i wonder...
REDISCOVERING SCHOOL SCIENCE

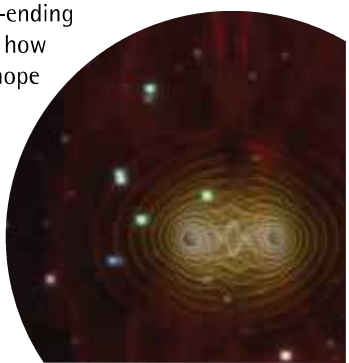
Editor's Desk

Propelled by science, humanity is at the cusp of becoming a spacefaring civilisation, with 'eyes' firmly set on distant stars and feet taking the first baby steps towards other planets in the Solar system. At this juncture, it is important to remember that science education can no longer be limited to telling students a plethora of facts, as if they are a given. Rather, the role of science education, as emphasized in the article **Why Science Matters**, is to enable children understand and appreciate the scientific process that has led to the most plausible hypotheses being proven with hard data and then being presented as theories. It is also about encouraging children to make use of this process, not only in scientific quests, but also in their day-to-day life. Effective science teachers can convey the beauty of this process and share the wonder it brings with their students. Because, often, each of these 'facts' is the culmination and coming together of work done by many scientists, spanning decades, and at times, even centuries. Frequently, they have benefited from the work of many other scientists – some of whom have come up against blank walls in an attempt to prove their hypotheses. What's more - many of these scientists have worked in seemingly unrelated streams of science, seeking answers to possibly unrelated questions!

The most plausible answers to the most fundamental questions – questions regarding the origins of time and space, of matter and energy, or the very existence of our Earth and life itself – have all benefited from this collaborative nature of science. Often, hundreds of scientists from across the globe have contributed individual jigsaw pieces that together unveil the whole grand picture. We have tried to capture this in the theme section on **Origins**. Any student of science cannot help but appreciate each of these hundreds of jigsaw pieces just as much as the final picture that emerges.

When one examines how these answers were arrived at, what one also realises is the role of technology in new discoveries. Each advancement in technology presents scientists with additional 'senses' to perceive nature, and hence, make available vastly improved and completely new data. Sometimes this new data upends existing 'facts' and sends scientists scrambling to develop and prove new hypotheses that fit all new known observations. Many sections of this issue, including **Emerging Trends in Physics, Annals of History, Indian Science Facilities** and **I am a Scientist**, highlight how technology has helped us reach our current understanding of the universe and nature around us.

The beauty of science is that there is no absolute truth. As newer technologies develop and newer discoveries are made, newer mysteries emerge, requiring more collaborative work and even more advanced technologies to solve them. Thus, science is a never-ending quest to understand the nature of the universe and how best humanity can tap its unlimited resources. We hope that this issue of 'i **wonder...**' ignites the spark to embark on that quest in each of our readers.



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