

**SD38 Transitional Learning**  
**K-7 Mathematics**  
**Small Group Zoom Meeting Ideas**

compiled by Janice Novakowski

February 2021

This document contains a collection of ideas for interactive math mini-lessons using video-conferencing. During the 2020-2021 school year, over 4000 elementary students in the Richmond School District were part of our Transitional Learning program, learning from home. They were provided with a district weekly math plan and a weekly live math webinar based on their grade level learning standards. In addition to these supports, their school-based teachers had regular Zoom meetings with them in small groups. As part of the weekly teacher support document for math, suggestions for small group Zoom math lessons were provided, along with Indicators of Proficiency for the learning standards addressed each week.

These small group math ideas can be used on any video conferencing format but reference Zoom features specifically as that is what we used this year.

When engaging with students online, teachers can observe and listen, ask questions and “interview” students as they explain their thinking. Make assessment notes on a class list as you listen and observe what students are able to do.

As we move forward with Transitional Learning as of February 1 2021, there will be less check-ins with students with school-based teachers so the weekly Zoom suggestions are no longer being included in the weekly teacher support document, but are compiled here for reference.

Janice Novakowski  
February 2021

# NUMBER CONCEPTS

## Primary

**Representing numbers** – Choose a number that is within the range that most of your students are working with. For example, for a K&1 grouping, choose 9 or 10 and for a grades 2&3 grouping choose 47 or 125. You could use the whiteboard function on Zoom or an actual whiteboard or piece of chart paper and record their ideas on how they could represent that number. Ideas include tallies, tens and ones blocks, ten frames, coins, words, etc

**Counting collections** – Shows students a collection of objects (bread tags, gems, rocks, cubes) and ask them to suggest different ways to count the collection. Count the collection in different ways together, inviting students to unmute their microphones to join in. Move your laptop web camera down towards the table where students can see the collection and how it is being counted or use a separate device like your iPhone or iPad and use that by choosing “share screen” on Zoom and then choosing that device and using its camera. You could also draw a collection on a whiteboard and count by circling in groups or adding a dot to each item to show that it has been counted.

**Count Around the Circle or Choral Counting** – Have students unmute their microphones on and have them join you in orally counting by 1's, 2's 5's, 10's etc from different starting places and forwards and backwards.

## Intermediate

**Decomposing numbers** – Choose numbers relevant to the grouping of students you are working with, ranging from decimal numbers to numbers in the millions. Invite students to enter ways to decompose that quantity by entering equations in the Chat box (you can save the text of the Chat box to have a record). You could also choose “share screen” and choose the whiteboard and invite students to annotate their ideas directly on the shared whiteboard, which allows for them to do diagrams and pictures as well. I like to assign each student a specific colour to use so I can keep track of their posts. Save the whiteboard or take a screenshot to have a record.

**Count Around the Circle or Choral Counting** – Have students turn their microphones on and have them join you in orally counting with different multiples such 3's, 4's, 5's, 8's, 12's etc from different starting places and forwards and backwards.

# NUMBER CONCEPTS

## Primary

**Ordering numbers** – Have students cut out twelve squares or rectangles from a piece of paper, demonstrating how to do this on Zoom. Demonstrate how to write a number on each card. Choose a number range depending on your group (ie. K- 1-10, grade 1 9-21, grade 2 29-41, grade 3, 219-231). Ask them to put the cards in order from least to greatest. Older students could also write the numbers out. Then try greatest to least. Then try just choosing four or five numbers to put in order. Make it playful and read the numbers aloud together.

**Comparing numbers** – On index cards, write a collection of numbers. For K&1 students, you can use drawings, such as groups of dots with different amounts on each card. Hold up to two cards and ask students to compare. Which is more? Hold up one card and ask them if this one is more than the other. Students can use the thumbs up on Zoom to indicate if the number you are holding up is more than the other number. Or they could type the “more than” number in the chat.

**Count Around the Circle or Choral Counting** – Have students unmute their microphones on and have them join you in orally counting by 1's, 2's 5's, 10's etc from different starting places and forwards and backwards.

## Intermediate

**Comparing numbers** – Have students in your small group session use two small pieces of paper or index card and write the greater than and less than symbols on a card. Using a real whiteboard or the Zoom whiteboard, write two numbers side by side, with a space in-between, and ask students to hold up symbol they would place in the middle to compare the two numbers. Depending on the experience of your students, compare large numbers, fractions or decimal numbers.

**Clothesline** – Using the whiteboard on Zoom, draw a clothesline (open numberline) and assign each student in your group a number and have them annotate/write it on the whiteboard and then unmute their microphone and explain their reasoning.

# NUMBER CONCEPTS

## Intermediate

**Grades 4&5:** Use virtual visuals/manipulatives such as Unifix cubes, ten frames (for tenths) or pattern blocks to represent a fraction and have students record that fraction pictorially and symbolically. Ask them to consider what an equivalent fraction would be. Can they translate their fraction to a decimal number? Didax has the many virtual manipulatives that you can use on your laptop and “share screen” to use with your students:

<https://www.didax.com/math/virtual-manipulatives.html>

**Grades 6&7:** Students will likely need many demonstration of using two-sided counters and numberlines to practice adding and subtracting integer numbers. This is one of the more complex concepts at grade 7. At this beginning stage, avoid teaching students “tricks”- we want them to generalize what happens with their own experiences. Didax has virtual manipulatives for two-sided/colour counters which you can use to model the process with your students:

<https://www.didax.com/math/virtual-manipulatives.html> Encourage students to make their own two-sided counters out of paper or cardboard so they can do the questions with you.

# NUMBER OPERATIONS

## Primary

**Number talks** – Using the whiteboard feature on Zoom, or using an actual whiteboard or piece of chart paper, share a dot image or question (could select from one of the five math tasks for the week) for students to think about. Ask them to tell someone in their home how they know how many (dots) or how they would figure out the question. Ask them one at a time to unmute their microphone and share their thinking/strategy. Record each of the students strategies as they share. Choose two strategies and ask the students to think about how they are the same and how they are different.

**Math stories** – Using props such as stuffed animals, puppets or peg dolls, act out different math stories involving counting, combining or adding numbers for the children to watch and solve. Invite students to share their own math stories. Or share a picture that shows a context that might inspire students to think of a math story or to pose a math (word) problem. Have students share their stories/problems for the rest of the group to solve.

## Intermediate

**Number talks** – Using the whiteboard feature on Zoom, or using an actual whiteboard or piece of chart paper, share one of the computation questions from the weekly plan for students to think about. Ask them to tell someone in their home (or write down, or think in their head about) how they would figure out the question. Ask them one at a time to unmute their microphone and share their thinking/strategy. Record each of the students strategies as they share. Choose two strategies and ask the students to think about how they are the same and how they are different.

**Circles and Stars** – Play a simple dice game with students to practice their multiplication facts. Roll a dice and show students and have students record that number and draw that many circles. Roll the dice again and show students and have students record that number as the second factor and draw that many stars in each of the circles. Students then record the full equation with a solution. You could also do the recording of the circles and stars and equation yourself to provide the visual to the students and ask them to figure out the question mentally.

# NUMBER OPERATIONS

## Primary

**Number Talk Images** – Download a Number Talk Image from this website:

<http://ntimages.weebly.com>

You can drag an image to your desktop and either copy it to a slide to “screen share” or just “screen share” the image for students to discuss. The prompts you ask could be: How many? How do you know? How do you see them? Invite students to take turns unmuting their microphones to share their thinking. You could record their different ideas in the chat box or on a whiteboard or piece of chart paper.

**Number Talk** – Choose a computation question (such as  $8+7=$ \_\_\_) from your students’ weekly math plan. Use the whiteboard feature on Zoom or an actual whiteboard or chart paper to record the question. Invite students to think about different strategies for solving the question. Taking turns, have students unmute their microphones and share their thinking with a phrase such as: “The answer is 15 because...” and then follow this with an explanation of their strategy. For the next student to share, emphasize that they need to share a different strategy but encourage students to show they agree or connect to a strategy that another student shares.

## Intermediate

**Number Talk Images** – Download a Number Talk Image from this website:

<http://ntimages.weebly.com>

You can drag an image to your desktop and either copy it to a slide to “screen share” or just “screen share” the image for students to discuss. The prompts you ask could be: How many? How do you know? How do you see them? Invite students to take turns unmuting their microphones to share their thinking. Ask students to consider different ways of explaining how many dots or items there are. Ask students to record their solutions in equation form, introducing the use of brackets as needed.

**Number Talk** – Choose a computation question (such as  $2.75+3.50=$ \_\_\_) from your students’ weekly math plan. Intermediate students need to focus on operations with decimal numbers and consider strategies such as decomposing and compensating that they have used with whole numbers. Use the whiteboard feature on Zoom or an actual whiteboard or chart paper to record the question. Invite students to think about different strategies for solving the question. Taking turns, have students unmute their microphones and share their thinking with a phrase such as: “The answer is 6.25 because...” and then follow this with an explanation of their strategy. For the next student to share, emphasize that they need to share a different strategy.

# NUMBER OPERATIONS

## Primary

**Number talks** – Using the whiteboard feature on Zoom, or using an actual whiteboard or piece of chart paper, share a dot image or subtraction question (could select from one of the five math tasks for the week) for students to think about. Ask them to tell someone in their home how they know how many (dots) or how they would figure out the question. Ask them one at a time to unmute their microphone and share their thinking/strategy. Record each of the students strategies as they share. Choose two strategies and ask the students to think about how they are the same and how they are different.

**Math stories** – Using props such as stuffed animals, puppets or peg dolls, act out different math stories involving counting, separating, take away or subtracting numbers for the children to watch and solve. Invite students to share their own math stories. Or share a picture that shows a context that might inspire students to think of a math story or to pose a math (word) problem. Have students share their stories/problems for the rest of the group to solve.

## Intermediate

**Number talks** – Using the whiteboard feature on Zoom, or using an actual whiteboard or piece of chart paper, share one of the subtraction questions from the weekly plan for students to think about. If you are only meeting with your students once this week, I would recommend focusing on subtraction with decimal numbers as this will be new content for some students. Ask them to tell someone in their home (or write down, or think in their head about) how they would figure out the question. Ask them one at a time to unmute their microphone and share their thinking/strategy. Record each of the students strategies as they share. Choose two strategies and ask the students to think about how they are the same and how they are different.

**Financial Transactions** – Using a store flyer or an advertisement you find online, provide a math problem to solve using a shopping context. For grades 4&5 this could focus on adding or subtracting decimal numbers (ie. \$4.99) and for grades 6&7, this could focus on percentage discounts.

# NUMBER OPERATIONS

## Primary

**Number Talk Images** – Share a photograph or dot image from the Number Talk Images website (<http://ntimages.weebly.com>). Ask students to think about “How many?” and “How do you know?” Invite students to unmute their microphones to share their thinking. Ask grades 1 and 2 students to look for opportunities for repeated addition within the image and ask grade 3 students to look for multiplication. Images of arrays will connect to the math tasks in the grades 2&3 plan this week.

**Circles and Stars** – Play the game Circles and Stars with your students. Ask them to have a piece of paper and pencil ready. Roll a die and show or read the number to the students. Ask them to draw that many circles. Roll the die again and show or read the number to them. Ask them to draw that many stars in each circle. Invite students to figure out how many stars there are together and to share their strategies. Examples of grade-level strategies: 1) Kindergarten and grade 1 students may count all or count on, 2) Grade 2 students may skipcount or use repeated addition and 3) Grade 3 students may skipcount or use multiplication.

## Intermediate

**Number Talk Images** – Share a photograph or dot image from the Number Talk Images website (<http://ntimages.weebly.com>). Ask students to think about “How many?” and “How do you know?” Invite students to unmute their microphones to share their thinking. Students can use a small whiteboard or piece of paper to record equations to represent the image and hold these up to the camera for others to see and discuss. Encourage the use of brackets and multiple operations to communicate clearly. For example, in this duck image, one equation to represent the image would be  $(3 \times 4) - 1 = 11$ .



**Doubling/Halving** – One strategy I have noticed that not many students are using for multiplication is doubling and halving. They need to be able to visualize and mentally manipulate arrays to understand why this works. For example, this array shows the multiplication equation  $4 \times 4$ . If we halved this array vertically down the centre and moved the dots on the right under the dot on the left, we would now have an array showing  $8 \times 2$ . When one factor is doubled, the other is halved. Share an array with the students and ask them to visualize and describe an array that is halved and reconfigured. What would the new multiplication equation be? How could this strategy help them mentally solve a question like  $84 \times 5$ ?



# NUMBER OPERATIONS

## Primary

Choral Counting - Have students unmute their microphones on and have them join you in orally counting by 1's, 2's 5's, 10's etc from different starting places and forwards and backwards.

Math Stories - Using props such as stuffed animals, puppets or peg dolls, act out different math stories involving counting, combining or adding, removing or taking away numbers for the children to watch and solve. Invite students to share their own math stories. Or share a picture that shows a context that might inspire students to think of a math story or to pose a math (word) problem. Have students share their stories/problems for the rest of the group to solve.

## Intermediate

Choral Counting – Have students turn their microphones on and have them join you in orally counting with different multiples such 3's, 4's, 5's, 8's, 12's etc from different starting places and forwards and backwards. This supports thinking about factors and multiples. Extend this routine by counting by fractions or decimal numbers. How would you count by  $\frac{1}{2}$ s? What about counting by 1.2?

Sweet Sixteen – Play this week's math game together. Ask students to bring a deck of cards to your Zoom meeting. The video explaining the game can be found here: <https://youtu.be/Sq2S7y9O6Wk>

Exponents are not part of our intermediate math curriculum but can be introduced, particularly in relation to square numbers. Drawing or building an array of a square number such as 9 will help students understand the meaning of the exponent.

Have students each build their four by four (16) array with face-up cards at home. Roll the dice to determine the target number.

Students each use 2-5 cards to create an equation that equals that number. They can use all four operations, brackets, exponents and order of operations. Have students share and compare their equations.

# ALGEBRAIC THINKING

## Primary

**Splat!** – Download some Splat! slides to do with your small groups of students. The slides can be downloaded as powerpoint slides and used in a Zoom meeting by sharing your screen. You can click through the slides and all the “transitions” between the slides are included. Begin with the very first set of slides to introduce the routine and then choose numbers that are applicable for your groups of students.

**Math stories** – Continue the idea of Splat! and act out and tell math stories to think about building and changing quantities and solving for a “mystery” number. Back in the day, when I used Math Their Way materials, we used margarine tubs as a bear cave. I would count out 10 bears with the students and then some would go into the cave for the winter while some stayed out to eat some more berries. Students would need to figure out how many bears were in the cave. Math storytelling is a great way to practice math language, have students solve a contextualized problem and see you modelling the mathematical actions with your materials or gestures. Use numbers appropriate for the grade group you are working with. You can also cut out your own Splat! from paper or felt and do Splat! stories with your students.

## Intermediate

**Splat!** – Download some Splat! slides to do with your small groups of students. The slides can be downloaded as powerpoint slides and used in a Zoom meeting by sharing your screen. You can click through the slides and all the “transitions” between the slides are included. Begin with a few Splats the very first set of slides to introduce the routine and then choose numbers or types of Splats that are applicable for your groups of students. The sets increase in complexity. For grades 6 and 7 students you can introduce multiple Splats (ie two black Splats means the same number of dots are under each) as a way to connect to coefficients (ie  $2x$ ). With intermediate students you could have them record the algebraic equation that represents the Splat! you have done and hold it up the camera for you to see or add it to the Chat box.

# PATTERNING

## Primary

**Pattern Talk** – Create the first three parts of a repeating pattern. Draw a pattern using the whiteboard feature on Zoom, or an actual whiteboard or piece of chart paper. You could also create a pattern with cubes or other materials on a tray and place it on your laptop and tilt the screen down so students can see it. Read the pattern from left to right together (For example, orange green green, orange green green, orange green green). Is there a different way we could read the pattern? (For example, ABB ABB ABB) Ask: What comes next? What comes before? What is the part that repeats over and over? We call this the pattern unit or core or stem. Draw or create a pattern with something missing in the middle. Ask students to unmute their microphones and share what they think is missing and what their reasoning is. For grades 2&3 students, you can do similar talks with increasing and decreasing patterns.

**Counting Patterns** – Count Around the Circle or Choral Counting – Have students unmute their microphones on and have them join you in orally counting by 1's, 2's 5's, 10's etc from different starting places and forwards and backwards. Use a number path, a number line or a hundred chart as a visual support for students' counting.

## Intermediate

**Visual Patterns** – Download a Visual Pattern Image from this website:

<http://www.visualpatterns.org>

You can drag an image to your desktop and either copy it to a slide to “screen share” or just “screen share” the image for students to discuss. Ask students to describe what the next term/step will look like, asking them to focus on what will stay the same and what will change. This helps develop the ideas of constant and variable. Ask them to predict what the tenth term/step will be. Some students may need to draw out the pattern while others may generalize the pattern rule and be able to explain it using words and numbers. The challenge on the Visual Patterns website is to generalize to the 43<sup>rd</sup> term (and those solutions are provided for each visual pattern).

**Number Patterns** – Count Around the Circle or Choral Counting – Have students turn their microphones on and have them join you in orally counting with different multiples such 3's, 4's, 5's, 8's, 12's etc from different starting places and forwards and backwards. Record the count on a whiteboard or piece of chart board as they count. Ask students to notice and describe the patterns they see in the numbers they counted.

# GEOMETRY & MEASUREMENT

## Primary

**Same but Different:** Choose a pair of 2D shapes from this website - <https://www.samebutdifferentmath.com/geometry> and drag the image to your desktop. During a Zoom meeting, share the image to your screen and ask students to contribute their ideas verbally or in the chat box as to how the shapes are the same and how they are different. Model mathematics vocabulary and language as necessary.

**Which One Doesn't Belong:** Choose a WODB about 2D shapes from the website here: <http://wodb.ca/shapes.html>  
Ask students to describe how the shapes are similar and then how they are different. Ask them to choose one shape that is the most unique and explain their reasoning.

## Intermediate

**Same but Different:** Choose a pair of 2D shapes or angle measurements (grades 6&7) from this website - <https://www.samebutdifferentmath.com/geometry> and drag the image to your desktop. During a Zoom meeting, share the image to your screen and ask students to contribute their ideas verbally or in the chat box as to how the shapes are the same and how they are different. Model mathematics vocabulary and language as necessary.

**Which One Doesn't Belong:** Choose a WODB about 2D shapes or angle measurement from the website here: <http://wodb.ca/shapes.html>  
Ask students to describe how the images are similar and then how they are different. Ask them to choose one shape that is the most unique and explain their reasoning.

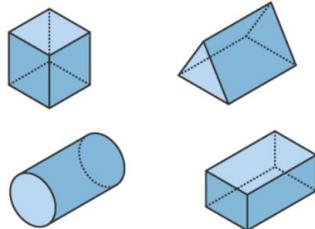
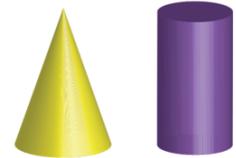
# GEOMETRY & MEASUREMENT

## Primary

Same but Different: Choose a pair of 3D shapes or a pair of each of a 2D and a related 3D shape from this website -

<https://www.samebutdifferentmath.com/geometry> and drag the image to your desktop. During a Zoom meeting, share the image to your screen and ask

students to contribute their ideas verbally or in the chat box as to how the shapes are the same and how they are different. Model mathematics vocabulary and language as necessary.



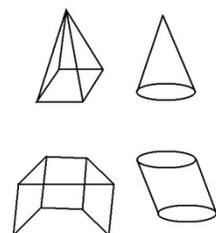
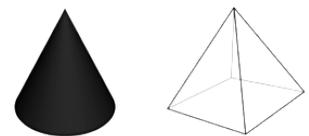
Which One Doesn't Belong: Choose a WODB about 4D shapes from the website here:

<http://wodb.ca/shapes.html>

Ask students to describe how the shapes are similar and then how they are different. Ask them to choose one shape that is the most unique and explain their reasoning.

## Intermediate

Same but Different: Choose a pair of 3D shapes from this website - <https://www.samebutdifferentmath.com/geometry> and drag the image to your desktop. During a Zoom meeting, share the image to your screen and ask students to contribute their ideas verbally or in the chat box as to how the shapes are the same and how they are different. Model mathematics vocabulary and language as necessary.



Which One Doesn't Belong: Choose a WODB about 3D shapes or angle measurement from the website here:

<http://wodb.ca/shapes.html>

Ask students to describe how the images are similar and then how they are different. Ask them to choose one shape that is the most unique and explain their reasoning.

# GEOMETRY & MEASUREMENT

## Primary

**Quick Images** – Hold up a dot image (or share screen to share an image) for 2-3 seconds and ask students to visualize and describe the orientation of the dots. Similar images with shapes, two or more shapes in different positions or shapes combining to make an image can also be used. As an extension, students could draw what they think they have seen and share and compare these.

**Barrier Shape Game** – Without showing the students what you are doing, begin by drawing two shapes on a piece of paper in front of you, using a different colour for each shape. Using clear geometric and positional language, explain your drawing to the students and ask them to draw/replicate what you have drawn using your clues. Students can ask for more clues or clarify with questions. Have students share and compare their drawings with yours.

*\*This is called a barrier game because when played f2f with drawings or materials, some sort of barrier or partition is placed between the players.*

## Intermediate

**Barrier Shape Game** – Without showing the students what you are doing, begin by drawing a polygon on a piece of paper in front of you. Using clear geometric and positional language, explain your shape to the students and its position on the page and ask them to draw/replicate what you have drawn using your clues. Choose another colour for the next phase. Choose a transformation (slide/translation, flip/reflection, turn/rotation) and draw the original shape in its new transformed position and orally explain this to your students. Continue as many steps as you think is suitable for your students. Students can ask for more clues or clarify with questions. Have students share and compare their drawings with yours.

*\*This is called a barrier game because when played f2f with drawings or materials, some sort of barrier or partition is placed between the players.*

**Online Battleship Game** - Play an online version of “Battleship” with your students to connect the ideas involved with the Cartesian plan and coordinate graphing. This is a great game for both spatial reasoning and strategic thinking. One online version of the game can be found here:

<https://www.battleshiponline.org>

# GEOMETRY & MEASUREMENT

## Primary

**Marble Jar Estimation** – Go to <https://toytheater.com/category/teacher-tools/> and choose Marble Jar. Make sure button says Total Off so students don't see the number of marbles yet. Share your screen. Ask students to estimate how many marbles the jar will hold. Click "Fill" and ask students to not count but to estimate about how many marbles are in the jar. They could say things like, "about 20" "about 20-30" etc. Show students how to use a referent to help them estimate. Using your cursor, count a small set of five marbles in a jar – "If this is five marbles, what would ten look like? Using this as a referent, about how many marbles do you think are in the jar?" Discuss their estimates and then click Total Off to show the actual amount. Instead of focusing on whether their estimates were right or wrong, ask "Was your estimate reasonable?" and discuss. Repeat if students are interested.

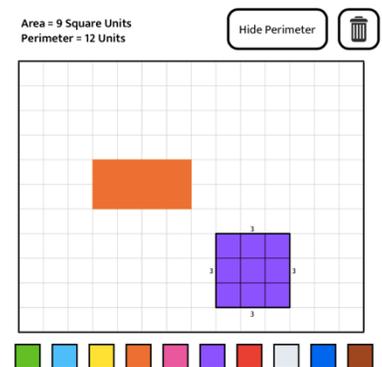
**Find and Share** – Ask students to find cans, boxes or other containers that have measurements on them in their home. Have students hold the items up to the camera and discuss the meaning of the measurements with the students.

## Intermediate

**Marble Jar Estimation** – Go to <https://toytheater.com/category/teacher-tools/> and choose Marble Jar. See description of possible task above in the primary section.

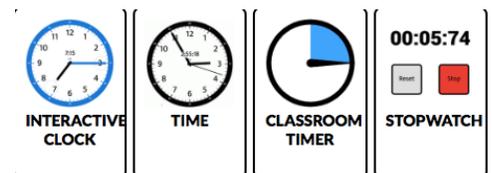
**Area and Perimeter Exploration** – Go to Toy Theater and choose Area and Perimeter Explorer here: <https://toytheater.com/area-perimeter-explorer/>

Share your screen to create different squares and rectangles. Use a different colour tile for each shape you create so students can compare and discuss them by referring to their colours at the end. This is a great tool to explore the relationships between area and perimeter.



**Telling Time and Time Problems** - Toy Theatre has four interactive teacher tools you could use during Zoom sessions to practice telling time or to support solving elapsed time problems.

<https://toytheater.com/category/teacher-tools/>



# DATA & PROBABILITY

## Primary

**Game of Chance** – In a brown paper bag, place four cubes, two that are the same colour such as blue, blue, red and yellow. Have students predict what colour cube you will pull out, explaining their reasoning. For one game, once you pull out the cube, keep it out and then have the students predict what you will pull out next. Continue until all the cubes have been pulled. Model language such as “more likely” or “less likely” or “equal chance” or “impossible or possible” or “certain.”

You could also play a game of Roll, Add and Graph with them.

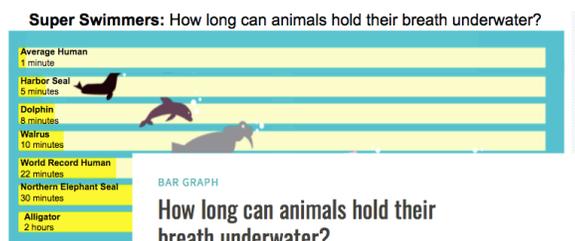
**Creating a Graph** – Using the Zoom whiteboard or an actual whiteboard or piece of chart paper, create a graph with your students. Ask them a survey question such as: What is your favourite author? What is your favourite animal? Record their results with tallies and then create a bar graph or pictograph. Ask students to describe the graph.

## Intermediate

**Probability Experiments** – Use a virtual dice or virtual spinner to do probability experiments with your students. Ask them to create a table or chart to record the results. Compare and discuss the results. For example: 1) roll a die twenty times. 2) roll two dice at the same time twenty times and record the combination of numbers, 3) flip two coins and record the outcomes (ie HT, HH, TT). For grades 6&7 students, have them figure out the theoretical probability before each experiment and then compare the experimental probability to the theoretical probability.

**Slow Reveal Graphs** – At the website , go to the tab “Resources for the Classroom” and scroll down to the type of graph you would like to think about with your students. Choose a graph topic that you think will interest your students (and is age appropriate). Click on the title and download/save the accompanying slide deck. During your Zoom session, have this slide deck open on your desktop and “share screen,” clicking on “present” in the top right corner of the google slides. Pause on each slide for students to unmute their microphones to respond, or to share their thinking in the chat box. Questions for you to ask students are at the bottom of each slide (you won’t be able to see this once you click “present”).

Some of the content is very American focused so just scroll past those ones! The one that I will be using in the grades 4-7 webinars is a bar graph focusing on animals called Super Swimmers.



# FINANCIAL LITERACY

## Primary

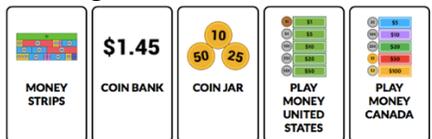
**Counting Coins and Bills** – Use a document camera to show students coins and bills and practice counting multiples or combinations, having students turn off their microphones to choral count with you. Or, use the Mathies Money app (iPhone or iPad) to access digital Canadian bills and coins that are very realistic looking to use on your screen or whiteboard.



**Money Games** – In the teacher tools section of Toy Theatre, there are both virtual manipulatives (including Canadian coins and bills) and games here:

<https://toytheater.com/category/teacher-tools/>

For grades 2& 3 students, I would recommend the Money Strips game which involves making an amount in different ways.



## Intermediate

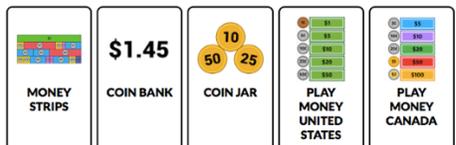
**Making Change with Coins and Bills** – Use a document camera to show students coins and bills and making change or other simple financial transactions. Or, use the Mathies Money app (iPhone or iPad) to access digital Canadian bills and coins that are very realistic looking to use on your screen or whiteboard.



**Money Games** – In the teacher tools section of Toy Theatre, there are both virtual manipulatives (including Canadian coins and bills) and games here:

<https://toytheater.com/category/teacher-tools/>

For grades 4&5 students, I would recommend the Coin Bank game which involves adding monetary amounts using decimal notation.



# PROBLEM-SOLVING FOCUS

## Primary

**Photo Problem Posing** – Share a photograph with students via screen share on Zoom. The photograph could be of something in the local environment, a collection from your home or school or something that is “in the news”. Ask students: “What math do you see?” and then invite students to pose problems inspired by the photograph. Record their problems and then choose one or two to solve together.

**Numberless Word Problems** – Go to <https://bstockus.wordpress.com/numberless-word-problems/> and scroll down to the Problem Bank and choose a problem that is suitable for the students you are working with. Each problem includes the different components of a numberless word problem along with the prompts to nudge students thinking and communication at the bottom of each slide. Work through a problem with the students, having them unmute their microphones to share their thinking.

## Intermediate

**Photo Problem Posing** – Share a photograph with students via screen share on Zoom. The photograph could be of something in the local environment, a collection from your home or school or something that is “in the news” or from sports or pop culture. Ask students: “What math do you see?” and then invite students to pose problems inspired by the photograph. Record their problems and then choose one or two to solve together.

**Numberless Word Problems** – Go to <https://bstockus.wordpress.com/numberless-word-problems/> and scroll down to the Problem Bank and choose a problem that is suitable for the students you are working with. There is a multiplication and division section which would be suitable for intermediate students and you can edit the numbers in the slides. Each problem includes the different components of a numberless word problem along with the prompts to nudge students thinking and communication at the bottom of each slide. Work through a problem with the students, having them unmute their microphones to share their thinking.

# ASSESSMENT

Scan through student assignment submissions and note what areas of mathematics your students have strengths in and what areas they need ongoing learning and practice with.

Consider using your scheduled time with students for assessment opportunities:

- 1) One of the most effective assessment techniques in mathematics is using task-based interviews. Schedule individual or partner Zoom meetings for about 5 minutes each and choose one or two tasks that help you assess the learning standards you need more information for. Ideas might be asking young students to bring a collection of items to the session and you listening to and watching them count them and for older students it might be provided two or three number operation questions or problems and having students either orally explain their strategies and solution or recording it on paper and holding it up to the screen for you. Interject with prompts and questions to collect the evidence of learning you are needing.
- 2) For students in grades 3 and up, you could ask them to complete sections of the Island Numeracy Assessment which is aligned with our BC Curriculum. More information can be found here: <http://www.islandnumeracy.ca/index.php/ina-home/>
- 3) For our K-2 students, consider using tasks from the SD38 Early Numeracy Assessment Tool which can be found here: <https://blogs.sd38.bc.ca/sd38mathandscience/sd38-k-2-numeracy-assessment-information/>