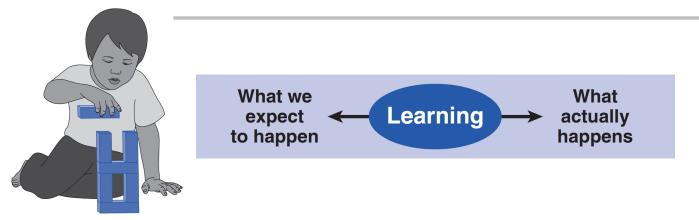
What is Scientific Thinking?



Scientific thinking means acknowledging that our existing comprehension is always incomplete and possibly incorrect. Perhaps the root of scientific thinking is recognizing that any idea you have needs to be tested. And, it means when things go differently than expected you use that new information to learn & adjust.

Scientific thinking is curiosity about a world we will never fully understand, but we want to take the next step to understand a little better. It's about engaging reality with a joy in learning. It's a continuous comparison going on in your head ... between what you predict will happen next, seeing what actually happens, and adjusting your understanding and actions based on what you learned from the difference. Lather, rinse, repeat.



Scientific thinking is not just for professional scientists, but a widely-applicable skill for *everyone*; humans striving for a new goal. It's a **meta skill**, i.e., a universal way of thinking and acting that counteracts your

natural cognitive biases anytime you try to achieve a goal or solve a problem.

Scientific thinking is not the same as the "scientific method," but rather a mental underpinning for approaching goals and problems more effectively. Whereas the scientific method is a fairly strict routine for studying phenomena, a scientific-thinking approach can be a practical routine for everyday life.

It's true, scientific thinking is not our natural, default way of working. Our brain tends to quickly reach conclusions. However, anyone can learn to think and react more scientifically by practicing the simple starter routines of the Improvement Kata and Coaching Kata. That's the goal of Toyota Kata ... an ability to apply a scientific mindset to everyday human affairs.