

## Teacher Turns Maths Into Child's Play

A novel project which makes learning Mathematics child's play while creating awareness of the environment among children has won an Indian primary schoolteacher a top Commonwealth award.

Materials used in the Maths games devised by the teacher are so basic that even the poorest of schools in developing countries can afford them. All they need is cardboard, a piece of wood, colours and brushes, marbles, shells and buttons.

Young children learn to count, divide, multiply and subtract various figures within 100 depending on the game they are playing.

The games were the idea of Abbasbhai Khokhar who teaches at Dasada, Sundranagar, in the western Indian state of Gujarat.

His work has now been recognised by the Commonwealth Association of Science, Technology and Mathematics Educators (CASTME) which has awarded him the first prize in an annual competition for Commonwealth educators.

Abbasbhai Khokhar has devised four Maths games, using cardboard. One of these, for children aged up to six, is a variation on the 'snakes and ladders' theme where players start with square 1 and aim to get to a lotus flower at 100.

On their way around narrowing circles they meet creatures such as a frog, a tortoise, a crocodile and a water snake amid a colourful background of mountains, rivers and trees.

Children use buttons of different

colours and a six-sided dice. The throw of the dice determines the number of places a player can move. The button is 'eaten' if it lands in a square with an animal, and the player has to go back to square 1. The first player to reach the lotus is the winner.

Mr Khokhar says children not only learn to count, they also learn a bit about the environment as they move buttons around the board passing along mountains, trees, rivers and marine life. "And they learn that lotus grows in water."

About 170 awards and commendations have gone to more than 30 Commonwealth countries since the scheme's launch in 1974, the year when CASTME was formed.

Most winners have come from India, though countries like Australia, Britain, Cyprus, Guyana, Jamaica, Kenya, Malaysia, Seychelles, Sri Lanka, Trinidad and Tobago and Uganda have also done well.

The scheme is open to teachers in primary, secondary and tertiary education as well as education officials. Entries that show innovative work are particularly encouraged.

CASTME was created to provide a link between practitioners in the teaching and learning of science, technology and mathematics (STM) throughout the Commonwealth. It places particular emphasis on the need for STM education to be relevant to the social, cultural and

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economic conditions of countries concerned.

The association receives financial help from the Commonwealth Foundation and administrative support from the Commonwealth Secretariat and the British Council.

It received a boost with the recent announcement that from 1997 the awards scheme will be co-sponsored by the Royal Academy of Science International Trust (RASIT), based in New Jersey, USA.

Dr Ved Goel, honorary secretary of CASTME and a chief programme officer in the Secretariat's Education Department, welcomed RASIT's involvement.

"It is a feather in CASTME's cap and an indication of its standing in the international community," said Dr Goel, himself a science educationalist.

The extra funds from the academy would allow the association to give cash and other tangible prizes with the certificates, he added. Cash awards would help to attract still better entries.

From 1997 the first prize winner will receive US\$3,000, with \$2,000 and \$1,000 going to second and third places.

The award scheme was the idea of Dr Maurice Goldsmith of Britain, founder president of CASTME, who was honoured by CASTME in December 1995 for his services to the

association. He received a special certificate on CASTME's behalf from Dr Federico Mayor, director-general of Unesco.

The presentation took place during a symposium at Marlborough House to mark the 21st anniversary of CASTME whose work has been praised by Commonwealth education ministers.

The inter-relationship of STM education with the arts and humanities was the theme of the symposium, opened by Commonwealth Deputy Secretary-General Nick Hare of Canada. The theme went to the heart of what education was all about, he declared.

Mr Hare said: "The impact of science on the culture of a community depends on whether the gulf between individuals can be reduced."

"This reduction depends on the scientific community working closely with their counterparts in the humanities and the arts in solving the problems of society and making science a more integral part of one's culture."

He said despite lack of resources many innovative and imaginative teachers were making curriculum inroads in accessing STM education to children in schools.

"Their efforts often get overlooked. CASTME, through its awards system, has encouraged, recognised and rewarded many such teachers, and that is no small achievement."

**Commonwealth Feature**