

**Put
MATHS BACK ON TRACK**

**Save
the Children
&
MATHEMATICS!**

**SCHOOL
MATHS**

A Genuine
REFORM

**Much Needed
and
Long Overdue**

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for Excellence in Mathematics

NATURAL MATHS vs SCHOOL MATHS

MATHEMATICS

Everything in this Universe, why, the Universe itself, is based on mathematics. Mathematics has no beginning; it is an unfathomable and boundaryless ocean, giving out *pearls* of mathematical wisdom endlessly.

MATHEMATICS IS NATURAL

Mathematics is NATURAL to humans. It is born with every man; it is not external to him. It is natural like speaking, singing, day-dreaming, etc. It is the combination of understanding, logical reasoning, intelligent thinking, etc. Most certainly, it is not just a 'school subject' taught within the four walls of a class room.

Everyone counts, compares, measures, divides, shares etc. in his daily life. Even a very small child wants *வெண்ணாடு மிட்டாய்* (two candies), stretching all the five fingers of a hand. The vegetable vendor or his siblings, who perhaps never went to school, charge the sale and give the change correctly, **everytime and in no time**. The farmer subdivides his plot into smaller portions for better management; his wife correctly estimates and cooks when guests come, his children share fruits and other eatables equally among themselves and so on. None of these people learnt multiplication, division, geometry, ratios etc. The lady did not have a ready reckoner saying so much rice for so many people etc.

MATHEMATICS LEARNT EFFORTLESSLY

Life is full of processes. Farming, cooking, running the house-hold, running the village, etc. are all processes and hence mathematical. *Every life-skill is mathematics*. Every skill is learnt and perfected *as the need arises*. The beauty is that these *necessary mathematics* (life-sills) for his daily life is learnt and used *effortlessly* without ever even knowing or thinking that it is mathematics. They simply acquire them in the normal course of growing and living.

The child on the cycle, while negotiating a curve, tilts the exact amount of angle; labourers use all three types of levers for work; the lady bends the correct angle and applies the correct force on her legs to lift a pot of water to her head; ... All these people have not even heard of 'dynamics' though.

LIFE SKILLS

1) The 'illiterate' village carpenter makes a circular wooden wheel joining six equal arc-sections naturally. It is one of his life-skills.

2) (Mrs) Ponnamma draws *kolams* involving lines and curves maintaining relative dimensions and proportions.

3) Children pick up Thamizh as they grow. They speak correct, grammatical Thamizh.

4) A small baby of Thamizh parents, say, living in Hyderabad, grows up speaking Thamizh, Telugu and Urdu (and/or Hindi) effortlessly. All migrants learn the language of their domicile 'naturally'.

SCHOOL SKILLS?!?

The carpenter's son who goes to school, can not draw a neat circle and divide its circumference into six equal parts.

Kannamma, Ponnamma's daughter studies Geometry but can not draw even a straight line 2 cm long by free-hand.

Most Thamizh children find Thamizh difficult in school and fail in Thamizh.

We teach 'English' from pre-K.G. and how many of our graduates can speak reasonably in English? [Because 'Wren & Martin' is mistaken for English]

IS MATHEMATICS EASY OR DIFFICULT? WHY?

The Natural Mathematics is neither easy nor difficult; it is natural. The 'illiterate' rural folk, calculate the amount of grain in a heap, they know how much soil is to be excavated to dig a well of given dimensions etc. etc. But our LITERATE 'modern' population can not do any of these. **It is evident that something is amiss with our School (Mathematics) Education System.** An easy and natural life-skill becomes difficult and almost impossible if handled within the four walls of a class room.

The reason is simple. While the *declared aim* of teaching mathematics is very lofty, the **actual aim of teaching mathematics is universally ANYTHING BUT LOFTY.**