

News & Announcements

Preparing for Exams

Is it too early to be thinking about exams? We don't think so. Successful planning for exams begins early in the semester. Here are some quick **tips for exam prep success:**

- ▶ Set goals
- ▶ Attend all classes
- ▶ Take notes; ask questions in class
- ▶ Review your notes
- ▶ Organize & stay organized
- ▶ Do your homework every night
- ▶ Ask for help when you need it
- ▶ Set aside time to review past notes
- ▶ Look ahead to upcoming topics
- ▶ Summarize your notes orally or in writing
- ▶ Memorize & recite facts
- ▶ Make up quizzes for yourself
- ▶ Schedule in extra study time before exams
- ▶ Build confidence in your ability to do well

STR in the Community

STR was invited to speak with peer tutors in three secondary schools in October:

- ~ Claremont
- ~ Mt. Douglas
- ~ St. Andrew's

STR runs workshops for middle school and high school level students, parents and teachers.

Workshop Topics Include:

- ▶ Study Skills for Parents
- ▶ Study Skills for Students
- ▶ Exam Preparation
- ▶ Memory Techniques

If you are interested in hosting a talk by Smart Tutor Referrals, please contact us.

Great Thinkers: Einstein (1879 – 1955)

by Dahlia Miller

This is the first in a series of articles on great thinkers. In each article, we'll look at some interesting details about the life of a historical thinker who changed the way we look at the world. This month's article focuses on Albert Einstein as a young boy and teenager.

Many factors come together to form a great mind. Nature and nurture are both at play. There are definite clues to Einstein's genius as a child, and, at the same time, we can trace how the people and circumstances in his youth helped to encourage the development of his mind.

We all know of the great thinker that Einstein became, but some circumstances of his growth and history you may not know.

'The Dopey One'

Einstein was slow to develop in many ways, and was labelled 'der Depperte' (the dopey one), by the family maid.

He began to speak some time after two years of age. He had a mild form of echolalia: whenever he wanted to say something as a young child, he would first whisper the words softly to himself before speaking them aloud. This trait followed him into adulthood and he would often repeat phrases that he found interesting or funny two or three times to himself.

Einstein believed his slow verbal development gave him the opportunity to explore the world without mental labels. His main form of conceptualization seems to have been through mental imagery. These days, we would likely call him a 'visual-picture' learner: he

thought in pictures and had a vivid imagination. He would put things into words only after he had fully pictured them.

This learning style leant itself to his propensity for 'Thought Experiments' (like imagining what it might be like to ride a bicycle alongside a beam of light, or what it might feel like to be in an elevator in outer space that was rising rapidly – this thought experiment led him to his theories of special relativity).

Perhaps because of his slow verbal development, all through his life, Einstein saw things as through the eyes of a child, and wondered about them. He never stopped being awed by nature, gravity, motion, and light. This curiosity left him free to play with physics and math like a child.

The Outsider

Though both his parents were Jewish, Einstein's first school was a Catholic one. He was accepted at school, but was often teased on his way home. Being part of the 2% of Jewish people living in Munich in the late 1800's was perhaps not an easy position to be in for a young boy.

The family backyard was often noisy with the play of many cousins and other children, but although Einstein enjoyed making friends, he often played by himself. He played with puzzles and built elaborate structures, and he loved to build houses of cards (his younger sister, Maja, claimed that he was able to construct 14-story card houses).

He was persistent, tenacious and sometimes prone to temper tantrums as a boy. (Once when he was five, he threw a chair

About Us

We provide **1-on-1, in-home tutorial support** throughout Victoria, Saanich and Sooke.

STR was established in Victoria, BC in 2002 and has built a solid reputation for creativity and professionalism.

With over 50 tutors, we are able to find the best match for each student. Our tutors are certified teachers and professionals, all carefully screened. After talking with each student to learn more about the details of his or her learning history and needs, **we chose a tutor specifically to match the needs and learning styles of each student.**

Our goal is to enhance students' skills and to cultivate learning confidence through support that is truly individualized: matched specifically to each student's needs, recognizing each student's unique talents and abilities.

We support families in education.

For more information and resources, visit us on-line at:

www.SmartTutorReferrals.com

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at his tutor.) In fact, his rebelliousness toward authority was a trait that influenced his interactions at school and all through his life. Leading him to claim with his hallmark wit, *"To punish me for my contempt for authority, fate made me an authority myself."*

Influential Gifts

When he was about 4 or 5 years old and sick in bed, Einstein's father gave him a compass. The young boy was thrilled to witness the effects of an invisible power that moved the compass needle. He later wrote and reflected on the depth of impact this gift had on him.

The same awe that young Einstein felt in witnessing the compass needle drove his work in field theories throughout his life: he sought to describe the nature of the force behind things and how objects that appear to be separate are connected and will affect each other. He had hoped to find a unified field theory to fully describe the interconnectedness of the world around us (even scribbling notes on his deathbed).

Einstein's mom was a pianist and she arranged violin lessons for young Einstein. At first he complained at the mechanical discipline. But after hearing Mozart's sonatas, he fell in love with music, beauty and simplicity. Soon he began playing Mozart duets with his mother.

He found that music helped him to think – all through his life, when he came to roadblocks in his work, he'd pick up the violin and play. In playing, he'd find an answer, or some new perspective would bubble up.

Around age 12, over summer, his parents bought him math texts and he enjoyed himself by solving the applied arithmetic problems, then trying to find new theories to prove the equations.

Around this time, Einstein's uncle introduced him to algebra, describing it as a 'merry science'. He asked Einstein to solve and prove the Pythagorean Theorem; having to solve it on his own deepened Einstein's understanding of geometry.

He marveled at how complexities could be described with simple equations and so was encouraged to seek out simple explanations for the seeming complexities of nature.

When he was a young teen, Einstein's family hosted a medical student for dinner once a week. This medical student brought Einstein science books including People's Book on Natural Science in 21 volumes.

Einstein read 'with breathless attention' as the author demonstrated interrelations between biology and physics, and described the science experiments being done at that time in Germany. The author asked readers to use their imaginations, for example asking readers to picture speeding along on a train and how if a bullet was shot through one window and out another, it would look like the bullet had turned an angle.

This author was undoubtedly influential both in Einstein's later use of thought experiments and his development of the theory of relativity as a young adult.

Many factors in Einstein's childhood and youth played into creating the scientist and great thinker that he became. His natural tendencies, the people around him, and the influences they introduced into his life all lent a supportive hand in encouraging his development.

"I thank all those who have gone before me and all those who make it possible for me to do the work I do."

Albert Einstein

Isaacson, Walter. 2007. Einstein: His Life & Universe. Toronto: Simon & Schuster.