like centimeters), we need a greater number of copies of the unit to fully measure the object than we do when we use a larger unit of measurement (like inches).</p>	<p>Measure the length of an object using a standard measuring tool, such as ruler, yardstick, meter stick, or measuring tape. (Common Core 2.MD.A.1)</p>

**Note: In 1st and 2nd grades, it is OK for children to approximate the length of the object to the nearest whole number unit. Students studying under Common Core will learn to round to nearest 1/2 and 1/4 of an inch in 3rd grade.*

You can help them understand that they are rounding by saying, “It looks like it’s a little less than 8 cubes. We’ll pick the one it’s closest to which is 8 cubes.”