

The Research Proposal

Make sure you fill out completely *all* the information in the sections below. Failure to complete these sections fully and honestly may incur a loss of points. Responding to some questions with “no” or “n/a” or “I don’t know yet” *is* acceptable; however, leaving any responses blank is not. If you do not understand any questions you are encouraged to contact your instructor.

Section 1

Name: Hassan Sajid

Your Major: Mechanical Engineering

Section 2

On a scale of 1 to 10, how confident are you *now* feeling about writing for this course? Explain any change in your scoring from the first assignment.

1/9

I am still as confident as before.

Section 3

Final grade you received from your previous assignment (Research Plan). How do you feel about this grade? If you lost points on the first major assignments, then **where** and **why** did you lose points, and what have you done to address the issue? Write out your response in complete sentences below.

1/ I have gotten a 100/100 in my Research Plan, and I have some minor grammar related issues.

Section 4

Based on your last assignment and the lessons you have received so far in ENG 204, what **three** things have you given extra care and attention towards for this assignment? Make sure your three points are updated and distinct from your previous submission,

1/ Improving on sentence structure of the paragraphs.

2/ Improving on developing my supporting and counterarguments.

3/ Researching for peer-reviewed articles.

Section 5

Working Topic: (e.g., smoking)

1/ Space colonization of Mars

Working Research Question: (e.g., Is smoking beneficial?)

1/ Should NASA invest resources in space colonization of Mars?

Working Thesis: (e.g., Smoking is beneficial.)

1/ NASA should not invest resources in space colonization of Mars.

Working Secondary Questions

You may not have *all* your secondary questions yet – but have a go at writing what some may be. At least, you'll get some feedback from your instructor. Remember that

secondary questions are W-questions that usually follow "if so ..." and/or "If not ..."

(Examples: What are the benefits of smoking?

1/ How can colonizing the planet Mars improve the quality of life on Earth?

2/ What are the potential health risks of colonizing Mars?

3/ Is it possible that Mars can become a habitable planet compared to Earth?

Working Counter Theses: (e.g., 1/ Smoking is not beneficial. 2/ Smoking may have some benefits, but it has more drawbacks. 3/ Smoking may be beneficial but only when combined with other practices. 4/ Smoking may be beneficial for some people but not for others. Etc.)

1/ NASA should invest resources in space colonization of Mars.

2/ Space colonization of Mars may have some benefits, but it has more drawbacks.

Working Supporting Arguments: (e.g., [Smoking is beneficial because ...] 1/ smoking makes you look cool. 2/ smoking helps you lose weight.)

Space colonization of Mars is not beneficial because:

1/ there would be potential health risks/hazards.

2/ it is a costly investment.

Working Counter Arguments: (e.g., [Smoking is *not* beneficial because ...] because 1/ smoking causes serious diseases. 2/ cigarette smoke is very smelly. 3/ smoking not only harms the smoker, it also harms other people in the environment of the smoker.)

Space colonization of Mars is beneficial because:

1/ it ensures the survival of humanity.

2/ potential of finding abundant resources, which could be profitable.

Working Refutations/Rebuttals/Acknowledgements of Counter Arguments:

(e.g., For “Cigarette smoke is very smelly,” I have found a study showing that most people actually like the smell of cigarette smoke on their clothes. I have also found an article describing a company that makes cigarette smoke room fresheners.)

1/ Finding resources can be a profitable business for NASA. However, the initial budget of space colonization is immense. I have found a source showing that this budget could be used to resolve Earth-related problems.

2/ Scientific curiosity is the main motivation, that NASA want to explore and colonize Mars. However, the atmosphere of Mars is hostile to humans who would go to space. Furthermore, I have found an article that highlights psychological and physiological effects that occur when humans would go to space.

Write Your Paper Below

Begin your paper at the start of the next page. Note that APA Level 1 headers have been provided. Write appropriate paragraphs within these prescribed areas. Remember to leave the rubric at the end of the paper.

Introduction

In this paper, I argue that NASA should not invest resources in the space colonization of Mars. Space colonization is a permanent human habitation and exploitation of resources beyond Earth (New World Encyclopedia, 2021). Over the years, there have been significant developments from The National Aeronautics and Space Administration (NASA) regarding space colonization of the planet Mars. However, there have been arguments made for and against space colonization. Therefore, I will be addressing the negative aspects of space colonization of Mars by showing evidence related to the potential health risks of space colonization and budget considerations.

I support the position that NASA should not invest resources in space colonization of Mars, with the following two arguments. First, the colonization of Mars would pose a drain on financial resources. The resources could instead be spent resolving Earth-related problems such as poverty, disease, and hunger. Second, space colonization would pose potential health hazards for the human population going into space. These health risks include physiological and psychological effects, as the space environment is hostile towards humans (Campa et al., 2019).

I also consider alternative positions that argue for NASA colonizing Mars. First, the space colonization of Mars can ensure the survival of humanity. For example, if the human population goes into space, space colonization will allow humanity to avoid upcoming asteroids. Furthermore, colonizing Mars would decrease the likelihood of human extinction (Munever, 2019). Second, the main drive for NASA to colonize Mars is scientific curiosity. There is the potential of finding resources that would make NASA profitable. While these positions have merit, in this paper, I show that space colonization of Mars is not considered the best course of action for humanity. To support my arguments, I will be presenting evidence of the potential health hazards when humans would venture into space. In addition, I will present evidence for the initial budget of colonization of Mars, which could be used to solve problems on Earth.

This paper is important because space colonization of Mars is a global topic, and it is targeted at Earth's population. For years, the colonization of Mars has been a popular topic since it is more suitable for human habitation than other planets such as Jupiter and Saturn. The prospect of venturing into space is exciting and challenging as humanity needs to plan for the future. It must be understood that undertaking this step is huge since this could radically change how humanity perceives outer space. Therefore, the actions agencies such as NASA and humanity take right now will have a lasting impact in the future.

Discussion of Sources

Source 1

Aleci, C. (2019). From international ophthalmology to space ophthalmology: The threats to vision on the way to Moon and Mars colonization. *International Ophthalmology*, 40(3), 775-786. <https://doi-org.aus.idm.oclc.org/10.1007/s10792-019-01212-7>

Aleci is known for obtaining a Ph.D. in Ophthalmological Sciences and won an Ophthalmology research award in 2001. This article is peer-reviewed and was published in the *International Ophthalmology* journal. Aleci (2019) discusses in detail the many threats that occur when colonizing a planet like Mars. The author discusses that over 50 years, humans venturing into space can adapt to different environmental conditions. He concludes that irrespective of the technological solutions for living on Mars, health safety is crucial. My supporting argument in my argumentative research paper is "space colonization of Mars poses health risks," so using this source will help me answer my thesis. For example, Aleci mentions that exposing human life to cosmic radiation can have adverse effects on the human body, such as carcinogenesis, degenerative processes, and acute poisoning. Using this evidence, I can further elaborate and strengthen my supporting argument. The aspect I like about the source is the amount of research included merely is astonishing. The author does not state the health hazards, but he goes into immense detail and uses statistics to back up these supporting points.

Source 2

Zubrin, R. (2019). Why we earthlings should colonize Mars! *Theology and Science*, 17(3), 305-316. <https://doi-org.aus.idm.oclc.org/10.1080/14746700.2019.1632519>

This article was published in the *Theology and Science* journal. Zubrin is an American aerospace engineer and advocate for the human exploration of Mars. In 1992, he earned a Ph.D. in Nuclear Engineering from the University of Washington. He is known for being an author of over two-hundred technical and non-technical papers on concepts such as space exploration and propulsion. In his article, Zubrin (2019) explains colonizing Mars and argues why the people of Earth need to undertake this critical step. The author discusses the habitable conditions of Mars and also mentions ethical considerations of humans colonizing the planet Mars. The evidence from this source will help me elaborate my counterargument that "space colonization of Mars can ensure survival of humanity." After reading his article, the amount of information the author goes into is a fantastic feat. Additionally, I liked that the paper was accessible, as not many technical words were written, and that it was primarily a straightforward read.

Source 3

Campa, R., Szocik, K., & Braddock, M. (2019). Why space colonization will be fully automated. *Technological Forecasting and Social Change*, 143, 162–171.

<https://www.sciencedirect.com/science/article/pii/S0040162518317281?via%3Dihub>

Campa is an Associate Professor of Sociology and the Director of the History of Ideas Research Center at the Jagiellonian University of Krakow. His research focuses on the sociology of technology and science, with a particular focus on automation. In this article, Campa et al. (2019) argue that space colonization should be automated since humans cannot survive for long periods in outer space. The authors mention that astronauts are willing to accept the risks involved in their missions, as they want to leave a legacy for future space

exploration missions. In the article, the authors mention the physiological and psychological effects of space colonization. As such, this information will help me develop my supporting argument, "space colonization of Mars poses health risks." I liked the reasoning in the author's views, as the authors utilized appropriate evidence to back up their points. They mention a benefit of space colonization that space mining can be profitable since there is potential for finding abundant resources. Furthermore, this article's evidence will help me develop my counterargument that space mining can lead to finding abundant resources.

Source 4

Munevar, G. (2019). An obligation to colonize outer space. *Futures*, *110*, 38–40.

<https://doi.org/10.1016/j.futures.2019.02.009>

Munevar was a Professor at the Lawrence Technological University and was listed as a notable philosophy educator by Marquis Who's Who. In 1986, he won a Distinguished Research Award at the University of Nebraska in the Philosophy and Religion fields. In the article, Munevar (2019) argues that humans should colonize Mars. He mentions that colonizing Mars will provide benefits to humanity. For example, cosmic catastrophes such as asteroids will destroy most of human life. Furthermore, the space colonization of Mars will allow humankind to deflect and prevent asteroids since the people would stay on Mars rather than on Earth. The author discusses other benefits: increasing scientific knowledge of outer space, bringing clean energy into Earth, and colonizing Mars would provide access to resources. For my counterargument, "space colonization of Mars can ensure the survival of humanity," I will be using evidence from this source to support it. Overall, I liked this source, as it was relevant to my counter-thesis, and the information presented was straightforward.

Source 5

Levchenko, I., Xu, S., Mazouffre, S., Keidar, M., & Bazaka, K. (2019). Mars colonization:

beyond getting there. *Global Challenges*, 3(1), 1-11.

<http://aus.idm.oclc.org/login?url=https://www-proquestcom.aus.idm.oclc.org/scholarly-journals/mars-colonization-beyond-gettingthere/docview/2333568097/se-2?accountid=16946>

Levchenko is currently a Research scientist at the Nanyang Technological University, Singapore. He has authored about 150 journal articles and several book chapters. In 2013, he won the Julius Award (Australia) and was a Japanese Society recipient for promotion of Science Research Fellowship in 2005. Levchenko et al. (2019) discuss the advantages and disadvantages of the colonization of Mars. The authors describe the atmospheric conditions of Mars and mention that the planet Mars is habitable for humans compared to other planets such as Jupiter and Saturn. Additionally, they state several arguments for colonizing Mars, such as gaining political and economic leadership, developing as species, and using space technology to improve Earth's quality of life. In the article, the authors discuss the consideration of resources. Therefore, I will use this information as the reasoning behind the supporting argument, "space colonization of Mars is a costly investment." I like the article because it does not entirely give a detailed account of the issue. Instead, it provides a general overview of the chosen topic, which helps me broaden my research.

Source 6

Stoner, I. (2017). Humans should not colonize Mars. *Journal of the American Philosophical Association*, 3(3), 334–353. <http://aus.idm.oclc.org/login?url=https://www-proquestcom.aus.idm.oclc.org/scholarly-journals/humans-should-not-colonizemars/docview/1999116770/se-2?accountid=16946>

Stoner is a full-time instructor of the Philosophy department at Saint Paul College. In 2017, he won a prize funded by the Routledge, Taylor & Francis Group for extraordinary scholarly work. Stoner (2017) argues for the conclusion that humans should not establish a

human presence on the surface of Mars. The author claims that scientific curiosity is the primary reason for humanity to colonize Mars. Additionally, discovering and learning more about outer space can increase scientific knowledge, and there would be potential for finding abundant resources. However, the author claims that these resources provide no economic justification for the colonization of Mars. In addition, the author states several reasons why humanity should colonize Mars, and these include, colonizing Mars can act as a backup planet and can fulfill humankind's pioneering nature. Furthermore, I will be using the evidence from this claim to further elaborate on my counterargument, "space colonization of Mars can ensure the survival of humanity." Overall, I liked this source, as the source covers many points in a detailed and efficient manner.

Source 7

Kovic, M. (2018, November 10). *Why space colonization is so important*. Medium.

https://medium.com/@marko_kovic/space-colonization-why-nothing-else-mattersa877723f77d4.

This article, taken from the Medium website, highlights the importance of space colonization. Kovic (2018) addresses both sides of the debate, whether humanity should undergo the colonization of Mars. The author mentions that space colonization is a doubleedged sword. The creation of permanent human habitat on Mars is unavoidable if humanity existed in the long-term future. On the other hand, if humankind were to colonize Mars incorrectly, there would be catastrophic consequences. I liked this source since it helped me research more on the topic. This source was a tremendous preliminary research tool. Additionally, I incorporated the evidence in the introduction paragraph.

Source 8

New World Encyclopedia. (2019, December 11). *Space colonization*. New World

Encyclopedia. https://www.newworldencyclopedia.org/entry/space_colonization

This webpage is taken from an encyclopedia, and it gives information on space colonization. The reason why I chose this source is it was an excellent resource for preliminary research. It contains a detailed, general overview of the topic. For example, the colonizing process requirements were mentioned, and a brief review of the pros and cons. Additionally, there is detailed information about satellite and free space locations, as well as transportation methods. I used elements of this source in my introduction paragraph.

Outline

1) Introduction

- a. Background information
- b. Definition of space colonization
- c. Importance of the topic
- d. Summary of supporting arguments and counterarguments
- e. Thesis
 - i. Counter-thesis

1. NASA should invest resources in space colonization of Mars. ii.

Thesis

1. NASA should not invest resources in space colonization of Mars.

2) Supporting argument 1: Space colonization of Mars poses health risks.

- a. Physiological effects
- b. Psychological effects

3) Supporting argument 2: Space colonization of Mars is a costly investment.

4) Counterargument 1: Space colonization of Mars can ensure the survival of humanity.

- a. Able to avoid natural disasters or catastrophes.

5) Counterargument 2: Space colonization of Mars can lead to finding abundant resources.

- a. Profitable business due to space mining

6) Conclusion

- a. Restate thesis.
- b. Summarize main supporting and counterarguments.
- c. Provide possible solutions to the issue.

References

- Aleci, C. (2019). From international ophthalmology to space ophthalmology: The threats to vision on the way to Moon and Mars colonization. *International Ophthalmology*, 40(3), 775-786. <https://doi-org.aus.idm.oclc.org/10.1007/s10792-019-01212-7>
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- Munevar, G. (2019). An obligation to colonize outer space. *Futures*, 110, 38–40. <https://doi.org/10.1016/j.futures.2019.02.009>
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- Stoner, I. (2017). Humans should not colonize Mars. *Journal of the American Philosophical Association*, 3(3), 334–353. <http://aus.idm.oclc.org/login?url=https://www-proquestcom.aus.idm.oclc.org/scholarly-journals/humans-should-not-colonizemars/docview/1999116770/se-2?accountid=16946>

Zubrin, R. (2019). Why we earthlings should colonize Mars! *Theology and Science*, 17(3), 305-316. <https://doi-org.aus.idm.oclc.org/10.1080/14746700.2019.1632519>

Checklist

Before submitting, write “YES” for each of the items below. If this section has not been completed in full then your paper will need to be resubmitted as LATE (incurring the usual 10% late penalties).

1/ I have carefully read *out loud* my entire paper and corrected issues where appropriate.

YES

2/ I have named the file for submission as follows: Research Proposal [my name] For example: Research Proposal Philip Michael McCarthy

YES

3/ I have read the rubric and guide, and included all the information required in the pages above.

YES

4/ I have pressed spellcheck/grammar check and corrected any text as appropriate.

YES

5/ I have set my WORD document to all the specified proofing requirements, and I have corrected my test accordingly. If not, I have contacted my instructor for assistance.

YES

6/ The file I am submitting is a Microsoft Word document.

YES

7/ I have carefully checked my paper to ensure there are *no* examples of any form of plagiarism. I fully understand what these forms of plagiarism are and I realize fully that any examples of plagiarism will have severe consequences (including *but not limited to* a zero grade, an F for the course, a formal report to administration, and/or having to write a completely new research paper on a different topic). I further confirm that I have had ample opportunity to discuss issues of plagiarism with my instructor and that any and all of my questions have been addressed.

YES

8/ All work submitted in this paper is my own. No other person was involved in any of the actual writing of this paper. If I received ANY help from ANY other source, I have emailed my instructor to detail ALL the support that I received.

YES