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Reshaping the Human and Collective Soul

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# EINSTEIN AND MATH

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IN 1905, EINSTEIN, ONE OF THE MOST INFLUENTIAL THINKERS OF THE 20TH CENTURY, MADE IMMENSE BREAKTHROUGHS IN THEORETICAL PHYSICS. He brought illumination to the world, in what is now referred to as his *miracle year*. He concluded that space and time were not absolute and unchanging; rather they were *relative*. From there, he drew a further conclusion – that matter and energy are two aspects of the same thing and can emerge from each other. He demonstrated this understanding in his famous equation  $E=mc^2$ .

Einstein was an incredible problem solver. He used math as a tool to demonstrate his thinking and as a means for expressing the laws of the universe he discovered. As a physicist, he knew the laws of science, to some extent, are debatable and in constant danger of being overturned by newly discovered facts. But he also knew math is absolutely certain and indisputable. Einstein said that math enjoyed special esteem above all the other sciences for this reason.

In addition to leaning heavily on math, Einstein used creativity, inspiration, imagination, intuition and perseverance to help him solve problems. Einstein was keenly aware that wisdom is often felt and perceived rather than intellectualized. He often felt he was right before he knew he was right. When he had a feeling about something, he listened to the feeling. Then, using math, he went looking for evidence to prove the feeling. He viewed math as a way to reconstruct what he saw, felt and experienced using the language of logic.

Einstein rarely thought in words. He often thought in music and some of his best thoughts came while he was playing his violin or listening to classical music on his victrola. He understood the power of daydreaming – he daydreamed in music – and he understood deeply that curiosity, play and creative imagination are the main sources of all technological achievements.

Einstein viewed art as a way to communicate connections that were not accessible to his conscious mind. He relied on intuition to guide him, he used music or long walks in nature to help him connect to his intuitive mind, and he used math equations to communicate those ideas to the world. That's why he said the intuitive mind is a sacred gift and the rational mind a faithful servant. It's also why he said that many great scientists are also great artists.

When Einstein discovered the theory of relativity, he brought illumination to the world at the tender age of 26. More than 300 years of scientific certainty were swept away with his formula. Using his intuitive and rational minds, intuition, the power of his daydreams, play, creative imagination, music, walks in nature, a pencil, paper, and a mathematical formula, Einstein literally changed the world.

## 10 Great Life Lessons from Albert Einstein

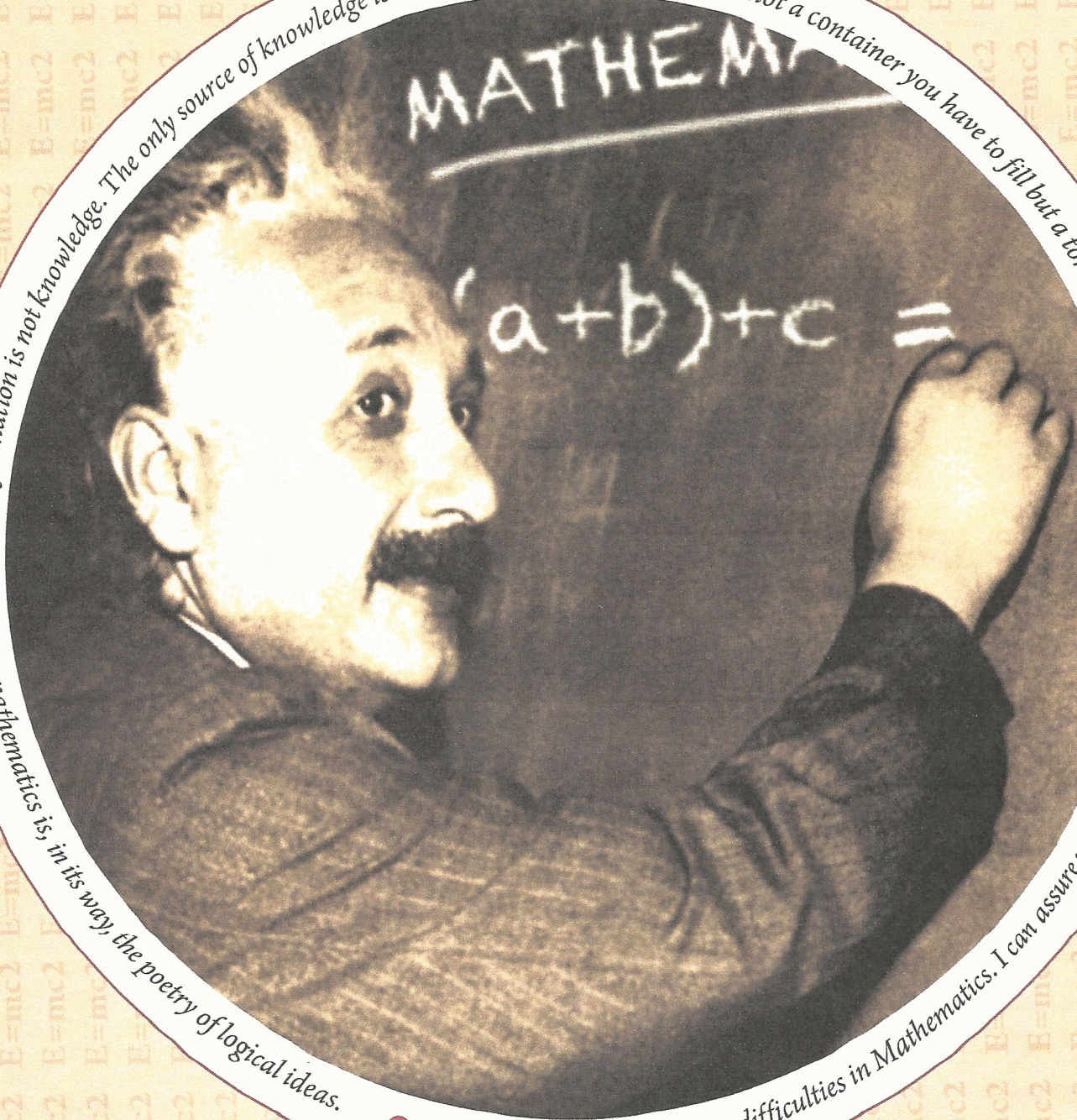
1. Follow your Curiosity
2. Perseverance is Priceless
3. Focus on the Present
4. Imagination is Powerful
5. Make Mistakes
6. Live in the Moment
7. Create Value
8. Don't Be Repetitive
9. Knowledge Comes from Experience
10. Learn the Rules and then Play Better

Information is not knowledge. The only source of knowledge is experience.

Student is not a container you have to fill but a torch you have to light.

Pure mathematics is, in its way, the poetry of logical ideas.

Do not worry about your difficulties in Mathematics. I can assure you mine are still greater.





*PRINCIPAL*  
**Connections**

Fall 2014 • Volume 18 • Issue 1

