



1.

Working is an important part of Mathematics. It is the way in which Mathematicians communicate their processes and thinking.

Encourage your child to think about working as a form of communication. All the steps in a solution should be clear enough for a person of limited Mathematical knowledge to be able to follow.

Communication

2.

Correct answers are usually only part of a solution.

Ask your child to show you all their working and explain the steps which make up a solution.

Talk to your child, on a regular basis, about Mathematics

3.

Your child will benefit from taking on the role of teacher, as explaining a process can clarify thinking.

Ask your child to teach you how to do some questions. You never know, you might also learn some Mathematics.

and Reflection

4.

Don't force your own fixed mindset on your child

If you say to your child "I'm not good at Mathematics" you could be giving them the excuse they need to fail. Perhaps you could suggest that your child explains some Mathematics to you, displaying your own willingness to learn.


5.

Reflective learners try to learn from mistakes

Ask your child to give you examples of a time they learned from a mistake they had made.

6.

An assessment is not an end point, it is part of the learning process.



Talk about
being a
resilient
learner

Your child will regularly sit assessments in Mathematics. After an assessment, encourage your child to identify what he/she achieved and, more importantly, identify mistakes which he/she can learn from.

Learning from.....

7.

Define **smart** as a process not an attribute


Say things like:

"It was smart to try those five questions, check the answers and learn from any mistakes you made"

8.

Mathematics is not about getting it correct first time.

It's about learning how to do it correctly, sometimes after lots of effort and thinking.



Talk about
learning
from
mistakes

9.

Making mistakes is a vital part of learning and being overly risk averse can have a detrimental effect on a pupil's progress.

This seems to be even more evident for pupils studying Mathematics than in most other subjects.

10.

Encourage your child to always attempt tasks, even when there is a risk of making a mistake.

"Do not judge me by my successes, judge me by how many times I fell down and got back up again." - Nelson Mandela

11.

Making mistakes is a natural part of the learning process.

You child should feel safe to experiment with their Mathematics, safe in the knowledge that they can learn from their mistakes.

12.

Resilient learners try their best when faced with a challenge.

Ask your child to talk about a question in this topic which he/she found challenging and, with resilience and persistence, rose to the challenge to complete it successfully.

.....mistakes

Embrace Challenge

13.

Acknowledge that Mathematics can be challenging

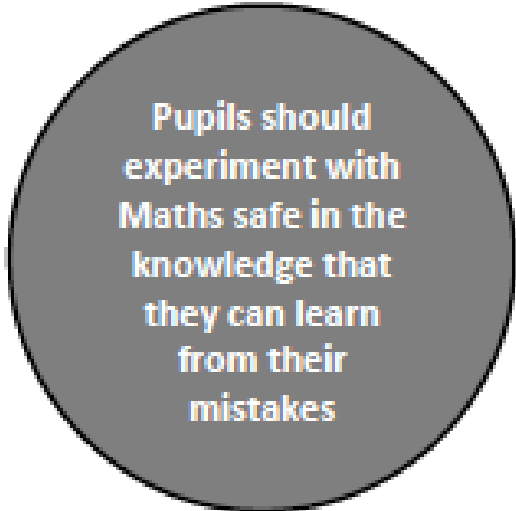
Encourage your child to be ambitious even when they find Mathematics challenging. Mathematics should be challenging and will require your child to put in enough effort to meet this challenge.

14.

Some learners would rather not try than get it wrong. This is a recipe for disaster.

Encourage your child to take the time to complete all questions, even if they get things wrong. They can always learn from the mistakes.

15.



Pupils should experiment with Maths safe in the knowledge that they can learn from their mistakes

The power of yet!

If your child says “I don’t get it”, this has the sound of permanence - and they might never get it.

If your child says “I don’t get it yet”, they open themselves up to a future where they will be able to do it.

16.

Relate grades to honest and realistic estimation of how well your child prepared.

Preparation includes classroom application, at all times, and home study/revision. A way to visualise this is to consider a result of 40% meaning the need to improve revision/study/preparation by up to 60%.

17.

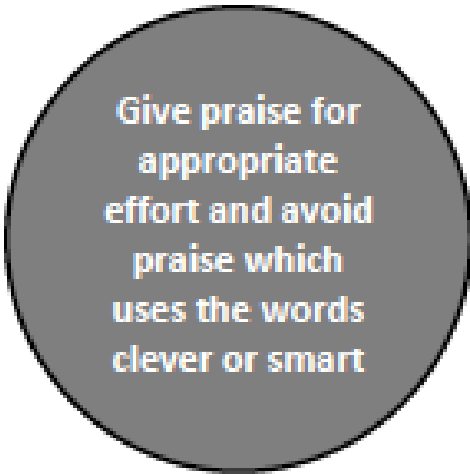
Praise your child for effort and for being positive in the way they have met a challenge.

"You said you'd complete five questions tonight and you've worked really hard to achieve that. Well done!"

18.

Avoid praise using words like smart or clever.

If your child begins to believe that being clever means you find Mathematics easy, then at some point they will find Mathematics difficult and give up because they don't feel smart enough.



Give praise for appropriate effort and avoid praise which uses the words clever or smart

Growth Mindset

19.

Challenge your child if they say "no homework tonight".

At all times, there is home study for Mathematics. The more your child attempts, and the harder your child works, the more they will achieve.

20.

Don't praise speed ("clever boy you finished that quickly") unless it is an improvement on a previous position "you have practised your mental calculations so much that you completed that task in half the time"

Encourage your child to measure progress in how much they have achieved and not in how quickly they achieve it.

21.

Discuss brain growth with your child

Make your child aware that intelligence is not fixed and persistent effort will lead to a smarter brain.

Talk about your child's brain power improving, through hard work, and not being something that is fixed

22.

Ability in Mathematics is not fixed - It can change.

Your child's level of ability in Mathematics can improve - through hard work and resilience.

23.

Focus your child's attention on the questions they did not manage to complete successfully.

Don't concentrate too much on class averages. Focus on what they have mastered and the areas where they need to work harder in order to make improvements.

24.

Ask reflective questions which help your child develop a good work ethic

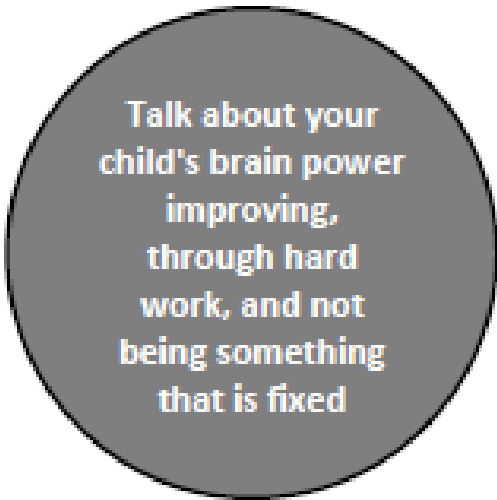
"How many question did you complete tonight?"

"Do you think that is enough?"

"How do you know that is enough?"

"Did you try hard enough?"

"Next time could you do more than this time?" etc.



Talk about your child's brain power improving, through hard work, and not being something that is fixed

Growth Mindset

The passion for stretching yourself and sticking to it, even when it's not going well, is the hallmark of the Growth Mindset.

This is the mindset that allows people to thrive during some of the most challenging times in their lives.

Carol Dweck

Hard Work

Our greatest weakness lies in giving up.

The most certain way to success is always to try just one more time.

Thomas Edison

Learn from Mistakes

I think and think for months and years. Ninety-nine times out of a hundred I am wrong.

The hundredth time I am right.

Albert Einstein

Embrace Challenge

A teacher's job is not to make work easy. It is to make it difficult. If you are not challenged, you do not make mistakes. If you do not make mistakes, feedback is useless.

John Hattie

The Power of Yet

There is a difference between not knowing and not knowing yet!

Sheila Tobias

Resilience

You must learn to fail intelligently. Failing is one of the greatest arts in the world. One fails forward towards success.

Thomas Edison