

The principal mark of genius is not perfection but originality, the opening of new frontiers (Arthur Koestler)

Igor Vasilievich Kurchatov

- I. Comment on the quotation.
- II. What do you know about I.Kurchatov? Can you tell what he is famous for?
- III. What would you like to know about this scientist? Make up your list of questions and compare it with your partner's.
- IV. Read the text to find out if you got the answers to your questions.

The history of Ozersk's foundation is connected with the name of the great scientist and statesman I.Kurchatov. This outstanding physicist was one of those who determined the town's development for years ahead. Here, in the South Urals among beautiful lakes and woods on 19 June, 1948 soon after the end of WWII, the first continental reactor was put into operation under the scientific guidance and supervision of I.Kurchatov. This day may be considered a birthday of the "Mayak" Production Association and the nuclear industry of the country as a whole.



Igor Vasilyevich Kurchatov was born on January 8, 1903, in Simsky Zavod, Ufa Guberniya (now the town of Sim, Chelyabinsk Oblast). His father, a land surveyor, and his mother, who came from a family of priests, wanted a better education for their children and moved the family to Crimea.

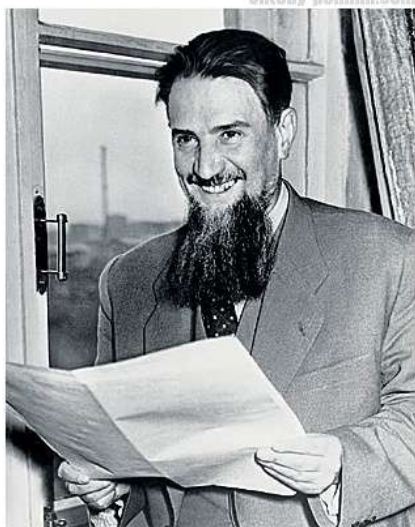
Graduating from Crimea State University in 1923 with a degree in physics, Kurchatov moved to Petrograd (now St Petersburg) where he earned his degree in naval engineering. Since early years I.K. had been overwhelmed by the desire to learn where the energy of stars came from. That's why in 1925 at Physics-Technical Institute he started research under the supervision of Abram Fedorovich Ioffe. They conducted experiments based on radioactivity. Abram Ioffe considered the young talented scientist the best of his students and trusted him a lot. In 1932 the Soviet Union Government granted the young scientist Kurchatov funding to establish his own nuclear research team. And in 1937 they created the Europe's first cyclotron particle accelerator and began their research of the basic ideas of the uranium chain reaction and the nuclear reactor concept.

Those days few people understood the importance of this work for the future of the country. Besides, the outbreak of World War II made Russian scientists turn to some more urgent work. Kurchatov joined a group that was working on protecting ships from German magnetic mines. But Igor Vasilievich and his team continued their research work in nuclear physics, as well. In 1943 he was appointed the director of the Soviet atomic weapons programme.

In August 1945 the USA demonstrated to the world the most destructive weapons of all times, the atomic bomb, which was thrown onto the Japanese towns of Hiroshima and Nagasaki. The world was terrified with this horrible act and the tragedy of Japanese people. To obtain a military and political balance Stalin ordered Kurchatov to produce an equal weapon by 1948. On August 29, 1949, the team detonated *First Lightning* at the Semipalatinsk Test Site. Plutonium for the bomb had been produced in the reactor "A" built in Ozersk, which those days was called Chelyabinsk-40. The bomb was created not to threaten the world, but to gain parity in nuclear weapons and protect the USSR from a possible tragedy.



During the atomic bomb programme realization Kurchatov swore he wouldn't cut his beard until the programme succeeded, and he continued to wear it for the rest of his life, which earned him the nickname "The Beard."



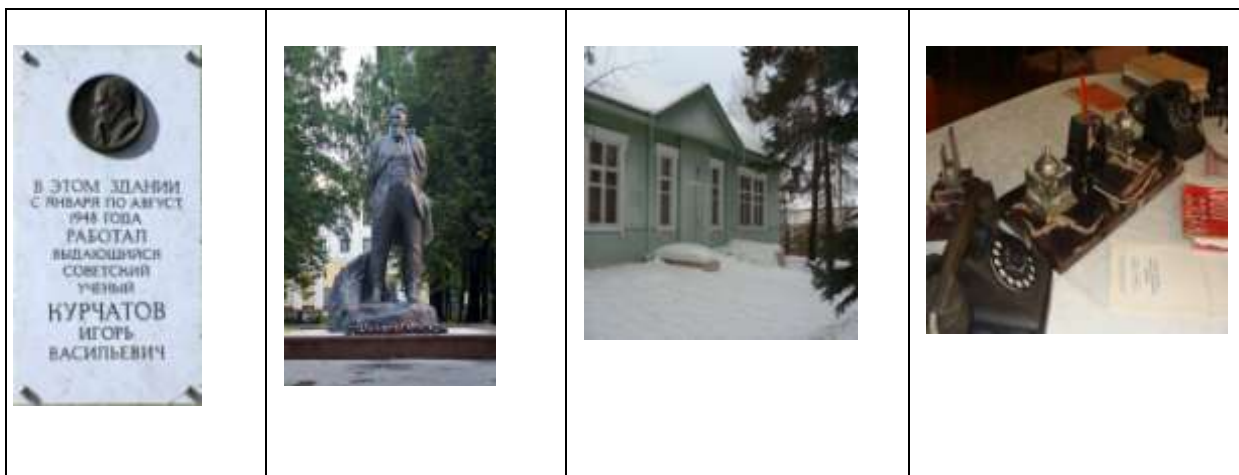
Coworkers remember I.Kurchatov not only as a prominent scientist, a hardworking and skillful organizer, a generator of ideas, but a remarkable person as well. Igor Vasilievich was a man of great culture, intelligence and tact. They say he was one of those people who had a special talent to create an atmosphere of friendliness, productive activity, mutual understanding and reliability around him. They also remember his wonderful sense of humour, love for a good joke. Those who used to work with him in Ozersk pointed out that I.Kurchatov had a genuine interest in people, he never looked down on them, was attentive to their needs. It is known that when I.K. was awarded money for some successful research he would give it away to orphanage.

In late 1950s, having realized all the possible consequences of further nuclear weapons development for the future of the world, the scientist spoke a lot against nuclear bomb tests. He started working on peaceful use of nuclear technology. Among the projects completed under Kurchatov's leadership was the first atomic reactor in Europe, the first nuclear power plant in the world (1954), the first nuclear reactor for submarines in the world (1959), the icebreaker *Lenin* and some others.

Being totally devoted to his work, possessing a sense of great responsibility, working for more than 10 years without holidays, dealing with very dangerous substances, Igor Vasilievich didn't live a long life. He died in Moscow in February 1960 at the age of 57. He was cremated and his ashes were buried in the Kremlin Wall Necropolis on Red Square. This way the country showed its respect and gratitude to the outstanding personality and recognition of his importance for the history of Russia.



Ozersk also honours the name of Igor Kurchatov and people are proud of the fact that he lived and worked here for some time (in the middle 1940s and early 1950s). On one of the buildings there is a memorial board. In the historical and administrative centre of the town there is a beautiful square named after him with a magnificent monument to the scientist in the middle. Not far from the square there is a house museum of Kurchatov, where he used to stay and work. The rooms and furniture are plain and modest. On the desk in the study there are books on nuclear physics in German and English Igor Vasilievich would read. Grandfather clock in the study shows 20:15 the time of Kurchatov's death.



- V. Look through the text once again and think of a heading for each paragraph.
- VI. Imagine that you are meeting a group of foreigners in a house museum of Kurchatov. They are short of time. Give them a two minute talk about Igor Vasilievich.
- VII. Find more information of:
 places and institutions that bear Kurchatov's name:
 awards and titles, given to the scientist during his lifetime.

Vocabulary:

scientific guidance – научное руководство
nuclear industry – ядерная промышленность
priest – священнослужитель
land surveyor – землеустроитель
naval engineering – морское инженерное дело
establish – основывать
uranium chain reaction – урановая цепная реакция
military – военный
nuclear weapons – ядерное оружие
nuclear power plant – атомная электростанция
deal with – иметь дело с
substance – вещество
ashes – прах
genuine – подлинный(зд. искренний)
consequences – последствия
cyclotron particle accelerator – ускоритель заряженных частиц

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