# Everyone can be successful using math!

## Be Positive About Math

Every child can learn math. Regardless of your own abilities and interest in math, you can help your child to succeed in math. The important thing is to welcome math into your child's everyday life.

In the world your child is entering, an understanding of math will be essential for success. Math has never been more important than in today's competitive, technological world.

*It's not that I'm so smart, it's just that I stay with problems longer.*

*Albert Einstein*

## What Learning Math can Give Your Child

- Math is a way of thinking; it has often been called a language. Just like learning a new language, learning math actually develops thinking skills and parts of your child's brain.

- Math will enable your child to recognize patterns and relationships, use this information to make better decisions, and solve problems more creatively.

- Mastering math will build your child's self-confidence and ability to think flexibly.

- Solid math skills will open the door to a variety of career opportunities in the future.

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# What Your **Child** is **Learning** as a Math Student

Your child is learning more than simply memorizing math facts and rules. Your child is learning to:

- explore possibilities and to take risks in order to succeed.

- make sense of math, and is developing an understanding of how it works.

- make connections between everyday experiences and the skills and ideas learned in math class.

- share and explain his or her thinking by talking, writing, and drawing.

- use technology to explore and learn new ideas.

- solve problems.

- think logically and critically.

## Ask prompting questions when your child needs help.

- What do you already know to help you solve the problem?
- Can you draw a picture or make a diagram to help solve the problem?
- What words or directions do you not understand?
- Do you see any patterns?
- Does that make sense to you?
- How do you know?
- If you don't know, how can you find out?

## Create a positive attitude to math.

- Show your child that you think math is important.
- **Be confident** that everyone can learn math.
- Encourage your child to keep trying even when an answer is difficult or slow to find.
- Treat errors and misconceptions as opportunities to learn.
- Celebrate successes!

## Make math part of everyday life.

- Estimate everything: the number of things, amount of time, length and mass.
- Play board games and strategy games (e.g., tic-tac-toe) and discuss strategies.
- Organize toys, collections and other things around the house.
- Encourage your child to use his or her math skills to help you cook, shop and measure.
- Talk about time and use a calendar to discuss upcoming events, such as holidays.
- Do jigsaw puzzles together.
- Look for patterns in pictures, music, books and numbers. Talk about what makes them a pattern.

## Show an interest in your child's math studies.

- Provide a space and materials to help your child at home.
- Ask your child to share what he or she is learning in math class.
- Be an interested listener, accepting different ways to find solutions.
- Ask your child to explain how to solve homework questions so you can ensure that he or she understands the skill being practiced.
- Keep in contact with your child's teacher.

# You can **Help** your Child **Succeed** in **Math**

# The **Big Ideas** of Grade 2 Math

- Count forwards and backwards from 0 to 100 by 2s, 5s, and 10s

- Even and odd numbers: identify and model up to 100

  8 is even    15 is odd

- Use ordinal numbers to order and describe position (up to tenth)

  first, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth

  1st  2nd  3rd  4th  5th  6th  7th  8th  9th  10th

- Numbers to 100: represent, describe, compare, order, and estimate quantities

  43: forty-three $\longrightarrow$ 40 + 3 $\longrightarrow$ 45 - 2 $\longrightarrow$ 30 + 13          27, 30, 35, 38, 43, 47, 50

- Understand the value of digits in numbers up to 100

  56 $\longrightarrow$ 50 + 6 $\longrightarrow$ 5 tens and 6 ones $\longrightarrow$ 4 tens and 16 ones $\longrightarrow$ fifty-six ones

- Addition and subtraction with answers to 100 using personal strategies in problem-solving situations (limited to 1- and 2-digit numbers)

  38 + 27 $\longrightarrow$ 30 + 20 + 8 + 7 $\longrightarrow$ 50 + 15 $\longrightarrow$ 65

- Use mental math strategies for developing recall of basic addition and subtraction facts to 18

  To solve 6 + 7, think 6 + 6 = 12 so the sum is 1 more $\longrightarrow$ 13
  To solve 8 - 5, think 5 + ? = 8 so the difference is 3
  To solve 16 - 9, think 16 - 6 = 10 and 10 - 3 = 7

- Repeating and increasing patterns: create, describe, compare, and continue patterns
  Represent using objects, pictures, sounds, and numbers (limited to 100)

  ☺☺◆☺☺◆☺☺◆ ...          snap, snap, clap, snap, snap, clap, snap, snap, clap ...

  ●● ●●● ●●●● ...          4, 9, 14, 19, ...
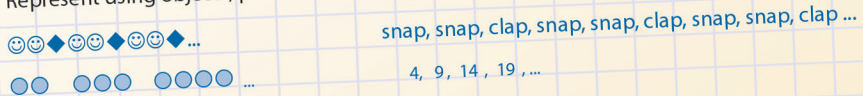
- Demonstrate and explain how two quantities are equal and unequal (0 to 100)

  △△△ ≠ △△△△          16 + 15 = 20 + 11          10 + 4 ≠ 14 + 1
  △△△   △△△△
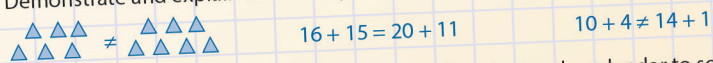
- Time: days in a week, months in a year; read and understand a calendar to solve problems

- Measure and estimate using non-standard units (length and mass) and compare measurements

  How many hands wide is the table?      Which object is taller?      Which object is heavier?

- 2-D shapes: describe, compare, and make triangles, squares, rectangles, and circles

- 3-D objects: describe, compare, and make cylinders, cubes, spheres, cones, and pyramids

  cylinder    cube    sphere    cone    pyrmaid

- Sort 2-D shapes and 3-D objects and explain the sorting rule

  blue rectangles          blue triangles
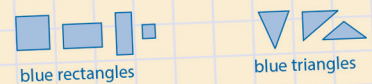
- Collect data and make pictographs and graphs using objects

**Favourite Colours of Grade 2 Students**

| | |
|---|---|
| Blue | ☺ ☺ ☺ ☺ ☺ ☺ ☺ |
| Red | ☺ ☺ ☺ ☺ ☺ |
| Yellow | ☺ ☺ ☺ ☺ |
| Purple | ☺ ☺ ☺ |
| Other | ☺ ☺ |

☺ = 1 student

# Books that Make Math Fun

All of these books are available at New Brunswick Public Libraries.

- **What Comes in 2's, 3's, & 4's** by *Suzanne Aker*
- **Even Steven and Odd Todd** by *Kathryn Cristaldi*
- **Alexander, Who Used to Be Rich Last Sunday** by *Judith Viorst*
- **Counting on Frank** by *Rod Clement*
- **Out for the Count: A Counting Adventure** by *Kathryn Cave*
- **One Hundred Hungry Ants** by *Elinor J. Pinczes*
- **Math Potatoes** by *Greg Tang*
- **Today is Monday** by *Eric Carle*
- **How Big is a Foot?** by *Rolf Myller*
- **So Many Circles, So Many Squares** by *Tana Hoban*
- **The Silly Story of Goldie Locks and the Three Squares** by *Grace Maccarone*

# Internet Resources for Grade 2 Math Students:

The Internet is a source of many resources to help you and your child understand and practice math at the Grade 2 level and beyond. These sites were active at the time of publication, but you should preview them first to ensure they are appropriate for your child's needs and interests.

- **Interactive Math Dictionary** - a great resource for you and your child: www.teachers.ash.org.au/jeather/maths/dictionary.html
- **National Council of Teachers of Mathematics** - "Illumination" interactive activities: http://illuminations.nctm.org/Activity Search.aspx
- **National Library of Virtual Manipulatives** - interactive activities for all grade levels: http://nlvm.usu.edu/en/nav/vlibrary.html
- **TVO kids** - collection of videos and games for math and other subjects www.tvokids.com/6-11
- **NRich** - activities, games, and problems: http://nrich.maths.org/forstudents
- **Education Place Math a Rama** - interactive games and activities, glossary and more: www.eduplace.com/kids/mw
- **BBC Bitesize Maths** - activities and games to practice skills: www.bbc.co.uk/schools/ks2bitesize/maths
- **Cool Math 4 Kids** - puzzles, games and much more: www.coolmath4kids.com
- **BBC Number Time** - interactive number games, including Snakes and Ladders www.bbc.co.uk/schools/numbertime/index.shtml
- **Count Us In!** - games to practise math concepts: www.abc.net.au/countusin

# Contact Us

The Department of Education and Early Childhood Development is committed to your child's success in math. If you have any questions about your child's progress or about how you can be an active part of his or her learning, contact your child's teacher or the Department of Education and Early Childhood Development at 506-453-3678.