

Why Choose the Moon?

Topic: President Kennedy's decision to go to the Moon and the debate over federally funded space exploration

Grade Level: 6-9

Subject Area: Social Studies, History, Government

Time Required: One class period. Assessment can be assigned for homework or modified for use in class.

Goals/Rationale

Students examine President Kennedy's 1961 decision to send a man to the Moon by reading a letter written to the president by 13-year-old Mary Lou Reitler. Students then consider arguments in support of and opposition to using federal funds for space exploration both in the context of 1961 and the current debate on funding for NASA.

Essential Question: How much money should the federal government devote to space exploration?

Objectives

Students will:

- consider the costs related to space exploration in the 1960s and the decision to send a man to the Moon.
- identify the main idea of two primary source letters.
- evaluate two competing positions, construct a generalization, and use evidence from primary source documents to support their statement in an essay.

Connections to Curriculum (Standards)

National History Standards

Historical Thinking Skills Standard 2 Historical Comprehension

B. Reconstruct the literal meaning of a historical passage.

Historical Thinking Skills Standard 3 Historical Analysis and Interpretation

A. Consider multiple perspectives.

B. Compare and contrast differing sets of ideas.

History Standards for Grade 5-12, United States

Standard 1C: The student understands how postwar science augmented the nation's economic strength, transformed daily life, and influenced the world economy.

5-12: Assess the significance of research and scientific breakthroughs in promoting the US space program. [Examine the influence of ideas]

Massachusetts History and Social Science Curriculum Framework

USII.T5 (#1); WHII.T5 (#11)

Prior Knowledge and Skills

Students should have general background knowledge of Cold War tensions between the United States and the Soviet Union.

Historical Background and Context

On May 25, 1961, President John F. Kennedy made a special address to Congress on Urgent National Needs and asked Congress to dedicate \$7-9 billion dollars to the space program. The United States, he declared, needed “to take a clearly leading role in space achievement” and “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.” The mission was clear: the United States must go to the Moon.

President Kennedy made this request one month after the Soviet Union had sent the first man into space. The Soviet success suggested that the United States was falling behind in the arms race and fueled new tensions between the two nations entwined in a bitter Cold War. Space was the latest theater for battling the Cold War and provided an opportunity for the United States to promote leadership and demonstrate the technological advances of a free and democratic society. In order to do that, the United States needed to reach the Moon before the Soviet Union.

To achieve this end, Congress appropriated the funding for NASA’s Apollo lunar landing program. It took eight years of work and sacrifice, including the loss of three astronauts in a fire aboard *Apollo 1*, but President Kennedy’s goal was finally achieved on July 20, 1969 when Neil Armstrong and Buzz Aldrin became the first men to walk on the Moon as part of the Apollo 11 mission.

From the very moment President Kennedy made his intentions clear, people began to debate the necessity of space exploration. The wonders of exploring the unknown and promise of potentially life-altering technological advances were tempered by thoughts that life would be most improved by focusing on immediate concerns on earth such as the struggle for civil rights, domestic anti-poverty programs, and, as time went on, increasing US involvement in Vietnam.

This lesson examines the public debate over the space program through the eyes of a 13-year-old girl. In 1962, eighth grader Mary Lou Reitler wrote a letter to President Kennedy articulating her opposition to the space program. Although President Kennedy did not personally respond to her letter, Myer Feldman, the Deputy Special Counsel to the President, wrote back, addressing Ms. Reitler’s concerns and detailing the president’s views on the importance of space exploration. Through their analysis of these letters and additional information about the costs and benefits related to the Apollo program, students will consider the merits of federally funded space exploration and take a position in support of or in opposition to President Kennedy’s decision to go to the Moon. This lesson includes an extension where students can also examine the current debate on space policy in relation to the 1960s.

Materials

- Student Handouts (included in this PDF)
 - Overview/Rice University Speech
 - Letter from Mary Lou Reitler to President Kennedy, January 19, 1962
 - Response from Myer Feldman, Deputy Special Counsel to the President, to Mary Lou Reitler, March 29, 1962
 - Graphic Organizer
 - “Other Things to Consider”
 - Assessment Worksheet

- [Audio or video of President Kennedy’s Rice University Speech, September 12, 1962](#)
[The entire speech is 17 minutes and 41seconds long. A good excerpt to use would be about halfway through the speech starting with the paragraph “We set sail on this new sea...” If you are unable to access audiovisual materials in your classroom or wish to shorten the lesson, the text of an excerpt from the speech is provided on the student handout.]

Procedure

This lesson uses a letter written by 13-year-old Mary Lou Reitler to President Kennedy, and the White House’s response, to examine some of the reasons given in support of and in opposition to President Kennedy’s decision to send a man to the Moon. Students use these letters, as well as additional information on the space program, to construct their own position on federally funded space exploration. This lesson consists of three parts and an assessment.

Part I: Anticipatory Set

1. Begin the lesson by playing an excerpt of the audio or video from President Kennedy’s September 12, 1962 speech at Rice University in Houston, Texas where he dedicated NASA’s new Manned Spacecraft Center (now the Johnson Space Center). In this speech President Kennedy reaffirms the commitment he made to Congress in May of 1961 to send a man to the Moon. [An excerpt of the speech is provided on the student handout if you choose not to listen to or watch the speech.] You may want students to consider the following questions after listening to the speech:

- What does President Kennedy want to do?
- What is President Kennedy’s tone in this speech?
- What words or phrases does he emphasize?
- Why do you think the president is emphasizing this topic at this time?

2. After discussing President Kennedy’s speech, have students read the historical overview on the student handout either individually or a class read-aloud. [You could also have students read this overview before listening to Kennedy’s speech.]

3. Highlight the point that the decision to go to the Moon in 1961 was controversial and that Americans disagreed on the subject.

Part II: Correspondence between Mary Lou Reitler and Myer Feldman

1. In January 1962 – after President Kennedy announced his decision to Congress to send a man to the Moon but before his speech at Rice University – 13-year old Mary Lou Reitler wrote a letter to President Kennedy. Have students read Mary Lou Reitler’s letter and answer the following questions (answers can be recorded on the graphic organizer provided in this lesson):

- What is Mary Lou’s reaction to the decision to send a man to the Moon?
- What are the reasons that Mary Lou gives to defend her position?

2. Although President Kennedy did not personally respond to Mary Lou’s letter, Deputy Special Counsel to the President Myer Feldman wrote to her on the president’s behalf. Ask students to read Feldman’s response and answer the following questions (answers can be recorded on the graphic organizer provided in this lesson):

- How does Myer Feldman respond to Mary Lou’s letter?

- b. What are the reasons that Myer Feldman uses to defend his position?
3. Once students have recorded their observations on the Reitler and Feldman letters, ask students to brainstorm additional reasons in support of or opposition to spending federal money on the space program.
 4. Have students look at the handout “Other Things to Consider” for additional ideas. This handout provides a chronology of other events that were going on at the same time as the Apollo program, statistics about the cost of the Apollo program, and a list of technological advances attributed to the Apollo program.

Part III: Debating the Decision to Go to the Moon

Have a class discussion about the pros and cons of space exploration. You may want students to consider the following questions:

1. Reitler and Feldman letters

- a. What arguments did Reitler and Feldman make in support of and in opposition to the decision to send a man to the Moon?
- b. Who makes a better argument in their letter: Mary Lou Reitler or Myer Feldman? Why?
- c. Where do you think Mary Lou got her ideas from? Why might she be thinking about space? Is there an issue that you feel strong enough about to write to the president?
- d. What did you notice about the tone of both of the letters? Did it surprise you that Feldman’s letter was so respectful towards Mary Lou’s letter?

2. Apollo Program and the Space Race

- a. Why do you think it was so important for President Kennedy to focus on space and sending a man to the Moon?
- b. In the Rice University speech, President Kennedy says that going to the Moon is a challenge “which we intend to win” and vows that the Moon will not be “governed by a hostile flag of conquest.” What other issue do you think he is referring to in those statements? To what extent is the Cold War related to the decision to send a man to the Moon? (*In September 1962, President Kennedy was aware of the increasing Soviet military buildup in Cuba and a month later the two nations would be engaged in the Cuban Missile Crisis. This tension is evident in this speech.*)
- c. How much did it cost to send a man to the Moon?
- d. What were some of the other issues going on during the 1960s that required attention and/or federal funding?
- e. What advances came about as a result of the Apollo program?

3. General

- a. Is it important to explore outer space?
- b. Should the federal government spend money on the space program?
- c. Who decides how federal money is spent in the United States?

4. The Space Program Today

- a. There is a similar debate about space exploration today. President Trump recommended accelerating the US space program, returning astronauts to the Moon as a major step before an eventual trip to Mars. This would require increased government spending.
- b. In what ways do Mary Lou Reitler’s and Myer Feldman’s comments apply today?
- c. Do you think the United States should continue to fund the space program today?

Assessment

This assessment can be done in class, as a homework assignment, or modified as an “exit ticket.” Students should complete the following writing prompt:

It is May 1961 and you are a member of Congress. Write a statement to your constituents about your position on President Kennedy’s decision to send a man to the Moon. In your statement, tell your voters if you plan to support or oppose President Kennedy’s request to give more money to NASA and explain your position on space exploration. Use the letters written by Mary Lou Reitler and Myer Feldman, as well as the ideas you brainstormed and any additional information, to support your position.

Lesson Extension

As President Kennedy’s speech at Rice University suggests, the decision to go to the Moon and the space program were motivated, in part, by the Cold War tensions between the United States and the Soviet Union. Have students conduct research conduct further research on this topic to consider the impact of the Cold War on the space program.

Additional Resources

[National Aeronautics and Space Administration](#)

NASA provides a wide range of educator resources on the *Apollo* program and current NASA projects.

[National Archives and Records Administration](#)

This NARA web page provides links to information about the United States’ space flight programs, including NASA missions and the astronauts who have participated in the efforts to explore space.

Why Choose the Moon?

On September 12, 1962, President Kennedy made the following remarks at Rice University in Houston, Texas, in support of the space program:

“Those who came before us made certain that this country rode the first waves of the industrial revolutions, the first waves of modern invention, and the first wave of nuclear power, and this generation does not intend to flounder in the backwash of the coming age of space. We mean to be a part of it - we mean to lead it. For the eyes of the world now look into space, to the Moon and to the planets beyond, and we have vowed that we shall not see it governed by a hostile flag of conquest, but by a banner of freedom and peace....”

“We choose to go to the Moon. We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win...”

“Many years ago the great British explorer George Mallory, who was to die on Mount Everest, was asked why did he want to climb it. He said, “Because it is there.” Well, space is there, and we’re going to climb it, and the Moon and the planets are there, and new hopes for knowledge and peace are there. And, therefore, as we set sail we ask God’s blessing on the most hazardous and dangerous and greatest adventure on which man has ever embarked.”



On May 25, 1961, President John F. Kennedy made a special address to Congress on Urgent National Needs, asking Congress to dedicate \$7 to \$9 billion dollars to the space program. The United States, he declared, needed “to take a clearly leading role in space achievement” and “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.” The mission was clear: the United States must go to the Moon.

President Kennedy announced his decision to go to the Moon one month after the Soviet Union sent the first man into space. The Soviet success suggested that the United States was falling behind in the arms race and fueled new tensions between the two nations already involved in the Cold War. If the United States could reach the Moon before the Soviet Union it would demonstrate that the United States and was a leader in science and technology. (See left insert for President Kennedy’s remarks on the issue.)

Congress awarded the necessary funds to the National Aeronautics and Space Administration (NASA) for the Apollo program and the race to the Moon began. In February 1962, John Glenn became the first American to orbit the earth. After a series of additional missions, President Kennedy’s challenge was met when *Apollo 11* astronauts Neil Armstrong and Buzz Aldrin became the first men to walk on the Moon on July 20, 1969.

President Kennedy’s decision to go to the Moon was controversial. Some people argued that the cost was too high. The Apollo program cost approximately \$20 billion dollars between 1961 and 1973. Other people, however, argued that the technological benefits of space exploration made the program worthwhile. Technology from the space program has been applied to other uses. These technology “spinoffs” have been used in textiles to protect firefighters, medical imaging machines to help doctors see what is happening in the body, cordless tools, and television satellite dishes.

One of the people who voiced their opinion on President Kennedy's decision to go to the Moon was 13-year-old Mary Lou Reitler. Read Mary Lou's letter. Think about whether or not she supports the President's decision and what reasons Mary Lou gives to defend her position.

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January 19, 1962
P. O. #1
Deltow, Michigan

Dear President Kennedy,

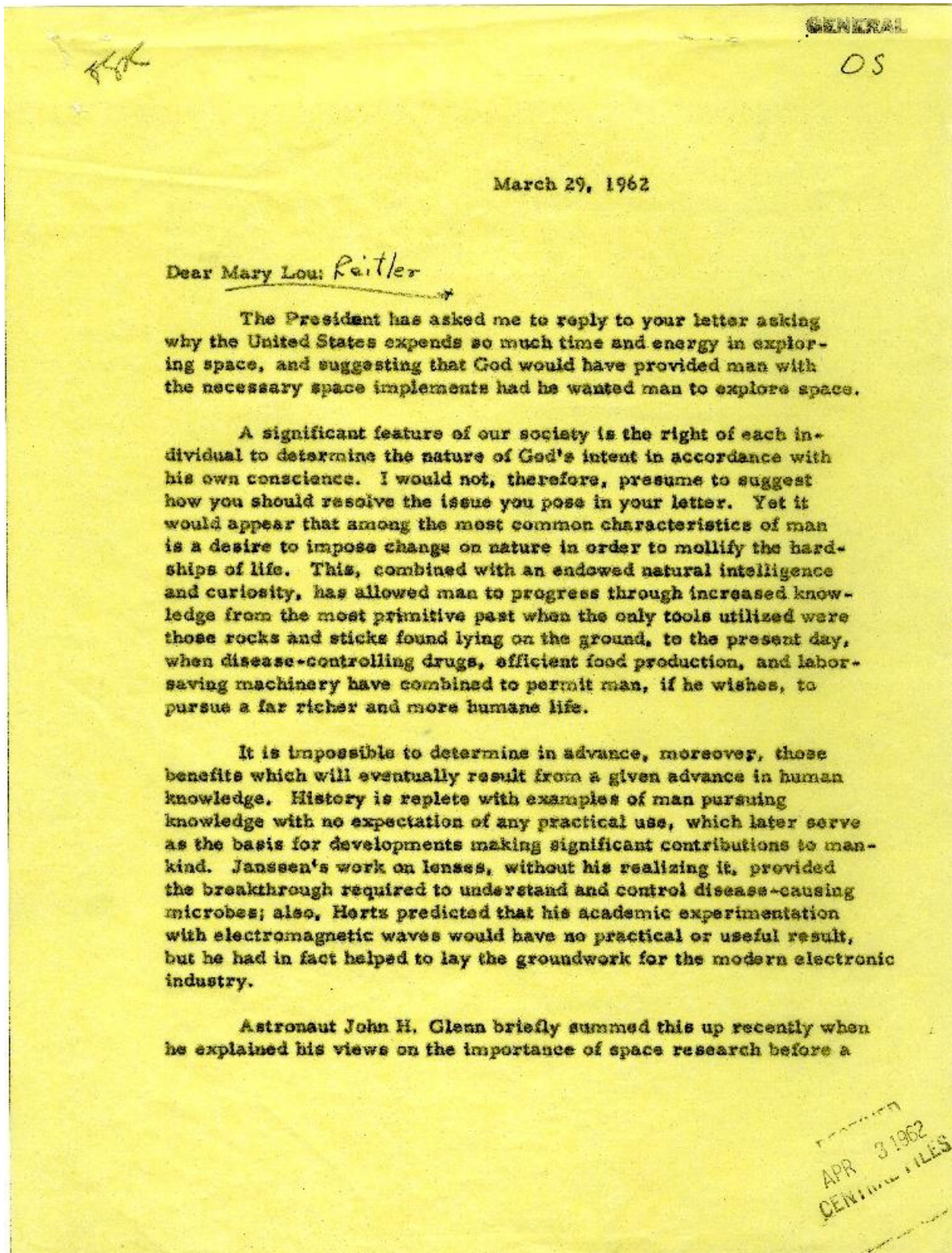
I am thirteen years old & I'm in the eighth grade. Please don't throw my letter away until you've read what I have to say. Would you please answer me this one question? When God created the world, He sent man out to make a living with the tools He provided them with. They had to make their living on their own with what little they had. If He had wanted us to orbit the earth, reach the moon, or live on any of the planets, I believe He would have put us up there Himself or He would have given us missiles etc. to get there. While our country is spending billions of dollars on things we can get along without, while many refugees and other people are starving or trying to make a decent living to support their families. I think it is all just a waste of time & money when many talents could be put to better use in many ways, such as making our world a better place to live in. We don't really need space vehicles. I think our country should try to look out more for the welfare of its people so that we can be proud of the world we live in. At school they

EVER

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tell us that we study science so that
we can make our world a better place
to live in. But I don't think we need
outer space travel to prove or further the
development of this idea. Now that you
have heard what I have to say will you
please write me in answer to my question?

Sincerely,
Mary Lou Peitler

Although President Kennedy did not personally respond to her letter, Myer Feldman, the Deputy Special Counsel to the President, responded on the president's behalf. Read Feldman's response. Think about whether or not he supports the president's decision and what reasons Myer Feldman gives to defend his position.



joint session of Congress. He in part said, "But exploration and the pursuit of knowledge have always paid dividends in the long run -- usually far greater than anything expected at the outset . . . Any major effort such as this results in research by so many different specialties that it is hard to even envision the benefits that will accrue in many fields. Knowledge begets knowledge. The more I see, the more impressed I am -- not with how much we know -- but with how tremendous the areas are that are as yet unexplored."

Thank you very much for advising the President of your views on this important matter. It is encouraging to find someone of your age showing such interest and concern in public affairs.

Sincerely,

Myer Feldman
Deputy Special Counsel
to the President

Miss Mary Lou Reitler
R. F. D. #1
Delton, Michigan

Why Choose the Moon?

➤ What reasons do Mary Lou Reitler and Myer Feldman give *in support of* or *in opposition to* space exploration?

Support

Oppose

➤ What other reasons can you think of that are *in support of* or *in opposition to* space exploration? (For additional ideas, refer to the handout "Other Things to Consider.")

Support

Oppose

Why Choose the Moon? - Other Things to Consider

Chronology

Key events related to space and the decision to go to the Moon.

1945	The United States develops the first atomic bomb.
1949	The Soviet Union develops the atomic bomb.
1957	The Soviet Union launches <i>Sputnik</i> – the first satellite sent into space.
1958	The National Aeronautics and Space Administration (NASA) is formed.
1958	National Defense Education Act is passed, promoting educational programs focused on math and science to bolster national defense.
1961	Soviet cosmonaut Yuri Gagarin becomes the first man to enter outer space.

Costs

Figures related to the cost of the Apollo program.

Apollo Program Budget, 1960-1973	\$19.4 billion dollars
NASA's Total Budget, 1960-1973	\$56.6 billion dollars
Apollo Share of NASA's Total Budget, 1960-1973	34%
Percentage of Total Federal Budget devoted to NASA in 1966	5.5% <i>(This was the highest percentage of the federal budget devoted to NASA in NASA's history.)</i>
Number of People Employed (by NASA or Contractor) Working on Apollo in 1964	250,000

Source: Richard W. Orloff, *Apollo by the Numbers: A Statistical Reference* (Washington, D.C.: NASA, 2000).

1961	President Kennedy's Special Message to Congress on Urgent Needs announcing the plan to send a man to the Moon.
1962	John Glenn becomes the first American to orbit the earth.
1962	The Cuban Missile Crisis occurs.
1963	Martin Luther King, Jr., gives his "I Have a Dream" speech at the March on Washington.
1963	President Kennedy is assassinated.
1964	President Johnson begins federal anti-poverty programs such as Medicaid, Medicare, and federal money to education.
1964	Vietnam War intensifies after the <i>Gulf of Tonkin Resolution</i> .
1967	A flash fire in <i>Apollo 1</i> spacecraft kills three astronauts.
1969	<i>Apollo 11</i> astronauts Neil Armstrong and Buzz Aldrin become the first men to land on the Moon.
1972	End of the Apollo program.

“Spinoffs”

Technology developed for the space program has been applied to many innovations that influence our daily lives. NASA refers to these technological advances as “spinoffs.” Here is a list of a few spinoffs. Visit www.nasa.gov to see more.

- Smoke detectors
- Cordless tools
- TV satellite dishes
- Technology used on commercial aircraft and air traffic control
- Fire-resistant textiles and clothing that are used to protect firefighters and the military
- Medical imaging that helps doctors see what is happening in the human body
- Navy life boat rafts to help sailors in case of an emergency on their boat
- Devices to detect dangerous chemicals in the air

Source: Douglas A. Comstock and Daniel Lockney, *NASA's Legacy of Technology Transfer and Prospects for Future Benefits* (Paper presented at the annual AIAA Space Conference and Exposition, Long Beach, California, September 18-20, 2007).

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