Building Math Success

GRADE 4

Be Positive and Supportive

Celebrate success and build confidence. Everyone uses math!

- Show and talk about how math is part of daily life.

- Be relaxed when talking about math, whether that is during homework time or in conversation.

- Encourage your child to keep trying, even if the problem seems hard at first.

- Focus on *how* your child is working on math problems and comment on good understanding.

The goal of this document is to support parents and caregivers as they promote positive math thinking. It also provides an overview of what Saskatchewan students will be taught in school in Grade 4.

Make Math Real at Home

- Discuss how math is part of everyday activities, such as sports, music and art.

- Look for ways to help your child use math skills while cooking, shopping or measuring.

- Comment on and discuss the meaning of charts and graphs that you may see online or in the news.

- Practice your own estimation skills along with your child as you estimate amounts, measurements or calculations.

- Talk about math in the weather, such as precipitation amounts, wind speeds and temperatures.

- Play card games, chess, checkers, Mancala, Tri-Ominos, Qwirkle and do puzzles such as Sudoku or Pentominos.

Saskatchewan

Overview of Grade 4 Math

<div style="writing-mode: vertical">NUMBER</div>

- Compare, order, read and understand the value of digits in numbers up to 10 000.
    - o 10 000 is 10 groups of 1000, 100 groups of 100 and also 1000 groups of 10.
    - o The number 5321 is read as "five thousand three hundred twenty-one."
    - o $673 = 600 + 70 + 3$
    - o "I know the number 761 is a larger number than 671, because in 761 the '7' represents 7 hundreds, and in 671 there are 6 hundreds, and the '7' represents 7 tens."

- Add and subtract numbers (up to 10 000) and decimals (tenths and hundredths).

$2354 - 999 = ?$		$\$7.00 + \$3.95 = ?$	
$^1 2 \ ^2 3 \ ^4 5 \ ^1 4$ $- \quad 9 \ 9 \ 9$ $\overline{\quad 1 \ 3 \ 5 \ 5}$	I could think, "1000 is just one more than 999. 2354 – 1000 is 1354, and then I can add 1 to get 1355."	$\$7.00$ $+ \ \$3.95$ $\$10.95$	I could think, "$3.95 is 5 cents less than $4.00, so the answer will be 5 cents less than $7 + $4, which is $11, so the answer is $10.95."

- Multiply numbers (1, 2 and 3 digits by 1 digit) and solve multiplication problems.

$18 \times 5 = ?$		$101 \times 6 = ?$	
$^4 1 8$ $\times \ 5$ $\overline{\quad 9 0}$	I could use the "half and double" strategy. Half of 18 is 9, and the double of 5 is 10. $18 \times 5 = 10 \times 9$, which is 90.	101 $\times \ 6$ $\overline{606}$	I could think "I know that 100 x 6 is 600, and I just need to add 6 more, so the answer is 606. "

- Divide 2 digit numbers by 1 digit numbers with or without remainders. Understand the relationship between multiplication and division.
    - o "If I divide 52 into 5 groups, I will have 5 groups of ten, with 2 left over."
    - o When solving $64 \div 8$, think $8 \times \square = 64$.
- Compare and put in order fractions between 0 and 1.

$$0 \qquad\qquad \frac{1}{3} \quad \frac{1}{2} \qquad \frac{3}{4} \qquad 1$$
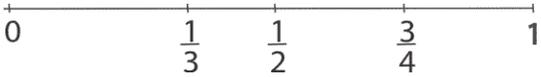
- Understand that the same fraction can represent different amounts, depending on the size of the whole.
    - o $\frac{1}{4}$ of a small apple is not the same amount as $\frac{1}{4}$ of a large apple.
    - o $\frac{1}{2}$ of a group of 6 blocks is not the same quantity as $\frac{1}{2}$ of a group of 16 blocks.

- Understand how decimals relate to whole numbers and fractions.
    - o Like a fraction, a decimal is part of a whole.
    - o 0.7 is $\frac{7}{10}$ which is read as "seven tenths."
    - o 0.54 is $\frac{54}{100}$ which is read as "fifty four hundredths."

- Add and subtract decimals (tenths and hundredths).
    - o Solve problems such as, "How much money would you get back if an item cost $5.85 and you paid with a five-dollar bill and one loonie?"
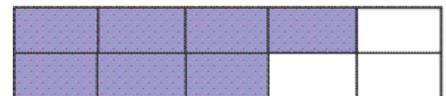
PATTERNS AND RELATIONS

- Decribe patterns in a chart, table or diagram.
  - o If the pattern in this chart continues, how many pets will four families have?
  - o Write a rule for the pattern: 2, 5, 8, 11, 14, 17, 20, 23, 26.
- Identify the sorting rule for a Venn diagram.

Number of families	Number of pets
1	2
2	4
3	6
4	?

Numbers greater than 20

27 33 45 | 22 16 | 12 8 6 18

Even numbers
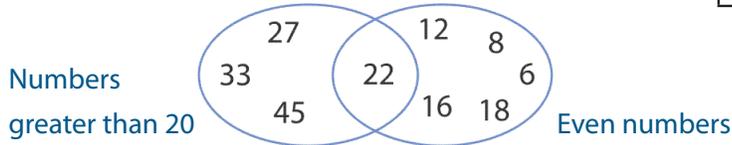
- Explain that a symbol in an equation (such as a triangle or square) represents an unknown number.

$$\Delta \div 4 = 24 \qquad\qquad 9 \times \square = 108$$

SHAPE AND SPACE

- Read and record time, including 24 hour clocks.
  - o 8:30 P.M. is 20:30 on a 24-hr clock, and looks like this [clock] on an analog clock .
- Write calendar dates in a variety of ways.
  - o 2020/07/16 ➝ 16/07/2020 ➝ July 16, 2020

9 square units

16 square units   12 square units

- Understand area of two-dimensional (flat) shapes (rectangles, squares, and irregular shapes).
  - o Create rectangles with a given area. Show that different rectangles can have the same area.
  - o Find the area of rectangles using cm^2 (square centimetres) or m^2 (square metres).
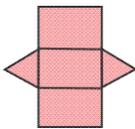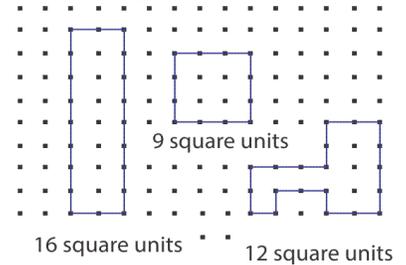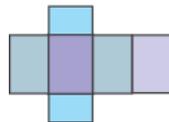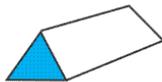
Triangular prism   Rectangular prism
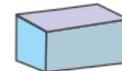
- Identify and create symmetrical shapes and draw or fold lines of symmetry.

1 line of symmetry   4 lines of symmetry   No lines of symmetry
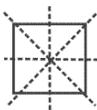
STATISTICS AND PROBABILITY

- Organize data and create bar graphs and pictographs, including many-to-one correspondence.

Average Life Span of Pet Birds

Years
90
80
70
60
50
40
30
20
10
0

Parrot Cockatoo Lovebird Budgie Parakeet Canary Finch

Favourite Zoo Animals

Elephant   Monkey   Lion   Giraffe   Bear

[figure] represents 10 people
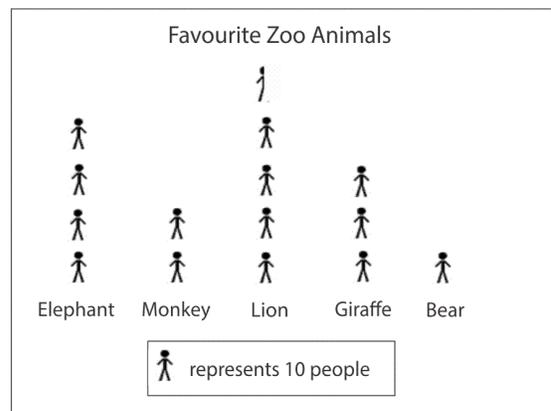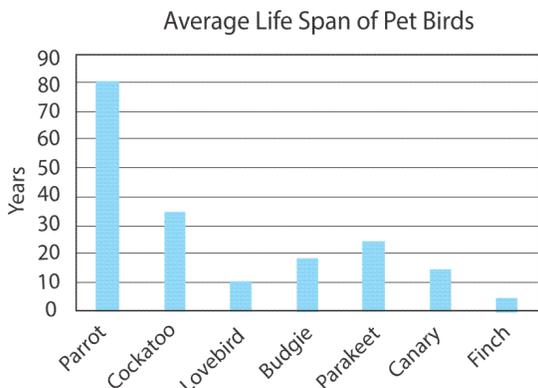
Math Learning in the Classroom

Math learning occurs in many ways in the classroom. Teachers observe students during daily work, have conversations with students about math ideas and look at the results of their math work.

If you have questions about math in the classroom or if your child needs additional support, please contact your child's teacher.

Online Resources for Grade 4 Math Students

These sites were active at the time of publication. Please review them to determine if they are appropriate for your child's needs and interests.

- **NRICH math** – interactive tasks and games for all grade levels: https://nrich.maths.org

- **Cool Math 4 Kids** – puzzles, games and much more: www.coolmath4kids.com

- **Mathpickle** – original math puzzles, games and problems: http://mathpickle.com

To view the entire Saskatchewan curriculum, go to *www.curriculum.gov.sk.ca*.