

Supporting your kindergarten learner at home

- Have a **positive attitude** about math.
- Use **math words** and concepts at home as you measure ingredients for cooking and baking (“cups,” “double”), cut lengths of wrapping paper (“rectangle”) or ribbon (“three times the length of the box”) to wrap gifts, or make a family schedule (“days,” “weeks,” “hours”).
- Go for a walk and look for different **shapes around the neighbourhood**—a soccer ball is a sphere; a stop sign is an octagon; paving stones are rectangles or irregular shape, etc.
- Roll, throw, catch, and kick balls of different sizes and talk about which one is bigger and which is smaller, which ones are heavier and lighter, and which one travels the longest or shortest distance.
- Visit the park or playground to look for different shapes—what shape is a baseball diamond? What **shape** is the running track? —and **patterns** (numbers on a hopscotch grid, numbers on license plates and the number of squares on a four-square grid).
- Ask your children questions about play—for example, what, where, why, when, who, and how? This will help them learn to self-reflect, and it will encourage problem-solving skills.
- Encourage play with measuring cups and rulers to stimulate interest in mathematical and scientific concepts.
- Talk about the things you have seen together.
- Take your child to the **grocery store** and point out the scales in the produce section.
- Show your child **how to use money** or gift cards to pay for things.
- Bake, cook, and prepare food with your child.

Recommended Resources

There is a wealth of information on the internet in addition to the links and other resources listed below. For an up-to-date list, please check our website.

Ontario curriculum

- Full-Day Early Learning Kindergarten Program. edu.gov.on.ca/eng/curriculum/elementary/kingergarten_english_june3.pdf

Fun math games for kindergarten children

- Chateau Meddybemps. Activities and stories for young children. meddybemps.com
- Caterpillar Count. Kids learn to recognize numbers and count. tvokids.com/games/caterpillarcount
- Shapeville. Kids learn about shapes. tvokids.com/games/shapeville
- A Lotta Dessert. Kids learn about patterns. tvokids.com/games/lottadessert
- EduGAINS (additional material for parents). edugains.ca/newsite/earlyPrimary/schoolleader/parent_info_sheets.html

Doing math activities with your child

- Fun and educational videos and resources. familymathcanada.org
- Information and advice for doing math at home. tvoparents.tv.org
- Math activity placemats, games, and songs. educ.queensu.ca/coc/resources
- The Prime Radicals Snowflake app. tvokids.com/apps/primeradicalssnowflakes

Books

- **Counting and Computations** *Two Ways to Count to Ten*, Ruby Dee
- **Patterning** *Beep, Beep, Vroom, Vroom*, Stuart Murphy
- **Sorting** *The Button Box*, Marguerite Reid
- **Measurement** *The Best Bug Parade*, Stuart Murphy
- **Data and Chance** *The Best Vacation Ever*, Stuart Murphy
- **Geometry** *Captain Invincible and the Space Shapes*, Stuart Murphy

Module Two

Fact Sheet

Kindergarten

Count Together

CODE

Council of Ontario Directors of Education

Funded By:  Ontario

1123 Glenashton Drive
Oakville, Ontario L6H 5M1
Tel: 905.845.4254
Fax: 905.845.2044

Handy math facts for kindergarten

Characteristics of children in kindergarten

- Kindergarten children learn best by doing—playing, experimenting, and discovering.
- Kindergarten children are curious and energetic. They enjoy using physical materials to solve problems—“how many grapes will I have left after sharing with a friend?”
- Kindergarten children love to talk and they love the challenge of learning new (and big) words.
- Kindergarten children learn through experiences, concrete situations, and explorations—at home, school, the zoo, the library, and the playground.
- Kindergarten children need opportunities every day to practice everything from drawing and printing, to buttoning and zipping, to cutting with scissors, and holding a pencil.
- Kindergarten children develop new knowledge by building on past experiences and using knowledge that they have already.
- Kindergarten children’s different cultural and linguistic backgrounds and daily realities contribute to the different ways that they develop and show their learning.
- Kindergarten children each develop differently—not in the same way or on the same day!

Yes, you can really help your child succeed in math!

Math milestones for children in kindergarten

By the end of kindergarten, children should be able to:

- Show that there are many ways to count.
- Use numbers for counting and measuring.
- Show that numbers represent quantities that can become bigger or smaller.
- Use language to describe position—first, second, third, etc.
- Measure and compare length, weight, and temperature. For example, children can line up toys from shortest to tallest or heaviest to lightest. They can compare an outdoor to an indoor thermometer to describe warmer and colder.
- Compare and identify two-dimensional and three-dimensional objects found at home, school, and in other environments. For example, a globe is a sphere, a stop sign is an octagon, a can of soup is a cylinder, dice are cubes, a floor tile may have a square, or a rectangular or irregular shape, etc.
- Sort and compare two- and three-dimensional objects by size.
- Identify, create, describe, and complete growing and shrinking patterns using a variety of attributes, such as size, shape, texture, etc. They can make patterns with symbols, shapes, numbers, or actions to represent their thinking—hop/clap/jump/clap; hop/clap/jump/clap.
- Use measurement terms such as tall/short, big/small and empty/full to describe length, size, and quantity.
- Use language to describe spatial relationships—for example, inside/outside and above/below.
- Sort objects (find differences) or group them (find similarities) using rules such as the same number of right angles, sides, etc.

Kindergarten math skills and processes

Problem-solving:

Children learn that there is more than one way to solve a problem.

Reasoning and proving

Children develop their own mathematical strategies for solving problems by collaborating with others and explaining their thinking to the teaching team (which can include educational assistants, special resource teachers and the school principal).

Reflecting

Children reflect on and monitor their own thinking to help clarify a problem.

Selecting tools and strategies

Children select an appropriate learning strategy and learning tool, such as blocks, to help solve a problem.

Connecting

Children make connections between math and everyday life—how many plates do you need so that each of your classmates will have one at lunchtime?

