



Making Maths Magical!

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Introduction

Maths can be perceived in certain ways and these are influenced by a few additional 'environmental' factors: Teachers, Parents, Friends, siblings, society and the Media. These 5 components have a direct influence on the way people feel about maths. Maths is often placed in an Ivory tower that is deemed untouchable. Sometimes, academics protect the very mystery by adding complexity and fancy formulae. The only way to improve attitudes and skills attained is to simply popularise the subject. Let students interact with numbers in a fun and exciting way – this will lead to positive experiences. Children need to have a positive experience and this should be reinforced throughout their maths career.

So how do we make Maths Magical?

What:

Games are often a simple way of explaining a concept. When one is immersed within the game, one begins to appreciate how the smaller pieces fit into the large picture. The following games will demonstrate how this principle works:

- Maths games – to be played in second session
- Magic tricks - Introduce fun little tricks that the students can test out on their peers and family
- Life experiences – foundation phase children need to be immersed in the usefulness of the numbers (shopping, number plate game, sharing, estimating, etc)
- Introduce the lateral thinking approach – get them to act out problems- E.g. the Hats problem (5 hats – 3 black and 2 white)
- Historical perspective – Mention Descartes and Gauss, explore the history of counting, number systems
- Behaviour Lottery – more merits go into a hat – improve their chances
- Other cultures VEDIC Maths samples (multiplication/ lines)
Noah's Ark was taller than a 3-story building and had a deck area the size of 36 lawn tennis courts. Its length was 300 cubits (450 feet, or 135 meters); its width was 50 cubits (75 feet, or 22.5 meters); it had three stories and its height was 30 cubits (45 feet, or 13.5 meters).
Genesis 6:15 in the Bible tells us the Ark's dimensions were at least 135 meters long (300 cubits), 22.5 meters wide (50 cubits), and 13.5 meters high (30 cubits). That's 450 feet long, 75 feet wide, and 45 feet high! It could have been larger because several larger-sized cubits were used. But the 45-centimeter (18-inch) cubit is long enough to show the enormous size of the Ark.(A cubit was the length of a man's arm from fingertips to elbow.)

How:

- Promote self-discovery – getting the right answer is not as important as the process – show this through your marking.
- Every game must allow the learner to develop their skills and the more frequently they play, the more repetition they experience and the faster they learn.
- Keep tools of the trade in the class and make them accessible
- RED versus GREEN sessions
- Interactive Whiteboard/Smart board activities
- Pocket Money example
Look at a model of earning R100 per month with a modest increase versus 1c – doubled every month

Some PRACTICAL, EFFECTIVE, CREATIVE and FUN ideas

- **Weekly Maths Challenge** – run by a group of learners
A brainteaser is read out each week in assembly. The brainteaser is then placed on a designated notice board with a post-box underneath. The Brainteaser committee then goes through the entries and picks one lucky correct entry. The following assembly, the person is called up and they come to receive their “certificate” or chocolate and the next brainteaser is read out. This will get the whole school discussing the teaser all week. Feel free to pick entries from children who do not do so well in maths – a little boost never hurt anyone’s self esteem. Don’t forget to put the previous week’s solution on the board.
- Enter more **maths competitions** and Olympiads – not only do you have the material as a resource afterwards but you also get new ideas and fun problems to present to your learners in class.
- Start a **maths club** at school. Erect a maths notice board in a prominent place in the school. It is the club’s mandate to maintain the maths notice board by placing articles that are relevant, brainteasers, competitions, maths advice, great new maths books, news of bursaries, Olympiads, Web sites, etc
- If you send out **school notices**, feel free to include little brainteasers or problems for the parents to think about and this will filter down to their children.
- Arrange **family maths evenings** – develop a fun worksheet that involves lateral thinking brainteasers, fun problems, word problems, mazes, riddles, etc and get the families to come over to the school one evening and let them go through the worksheet. You can run a tuck-shop to raise funds and at the end of the evening you can present prizes to a few people – not for getting everything correct but rather for having fun or smiling the most.
- Introduce a **maths theme** each month or each week at school. During an assembly once a month, spend a few extra minutes on a topic within the theme: EG THEME: MEASUREMENT and topic: the Speed of Sound or gravitational pull
- Instead of a sport or an activity, learners should be able to choose maths **enrichment as an extra-mural**. Living Maths runs such sessions at under 30 schools in Cape Town. Brainteasers can be presented, exciting ideas can be discussed, focussing on discoveries, going through old Olympiad papers, etc
- **DISCOVERY CORNER** – filled with goodies – this is a space where kids can “get lost” in the excitement of the discovery.
- **Treasure Box** – only kids that finish or do good work get a chance to play with the treasures inside. The irony is that the children are rewarded with “work”.
- **Skype Sessions** with other schools
- **Twitter**: mathsiscool

If you would like to receive **FREE Weekly emails** with brainteasers, puzzles, educational websites, information on interesting topics and information about our Maths Olympiad we are organising in the Fourth Quarter of the year, please feel free to contact our office for more details, visit our website www.livingmaths.com or email us: livmath@iafrica.com.

Spoon feeding leads to nothing more than understanding the shape of the spoon.. Self-discovery is itself the essence of the learning process. Independent thinking starts without the spoon.