



Konstantin Tsiolkovsky

1857 - 1936

Mankind won't stay on the Earth for ever! So said the great Russian scientist Konstantin Eduardovich Tsiolkovsky, the founder of the theory of rocket flight, in 1911.

Tsiolkovsky was born on September 17th, 1857 in the village of Izhevskaya in the province of Ryazan. He wrote about his parents with warm affection: 'Father, so intelligent, restrained, a skillful orator, had a passion for invention and construction; mother was a very cheerful, tenderhearted woman'. His first years of childhood were happy and cloudless, but **at the age of 10, after a serious illness, the boy became very deaf and had to leave school.**

The following four years were the darkest of his life. At 14, however, he took up mathematics and natural sciences and resumed his studies, making use of his father's library. The parents of the young Tsiolkovsky saw a great ability for science in their son, together with an inclination toward self-study and an unquestionable talent for invention. He was sent to Moscow to obtain an education and to study industry.

For three years Tsiolkovsky lived in Moscow, where he visited public libraries, and studied physics, mathematics, and philosophy. Upon returning home, he began to give lessons to backward students, and soon acquired a fair reputation as a private teacher, which allowed him to gain some financial independence.

In 1878, Tsiolkovsky obtained an external degree, and was soon appointed as a teacher of arithmetic and geometry at Borovsk College in Kaluga. In his flat, he arranged a small laboratory, where 'electric lightning flashed and thunder rattled'. His most impressive display was that of an electric 'octopus'. When it touched a person, it made his hair stand up on end and produced sparks falling thick and fast from its 'victim's' body.



He made a person's hair stand on end, using electrification



Baikonur, Russia



He was a world leader in rocket design

Tsiolkovsky lived in a provincial town far from the main road. There was no library, no scientific journals, no laboratory, no colleagues with whom to discuss questions; even newspapers arrived a week late. Tsiolkovsky conducted his first research in perfect confidence that his ideas were new and had not been worked out previously. After finishing his work, he sent it to the capital to receive the Academy of Sciences' response. Later, he wrote that, at first, he made "discoveries" that had already been known for a long time, then those that had been made quite recently, and finally, those that were genuinely new.

In 1885, Tsiolkovsky began work on problems of aeronautics, and investigated the scientific basis for an all-metal guided balloon. At the end of the 19th century, Tsiolkovsky began research in the field of spaceship building in Russia, and made a great number of original designs for rockets. He showed that the most efficient way of launching rockets into space is to arrange them in packets or series of rockets, 'staging' as it is known today.

In the 1920s and 1930s, he became an acknowledged world leader in rocket building.

In his life, Tsiolkovsky was concentrated and reserved. His character was dominated by clarity and purposefulness. He liked working in a deep armchair, putting a sheet of plywood on his knees on which to write. For convenience, during his conversations with others, he constructed a special speaking trumpet that he directed toward the speaker in order to hear him better.

T.K.