

## Parent Advice Sheet: Helping Your Child to Love Maths

### Maths is more than a subject for those who “can do”

- All children have a right to learn maths. Start with what your child can do and know rather than trying to plug a gap.
- Do not worry if your child makes mistakes. Errors are a crucial part of thinking and reasoning.
- Maths needs to have meaning and relevance to your child. Outdoor and real life experiences matter. Using your children’s interests to explain maths can also help. So count dinosaurs, take away dinosaurs and so on, if your child loves dinosaurs.
- Our perceptions of maths matters. Regardless of your own experiences of maths, it is important you pass on a love of maths and a belief that it is a worthwhile subject. Try to avoid comments such as “I’m useless at maths.” Or “I can’t do maths.”

Children learn maths through experiences until the constant learning becoming a knowing. For example, many adults know roughly the length of one metre because they have experienced one metre and used this unit of measurement in lots of different ways. Likewise, it is very difficult to fully understand some concepts in maths such as weight without a lot of experience of lifting and moving a range of objects that all weigh different amounts.

### Stories help maths

Very often putting the problem into a story can help children understand better what to do. Encourage children to make up and re-tell stories to you.

### Use gestures

Children will use gestures instead of words to explain their thoughts. When this happens provide the words to support the gesture. If it helps a child, then let them invent gestures to represent different symbols.

### Play games

Lot of maths can be learned through games where everyone helps everyone. Once a child or group know a game well, e.g. hopscotch, then encourage them to change a rule and talk about the impact on the game.

If you have a white sheet then this can be useful for lots of games. It can be easier to see leaves, sticks, stones and other objects than on grass.



### Estimate everything

This helps children make sensible approximations. We are constantly estimating in our lives, e.g. *How long will it take to get to work?* Or *Will this pair of trousers still fit me?*, etc.

Always estimate then check by doing. Use phrases such as “I wonder...”

- How many steps you need to take to reach the next lamppost?
- How many times you can jump up and down?

- How long it will take you to run to the fence and back?

### Use fingers for instant number games

Fingers are children's first counting tool. Play games with simple instructions such as:

- *Show me the number three with your hands.*
- *Can you make three with a different combination of fingers and thumbs?*
- *I wonder how many ways we can make the number three...*



### Count in different ways

- Count forwards when moving forwards or walking up steps.
- Count backwards when moving backwards or walking down steps.
- Count in twos, fives or tens if it makes sense to do so.
- If a child or group wants to use big numbers, then count in thousands or millions, e.g. one million, two million, three million, or two million and one, two million and two, etc.
- Ask you child to pick up handful of gravel or other objects. Ask your child to estimate how many they have before they count them.

### Use real money

- Encourage your child to search down the back of your sofa for spare change.
- When the tooth fairy arrives at your house, request that loose change is provided rather than a £1 or £2 coin. It means they have to count up how much money the tooth fairy has given them.
- Ensure your child has a piggy bank and uses it to collect money.
- Go for a penny walk. When you and your child come to a junction flip a coin. If it lands heads up, you turn right. If it lands tails up, you turn left.
- Flip a coin to make decisions.

### Your turn, my turn

Find or count out an agreed number of objects, e.g. five cones. In pairs, one person closes their eyes and the other removes some of the objects. The person opens their eyes and tries to guess how many cones have been removed. The other person shows them the hidden cones and put them back. Roles are swapped and the game continues for a few more rounds.



### The game of Nim

This is an ancient strategy game. Play in pairs. Count out 20 objects. Take turns to remove 1, 2 or 3 objects until one object is left. If it is your turn to pick up this object then you have lost the game. Have discussions around tactics and changing rules, e.g.:

- Whether it makes a difference who goes first.
- What happens if more people join in the game.
- The impact if you can only pick up one or two objects.

### Sing number songs and rhymes

Develop a bank of number songs for spur of the moment singsongs. This can help a lot of children re-focus and relax. Outside, you can link the songs to different places, e.g.

- Puddle – *Dr Foster went to Gloucester*
- Wall – *3 crows sat upon a wall, 10 green bottles*
- Drain pipe – *Incey Wincey Spider*

