

# TOY STORY

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*IIT-ian Arvind Gupta gave up his MNC job to make toys out of scrap and help students understand the concepts of science better. Arushi Chaudhary learns some tricks of the trade from him*

Has science given you nightmares? Have never understood what Newton's laws mean or what centrifugal force is all about? We can only wish this scientific magician was around to help you out of your Waterloo with science! But some are born luckier! Arvind Gupta, an IIT graduate, gave up a lucrative career to help students understand the concepts of science better.

"Using things available offhand to make exciting and innovative things was the idea behind coming up with these toys. Science is not hardware, it is a viewpoint. It's about having a critical angle to look at things. Having great labs and wearing white coats doesn't mean one is a great scientist," says Gupta.

"There is an insane notion in the society that the more expensive the education, the better it is. But people don't realise there is nothing more effective than using humble material for explaining scientific concepts to kids because they can relate to it immediately," he adds.

Gupta, whose current workstation is at Children's Science Centre, IUCCA, University of Pune, has dedicated almost 30 years to come up with these innovative toys made out of waste material. It all started in 1979, when he went for the Hoshangabad Science Teaching Programme (HSTP). "After graduating from IIT, Kanpur, I got employed with TELCO. It was a well paying job and would have brought me materialistic success and acclaim but I wasn't happy. I was looking for something that required more involvement, something that gave me an opportunity to grow.

I took one year's study leave from TELCO and worked with an NGO - Kishore Bharati. It was while working there that I went for the Hoshangabad Science Teaching Programme. It was a small town in MP and there I realised it was very important to apply scientific concepts in everyday life to help people understand them better," he says.

"I designed several low-cost and scientific teaching aids. UNICEF committees give grants and expensive kits are bought for schools, but often teachers don't even open them for the fear of damaging them and they go unused. Unless teachers make things themselves they can't teach science well," adds Gupta.

"It all started when I went to get my bike inflated while at the HSTP. I found a thin tube and took out a match stick and found it fitted well in the tube. I started making models like triangles, squares, hexagons out of it and realised it is something that every child can make and can hold in their hand and understand the concepts. The village I had used to live in have a weekly bazaar. I would buy stuff from there and use them to make models. It gave me a sense of contentment which I had never experienced before. So I chucked my job in 1980 and took it up full-time," he adds.

The range of toys at Gupta's lab is fascinating and are made from things like a waste Frooti tetra pack, old newspapers, film role covers, cycle tubes etc. Each toy is based on a scientific concept that makes science endearing. "People dread science and that is because most of us can't comprehend what these heavy sounding words and concepts really stand for.

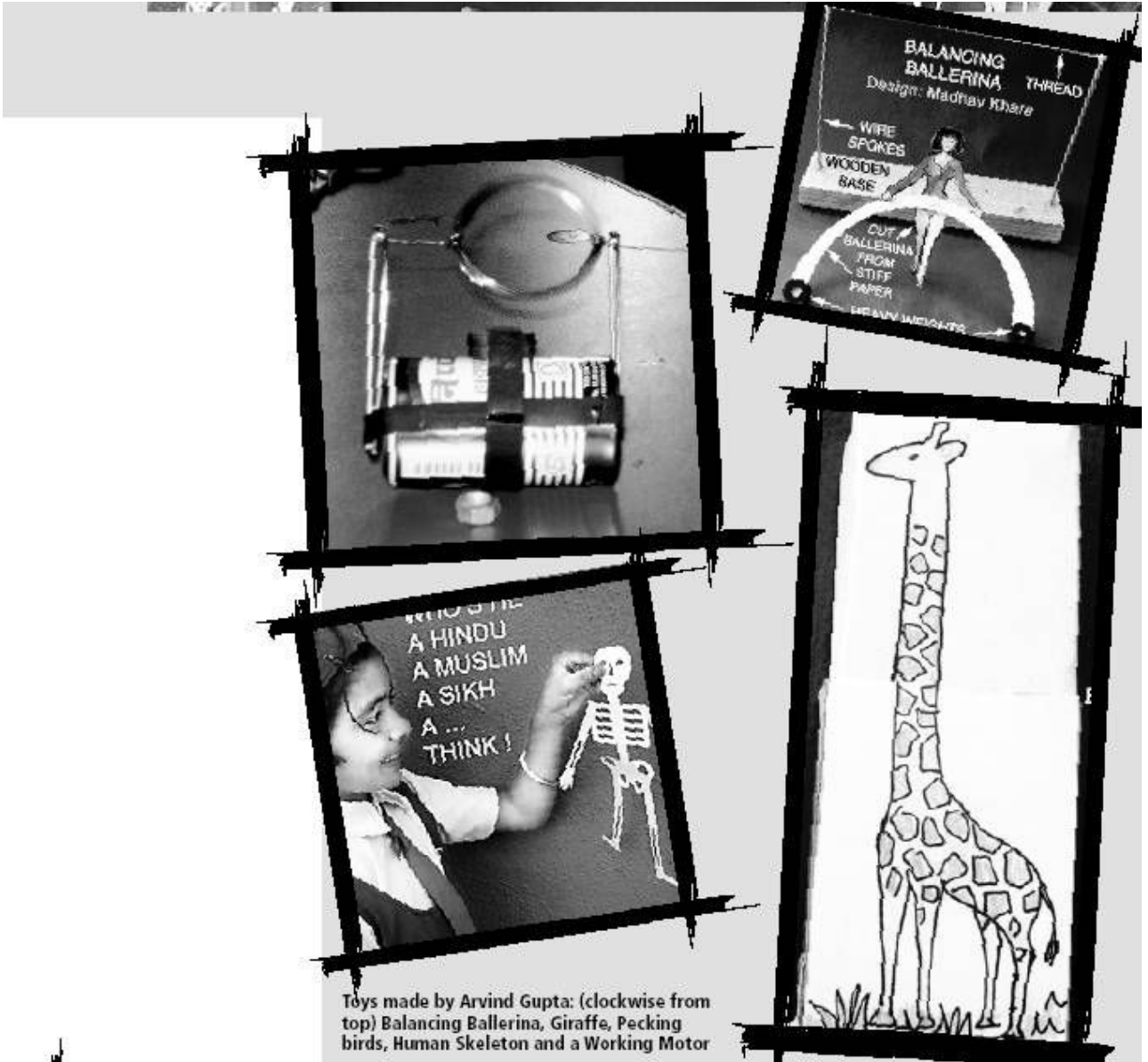
But when you know you can make a motor with a cell, two safety pins, some copper coil and two magnets, children realise that it isn't something they need to cram but something they need to experiment with. I always feel that the best thing I can do to a toy is to break it. There is an inquisitiveness in kids to find out what lies in the stomach of a toy, the key is not to let that die ever," he passionately adds.

Before coming to Pune, Gupta was in Delhi and conducted workshops in various schools and continues to do them here as well. "I have continued with experimenting and I love making new toys and teach kids how to make them work. I don't say all our ideas are original, we adapt great work done by people and use it in our toys. At times we fail miserably and kids don't like our endeavours at all, but we keep on trying to improve. People from across the world visit our website, try out our experiments and get back to us with suggestions to improve. We add 2-3 new toys everyday," adds Gupta candidly.

Apart from making these toys, he also translates books and puts them up for free download on his website. "In a country of 1.2 billion people, there are no public libraries and books are expensive. How does an average teacher keep himself updated? So I translate books and put them up on my website. My only atma is these books floating in the cyberspace," says Gupta. How did people react to him giving up a lucrative job? "People thought I was a freak, when I chucked my job. But I didn't bother. May be I would have been the GM at some MNC today, but it wouldn't have been half as interesting as interacting with 500 kids everyday," he answers.



Arvind Gupta



Toys made by Arvind Gupta: (clockwise from top) Balancing Ballerina, Giraffe, Pecking birds, Human Skeleton and a Working Motor



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