

Helping kids feel good about maths



At a glance

- Talk positively about maths so your child also values it.
- Play games with your child, which involve adding dice or numbers, to show them that maths matters.
- Ask your child how they work out maths problems; it helps build their knowledge and boosts their confidence.
- Help your child to group objects by asking them to set the table or put the cutlery away correctly.
- Point out maths in everyday life with your child whenever you can.

Maths expert and parent, Associate Professor Janette Bobis from the University of Sydney, gives her top tips on how young kids can become confident in maths.

Have a positive attitude towards maths

"Many parents are scared of maths or think they just can't do it, but it's the worst thing you can tell your child," says Janette.

"Parents are just so crucial as role models," she says.

"When parents tell their children that they themselves can't do it, it means they're communicating messages that it's OK not to be good at maths, which can carry all the way through high school."

Talk to your child about maths in everyday life

"We go about our everyday lives totally unaware of the maths we're using for so many tasks," Janette says. Talking to children about how maths is important in their everyday life makes it relevant and real. Some ideas are:

- cooking in the kitchen (measurement)
- operating a microwave oven (numbers and counting backwards)
- stacking containers in the cupboard (shapes)
- finding a certain house number down the street (counting by twos).

Play games to show you're interested in maths

Playing games that involve cards or dice provides valuable opportunities to show that maths matters and helps them to become better mathematicians, Janette says.

Ask your child to tell you the number of dots on a die each time they throw one during a board game. Eventually they will be able to do this without having to count them. These kinds of activities form the basis of working out number problems in their head. Research shows that kids who can do these things mentally have a deeper understanding of the maths involved.

When your child is adding the dots of two dice together ask them to start counting from the biggest number, eg if the dice rolled were five and two, start with the number five and then count on two more. This helps your child learn to be efficient in their number strategies.

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Ask your child to explain how they work things out

When your child works out a maths problem, such as adding the total when two dice have been rolled, ask them how they did it.

"What we've found through years of research is that even young children have quite

Associate Professor

sophisticated thinking strategies for solving maths problems. We need to communicate to them that their ways of thinking are just as important as finding out the answer," Janette says.

Janette Bobis
University of Sydney

"When you ask your child, 'How did you get that?' they may at first say, 'I don't know', but if they realise there is an expectation that they will need to explain the way they do maths, they will start thinking about it. The more they think about how they did something, the more it might make sense to them – it really contributes to that meaning-making process."

Look at patterns with your child

Asking your child to identify patterns – whether it's a pattern in a sequence of numbers, the beads in a necklace or the way bricks are arranged in a pathway – is helpful because through patterns, children identify structure.

"When we get to more advanced levels of maths such as algebra, it's all about identifying and dealing with patterns, so if we can get children at a very young age to start looking at them, no matter how simple they are, they're developing a mindset that they are important," Janette says.

Questions you can ask your child about identifying structure in patterns include:

- "What's the same about these patterns?"
- "How are they different?"

Group toys and objects

When children group things together, such as toys or blocks, they're actually identifying properties of things or looking for characteristics that are similar or different.

"Later on children will be asked to find the characteristics of different types of shapes – say, triangles. At a much simpler level, being able to classify or group objects according to obvious characteristics will develop those foundational skills," Janette says.

Other ways of grouping and classifying can include:

- setting the table
- putting the cutlery back into the appropriate slots
- placing different sized containers inside each other
- sorting blocks into different colours or shapes.

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Get your child to work things out in their head

Kids are encouraged to work things out in their mind in the early years of school rather than using pen and pencil to work out number problems, because it leads to a deeper understanding of the maths involved.

"That deeper understanding builds confidence, and makes it easier to solve more difficult problems because they understand the fundamentals," Janette says.

"Maths is about building upon foundations. The more complex maths kids learn later on is made easier if they've got solid foundations in those early years. That's why it's so crucial for children in the younger grades to understand those foundational concepts of maths: addition, subtraction, multiplication and division".