

Grades 2 & 3 Numeracy Experiences and Tasks

The following is a collection of numeracy experiences and tasks developed during 2020-2021 by Janice Novakowski for the SD38 Transitional Learning week plans. A numeracy experience or task was included every week in the plans during the school year. Building awareness of how we use and apply mathematics in our daily lives and to understand the world around us is a goal of the numeracy experiences. Numeracy tasks are often framed around four types: fair share, plan and design, reasoned estimates, and modeling mathematics. When engaging in a numeracy task, students typically use the five numeracy processes: interpret, apply, solve, analyze, and communicate.

Look around your home or neighbourhood. Where do you see numbers? Take photos or record the numbers you find on a piece of paper. What numbers are most common? How are numbers used? Can you find some numbers that are in a pattern? Share what you found out with someone.

Look around your home or neighbourhood. Where are numbers used that are in a specific order? (ie. a clock, addresses) Take photos or record the numbers you find on a piece of paper. Do you notice any patterns in the numbers?

When might you need to add two numbers or amounts together when you are doing things at home? Draw or write a story about this.

What is the temperature outside each day? Write down the temperatures for three days in a row. How do the temperatures change from day to day? How could you describe these changes? Record your findings with pictures, numbers and words.

You and two friends picked up 23 fir cones under large Douglas Fir tree. How could the three of you share the fir cones fairly? What do you need to consider? Record your findings with pictures, numbers and words.

Look around your home, out your window or in your neighbourhood. How are patterns used in design? How are patterns used in structures or how buildings and homes are numbered or organized? Record your findings with pictures, numbers and words.

You and someone from your family went to the store with \$50. You bought some groceries for \$26. How much change did you get back? What different combinations of bills and coins could the cashier give you your change with? Draw or write a story about this.

You and someone from your family went to the store with \$20 to buy some fruit. The prices are: Apple \$1 Banana \$2 Mango \$3 Orange \$2 What could you buy with \$20? Record a math story about this using addition or multiplication.

Create a math game that is based on chance. A game of chance usually involves the roll of dice, spinning a spinner, or turning over cards. It is chance that determines what number or colour comes up. You could make up your own card or dice game or make a boardgame. Explain the instructions to your family and play your game!

Choose something you are interested in to investigate such as a sport, music, or an animal or an issue that is important to your family, our community or the world. What math can you use to help you understand the topic of your investigation? What data or information can you collect? Create a drawing, a diagram, a graph or an infographic to share your findings.

There are 24 oranges in a box. If there are four people in a family, how many oranges could they each have if they share them fairly? How could you solve this problem? Show your answer and how you solved it with pictures, numbers and words.

What shapes can you find in your home? What shapes do you see in your windows or doors? How could you describe them? How many different kinds of 2D shapes can you find? Draw a picture showing some of the shapes you find. Name and describe the shapes you find.

Make a snowman out of paper or other materials. Design a playground for a snowman. What do you think a snowman would like to do? Think about shapes, pattern and size in your design. The playground should be the "right" size for the snowman. Draw a "map" of your playground or build it with materials.

Design an obstacle course for the little snowman you made last week or another character or toy you have at home. Think about positional language - over, under, through, beside, right, left and build your obstacle course with blocks, boxes, cans, and other materials. Move your character through the obstacle course and record it as a map. What 2D shapes will you use to represent the different items in the obstacle

course? If you would like to, you could also create an obstacle course for yourself in your home!

Using the little snowman you have made this month, create a boardgame for the snowman that includes a path for it to follow and cards with directions on them (move forward two spaces, turn around, move back three spaces, etc). You could use a file folder or a piece of cardboard from your recycling. Where will the path or game start? Where will it end? What will its setting be? Play your game with your family.

Choose a small object or toy. Using what you have learned about shapes and measurement, use paper or cardboard to create a box that will hold the object, including a lid. What type of 3D shape will you create? What measurements of the object will you need to take? Draw a plan (a net) to begin and then create your box, testing it to make sure your object will fit.

You have \$25 to buy some art supplies at a store. The prices are: A big box of 72 crayons \$6 Scissors \$4 Pad of white paper \$4 Pad of coloured construction paper \$6 Gluestick \$1 Tape \$2 Watercolour paints and brush \$7 Black fineline marker \$2 Ball of string \$3 What would you choose and why? What would you use the supplies to make? Record a math story about this using pictures, words and numbers.

Create a calendar for one week. Label the day of the week and date and for each day, draw something that happened that day. It could be something you did or what the weather was like. Special days also help us measure time. At the end of this week, some families will be celebrating Lunar New Year, and there is also Valentine's Day and Family Day. You can include these days on your calendar. What do you or your family use calendars for? Can you find some different examples of calendars in your home?

Monday was BC's Family Day. Create a survey question to ask as many people in your family as you can. You might ask them something like "What is your favourite colour?" or "What is something you hope for in 2021?" or think of your own idea! Record their answers (collect data) using pictures or tally marks and then create a bar graph to share your findings (represent data). What does the graph say about your family (interpret data)?

Play the game Face-Off or Salute to practice adding or multiplying. If you forget how to play, there are videos on Ms Novakowski's YouTube channel. Can you make up your own math game using cards or dice to practice addition and/or multiplication

facts? Where might you get an idea from for your game? Draw or write how to play the game or create your own math game video and then play your game with your family.

We are now in the season of spring. Take a walk in your neighbourhood or observe the outdoors through a doorway or window. Use a tally chart to record the signs of springs you notice such as flowers blooming or leaves growing on trees. What other changes do you notice? Is everyone wearing winter jackets still? What sign of spring do you see the most of? Use the data from your tally chart to create a bar graph. Include a title and label each part of the graph.

Find two things to measure and compare. Use metric units such as centimetres or metres. You might find two flowers growing outside, two puddles or two people in your family. Use algebraic thinking to think about the difference in size between the two things you measure. How much wider/taller/deeper is one than the other? How will you record your findings?

Hexagons are a geometric shape but they also occur in nature. There are hexagonal rock formations, insect eyes are hexagons as are many forms in snowflakes and bees create hexagons. Create a model or draw a picture of one or more examples of where hexagons are found in nature. Why do you think hexagons are such a good shape used for design both by humans and in nature?

Find a map in a book or online to look at. What different features do maps have? What numbers and words can you find on maps? How could you add some of those features, like symbols, scales or legends/keys, to one of your maps?

Choose a country or place in the world you are curious about. Find it on a map and watch a video or read a little bit about it. Draw your own map of the place and include some things you learn about the place such as special buildings or mountains, rivers or oceans or trees or animals that live there. What measurements could you include? Measurements could include the size of the largest lake, height of the tallest mountain or building or how long a river is.

You are going to plan a garden. The garden box is a rectangle. You want to plant some radish, carrot and lettuce seeds. They are all very small seeds and you have 100 seeds to plant all together. Plan and share two different ways to plan how you will plant the seeds in your garden.

What different insects live in Richmond? Go for a walk outside and create a tally chart of different insects you see. Create a graph to share your findings. What questions do you have?

Learn more about the importance of pollinators. How many different foods do you have in your home that grow because of pollinators? Sort them into different types of plants and create a tally chart or graph of these foods. What do you notice? Create a chart or infographic to share the importance of pollinators.

Use some of the mathematics you have learned this year to plan and design something for the summer such as a picnic for your family or a toy, obstacle course or game to play with. What will you need to think about? Draw and label your plan.