



GETTING READY FOR GRADE 1! MATH



This year in Kindergarten mathematics learning was focused on the following areas:

- Using numbers to represent quantity and solve problems.
- Describing their physical world using geometric ideas and vocabulary.

Next year in Grade 1 your child will continue to develop their mathematic skills by:

- Developing an understanding of addition and subtraction
- Developing an understanding of place value
- Developing an understanding of measurement
- Creating and deconstructing geometric shapes

The following choice boards provide a sample of activities that your child might choose to do over the summer to reinforce and review concepts, begin to bridge new concepts for the following year, and keep their mathematical curiosity alive. Engagement in mathematics leads to more academic success, so giving students voice over how they do the work and choice over what work they do is crucial.

The choice boards are grouped by topic based on the reporting domains—Operations and Algebraic Thinking, Numbers and Operations in Base 10, Numbers and Operations with Fractions, Measurement and Data, Geometry, and Mathematical Practices. Have a conversation with your child about what areas they are interested in, what activities they would like to engage in, and what areas they would like to grow as a mathematician. Students are encouraged to revisit any activities they are interested in.

Try the tasks together and have fun thinking and working together.

- Remember every child can be a strong mathematician.
- Encourage your child to stick with a task even if it seems challenging.
- Listen carefully to how your child is thinking about math.
- If you see signs of frustration, leave the problem and return to it with fresh perspective later

Ask:

If your child is stuck and unsure how to begin...	While your child is working....	When your child has completed the problem and reflecting on the answer...
<ul style="list-style-type: none"> -What do you know? -What do you need to find out? -How might you begin? -What should you do first? 	<ul style="list-style-type: none"> -How can you organize your information? -Can you make a drawing to explain your thinking? -What do you need to do next? -Do you see any patterns? -Does this remind you of any other problems you've done? 	<ul style="list-style-type: none"> -Is your solution reasonable? -Can you convince me that your solution makes sense? What did you try that didn't work? -How do you know that your answer makes sense? -Do you think there is more than one answer? How could we find out?

Counting and Cardinality: Knowing number names, counting objects, comparing numbers

Numbers in Base 10: Tens and Ones

Count the number of shoes YOU have. Count how many shoes another family member has. Who has more shoes? How do you know?	Count how many star jumps/ jumping jacks you can do in 1 minute. Is it more or less than 20? How do you know?	Write all the numbers in order that you can. Next to each number draw something (suns, hearts, flowers, triangles) that represents that number. What patterns do you notice?
Learn to count forwards and backwards to 20 in a language you do NOT know. What patterns do you hear when you say the words?	Grab a handful of objects (socks, paper clips, markers, plates) without counting. Estimate how many there are. Were you close? How do you know?	Count the number of people in your house. How many toes do you have altogether? How many fingers? How do you know?
Walk around your entire house. How many steps does it take? Now walk with baby steps. Which used more steps? Why? Make sure you start and stop in the same spot!	Read a counting book on Epic or Youku. Then create your own!	Walk around your entire house. How many steps does it take? Now walk with giant steps. Which used more steps? Why? Make sure you start and stop in the same spot!

Operations and Algebraic Thinking: Addition and subtraction

Write your full name, and the full name of two other people in your family. How many letters/characters are there total? How did you figure it out?	Hop on your right foot and count how many hops you can do until you put your foot down. Hop on your left foot and count how many hops you can do until you put your foot down. How many more hops did you do on one side than the other. How do you know?	Create your own addition and subtraction pictures. Ask your family to write down the number sentences that would match.
20 is the answer. What are five different addition sentences that you could write?	7 is the answer. What are five different subtraction sentences that you could write?	Collect 20 objects. Have a family member hide some of them behind their back. How many did they take? How do you know?
Create a math number monster! Choose a number and show different ways it could have this number. (For example if my number is 13 it could have 1 long hair and 12 short hairs, 2 left ears and 11 right ears, 3 red eyes and 10 blue eyes...). Write the number sentences that match.	Go on a number hunt. Name 5 different places you see numbers outside/in your house. Draw a picture of the places and say the numbers.	Set the table for dinner! Count how many plates, utensils, bowls, napkins you put out. Draw a picture of the table. How many total items are on the table altogether? How did you figure it out?

Measurement and Data: Describe and sort objects

Go on a walk outside and collect more than 20 small items (rocks, sticks, leaves, flowers). What are all the different ways you could sort them? By color? Shape? Size? Other ideas?	Ask your family a question and collect information (For example: "Do you like lions or sharks better?"). Record everyone's answers and show the information in some way. What do you notice?	Pick a room in your house. How long is it? Measure it at least two different ways (using blocks, markers, paper clips, rulers, your feet). Which measuring tool gave you the biggest number? Which measuring tool gave you the smallest number? Why?
Keep track of the weather for a week. Show the information in some way. What do you notice?	Collect more than 20 items from your kitchen (bowls, chopsticks, cups, food items). What are all the different ways you could sort them? By color? Shape? Size? Other ideas?	Go around your house and count all the windows. Then count all the doors. Then count all the tables. Show your information in some way. What do you notice?
Write 5 different questions you could ask your family to find out information about them. (For example, do you like chocolate or vanilla ice cream better?, Do you like dogs or cats better?)	Find an object in your house. Is it big or small? Heavy or light? Tall or short? What are other ways you could describe the shape?	Collect more than 20 items from your bedroom (socks, markers, books, pillows). What are all the different ways you could sort them? By color? Shape? Size? Other ideas?

Geometry: Identify, compare, and describe shapes

Build something with 20 blocks/Legos. Describe your structure and the shapes you used. Draw a picture of your structure.	Make a picture using exactly 4 triangles, 5 squares, 3 rectangles, and 7 circles. What did you draw?	Draw and label a picture of your family from tallest to shortest (don't forget pets!).
What are all the things in your bedroom that are circles? Draw them. What are all the things in your bedroom that are squares? Draw them.	Find a 3D shape in your room (like your bed) and transform it into a new shape. Draw a picture of it and describe it.	Gather five stuffed animals. What are all the different ways you can position them? Describe them using the words next to, beside, in front of, on top of, below, above, and behind.
Go on a shape walk. Try to find a very small square, circle, triangle, and rectangle. Then find a very large square, circle, triangle, and rectangle.	Build a structure out of 3D materials in your house (tissue boxes, cereal boxes, water bottles). What did you make and what shapes did you use?	What are all the things you see out the window that are rectangles? Draw them.

Mathematical Practices: Problem Solving, Modeling, Communicating Reasoning

<p>Gather two different items in your house. Name 3 ways that they are the same and 3 ways that they are different.</p>	<p>Create your own 'Which one doesn't belong'. Gather 4 different objects in your house. Find a way that 1 item does not belong to the rest (For example, the cookie does not belong because it is round and the other objects are square). Create a reason for each item.</p>	<p>Draw or take a picture of a building. What are all the different math questions you could ask? Ask another family member to think of 3 questions.</p>
<p>Draw a picture of yourself as a strong mathematician. Label what tools you need and write what you would do.</p>	<p>Create a schedule for your day. Write down the times for each activity.</p>	<p>Create your own number cards and number game. Write down the rules. Teach it to your parents or family member.</p>
<p>Create a number poster of important numbers in your life (your age, number of people in your family, your house numbers). Be sure to label what each number is!</p>	<p>Create a family workout based around a certain number up to 20. Have your family do the exercises with you. For example if the number is 11 you could do 11 jumping jacks, 11 push ups, run for 11 seconds...)</p>	<p>Create activities for your family to do all based around a number. (For example if you choose 20 you might choose to have everyone read for 20 minutes, play outside for 20 minutes, eat 20 bites of food...)</p>