THE LEGACY OF MIRZO ULUGBEK IS A GREAT HONOR AND A GREAT RESPONSIBILITY.

MIRZO ULUG'BEK MEROSI – BUYUK SHARAF VA ULKAN MAS'ULIYAT.

НАСЛЕДИЕ МИРЗО УЛУГБЕКА – ЭТО БОЛЬШАЯ ЧЕСТЬ И БОЛЬШАЯ ОТВЕТСТВЕННОСТЬ.

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Annotation: *This article talks about the heritage of Mirza Ulugbek, its importance, its influence on world civilization, as well as the responsibility of the young generation to study this great heritage, the work we need to do.*

Annotatsiya: *Ushbu maqolada Mirzo Ulug'bek merosi, uning ahamiyati, jahon sivilizatsiyasiga ta'siri, shuningdek, bu buyuk merosni o'rganishda yosh avlodning mas'uliyati, amalga oshirishimiz kerak bo'lgan ishlar haqida so'z boradi.*

Аннотация: *В этой статье говорится о наследии Мирзы Улугбека, его значении, влиянии на мировую цивилизацию, а также об ответственности молодого поколения за изучение этого великого наследия, о работе, которую нам необходимо проделать.*

Key words: *exact sciences, mathematical studies, STEAM sciences, astronomical discoveries*

Kalit so'zlar: *aniq fanlar, matematik tadqiqotlar, STEAM fanlar, astronomic kashfiyotlar*

Ключевые слова: *точные науки, математические исследования, STEAM-науки, астрономические открытия*

"Mirzo Ulugbek for many years managed his kingdom based on the ideas of justice and humanity, and while carrying out large-scale creative works, he paid special attention to raising the fields of science, culture and art. Many madrasahs, schools, libraries, mosques, caravanserais, bridges and peaceful gardens were built under his initiative and patronage. As a result, our country has developed in every way and has become a major culture and science country in the East," says the decision of the President of the Republic of Uzbekistan to celebrate the 630th anniversary of Mirzo Ulugbek's birth.

We are the children of a historically great nation that was able to realize renaissances. Many scientists who contributed to world civilization have grown up from our motherland. One of such great persons is Mirzo Ulugbek, a scientist of catastrophe

science, the founder of space science, and a great leader. However, at this point it should be taken into account that it is important not only to be proud of ancestors, but also to continue their research in a worthy manner, to be a worthy descendant of them.

According to Sharafiddin Ali Yazdi's work “Zafarnama”, Amir came to Temur and told him the good news about the birth of Ulugbek. Astrologers predict that the child will become a scientist and a ruler in the future. After this news, Amir Temur paid great attention to Ulugbek and stopped the siege of Mordin fortress and canceled all the demands placed on the inhabitants of the fortress. Amir Temur's attention to science and art can be seen in his children and grandchildren. At the beginning of the 15th century, the king and scholar Mirza Ulugbek (1409-1449) ruled the throne of Movarounnahr in Samarkand. During this period, Samarkand became a major political, scientific and cultural center. As a scientist and enlightener, Ulugbek paid great attention to science and tried to gather great scientists in Samarkand. He built many madrasahs in Samarkand, Bukhara, Gijduvan. Mirza Ulugbek became a patron of science along with state affairs. He wrote works such as “Zizhi jadidi koragony” on astronomy, “Tarihi arba ulus” on the science of history. Ulugbek, in turn, can be called the “creator of Madrasahs” who opened his heart to the people of science in several cities.

Mirzo Ulug'bek was able to prove that every leader should be a patron of science. The Ulugbek observatory built by him was a very complex project for civil engineering at that time. However, this observatory has been seismically stable over the years and its solid construction is a clear example for today's architects and architects. Research has shown that this observatory was built in 1428-1429. This site, which has not lost its condition since the 5th-6th centuries, still amazes thousands of people in Samarkand today. The complex mathematical forms and calculations used in its structure show how talented our ancestors were in exact sciences and natural sciences.

Ulugbek verified his data several times, and it was concluded that his calculations were accurate. In 1437, he determined the length of the astronomical year: 365 days, 6 hours, 10 minutes, and 8 seconds. Later revisions showed a difference of only 58 seconds. If we consider the astronomical year to be 365,258,150 seconds, it can be assumed that Ulugbek’s measurements were remarkably precise.

Today, when computer technologies are used effectively in all researches, it is impossible for us to feel the importance of this situation. Because, 5 centuries ago, being able to calculate these calculations with great accuracy based only on human abilities is a proof that these people have exceptional abilities.

In their scientific research, Ulugbek and his associates relied on the achievements of their brilliant predecessors – ancient scientists, including Hipparchus – which helped them make accurate astronomical observations. Under the guidance and with the participation of the Royal astronomer, the main work of the Ziji-Guragan Observatory was compiled - "Star tables of Ulugbek". The catalog contains the coordinates of 1,018 stars, determined with amazing accuracy. The creation of this catalog is an outstanding

contribution of Mirzo Ulugbek and the scientists who worked with him to the Treasury of world astronomical science. Planetary tables made by Samarkand scientists have played a great role in the history of astronomy. Ulugbek's star book was the highest achievement of medieval astronomical science before the invention of the telescope. The accuracy of its tables exceeded anything previously achieved in the East and in Europe. For a long time, this catalog was considered the best in the world. It was published at Oxford in 1665, and has since been reprinted with numerous commentaries. Only in the seventeenth century. Tycho Brahe managed to surpass the accuracy of the observations of Samarkand astronomers. The enlightened ruler spent more and more time in his favorite Observatory – his own "ivory tower" – trying to protect himself from worldly worries and worries. Observing the celestial sphere was a real spiritual delight for him. How he wished that his entire earthly path was only a path to knowledge and that there would never be any obstacles on this path! Power was insignificant for Ulugbek compared to the true power of nature, and the science of the stars remained the main meaning of his life.

Thanks to the vast knowledge and power of the ruler, Mirzo Ulugbek was able to create the most equipped astronomical centre of that time. The observatory was round in shape, its diameter reached 46 meters, and the height was at the level of a ten-story building. Although the structure was three-story, each floor was ten meters higher. Inside, along the line of the meridian, Ulugbek built a quadrant – a large 64 meters long instrument, located at an angle of 90 degrees. Before the invention of the telescope, such a quadrant served as a tool for measuring the height of the stars above the horizon and for determining the coordinate of the point from which the measurement was carried out. Ulugbek’s quadrant was the largest in the world at that time, and therefore the most accurate. The observatory consisted of two parts, and the one that was underground had been preserved.

In today's modern education, serious attention is paid to the study of STEAM subjects. The origin of the word STEAM consists of the following words:

- science
- technology
- engineering
- arts
- mathematics

STEAM Education is an approach to teaching and learning that combines science, technology, engineering, the arts, and math to guide student inquiry, discussion, and problem-solving. Education experts say STEAM education is about more than developing practical skills alone.

Why are we thinking about STEAM subjects? The reason is that our ancestors are the founders of the sciences that are considered fundamental in today's world. Every time I observe the achievements of the students in chess and mathematics in our country, the scientists who taught us about the existence of this knowledge, how important it is for the

development of the world and humanity, and who formed the first literature in this direction are our ancestors.

As I mentioned above, we should not only be proud of our great ancestors, but also be worthy followers of them. In this way, we need to awaken the abilities that are present in each of us, but are sleeping, and work tirelessly on ourselves. In this regard, we would like to present a number of our proposals:

- in today's era of globalization and information attack, we need to form concepts about the work of our ancestors and the importance of their scientific activities in the minds of each of our peers and the younger generation. In this regard, it is necessary to organize regular trips to our historical cities, museums and monuments, to hold festivals and events dedicated to various young people in these areas;

- taking into account the high influence of social networks, we should organize many projects that reflect our history and identity in these networks and involve as many young people as possible in them;

- Organization of small distributions, various competitions, intellectual games reflecting the content of Mirzo Ulug'bek's works;

- awarding the best mobilographers promoting the unique heritage of our great ancestors, publicizing their work on the scale of the Republic;

- implementation of various projects promoting great thinkers of Uzbekistan in foreign countries, effective use of these projects in tourism zones;

- conducting deep research with children from a very early age, identifying their hidden abilities as early as possible and developing them.

In conclusion, we can say that when we feel how much talent we have, what great generations blood flows, only after that we deeply feel the responsibility we bear. Mirzo Ulugbek's worthy share in the world's scientific treasure is a bright example in this regard. I believe that the great Mirza Ulugbek and the Berunis will grow again in our motherland.

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