

# Grades 4 & 5 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.

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How are numbers used in your neighbourhood? Streets, addresses, signs? Can you find some numbers that are in a pattern? Record your findings. Look in a newspaper, flyers or on a website. Where do you see numbers? Record the numbers you find on a piece of paper. What numbers are most common? How are numbers used to organize information, represent value or importance or communicate ideas?

Look around your home, on a website or in book, magazine or newspaper. Where can you find fractions and decimal numbers used to communicate information? Write down some of the fractions and decimal numbers you find. What are the most common fractions/decimals you find? Why do you think that is?

When might you need to add or multiply numbers together when you are doing things at home? Write a math problem about this and show how you solved it.

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

You and two classmates are given 72 pencil crayons to share for the school year. How could the three of you share the pencil crayons fairly? What do you need to consider other than quantity? 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 \$25.25 in cash. You bought some groceries for \$17.89. How much change did you get back? What different combinations of bills and coins could the cashier give you your change with? How could you represent this financial transaction?

You and someone from your family went to the store with \$50 to buy some fruit for a month. The prices are: Apple \$1 Banana \$2 Mango \$3 Orange \$2 Melon \$5 What could you buy with \$50? Record this financial transaction using a multiplication equation for each type of fruit and a total sum cost.

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 board game. 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 36 oranges in a box. If there are four people in a family, how many oranges could they each have if they share them fairly? What if there are three people? How could you solve this problem? Show your answer and how you solved it with pictures, numbers and words. How could you use fractions to express your solution?

What shapes can you find in your home? Make a t-chart with one side for regular polygons and the other side for irregular polygons. Record all the shapes you find by drawing and naming the different shapes on the chart.

Make a snowman out of paper or other materials that is about 10 centimetres high. Design a home or playground for a snowman. The playground should be to scale for the snowman. Draw a plan of your home playground or build it with materials

including a legend to explain the scale you use. Your scale might be actual size, half size, 1/10 size etc.

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, turn 180° etc 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? What scale will you use for your map? Include a legend/key on your map to indicate the scale and what the shapes represent. 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 or grid 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 to begin and then create your box, testing it to make sure your object will fit. If you wanted to create a box to hold two of your objects, what shapes or measurements would you need to adjust?

You have \$20 to buy some art supplies at a store. The prices are: A big box of 72 pencil crayons \$3.95 Scissors \$2.99 Pad of white paper \$4 Pad of coloured construction paper \$6 Gluestick \$0.99 Tape \$1.50 Watercolour paints and brush \$6.99 Black fineline marker \$1.79 Ball of string \$2.75 (don't worry about tax!) 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, choose four specific times of day (ie. 11:30am) and draw a clock showing the time and indicate what you did at that time. 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) in a table or chart 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, puddles, etc. 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 the metric units centimetres and record your measurements in decimal form. 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?

There are different types of maps such as physical or political. 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 and symbols could you include on your map? 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 240 seeds to plant all together. Plan and share two different ways to plan how you will plant the seeds in your garden and record the math equations that show how you planted the seeds .

Use a website, video or book to find out more about insects and how important they are to the Earth. What mathematical information can you find out and share in a poster or infographic?

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 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. What math will help you with your plan?