

GENERAL ESSAY 2020

Importance of Critical Thinking

Critical thinking is the ability to think clearly and rationally about what to do or what to believe. It includes the ability to engage in reflective and independent thinking. Someone with critical thinking skills is able to do the following:

- understand the logical connections between ideas
- identify, construct and evaluate arguments
- detect inconsistencies and common mistakes in reasoning
- solve problems systematically
- identify the relevance and importance of ideas
- reflect on the justification of one's own beliefs and values

Critical thinking is not a matter of accumulating information. A person with a good memory and who knows a lot of facts is not necessarily good at critical thinking. A critical thinker is able to see consequences from what he knows, and he knows how to make use of information to solve problems, and to seek relevant sources of information to inform himself.

Critical thinking should not be confused with being argumentative or being critical of other people. Although critical thinking skills can be used in exposing fallacies and bad reasoning, critical thinking can also play an important role in cooperative reasoning and constructive tasks. Critical thinking can help us acquire knowledge, improve our theories, and strengthen arguments. We can use critical thinking to enhance work processes and improve social institutions.

Some people believe that critical thinking hinders creativity because it requires following the rules of logic and rationality, but creativity might require breaking rules. This is a misconception. Critical thinking is quite compatible with thinking "out-of-the-box", challenging consensus and pursuing less popular approaches. If anything, critical thinking is an essential part of creativity because we need critical thinking to evaluate and improve our creative ideas.

The ability to think clearly and rationally is important whatever we choose to do. If we work in education, research, finance, management or the legal profession, critical thinking is crucially important. But critical thinking skills are not restricted to a particular subject area.

Being able to think well and solve problems systematically is an asset for any career.

Critical thinking is very important in the new knowledge economy. The global knowledge economy is driven by information and technology. One has to be able to deal with changes quickly and effectively. The new economy places increasing demands on flexible intellectual skills, and the ability to analyse information and integrate diverse sources of knowledge in solving problems. Good critical thinking promotes such thinking skills, and is very important in the fast-changing workplace.

Critical thinking enhances language and presentation skills. Thinking clearly and systematically can improve the way we express our ideas. In learning how to analyse the logical structure of texts, critical thinking also improves comprehension abilities.

Critical thinking promotes creativity. To come up with a creative solution to a problem involves not just having new ideas. It must also be the case that the new ideas being generated are useful and relevant to the task at hand. Critical thinking plays a crucial role in evaluating new ideas, selecting the best ones and modifying them if necessary.

Critical thinking is crucial for self-reflection. In order to live a meaningful life and to structure our lives accordingly, we need to justify and reflect on our values and decisions. Critical thinking provides the tools for this process of self-evaluation.

Good critical thinking is the foundation of science and democracy. Science requires the critical use of reason in experimentation and theory confirmation. The proper functioning of a liberal democracy requires citizens who can think critically about social issues to inform their judgments about proper governance and to overcome biases and prejudice.

The Fourth Industrial Revolution, which includes developments in previously disjointed fields such as artificial intelligence and machine-learning, robotics, nanotechnology, 3-D printing, and genetics and biotechnology, will cause widespread disruption not only to business models but also to labour markets over the next five years, with enormous change predicted in the skill sets needed to thrive in the new landscape.

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Why should we explore space?

Humanity's interest in the heavens has been universal and enduring. Humans are driven to explore the unknown, discover new worlds, push the boundaries of our scientific and technical limits, and then push further. The intangible desire to explore and challenge the boundaries of what we know and where we have been has provided benefits to our society for centuries.

Human space exploration helps to address fundamental questions about our place in the Universe and the history of our solar system. Through addressing the challenges related to human space exploration we expand technology, create new industries, and help to foster a peaceful connection with other nations. Curiosity and exploration are vital to the human spirit and accepting the challenge of going deeper into space is necessary for more reasons too.

ISS

The first step in embarking on a long and challenging journey involves laying solid groundwork for a successful endeavor. The International Space Station serves as a laboratory for human health, biological, and materials research, as a technology test-bed, and as a stepping stone for going further into the solar system. On the International Space Station we will improve and learn new ways to ensure astronauts are safe, healthy and productive while exploring, and we will continue expand our knowledge about how materials and biological systems behave outside of the influence of gravity.

Moon

For as long as humans have lived on planet Earth, the moon has been a focus of fascination. First, we could view our cosmic partner only with the naked eye, then with telescopes, and finally in the 20th century the first humans were able to visit Earth's moon in person.

Thanks to these missions, we now know a lot about the moon. Manufacturing processes gives a big incentive to explore the Moon. Some items can be better made in a lower gravity environment than that of the Earth.

Finding life is another reason to show interest in the Moon. So far, the Earth is the only biological haven in the universe. It would be exciting to find another form of life, especially in a land body as close as the Moon. If scientists find life, it most likely will be in the form of bacteria.

We could harvest the Moon for its natural resources. Moon (which is basically a giant rock), contains large amounts of Helium that can be used for fusion energy. If we could locate, mine, and ship this precious resource back to Earth in an efficient manner, humans can gain a valuable amount of resources.

One of the main reasons why lunar exploration should be funded is because we need more living space.

Mars

Mars has always been a source of inspiration for explorers and scientists. Robotic missions have found evidence of water, but if life exists beyond Earth still remains a mystery. Robotic and scientific robotic missions have shown that Mars has characteristics and a history similar to Earth's, but we know that there are striking differences that we have yet to begin to understand. Humans can build upon this knowledge and look for signs of life and investigate Mars' geological evolution, resulting in research and methods that could be applied here on Earth.

A mission to our nearest planetary neighbor provides the best opportunity to demonstrate that humans can live for extended, even permanent, stays beyond low Earth orbit. The technology and space systems required to transport and sustain explorers will drive innovation and encourage creative ways to address challenges. As previous space endeavors have demonstrated, the resulting ingenuity and technologies will have long lasting benefits and applications.

The challenge of traveling to Mars and learning how to live there will encourage nations around the world to work together to achieve such an ambitious undertaking. The International Space station has shown that opportunities for collaboration will highlight our common interests and provide a global sense of community.

These are the main reasons for space exploration.

PS: Talk of India and space with ISRO

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