# GETTING READY FOR GRADE 2!
# MATH

This year in Grade 1 mathematics learning was focused on the following areas:
- Developing an understanding of addition and subtraction
- Developing an understanding of place value
- Developing an understanding of measurement
- Creating and deconstructing geometric shapes

Next year in Grade 2 your child will continue to develop their mathematic skills by:
- Write, add, and subtract numbers up to 1,000
- Use standard units to measure
- Describe and analyze 2D shapes

The following choice boards provide a sample of activities that you might do with your child 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— Numbers and Operations in Base 10, Operations and Algebraic Thinking, 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... |
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| -What do you know?<br><br>-What do you need to find out?<br><br>-How might you begin?<br><br>-What should you do first? | -How can you organize your information?<br><br>-Can you make a drawing to explain your thinking?<br><br>-What do you need to do next?<br><br>-Do you see any patterns?<br><br>-Does this remind you of any other problems you've done? | -Is your solution reasonable?<br><br>-Can you convince me that your solution makes sense? What did you try that didn't work?<br><br>-How do you know that your answer makes sense?<br><br>-Do you think there is more than one answer? How could we find out? |

## Numbers in Base 10: Tens and Ones

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| Jump rope and count by 10s to 100, 5s to 100, and 2s to 100. Try counting backwards, too! If you don't have a jump rope, just hop or jump. | Count how many star jumps/ jumping jacks you can do in 1 minute. Is it more or less than 50? 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 by 10s in a language you do NOT know. What patterns do you hear when you say the words? | Grab as many objects as you can in 1 minute (socks, paper clips, markers, plates) without counting. Estimate how many there are. Were you close? How do you know? | Hold an ice cube in your hand. If it's too cold lay it on the sidewalk or a plate. Count by 2's until it melts. Did you count to more or less than 100? Why did it melt? |
| 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 number 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

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| Write your full name, and the full name of everyone 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. |
| 50 is the answer. What are five different addition sentences that you could write? | 75 is the answer. What are five different subtraction sentences that you could write? | Roll two, three, or four dice. Practice addition and subtraction by adding or subtracting the two numbers. |
| Ask 5 people their phone numbers. Add the digits of each phone number together. Whose phone number has the highest value? | 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. | Start at your front door and walk to the stove. Record how many steps it took. Start at your front door and walk to the bathroom and record how many steps it took. Which took more? How much more? (Try again with giant steps) ` |

| Measurement and Data: Measure objects, time, organize data | | |
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| 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? | Find the smallest thing in your bedroom. How long is it? How did you measure it? Find the biggest thing in your bedroom. How long is it? How did you measure it? | 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? |
| Have everyone in your family bring their favorite item. Estimate the lengths of each item. Then measure the items. Were you close? How do you know? | 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? | Draw and label a picture of your family from tallest to shortest (don't forget pets!). Measure each family member and label your picture. |
| Jump 3 times: once like a bunny, once like a frog, and once like a child. Measure each jump. Which was the longest? Shortest? What is the difference? | Create a schedule for your family by writing down times and activities. | Sort the laundry into categories (owner, color, item type (pants/shirt). Make a bar graph and compare the categories. If by owner: Who has more clothes? Who has less? If by color: Who has more ___ colored clothes? etc. Record your graph. |

| Geometry: Describe shapes and attributes | | |
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| Build something with 20 blocks/Legos. Describe your structure and the shapes you used. Draw a picture of your structure. | Draw a shape picture by divide an entire piece of paper into squares, triangles, rectangles, trapezoids, circles, half-circles. Give your artwork a title. | Find 'almost' shapes. Find things that are 'almost' a triangle, square, rectangle, circle but are not. Describe why they are NOT that shape. |
| 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 3-Dimensional shape in your room (like your bed) and transform it into a new shape. Draw a picture of it and describe it. | Some 3D shapes are cylinders, cubes, spheres, cones, and pyramids. Use play-dough, dirt, sticks, paper, etc. to make one or more of the shapes. Write about what you did. |
| Go on a Shape Hunt around your home. Look for items shaped like a square, rectangle, and a triangle. Draw and label the items. These are all 2D shapes. Do you remember any 3D shapes? Hint: a cylinder is one but there are more! | Build a structure out of 3-Dimensional 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. How do you know they are rectangles? |

| Mathematical Practices: Problem Solving, Modeling, Communicating Reasoning | | |
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| Gather two different items in your house. Name 3 ways that they are the same and 3 ways that they are different. | 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. | 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. |
| Draw a picture of yourself as a strong mathematician. Label what tools you need and write what you would do. | Write "Would you rather...?" number questions. For example "Would you rather have 13 large scoops of ice cream or 23 small scoops of ice cream? Why?" or "Would you rather have 10 minutes of free time at 9:00 and 15 minutes of free time at 10:00 OR 30 minutes of free time at 11:00? Why?" | Create your own number cards and number game. Write down the rules. Teach it to your parents or family member. |
| 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! | Create a family workout based around a certain number up to 50. Have your family do the exercises with you. For example if the number is 37 you could do 37 jumping jacks, 37 push ups, run for 37 seconds...) | 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...) |