

How Will My Child Learn Mathematics?

Children learn mathematics best through activities that encourage them to: investigate; think about what they are investigating; gather information, organise it, and act on it; use information that they have gathered from a variety of sources to solve problems; explain how they reached their solutions.

Children learn more easily when they can connect mathematics concepts and procedures with their own experience. By using common household objects (such as measuring cups, bathroom scales, a deck of cards) and observing everyday events (such as weather trends over the course of a week), they can “see” the ideas that are being taught.

An important part of learning mathematics is learning how to understand and solve problems. Children are encouraged to use systematic trial and error and a variety of other strategies to develop their reasoning and to learn how to go about problem solving. They learn that there are many ways to solve problems and there is often more than one solution to any given problem. They also learn to communicate clearly as they explain their solutions.

What Tips Can I Use to Help My Child?

Be positive about mathematics.

- Be positive, and talk about the ways you use mathematics every day. Sharing negative experiences (by saying, for example, “I was never good at maths”) will not encourage your child to engage in mathematics and be confident about taking risks as he or she solves problems. Instead, try statements like this: “Okay, we can solve this if we work it out together. What are you thinking?” Let your child know that *you* think mathematics is important.
- Point out the ways in which different family members use mathematics in their jobs and at home. Let your child know that *everyone* can learn mathematics.
- Praise your child when he or she makes an effort and understands something for the first time, and share in the excitement when you and your child solve a problem together.
- Encourage your child to be persistent when a problem seems difficult.

Make mathematics part of your child's day.

- Point out to your child the many ways in which mathematics is used throughout his or her day. Encourage your child to tell or show you how he or she uses mathematics. Include your child in everyday activities that involve mathematics – making purchases, measuring ingredients, counting out plates and utensils for dinner, measuring and calculating the area of a room.
- Play games and do puzzles with your child that involve mathematics. Such activities may focus on direction or time, logic, reasoning, sorting, classifying, and/or estimating.
- Work with your child to solve mathematics problems such as the ones in this workshop. Problem solving helps your child develop mathematical thinking and reasoning. In addition to mathematics tools, such as a ruler and a calculator, use household objects, such as straws, a measuring cup, and containers of various shapes and sizes, when doing mathematics with your child.

Encourage your child to give explanations.

- When you and your child are trying to solve a problem, have your child share his or her thinking aloud and talk about the strategies that he or she used to reach a solution. If some of your child's ideas are puzzling, ask your child to explain further. As children talk about their ideas and how they reach solutions, they are learning to reason mathematically.
- Suggest that your child act out a problem or draw a diagram to solve it. Have your child show how he or she reached a conclusion by drawing pictures and moving objects as well as by using words.
- Treat errors and misconceptions as opportunities to develop reasoning skills and new ideas. Identify which part of your child's reasoning is convincing and which part is less convincing. For example, "I like the way you organised the information. Can we look at the chart again to see if the numbers are accurate?" Also, prompt your child to think of another way to solve the problem.