

**the Gov**

“NASA Paves Way for Commercial  
Space Exploration”  
Social Studies Lesson Plan

**the Gov**  
is a feature of

**the News**

A daily news broadcast for High School and Middle School students  
now under development by MacNeil/Lehrer Productions



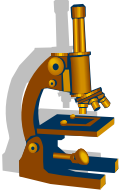
**the Gov**



**Segment 5:  
“NASA Paves Way for Commercial Space  
Exploration”  
Social Studies Curriculum**

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# the . Sci ©



Winter, 2011

Dear Educator,

*the.News* online video reports for *the.Sci* provide middle and high school students with a valuable exercise in science with this **5:40** minute segment on “NASA Paves Way for Commercial Space Exploration” at [www.pbs.org/newshour/thenews/thesci](http://www.pbs.org/newshour/thenews/thesci) Correspondent, Antonio Neves reports on NASA’s plans to shift space exploration from the government to a public/private partnership. Lesson plans for science (*the.Sci*) and social studies (*the.Gov*) are available to support this video in the “For Educators” section of the website. All videos and curricula have been informed by *the.News* instructional design that can be found on the website [www.pbs.org/newshour/thenews](http://www.pbs.org/newshour/thenews). The curriculum includes content-based standards, discussion questions, student activities, vocabulary and primary reference sources. A complete transcript of each video report includes time codes to assist in isolating specific segments of the video and to augment the instruction of media literacy and multimedia production. All of this material is presented as options to fit teachers’ instructional needs.

References to Larry Bell’s “The 12 Powerful Words” are highlighted in **bold** in the lesson plans and in the “thought starter” questions on the home page and educator’s page, and in the transcript (to denote where they are used in the video segment).

We have also added general topics to correlate to the lessons and video as well as concept based standards with conceptual lens and enduring understanding.

We welcome our partners at the Omaha Public Schools who have joined *the.News* in the second year of a special pilot project. We have also developed a new authoring tool for students called *YOU.edit* which gives students an online tool to remix the content of *the.News* reports, so they can create their own multimedia presentations. This editing tool can be found by clicking on the *YOU.edit* button on the home page of the website. Currently used with our OPS teacher consultants it is password protected so that it can serve as a viable educational asset that allows classroom teachers to assign multimedia projects within the security and content safety of *the.News* website.

Answers to **student “thought starter”** questions listed below the video.

#1 gas station

#2. It’s risky, expensive, difficult, and takes a lot of money

#3. Po talks about new ideas, new money and new people who are excited with “fire in the belly.” Wong wants to see his own “instrument” get into space and feels his own personal growth and knowledge expanding.

Sincerely,

Karen W. Jaffe  
Manager, Education Projects, *the.News*  
MacNeil/Lehrer Productions  
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# Privatizing NASA

This lesson was designed to support *the.News* video “NASA Paves Way for Commercial Space Exploration ”  
The video can be found online at [www.pbs.org/newshour/thenews/thegov](http://www.pbs.org/newshour/thenews/thegov)

### Omaha Public Schools Standards

<http://www.ops.org/District/LinkClick.aspx?fileticket=Hbqyrrg2ydM%3d&tabid=912&mid=2006>

U.S. History

Grade 8

**Citizenship/Government:** Describe the structure and function of government, the expanding role and responsibilities of the citizen in a representative democracy, and compare and contrast these elements to those in other countries.

**Conceptual Lens:** Transformation/Identity

**Enduring Understanding:** The advancement of technology transforms a country’s economy and culture.

Government

Grade 12

**Standard 4.** Describe the factors that influence government policy and decisions.

**Grade Level:** 7-12

**Content Areas:**

Social Studies,  
Government/Civics;  
Language Arts, A/P  
classes

**Key Concepts:**

This lesson contains a series of activities that can be done sequentially or individually as conditions allow. The lesson focuses on President Obama’s proposal to privatize some of NASA’s low-orbit space flight operations to private companies. What is the viability of such a proposal? What are the short and long-term ramifications for NASA, the space industry, and the United States’ leadership in space?

**Key Objectives:**

Students will:

- Understand President Obama’s new space initiative of privatizing NASA’s low-orbit operations.
- **Summarize** supporters and opponents views of the NASA space initiative.
- **Analyze** the costs and benefits of privatizing NASA’s low-



orbit operations.

- **Evaluate** the best option for privatizing NASA’s low-orbit operations.
- Participate in a mock-policy committee to **formulate** policies for privatizing NASA’s low-orbit operations.

**Key Vocabulary:**

- **aeronautics:** the study or practice of all aspects of flight through the air
- **Cold War:** a rivalry after World War II between the Soviet Union and its satellites and the democratic countries of the Western world, under the leadership of the United States for economic, political, military and ideological influence throughout the world.
- **commercialization:** to make commercial in character, methods, or spirit. To exploit for profit.
- **counterparts:** a person or thing closely resembling another, esp. in function, operation or mission
- **start-up companies:** pertaining to the beginning of a new project or venture, esp. to an investment made to initiate such a project, as in a commercial or industrial enterprise

Source: *Dictionary.com*



**Omaha Public Schools Standards**

<http://www.ops.org/District/LinkClick.aspx?fileticket=Hbqyrrg2ydM%3d&tabid=912&mid=2006>

**Language Arts**

**Grade 8**

**Standard 1.** Students will read a variety of grade level texts fluently with accuracy, appropriate pace, phrasing and expression.

**Standard 3.** Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

**Language Arts**

**Grade 12**

**Standard 1.** Students will read a variety of grade level texts fluently with accuracy, appropriate pace, phrasing and expression.

**Standard 3.** Students will extract and construct meaning using prior knowledge, applying text information, and monitoring comprehension while reading grade level text.

**Multiple Literacies**

**Standard 9.** Students will research, analyze, and communicate information in a variety of media and formats (textual, visual, and digital).



**Time Frame:**

- Opening activity: ½ class period
- Main Activity Part 1: One class period (less if research given for homework)
- Main Activity Part 2: Two to three class periods including small presentations)

**Materials:**

- *the.News* video:  
<http://www.pbs.org/newshour/thenews/thegov>
- Internet access
- Student Handouts:
  - #1A Privatizing NASA's Operations—Supporters
  - #1B Privatizing NASA's Operations—Opponents
  - #2 NASA's New Direction: Privatizing Space Missions, Issues Overview and Deliberations Procedures
  - #3: Stakeholders' Points of View
  - #4: Negotiation Records
  - #5: Agreement Form

**Lesson Topics:**

- Space Flight
- Commercial Ventures
- Private Enterprise
- Public Policy
- Role Playing Simulation
- Data Collection & Analysis
- Policy Recommendations

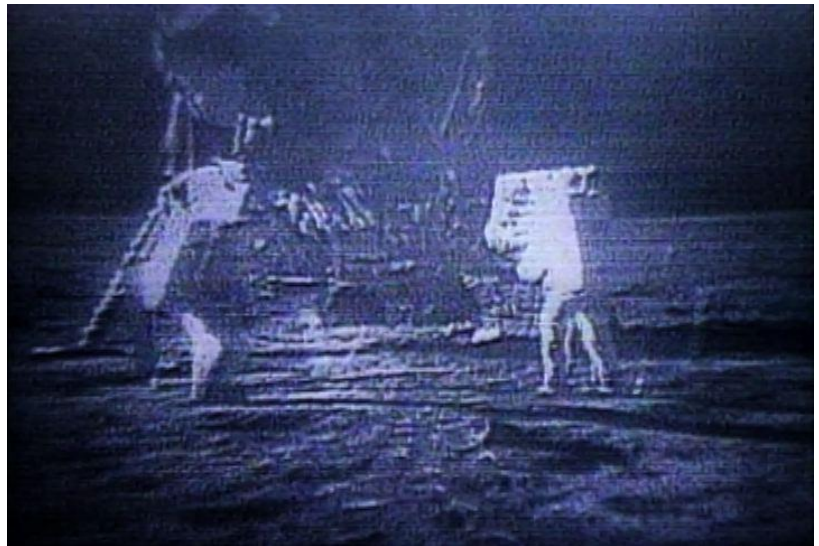




## Background:

The **commercialization** of space has been contemplated, desired, and rejected at various times since the U.S. space program began in 1958. Some believe that it is inevitable that space be exploited for its resources, just as any other of man's environments. Others believe that the United States' chief space agency, the National Aeronautics and Space Administration (NASA), and its **counterparts** in other countries, should preserve space and continue its mission to pioneer the future in space exploration, scientific discovery and **aeronautics** research.<sup>1</sup> For the most part, participation by private companies in the past was limited to production of materials to conduct space flights.

On February 1, 2010, U.S. President Barack Obama announced plans to take the commercialization of space a step further. In his state of the Union Address, the President proposed that NASA end its low-orbit missions and focus its efforts on longer-range flights into the solar system. In the 2011 budget, the *Constellation* program (a program to conduct space flight to the moon and eventually Mars) was cancelled almost entirely or at least postponed for several years. The goals of the *Constellation* program were to have astronauts gain significant experience in operating away from Earth's environment, opening the space frontier, and conducting fundamental science.



Apollo 11 Moonwalk

Space is now and has been for some time, utilized for its commercial value. Private corporations from the United States and other countries have sent communication satellites into space orbit to provide better information content services to their customers. Chemical and pharmaceutical companies for years have conducted experiments on the International Space Station. During the **Cold War**, both the United States and the Soviet Union pioneered space flight in partnership with affiliated industrial bureaucracies (in the case of the Soviet Union) and private corporations (in the United States) who built rocket boosters, space modules, operating systems, and parts for space missions. The European Space Agency, which formed in 1975, follows a similar model. In 1984, U.S. President Ronald Reagan signed the Commercial Space Launch Act, which enabled American industry to launch its own systems into space. In 1990, President George H. W. Bush signed the Launch Services Purchase Act, which ended the Space Shuttle monopoly and ordered NASA to purchase launch services for its primary payloads from commercial providers, when required.

President Obama's new proposal increases the role of private companies to carry out many of NASA's low-orbit missions beyond just building the equipment. Under this program, the NASA budget would stay close to its 2010 \$18.7 billion level for 2011. Only a small portion—approximately \$200 million—would be slated for the initial phase allowing private firms, including some **start-up companies**, to compete to build and operate spacecraft capable of ferrying U.S. astronauts into orbit—and eventually deeper into the solar system. However,

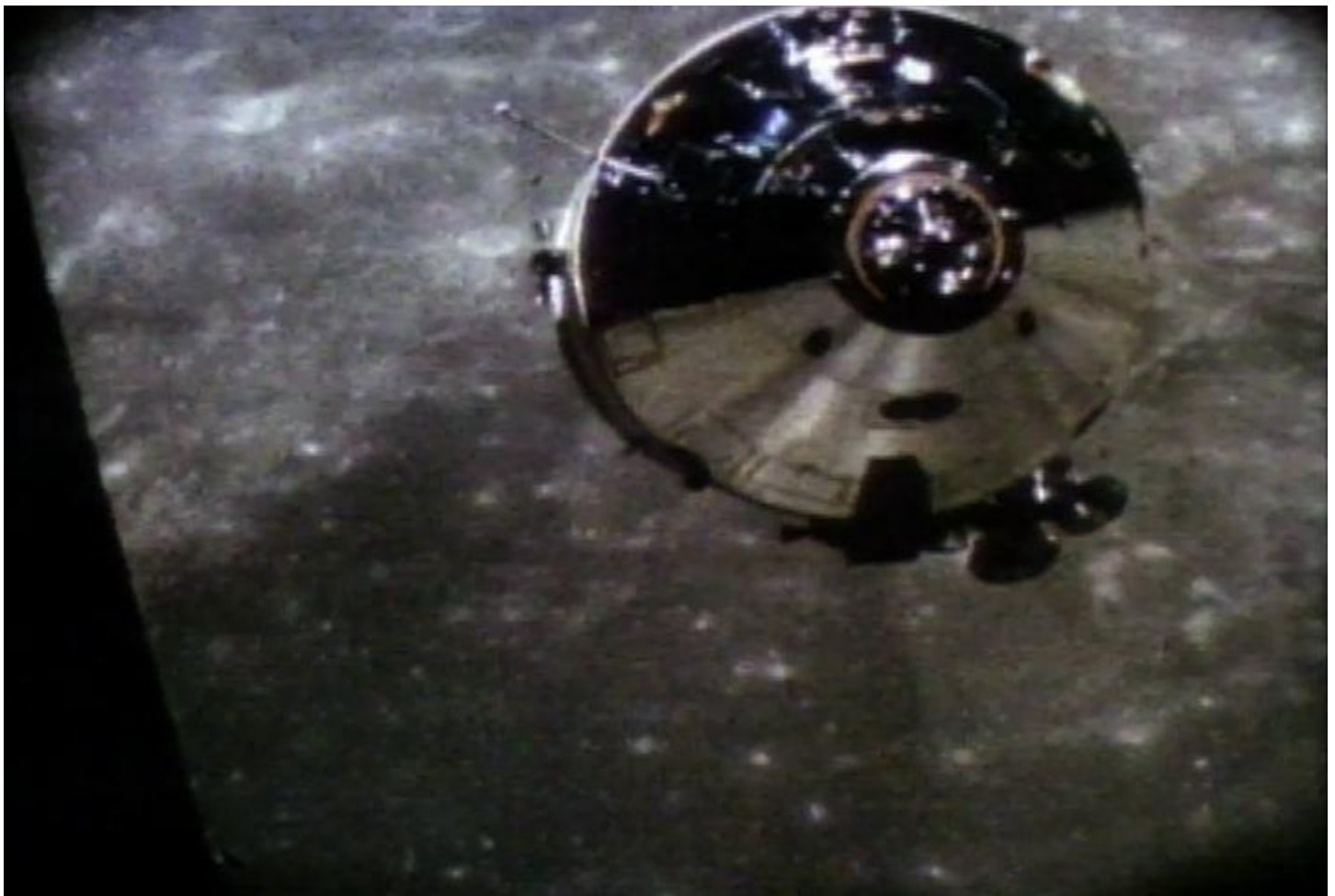
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<sup>1</sup> Main mission of NASA, from NASA's website [http://www.nasa.gov/about/highlights/what\\_does\\_nasa\\_do.html](http://www.nasa.gov/about/highlights/what_does_nasa_do.html)



this figure could increase to \$3.5 billion or more over the next five years. The proposal is based on the 2009 Augustine Commission Report which concluded that allowing private companies to build and launch their own rockets and space craft to carry American astronauts into orbit would save money and also free up NASA to focus on more ambitious, longer-term goals.<sup>2</sup>

However, many of NASA's older administrators and some former astronauts oppose the plan, fearing it diverts desperately needed funds for NASA's missions and poses enormous potential problems with safety. Several members of Congress also oppose the plan, especially those who have constituent companies that produce equipment for NASA and might have their contracts cancelled or scaled back due to this proposal. Other members of Congress and current NASA officials (and some former



Apollo Mission Orbiting Moon

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<sup>2</sup> Wall Street Journal, "White House decides to outsource NASA work"  
<http://online.wsj.com/article/SB10001424052748704375604575023530543103488.html>



## LESSON PLAN

### **Opening Activity:**

Have students view the *the.News* segment “NASA Paves Way for Commercial Space Exploration.”

### **Main Activity:**

This activity is not a debate, but a deliberation. Students will simulate a process used by policymakers to address important issues. They will role-play advocates for different interest groups to deliberate President Obama’s initiative for NASA and make recommendations on how best to implement this policy. Tell students that they will have strong opinions, but also have a common need to find a solution to the problem. Stress to students that they will need to express their position with conviction, but also listen to others’ concerns and ideas and compromise with them to come up with a workable recommendation.

### **Part 1: Research Phase**

1. Divide the class into two main groups. Distribute the student handout “Privatizing NASA’s Operations.” (This can also be assigned as homework the night before). Have one half of the class research the statements supporting privatization of NASA’s operations and the other half research the statements opposing privatization.
2. To expedite this research process, it is suggested you assign students in each large group one of the articles to research on the points from the lists. Some articles cover general information and others cover specific positions in support of or in opposition to the privatization proposal.
3. Then have the small research groups meet with their respective large group and report their findings. Then each large group is to create argument statements following the guides on the handout either supporting or opposing the privatization proposal.

### McRel

<http://www.mcrel.org/>

### **Level III (Grades 6-8)**

#### **Civics**

**Standard 21. Understands the formulation and implementation of public policy.**

- Understands what public policy is and knows examples at local, state, and national levels

- Understands why conflicts about values, principles, and interests may make agreement difficult or impossible on certain issues of public policy (e.g., affirmative action, gun control, environmental protection, capital punishment, equal rights)

### **Level IV (Grades 9-12)**

#### **Civics**

**Standard 21. Understands the formulation and implementation of public policy.**

- Knows a public policy issue at the local, state, or national level well enough to identify the major groups interested in that issue and explain their respective positions

- Understands the processes by which public policy concerning a local, state, or national issue is formed and carried out

- Understands why agreement may be difficult or impossible on issues such as abortion because of conflicts about values, principles, and interests



## Part 2: Deliberations Phase

4. Once each large group has developed its arguments, create new groups of five students and assign one of the following roles to each. Make sure that students' roles coincide with their research.

### The Role-play Groups -

- Small aerospace Industry Representative (generally supports proposal)
  - Member of Congress with aerospace industry constituents (concerned about proposal)
  - NASA executive supporting privatization
  - Former NASA executive opposing privatization
  - Facilitator: guide the deliberation
5. Then distribute the student handout Deliberation Procedures. Review the issues overview and deliberation steps with the class and answer any questions they may have.
  6. Emphasize to students that a deliberation is not a debate with the goal of determining which proposition is correct. Debate does occur, but the goal in a deliberation is to find common ground and a workable solution for all parties concerned. While this is not always possible, it's the responsibility of each competing position to state their case firmly and yet be flexible to others' ideas.
  7. Distribute the "Deliberation Procedures" handout to students and review the procedures and graphic organizers. Answer any questions students may have.
  8. Have each group proceed through the activity to develop their agreement forms. If time permits, have each group present their options to the entire class.

### Assessment:

- Cooperation and participation in group activities
- Individual student completion of the Agreement Form.
- Students who disagree with their policy group's final agreement could write up a paragraph explaining their disagreement with the policy and suggest an alternative they feel is better.

### Extension Activities:

- Have students research other instances where the United States government provided "incentive support" (funding, resources, etc) for newly developing industries such as weapons industry, the railroads, air mail, telecommunications, and others). Have them **compare and contrast** the government's input on these industries compared with the new initiative for low-orbit space travel.
- Have students research and report on some of the ideas government and private industry have for future space exploration and exploitation of resources. Have them research how many of the resources we use today are found on asteroids, planets, and the moons of other planets. What is the potential for obtaining these resources in terms of economic development, profit, and improving the way of life? For more adventurous students, they can **formulate** a science-fiction story based on the factual science they research.



### **Partnership for 21st Century Skills**

<http://www.21stcenturyskills.org>

#### *Civic Literacy*

- Participating effectively in civic life through knowing how to stay informed and understanding governmental processes
- Exercising the rights and obligations of citizenship at local, state, national and global levels

#### *Think Creatively*

- Use a wide range of idea creation techniques (such as brainstorming)
- Elaborate, refine, analyze and evaluate their own ideas in order to improve and maximize creative efforts
- Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work

#### *Reason Effectively:*

- Use various types of reasoning (inductive, deductive, etc.) as appropriate to the situation

#### *Make Judgments and Decisions:*

- Effectively analyze and evaluate evidence, arguments, claims and beliefs
- Analyze and evaluate major alternative points of view
- Interpret information and draw conclusions based on the best analysis

#### *Communication and Collaboration*

- Articulating thoughts and ideas clearly and effectively through speaking and writing
- Listen effectively to decipher meaning, including knowledge, values, attitudes and intentions
- Utilize multiple media and technologies, and know how to judge their effectiveness a priori as well as assess their impact

### **Resources:**

- **PBS NewsHour's the.News** <http://www.pbs.org/newshour/thenews/>
- **Augustine Committee Report** [http://www.nasa.gov/pdf/384767main\\_SUMMARY%20REPORT%20-%20FINAL.pdf](http://www.nasa.gov/pdf/384767main_SUMMARY%20REPORT%20-%20FINAL.pdf)
- **Commercial Spaceflight Federation:** <http://www.commercialspaceflight.org/>
- **National Aeronautics and Space Administration (NASA)** <http://www.nasa.gov/>
- **White House Briefing: 21st Century Space Exploration: "The Next Chapter That We Can Write Together Here at NASA"** <http://www.whitehouse.gov/blog/2010/04/15/making-investments-groundbreaking-developments-21st-century-space-exploration>

### **Activity Designer:**

Greg Timmons is a former social studies teacher now freelance writer and education consultant.



## Student Handout 1A: Privatizing NASA's Operations—Supporters

**Directions:** Research the resource articles at the bottom of the page on the details and context of the supportive statements below. You might want to divide the readings among members of your group to do the research and then meet to formulate arguments. After your research, meet in your large group to **formulate** argument statements that support privatizing NASA's low-orbit operations.

### Statements Supporting Privatization

- The operations NASA would lose from this proposal and the reasons this is good for NASA. (Identify what operations are being diverted from NASA to private enterprise and why this would be good for NASA.)
- This proposal is good for NASA's future operations. (Explain why this proposal helps NASA achieve its core goals.)
- The proposal is risky, but it's worth the risk. (Explain why.)
- Privatization is not new for NASA. (Provide past examples and answer the question as to whether this proposal is all that radical.)
- The proposal would be good for the American business and economy. (Explain private enterprise and the public in general would benefit.) Investors are interested. (Explain why.)
- Commercialization of space is good for long range economic growth as resources on earth become scarcer. (Explain how and provide examples.)
- This proposal doesn't leave the United States without space transportation to the Space Station and satellite launchings. (Explain how.)
- The cost of Space Shuttle launches has gotten too expensive. Competitive private industry can do it for less. (Provide details and explain how.)
- The proposal moves "routine" space operations from cost-plus contracts<sup>3</sup> to fixed-price contracts.<sup>4</sup> (Explain why this is a good thing.)
- Other nations are considering using private corporations for their space travel. (Provide examples and explain why this might be a threat to the United States.)
- The NASA job loss can be recouped in the private sector. (Explain how.)

### Resources

- Wall Street Journal: White House Decides to Outsource NASA Work  
<http://online.wsj.com/article/SB10001424052748704375604575023530543103488.html>
- Space.com: Obama Speech Redefines NASA Plans <http://www.space.com/news/obama-speech-nasa-plans-reaction-100415.html>
- Wall Street Journal: The Case for Privatization  
<http://online.wsj.com/article/SB10001424052748703382904575059350409331536.html>
- Time Magazine: Has Obama's NASA Strategy Fizzled at Launch?  
<http://www.time.com/time/health/article/0,8599,1982475-2,00.html>

<sup>3</sup> Cost-plus contracts are a contract where the contractor is paid for all of it allowed expenses to a set limit and additional payment to allow for profit.

<sup>4</sup> Fixed price contracts have a set price. It's up the contractor to manage the budget to produce the product or service and make a profit from the price set.



**the Gov** ©



- San Diego Union-Tribune: Should NASA be abolished and privatized? YES  
[http://www.signonsandiego.com/uniontrib/20060927/news\\_lz1e27peters.html](http://www.signonsandiego.com/uniontrib/20060927/news_lz1e27peters.html)
- The Washington Post Synopsis of the Augustine Committee report <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/08/AR2009090802464.html>



## Student Handout 1B: Privatizing NASA's Operations—Opponents

**Directions:** Research the resource articles at the bottom of the page on the details and context of the opposing statements below. You might want to divide the readings among members of your group to do the research and then meet to formulate arguments. After your research, meet in your large group to **formulate** argument statements that oppose privatizing NASA's low-orbit operations.

### Statements Opposing Privatization

- The proposal hurts NASA's mission and is one more example of inadequate funding that NASA has experienced throughout its history. (Identify what operations NASA will lose and explain why this is a historical problem for the agency.)
- Turning over "routine" space missions to private contractors takes away the United States' ability to set the agenda for how space is used. (Explain how privatizing space would do this.)
- This proposal could jeopardize United States national security. (Explain how.)
- Private industry is not up to speed with the operational capability of the Space Shuttle (Explain why and why this is a problem for U.S. space travel in the short term.)
- Private industry is not up to attaining and maintaining the required safety standards needed for space travel. (Explain why this is a problem.)
- The proposal would put many NASA employees out of work. (Provide details and explain why this is a problem at this time.)
- The job loss will have deep repercussions on the nation's economy. (Explain in terms of numbers.)
- The aerospace companies in line to take on these missions are in constant financial difficulties. (Provide examples and explain why this hurts the United States.)

### Resources

- Wall Street Journal: White House Decides to Outsource NASA Work  
<http://online.wsj.com/article/SB10001424052748704375604575023530543103488.html>
- Space.com: Obama Speech Redefines NASA Plans <http://www.space.com/news/obama-speech-nasa-plans-reaction-100415.html>
- Wall Street Journal: The case Against Privatization  
<http://online.wsj.com/article/SB10001424052748703382904575059263418508030.html>
- San Diego Union-Tribune: Should NASA be abolished and privatized? NO  
[http://www.signonsandiego.com/uniontrib/20060927/news\\_lz1e27king.html](http://www.signonsandiego.com/uniontrib/20060927/news_lz1e27king.html)
- Wall Street Journal: SpaceX Illustrates Privatization Risk  
<http://online.wsj.com/article/SB10001424052748704726104575290604217670696.html>



## Student Handout #2: NASA's New Direction: Privatizing Space Missions

### Issues Overview

In his 2011 budget, President Obama scrapped the Constellation program to return man to the moon by 2020 and instead moved NASA in a new direction: using private companies to transport astronauts to the International Space Station and other similar missions that up to this point have been conducted by the Space Shuttle. The Space Shuttle program was slated to be discontinued in 2011 by President George W. Bush. His replacement, *Project Constellation*, was to conduct space voyages away from Earth's orbit, develop new technologies for operating in a space frontier and conducting fundamental science.

The idea behind President Obama's initiative is to provide incentive funding to allow private firm to build and operate spacecraft capable of ferrying U.S. astronauts to some of the more "routine" space trips. The plan would also put money into NASA research to develop new rocket ships that would travel out into the solar system to the asteroids and eventually Mars. Though initial government funding could run as high as \$6 billion over the next several years, the intent is to foster a new industry of commercial space flight, owned and operated by private firms.

Supporters and critics will focus on the plan in the coming year, trying to work out details that would meet the goals of all parties concerned. In this activity, you will role-play various constituent groups that have something at stake with the new NASA initiative. You will engage in a process to address important issues like this one and discuss ways to best implement this policy. If you actively participate in this activity, it is likely you and other members of the groups will have strong opinions about what you would like to see happen. You will need to express your position with conviction, but at the same time, listen to others' concerns and ideas. Unlike a debate, a deliberation tries to find "common ground." In this case, you want to come up with workable solutions.

### Deliberations Procedures

You are a member of a panel of experts examining the proposed government policy of shifting routine space travel operations from NASA to private corporations. You will meet with individuals who represent different points of view to find a workable solution. Use the following procedure to guide your efforts.

The group's goal is to answer this question: *What is the best policy for NASA to develop a partnership with private corporations to carry American astronauts into low-orbit voyages?*

#### Deliberation Steps

##### 1. Developing Opening Statements—Meet as a Full Class



Each of the four group members will make an opening statement. The statements should answer the questions: *What group do I represent? What policy would I like to see enacted?* **Formulate** your opening statement from the material in the “Issue Overview” page and the research and arguments you developed on the “Privatizing NASA’s Operations” sheet. As the other groups **describe** their position, take notes on the “Stakeholders’ Points of View” chart to record their main points.

## 2. Opening Statements

Each person will make an opening statement of about one minute. Your statement should answer the questions: *What group do I represent? What policy would I like to see enacted?* **Formulate** your opening statement from the material in the “Issues” page. As the other members **describe** their position, take notes on the “Stakeholders’ Points of View” chart.

The facilitator keeps track of the time and moves from one presenter to the next.

## 3. Statement of Premises

Think about each person’s opening statement. What are the common assumptions your group has with any of the others? As a group, list them at the top of the “Negotiations Records” chart. One assumption is already listed on the recording chart to get you started.

## 4. Identifying Options

As a group, on the “Negotiations Records” chart, **formulate** a list of options under consideration for or against privatizing of NASA’s operations. The facilitator asks the question “Based on the information we’ve gathered, what are the options for NASA’s future?” Make a list of options in the left-hand column of the “Costs and Benefits” chart. Come up with four options. (You may find you have more, but it will be difficult to have enough time to explore more than four.)

## 5. Evaluating Options—

The facilitator leads the discussion going through each option as the group discusses the costs and benefits of each. List the costs and benefits of each option in the appropriate columns.

## 6. Deciding on the Best Option

As a group, study the chart. The facilitator asks: “Which options have the most benefits? Which have the fewest drawbacks?” The facilitator guides the group to **compare and contrast** the options to determine which is clearly superior to the others. Each group member should have a chance to state which option he or she favors and why. Does one option appear to be the best one? Can some options be combined?

## 7. Completing the Agreement Form

Individually, complete the “Agreement Form.”



### Student Handout #3: Stakeholders' Points of View

Who	Point of View
Small aerospace industry representative whose company is developing low-orbit space travel operations.	
Member of Congress who's constituent aerospace industries could be negatively affected by the new proposal.	
NASA executive who supports the proposal as a positive for the agency.	
Former NASA executive who opposes the proposal as negative to the agency and bad for space travel.	



## Student Handout #4: Negotiation Records

### Common Assumptions

1. *The United States must have an effective system for low-orbit space travel and long-range space exploration.*

2.

3.

4.

### Costs and Benefits

Option	Costs	Benefits
1.		
2.		
3.		
4.		



**Student Handout #5 Agreement Form**  
(To be completed individually)

Fill in names of  
classmates and roles here  
of those who are  
participating in this

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**I. Background**

The topic is privatizing U.S. space operations while maintaining supremacy in space. Here are some of the following problems connected with this issue:

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**II. Premises**

We have reached the following basic understandings, and have based our conversations on them (e.g. the United States needs to maintain its supremacy in space). List at least four others.

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**III. Possible Solutions**

We have discussed the following 5 possible solutions.

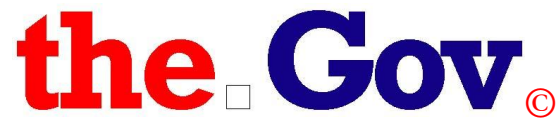
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**IV. Solution on which all parties agree:**

We have **evaluated** the above solutions and agreed on the following. (Explain why you believe it is the best solution.)

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