

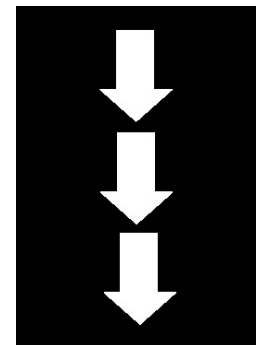
DRIVING QUESTION

Driving Question:

To what extent does space exploration contribute to the advancement of humanity?

Exploration confronts the unknown.

- Nothing is never known until it's discovered or done and that means that those ideas are made unless. And say exploring space is done then there is never truly a real understanding of funding, resources, and time.
- An article called Article The Societal Impact of Spaceflight written by 2008 Steven J. Dick states, "It seems obvious that certain turning points in the history of spaceflight must have had an impact." Confronting the unknown for humans is not difficult, but not easy but as soon as trouble even commences humans can't seem to realize doing the same problem over is not a very convenient. And this is probably why humans explore, we all have the desire and the curiosity to search for more. To do what may seem at first not so smart but for a cause and a good one.



- A lot of presidents have been strong advocates of NASA and in what it could contribute towards space exploration, such as former president Barack Obama who was a very strong advocate in space exploration growing in the 21 century. On April 15, 2010 Obama spoke about space exploration and said, "It's contributed to immeasurable technological advances that have improved our health and well-being, from satellite navigation to water purification, from aerospace manufacturing to medical imaging." From this it can be observed that out of nothing, out of confronting the unknown has brought so many advances in everything because the whole process of space explorations leads to discoveries that not only help astronauts up in space but also contribute to the life of humans down on earth. An example of this would be the water purification process that was needed to be invented for humans up in space as they could not just go down to earth and then come go back up easily, therefore

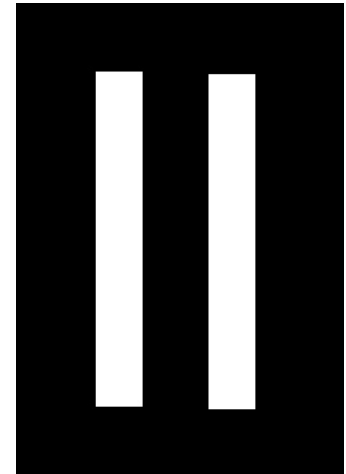
an advancement made for space also contributed to humans on earth.

- Space is an area in which there are still many discoveries to be made. Some of these discoveries can include finding an earth-like planet, as Sara Seager says, “With this discovery, we’ve made a giant, accelerated leap forward in our search for habitable worlds and life on other worlds potentially. ” Space as we see it could very well be the origin of a new beginning for humans, a frontier where we may soon inhabit.



Exploration requires recognizing purpose and responding to it.

- According to an article by the BBC (5 January 2016), “natural resources have always allowed us to expand to new frontiers. When Europeans first settled North America, they lived off the resources they found on the land, and in doing so created one of the world’s biggest economies.”



Going into space costs the United States lots of money and time. All the time and money put into trying to go to space would eventually be worth it. The possible resources found in space could give the United States a better economy and therefore make it worth the money and time. NASA similarly to the Europeans, could be self sustainable or funded by its resources that it gains from space, like the Europeans when they discovered the new

world.

- In the same BBC article they state “Planetary Resources say they are already making money from the technology they have developed, even before they’ve started mining anything beyond Earth” (5 January 2016).

This means that space exploration is making money even before they have had any expeditions into space and they don’t waste time and resources given to them. NASA uses a lot of our tax money, but in return, they also help make things better for people on Earth. Some inventions that we use today were made by NASA. By supporting and funding NASA, we are not only making advancements in space, but we are also helping make life on Earth better. By doing everything that is needed even if space exploration is required by making earth and all its inhabitants safe.

- Space Exploration is important as seen when former president Bush proclaimed a new bill which is/was ‘a renewed spirit of discovery’ as Steven J. Dick says, “The concepts of “discovery” and “exploration” are frequently

found throughout space literature, most recently in the new Vision for Space Exploration, billed as “a renewed spirit of discovery,” enunciated by President Bush in January, 2004. ”

- Some needs require reasoning and a recognition for purpose. The article called “The Importance of exploration” by Steven J. Dick states that, “of course, even those who say we should explore in principle, for whatever reason including new frontiers, face the hard reality of funding”. This means that responding to this problem which is funding in space exploration is first needed to find recognition for a specific purpose.
- The importance of space exploration is recognized by Stephen Hawking who says that “humanity would likely not survive another 1,000 years without escaping beyond our fragile planet,” according to the Associated Press. Even in this case Stephen Hawking is completely right because with the way that humans treat the Earth, we will go extinct. If humans went back to the way we treated earth

with no pollution and no waste there could be a chance that the planet could be saved from these dangers and humans would not eventually rely on space exploration. Meaning that as exploration recognizes purpose these dangers can be prevented from more dangers to occur.

Exploration may result in new findings or the confirmation of old findings.



- According to a NASA article from (July 23, 2015) “The new discovery, Kepler-452b, fires the planet hunter’s imagination because it is the most similar to the Earth-sun system found yet: a planet at the right temperature within the habitable zone, and only about one-and-a-half times the diameter of Earth, circling a star very much like our own sun. ”

Since there are a lot of problems in the world such as global warming and the unknowingly possibility of the

destruction of earth by an asteroid, we are forced to look for a possible new planet to move to (if needed) for future generations. We had found many candidate planets that could be colonized, but some were either too far or not that similar to earth. With the new discovery of planet Kepler-452b we now have a candidate for a planet, that is very similar to earth, to move to if it is necessary in the future. NASA's main idea/focus is the colonization and terraforming of other planets.

- New findings can stem from the exploration of space, whether it be a new planet or a confirmation that a planet could support human life, as said by Amaury Triaud, "We can expect that in a few years, we will know a lot more about these [seven] planets."



- NASA Spinoff article states, "Firefighting equipment widely used throughout the United States is based on a NASA development that coupled Agency design expertise with lightweight

materials developed for the U.S. Space Program.”

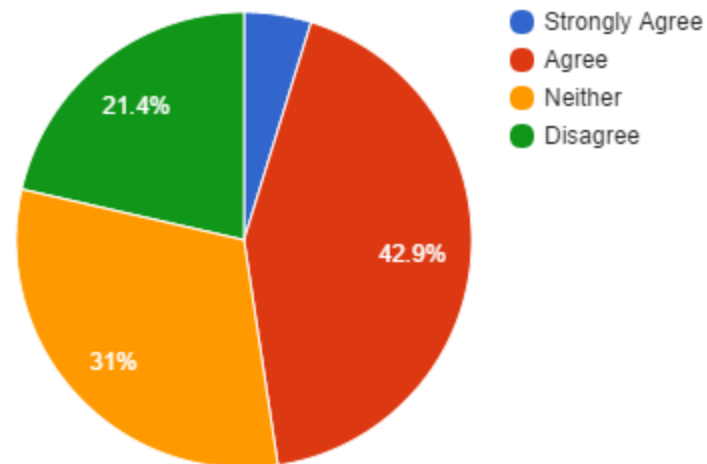
Although NASA's main focus isn't on helping Earth the new findings that were made from trying to get a man to space and moon also helped life on Earth. In order for the shuttle to be able to survive the reentry it would have to be able to handle extreme heat. For this reason NASA developed a material that could resist the heat and keep the shuttle stable enough for the people traveling inside to re enter Earth safely. This material heavily impacted life on earth because it was later applied to firefighter equipment and military equipment, two very important jobs that deal with saving people's life. This proves that NASA doesn't only help advancements in space but on Earth

- “So the point is what we're looking for is not just to continue on the same path -- we want to leap into the future; we want major breakthroughs; a transformative agenda for NASA.” Barack Obama-April 15, 2010

Survey Results

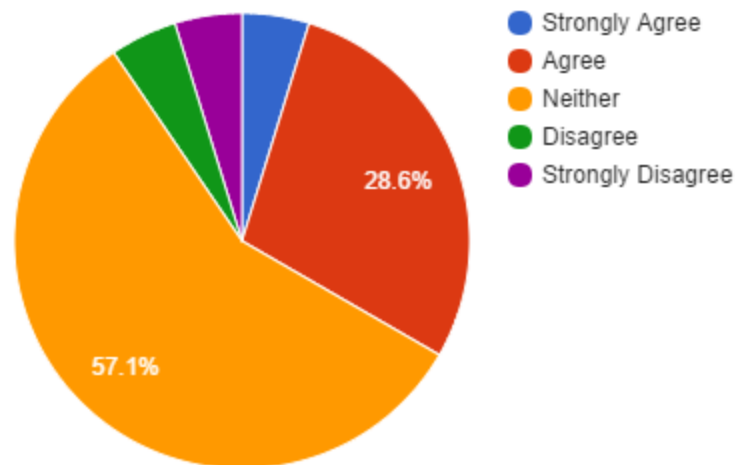
Survey Statements: All countries should have space programs, like the USA has NASA.

Response: Our survey showed that 31%, which is about $\frac{1}{3}$ of people surveyed, could not decide if other countries should have a space program like the USA. This might be telling us that kids between 10-15 years old really don't know what a space program does and if we should even have it. With that being said only 21.4% of people thought that the space program was not necessary for other countries.



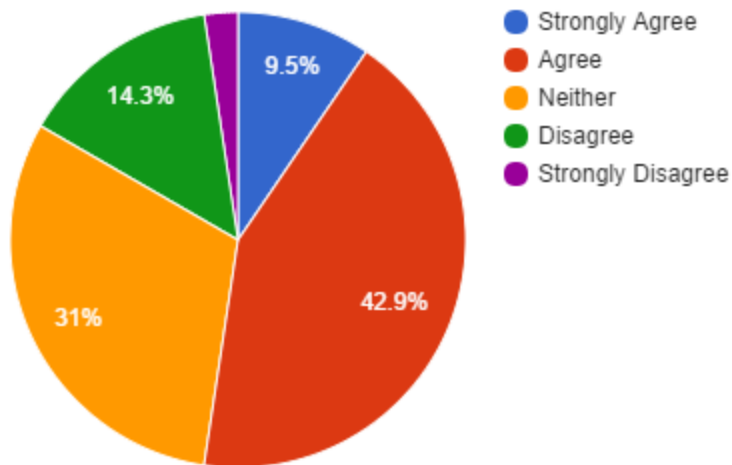
Survey Statement: The NASA space program should be kept fully funded through American tax dollars.

Response: Our survey showed that more than half of the people surveyed could not decide whether the space program should be kept funded by American tax dollars or not. This may be because they are not educated enough on how much money NASA receives and what it means. Now the percentages are reversed, with only about 1/3 of people agreeing or strongly agreeing that the space program should stay fully funded by tax dollars and more than half of the people don't know if the space programs should stay funded. We hope that through our presentations, kids will be able to understand what NASA funding really means.



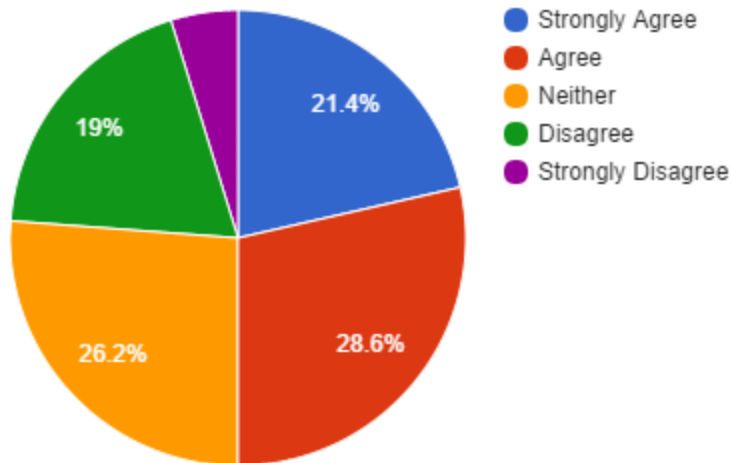
Survey Statement: What we gain from space is worth the cost of going into space.

Response: The majority of these young teens think that all the information and resources (if any) gained from space either being info for the sun or another solar system is a very good thing even if cost is high or low. It will benefit not the present but the future in a small or big way. From this data it can be assumed that most believe in the small chance that space exploration will be good in the long run.



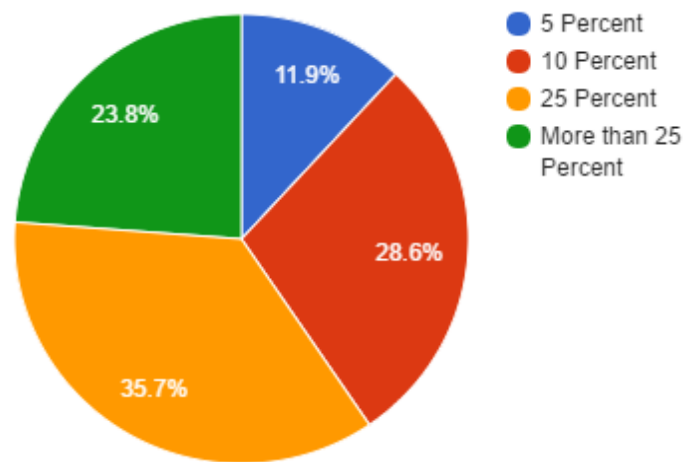
Survey Statement: The findings of outer space travel will affect the way humans treat and function on planet Earth today and in the future.

Response: The responses given seem very obvious as anyone would think having an extra something would mean that Earth would not be treated the same. And it might be already too late to start trying to protect Earth as the enormous amounts of air pollution, waste, and plastics can be found almost everywhere. If humans were to find a planet that is exactly like Earth or just as habitable, we wouldn't treat Earth as well due to us having 'safety net' to fall to.



Survey Question: How much of our government's spending should be spent on space exploration?

Response: In 2011 NASA's budget for that year was only 18.4 billion dollars which may seem a large amount but as for the military, its budget was about 598 billion in 2015. If NASA ever got to hold onto the military budget, things would go by so fast as things that take NASA ten years can probably be shortened to 1 to 2 years in the making. The fact that the data below shows how these kids want NASA's budget to increase is demonstrating that kids at Mendez who will be future tax-paying adults believe in NASA's mission to explore, even if it costs more money. If NASA wants to work on very serious projects like space exploration, then not only does the annual budget have to increase but also will the mindset of everyone onboard of larger and greater projects that will eventually need to be accomplished for more advancement in space exploration.



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To What Extent Does Space
Exploration Contribute To
The Advancement Of Humanity

Exploration confronts
the unknown.

Exploration requires
recognizing purpose and
responding to it.

Exploration may result
in new findings or the
confirmation of old
findings

Ending Question - Where do I Fit In:

How can I contribute to the advancement of humanity with or
without a space program?

Driving Question:

To what extent does space exploration contribute to the advancement of humanity?

Names of student researchers:

Marco Martinez
Diego Grajeda
Wilton Phung

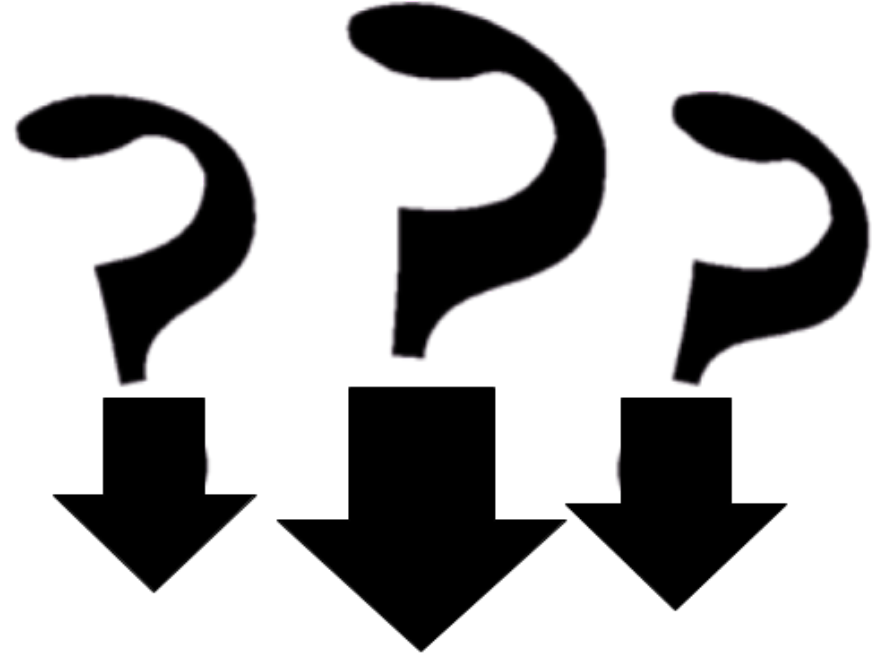
Grade level: 8th

Mentor teacher:

Ms. Park

Special notes about handling and or placement or presentation space needed:

**Ending Question - Where
do I fit in? How can I
contribute to humanity's
advancement with or
without a space program?**



Qr Code for Symposium Blog

