



# Changing attitudes towards Maths

Fight the UK's  
*"Can't do Maths"*  
attitude.

*"Continuous effort,  
not strength or intelligences,  
is the key to unlocking our potential"*

*Winston Churchill*

### **Ask yourself:**

How often have you heard someone announce, with great pride, that they cannot read or write?

How often have you heard someone announce that they are not very good at Maths?

Is it fair that we expose our children to these attitudes? It may not seem like much but these sorts of experiences in children's formative years cast a lasting impression that can be very damaging to them.

FACT:

The UK is one of the few advanced nations where it is socially acceptable to admit to an inability to cope with Maths.

FACT:

Maths is **NOT** something that you are born either good at or bad at.

FACT:

Parents' mathematical ability has **NO** influence on a child's potential to excel in Maths.

FACT:

Parents' attitude towards **working hard** and **not giving up** has a **huge impact** on a child's Mathematical success.

FACT:

**Mathematics is for everyone.** With the **right attitude** and **support** everyone is capable of achieving high Mathematical standards, regardless of starting point.

**DO:**

Reinforce a **positive attitude towards Maths** and **working hard to grow as Mathematicians**.

**DO:**

Talk to your child about what they are doing in Maths and **how they solve problems**.

**DO:**

**Challenge them** at home to solve everyday problems involving numbers.

**DO:**

**Show them** how you use Maths in your job or in everyday life.

**DO:**

**Talk about the importance of Maths** and its necessity for careers.

**DO:**

Look for opportunities to **challenge a negative attitude** towards Maths. Be prepared for this negativity to come from other family members, friends or in the media.

**DO:**

**Celebrate any positive uses of Maths**. Help your child understand that Maths is NOT just about what they learn in a Maths classroom.

**DO NOT:**

Admit to finding Maths difficult when you were at school, even if you did!

**DO NOT:**

Share any negative experiences you might have had in your Maths education – be positive!

**DO NOT:**

Make excuses for them finding some elements of Maths difficult - support them to overcome these obstacles.

**DO NOT:**

Suggest that there is no importance in Maths and that poor Maths ability “never did you any harm”

**DO NOT:**

Worry if you think you learnt “a different method.” Deep Maths learning is NOT about methods, it is about understanding, thinking, reasoning and problem solving.

*“If you are not willing to learn then no one can help you.  
If you are determined to learn then no one can stop you”*

The language you use with your child influences your child’s attitude towards Maths, and therefore their chances of success in Maths.

You need to think very carefully about what you say to your child when discussing Maths in any context.

As Maths teachers, it is almost impossible to support a child to make progress if they have the fixed belief that they are not ever going to be successful in Maths.

Believing you are not very good at Maths becomes a self-fulfilling prophecy.

Maths can and should challenge students to think. Having to think is how students learn and how the brain develops and grows.

Consider the brain as a muscle. To grow or strengthen muscles they need exercise. Just like muscles the brain grows more if you exercise it. Mathematical thinking, reasoning and problem solving provides this essential exercise for your child’s brain to help it grow.

## Negative/fixed mind-set causes lower performance

Most parents enjoy books with their children, but few will enjoy numbers or maths together.

Below are some maths ideas that are meaningful as well as interesting.

By doing this your child will begin to see maths as part of everyday life, rather than just something studied at school.

It is very important for school and home to work together, and by fostering positive attitudes to maths at home, hopefully we can help our children at school too.

### Out and About...

- Point out shapes, angles, lengths (e.g. in buildings, bridges, sculptures)
- Take your child shopping and compare prices (e.g. single versus multipack or different weights/volumes).
- Work out prices after a % reduction or sale.
- Ask your child to check change.
- Check the bill in a restaurant (estimate or add up exactly).
- Ask your child to calculate an appropriate tip to pay (10%, 15%, 20%?)
- Make up and play games (e.g. find a number plate that is a multiple of 3 on car journeys).
- Use timetables for trains etc. to calculate lengths of journeys.
- Calculate taxes, compare payment methods, and work out loans and home budgets.
- Work out or check bank balances.

### In the home...

- Show them how to read a meter, work out gas/electric used.
- Show them the household bills, talk these through with them.
- Look at calories etc. on food labelling.
- Mixing baby milk, squash, cleaning fluids etc. in certain proportions/concentrations (e.g 1 part squash to 10 parts water – ratio.)
- Scaling up/down a cup-cake recipe to make more/less cakes.
- Working out whether you have enough bread for the week.
- Wallpaper, paint or tiling – calculating required materials and pricing up.
- Compare mobile phone tariffs.
- Look at sport statistics

### Journeys...

- Estimating if you have enough petrol for a journey.
- Estimating your arrival time given the distance you are travelling and the speed.
- Guess how far it is to something on the horizon and clock distance (in miles and km)

## Games

Games require children to use strategies, make decisions and solve problems.

They develop understanding about numbers and how to use them (number sense) and computational skills.

Play games that help children develop decision making and mental math skills.

There are many games, such as board games or card games that involve patterns and probability.

Play games from your own family traditions such as counting games and games that keep score.

Ideas:

- Monopoly
- Mastermind
- Brain Training (Nintendo DS)
- Professor Layton (Nintendo DS)
- Blokus
- Canasta
- Pontoon
- Yahtzee
- Darts
- Pass The Pig
- Scrabble (literacy & numeracy)

*Solving a maths problem is like going on an adventure.  
Ten people could go to Rome, but some may fly, or walk, or  
go by boat.  
They will all get there, but by a different route and method,  
having a different adventure along the way!*

### **Questions you can ask your child:**

“How hard are you working in Maths?”

“What do you do when you find something difficult?”

“Do you think that Maths is important for you?”

These questions will help you to identify their attitude towards learning Maths and help trigger further conversations towards shifting their attitude.

Although test results are important, a successful student will focus more on their efforts and attitude to learning.

You should regularly re-visit these questions over the next 5 years to ensure your child remains on the right path.

### **Additional information for Year 7 parents (timestables):**

Another key area for success throughout Key Stage 3 and 4 is students' ability to quickly and confidently recall any fact from the 1 to 12 timestable.

This includes associated division facts

Eg. Students will need to recall that:

$$6 \times 8 = 48$$

$$48 \div 6 = 8$$

$$48 \div 8 = 6$$

At the Priory School we expect ALL students to be able to do this for all facts in under 3 seconds by Christmas of Year 7.

3 seconds is a minimum requirement and most students should be able to recall almost instantly.