

At the time of the landing on the moon in 1969, many sincerely believed, that by the beginning of the 21st century space travel became commonplace and the earthlings began to flee quietly to other planets. Unfortunately, it is not yet arrived, and people began to doubt whether they really need these space travel. Maybe the moon is enough? Nevertheless, space exploration gives us invaluable information in the fields of medicine, mining and security. And, of course, progress in the study of outer space has an inspiring effect on humanity!

Protection against possible collision with an asteroid is one of the most important reason to discover space. If we do not want to end like dinosaurs, we need to protect ourselves from the threat of collision with a large asteroid. As a rule, about once in 10 thousand years, some heavenly body the size of a football field threatens to land in the Earth, which can lead to irreversible consequences for the planet. We really should be afraid of such "guests" with a minimum diameter of 100 meters. The collision will raise a dust storm, destroy forests and fields, and doom to death those who survive. Special space programs are aimed at establishing a dangerous object long before it approaches the Earth, and knock it off the trajectory of motion.

Secondly, contribution to medicine and health care. The development of space has led to the emergence of many medical innovations for terrestrial use: for example, the method of introducing anticancer drugs directly into the tumor, the equipment by which a nurse can do ultrasound and instantly transfer data to a physician thousands of miles away, and a mechanical manipulator arm performing complex actions inside the MRI. Pharmaceutical development in the field of protection of astronauts from loss of bone and muscle mass in microgravity conditions led to the creation of drugs for the prevention and treatment of osteoporosis. And these drugs were easier to test in space, because astronauts lose about 1.5% of bone mass per month, and the elderly terrestrial woman loses 1.5% per year.

Space exploration inspires humanity to new achievements.

If we want to create a world in which our children will strive to become scientists and engineers, not leading reality shows, movie stars or financial magnates, then space exploration is a very inspiring process. It's time to ask the growing generation the question: "Who wants to be an aerospace engineer and design an aircraft that can get

into the dilapidated atmosphere of Mars?"

Do not forget that we need raw materials from outer space. There is gold, silver, platinum and other valuable metals. Some international companies are already thinking about extracting minerals on asteroids, so it is possible that the profession of a space miner will appear in the near future. The moon, for example, is a possible "supplier" of helium-3 (used for MRI and is considered as a possible fuel for nuclear power plants). On Earth, this substance costs up to 5 thousand dollars per liter. The moon is also considered a potential source of rare earth elements, such as europium and tantalum, which are in high demand for use in electronics, solar cell production and other advanced devices.

Space exploration can help to find the answer to a very important question. We all believe that somewhere in space there is life. In addition, many believe that aliens have already visited our planet. However, we still have not received any signals from distant civilizations. That is why the scientists-seekers of extraterrestrial civilizations are ready to deploy orbital observatories, for example, the James Webb space telescope. This satellite is planned to be launched in 2018, and with its help, it will be possible to search for life in the atmospheres of distant planets outside our solar system by chemical characteristics. Moreover, this is only the beginning.

For its survival, humanity will probably have to colonize outer space. We learned how to send satellites into space, and this helps us control and deal with pressing earthly problems, including forest fires, oil spills and depletion of aquifers. However, a significant increase in the number of people, banal greed and unjustified frivolity regarding environmental consequences have already caused serious damage to our planet. Scientists believe that the Earth has an "allowable load" in the amount of 8 to 16 billion, and we have more than 7 billion. Perhaps it is time for humankind to prepare for the development of other planets for life.