

**Document Based Question**  
**Mission to the Moon: At What Cost was the U.S. Willing to Win the Space Race?**  
**8<sup>th</sup> to 11<sup>th</sup> Grade**

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**Directions:**

The following documents show the “costs” to the United States in getting a man to the moon. Was the venture worth what they spent to get there? You are to read/analyze each of the following documents then answer the corresponding questions that follow each one in the order they are given. Finally, you will utilize the documents, your answers and background knowledge of the time period to respond to the following essay prompt.

Your essay should include an introductory paragraph followed by a body that makes specific reference to the documents that have been provided for your use. You should end the essay with a strong paragraph tying all the information together.

**Essay Prompt:**

Using the visual and literary documents, write an essay stating which “cost” was more important in getting a man to the moon. The definition of “cost” for this essay could be the expense of the program, the loss of human life or doing whatever it took to beat the former Soviet Union in the Space Race. You must be able to support your decision with evidence from the sources that follow.

**Document A: Excerpts from President Kennedy’s Congressional Speech May 25, 1961 on Urgent National Needs<sup>1</sup>**

Finally, if we are to win the battle that is now going on around the world between freedom and tyranny, the dramatic achievements in space which occurred in recent weeks should have made clear to us all, as did the Sputnik in 1957, the impact of this adventure on the minds of men everywhere, who are attempting to make a determination of which road they should take. Since early in my term, our efforts in space have been under review. With the advice of the Vice President, who is Chairman of the National Space Council, we have examined where we are strong and where we are not, where we may succeed and where we may not. Now it is time to take longer strides--time for a great new American enterprise--time for this nation to take a clearly leading role in space achievement, which in many ways may hold the key to our future on earth.

I therefore ask the Congress, above and beyond the increases I have earlier requested for space activities, to provide the funds which are needed to meet the following national goals:

First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space; and none will be so difficult or expensive to accomplish. We propose to accelerate the development of the appropriate lunar space craft. We propose to develop alternate liquid and solid fuel boosters, much larger than any now being developed, until certain which is superior. We propose additional funds for other engine development and for unmanned explorations--explorations which are particularly important for one purpose which this nation will never overlook: the survival of the man who first makes this daring flight. But in a very real sense, it will not be one man going to the moon--if we make this judgment affirmatively, it will be an entire nation. For all of us must work to put him there.

I believe we should go to the moon. But I think every citizen of this country as well as the Members of the Congress should consider the matter carefully in making their judgment, to which we have given attention over many weeks and months, because it is a heavy burden, and there is no sense in agreeing or

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<sup>1</sup> (Kennedy)

desiring that the United States take an affirmative position in outer space, unless we are prepared to do the work and bear the burdens to make it successful. If we are not, we should decide today and this year.

This decision demands a major national commitment of scientific and technical manpower, materiel and facilities, and the possibility of their diversion from other important activities where they are already thinly spread. It means a degree of dedication, organization and discipline which have not always characterized our research and development efforts. It means we cannot afford undue work stoppages, inflated costs of material or talent, wasteful interagency rivalries, or a high turnover of key personnel.

New objectives and new money cannot solve these problems. They could in fact, aggravate them further--unless every scientist, every engineer, every serviceman, every technician, contractor, and civil servant gives his personal pledge that this nation will move forward, with the full speed of freedom, in the exciting adventure of space.

1. What is the battle that Kennedy refers to in paragraph one? What country represents freedom and what country represents tyranny?

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2. What challenge did President Kennedy give the United States to have completed by 1969?

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3. Who must be involved in order to accomplish this feat?

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4. Why did Kennedy refer to going to space as a "burden" on the entire nation? At what "cost" will it take to put man on the moon?

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**Document B: Time Magazine Article printed Friday, Feb. 03, 1967**  
**"To Strive, To Seek, To Find, And Not to Yield..."~Excerpts from original article<sup>2</sup>**  
**This article gives details regarding the Apollo 1 Fire Tragedy at Kennedy Space Center**

...But the first three U.S. astronauts to die on duty were motionless and earth-bound when they were killed last week. With helmet faceplates closed and suits pressurized, they reclined in a row on padded couches in their cylindrical Apollo capsule, running through the countdown of a simulated launch, a routine but rigorous rehearsal for the real thing. They had been there 5 hrs. 31 min. when fire exploded in the cabin. Within seconds, Lieut. Colonel Virgil Grissom, 40, Lieut. Colonel Edward White, 36, and Lieut. Commander Roger Chaffee, 31, lay dead in the charred cockpit of a vehicle that was built to hit the moon 239,000 miles away, but never got closer than the tip of a Saturn rocket, 218 ft. above Launching Pad 34 at Cape Kennedy.

Everyone feared, and some had warned, that some day, somewhere, such a string of luck would have to snap. The astronauts have always approached their jobs with the workaday fatalism of men who live with

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<sup>2</sup> (Time Magazine Archive)

death at their elbows. When John Glenn returned from his harrowing trip, he cautioned: "We are going to have failures. There are going to be sacrifices made in the program; we have been lucky so far." Grissom himself said in words that may long be remembered: "If we die, we want people to accept it. We are in a risky business, and we hope that if anything happens to us it will not delay the program. The conquest of space is worth the risk of life."

The impact of three deaths aboard a "bird" raised anew the question of whether the conquest of space is really worth the cost—in lives or in money. Congressional support has been relatively lukewarm recently, and National Aeronautics and Space Administration officials considered themselves lucky to get a \$5.05 billion budget proposal from the President this year.

But NASA backers are convinced that the race for the moon will continue. Said California Democrat George Miller, chairman of the House Science and Astronautics Committee: "This is a tragedy; nevertheless, it is one of the hazards that take place. Remember, every new aircraft has cost lives of test pilots, and the pilots know it. I am certain that if Grissom, White and Chaffee could come back, they would be the first to urge that the program go on."

1. What happened to the crew members of Apollo 1 during their "dress rehearsal" of their launch?  
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2. What impact did this tragedy have on the Apollo Space Program?  
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3. Based on Grissom's quote, how did they want the public to handle a tragedy such as death to an astronaut?  
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4. How did NASA feel about continuing the space program after the loss of these 3 men?  
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### **Document C: Time Magazine Article, July 25, 1969**

#### **"Awe, Hope and Skepticism on Planet Earth"~Excerpt from original article**

Americans were gratified that the U.S. had won the race with the Soviet Union to land men on the moon. Said Patricia Lepis of Brooklyn: "It's the greatest thing that could happen to this country. It's definitely an American triumph." Houston Cameraman Ron Bozman argued: "The moon is there and we Americans have to get there first." More often, the moon mission evoked an exhilarating sense of human solidarity and potential. "I believe it's man's greatest achievement to date," said Barry Davidoff, 16, a student at the Bronx High School of Science. "It's a triumph for everybody."<sup>3</sup>

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<sup>3</sup> (Time Magazine Archive)

1. What was considered to be man's greatest achievement at this time?  
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2. What was the overall feeling of Americans when the U.S. put a man on the moon before the Soviet Union?  
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## Document D: What the Apollo Program Cost

To some individuals, the Apollo moon landings are considered the greatest achievement in human history and the beginning of humanity's expansion into the universe. At its height over 400,000 people were directly or indirectly involved in the project. But what was the cost?

- Apollo Spacecraft - **\$5.3 Billion**
- Saturn Rockets - **\$8.7 Billion**
- Other Costs - **\$11.4 Billion**

*The Total Estimated Cost in 1969 Dollars is \$25.4 Billion and \$145 Billion in 2007 Dollars.*<sup>4</sup>

1. What was the overall cost of the program in 1969 dollars?  
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2. How many individuals were impacted by the Apollo Space Program?  
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## Document E: National Education Defense Act~Colombia Encyclopaedia

National Defense Education Act (NDEA), federal legislation passed in 1958 providing aid to education in the United States at all levels, public and private. NDEA was instituted primarily to stimulate the advancement of education in science, mathematics, and modern foreign languages; but it has also provided aid in other areas, including technical education, area studies, geography, English as a second language, counseling and guidance, school libraries and librarianship, and educational media centers. The act provides institutions of higher education with 90% of capital funds for low-interest loans to students.<sup>5</sup>

1. What was purpose of the National Education Defense Act?  
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2. What impact would this new act have on the Space Race?  
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<sup>4</sup> (Calore)

<sup>5</sup> (The Colombia Encyclopedia)

### Directions for the essay portion:

- Your essay should include at least four paragraphs; an introductory, two to three body paragraphs and a conclusion.
- Be sure to incorporate supporting details from the documents given to you to support your position in the essay.

#### Essay Prompt:

Using the visual and literary documents, write an essay detailing the response of Americans to finally beating the Soviet Union in the Space Race by getting a man to the moon. You must be able to support your decision with evidence from the sources that follow.

### Works Cited

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