ENGLISH LANGUAGE AND COMPOSITION
SECTION II
Total time—2 hours

Question 1

(Suggested time—40 minutes. This question counts for one-third of the total essay section score.)

Directions: The following prompt is based on the accompanying eight sources.

This question requires you to synthesize a variety of sources into a coherent, well-written essay. When you synthesize sources, you refer to them to develop your position and cite them accurately. *Your argument should be central; the sources should support the argument. Avoid merely summarizing sources.*

Remember to attribute both direct and indirect references.

Introduction

Explorers and tales of explorations tend to capture the human imagination. However, such explorations have financial and ethical consequences. Space exploration is no exception.

Assignment

Read the following sources (including the introductory information) carefully. **Then, in an essay that synthesizes at least three of the sources, develop a position about what issues should be considered most important in making decisions about space exploration.**

You may refer to the sources by their titles (Source A, Source B, etc.) or by the descriptions in parentheses.

Source A (Livingston)
Source B (Photo)
Source C (Chamberlain)
Source D (NIH)
Source E (McLean)
Source F (Greenberg)
Source G (Collins)
Source H (Roberts)

Source A

Livingston, David. "Is Space Exploration Worth the Cost?" 21 Jan. 2008. The Space Review: Essays and Commentary About the Final Frontier. 4 March 2008 <http://www.thespacereview.com/article/1040/1>.

The following is from the Web page of a person dedicated to space travel.

In my opinion, the manned space exploration program is absolutely worth the cost. The money spent on manned space exploration is spent right here on Earth and most of it is spent in the US. We do not yet have a Bank of the Milky Way, the First International Bank of Mars, or a Lunar Mutual Savings and Loan. The money that is spent goes to manufacturing, research and development, salaries, benefits, insurance companies, doctors, teachers, scientists, students, blue- and white-collar workers, and corporations and businesses both large and small. The money disperses throughout the economy in the same way as money spent on medical research, building houses, or any other activity we engage in with government or even private spending.

We have our work cut out for us as we move forward in this new century. We don't seem to get along well with each other here on Earth, but we do quite well in space. Space is our model for all nations. Notice how many more nations are talking about and wanting to get into the manned space act. India, Russia, China, Japan, and the European Space Agency, for starters, all want a manned mission to the Moon and it won't stop there. These countries and agencies know that manned space exploration builds wealth for their nation, solves problems and enhances life for their people right here on Earth, and shows us the way for how we can all live together in peace.

Manned space exploration is absolutely worth the investment. It's not just about what we learn out there in space, or about ourselves, or how to be a better steward of precious Earth. It's about how we live here on Earth together and what type of future we want for ourselves and children. Manned space exploration is the path to how we build a better life for ourselves here on Earth, and how we can give hope and provide inspiration for our youngsters to grow up, do the schoolwork, and accept the challenges that await them to make our world even better. Whatever we spend on manned space exploration is a bargain and our investment will be returned to us many times over, both quantitatively and qualitatively.

Source B

National Aeronautics and Space Administration (NASA) photo

The following photo is taken from the NASA photo archive.

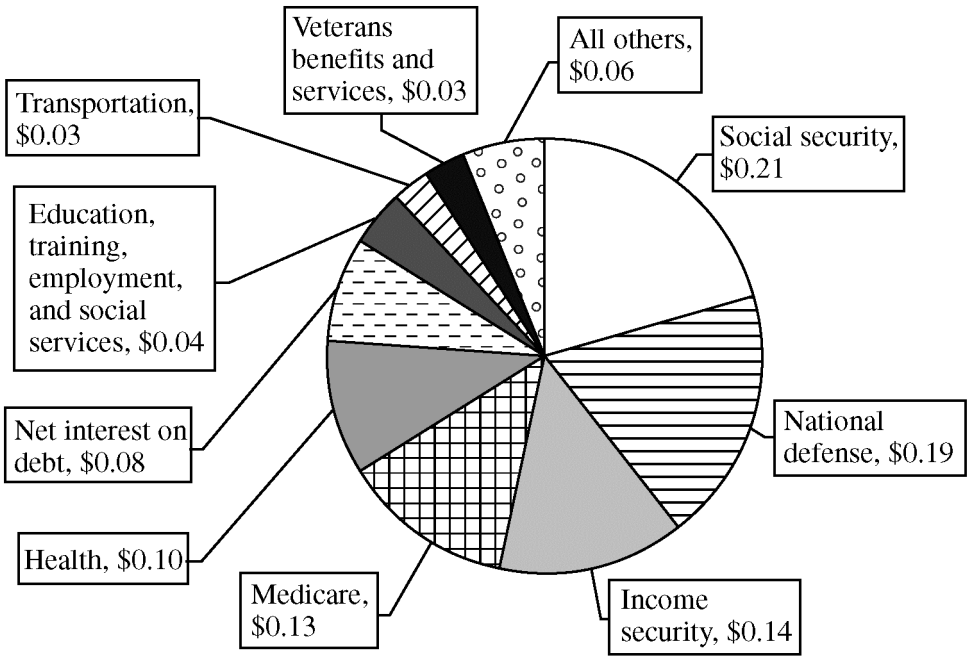
Photo Credit: NASA

Source C

Chamberlain, Andrew. "Pennies of Each Federal Spending Dollar." 7 Apr. 2006. The Tax Foundation. 1 March 2008 <http://www.taxfoundation.org/blog/printer/1420.html>.

The following are two visual representations of the same information about how each federal tax dollar is spent.

PENNIES OF EACH FEDERAL DOLLAR SPENT ON VARIOUS PROGRAMS, 2006 ESTIMATES



Pennies of Each Federal Dollar Spent on Various Programs, 2006 Estimate

Function	Amount
Social security	$ 0.21
National defense	$ 0.19
Income security	$ 0.14
Medicare	$ 0.13
Health	$ 0.10
Net interest on debt	$ 0.08
Education, training, employment, and social services	$ 0.04
Transportation	$ 0.03
Veterans benefits and services	$ 0.03
All others*	$ 0.06
Total	*$ 1.00*
*Includes community and regional development; administration of justice; international affairs; natural resources and environment; agriculture; general science; space and technology; general government; commerce and housing credit; energy; and undistributed offsetting receipts.	
Source: Office of Management and Budget, Analytical Perspectives, Budget of the United States Government, Fiscal Year 2007 (available at http://www.whitehouse.gov/omb/budget/fy2007/); Tax Foundation calculations.	

Source D

National Institutes of Health. 26 Feb. 2008
<http://www.nih.gov/about/NIHoverview.html>.

The following is a description of the National Institutes of Health (NIH), a government-funded agency whose mission is to improve health.

The Nation's Medical Research Agency

The National Institutes of Health (NIH), a part of the U.S. Department of Health and Human Services, is the primary Federal agency for conducting and supporting medical research. Helping to lead the way toward important medical discoveries that improve people's health and save lives, NIH scientists investigate ways to prevent disease as well as the causes, treatments, and even cures for common and rare diseases. Composed of 27 Institutes and Centers, the NIH provides leadership and financial support to researchers in every state and throughout the world. . . .

In the past several decades, NIH-supported research, and its national programs to communicate the results of research, played a major role in achievements such as:

- Death rates from heart disease and stroke fell by 40% and 51%, respectively, between 1975 and 2000.
- The overall five-year survival rate for childhood cancers rose to nearly 80% during the 1990s from under 60% in the 1970s.
- The number of AIDS-related deaths fell by about 70% between 1995 and 2001.
- Sudden infant death syndrome rates fell by more than 50% between 1994 and 2000.
- Infectious diseases—such as rubella, whooping cough, and pneumococcal pneumonia—that once killed and disabled millions of people are now prevented by vaccines.
- Quality of life for 19 million Americans suffering with depression has improved as a result of more effective medication and psychotherapy.

Source E

McLean, Margaret R. "To Boldly Go: Ethical Considerations for Space Exploration." Feb. 2006. Markkula Center for Applied Ethics. 29 Feb. 2008 <http://www.scu.edu/ethics/publications/ethicalperspectives/space-exploration.html>.

The following excerpt appeared on the Web page of a group dedicated to ethics.

In the budget unveiled on Monday, almost $17 billion will fly into NASA's coffers with around $5.3 billion dedicated to space exploration. The Crew Exploration Vehicle and Launch Vehicles will be built; new spacecraft on their way to the moon and Mars will be whizzing overhead by 2014. NASA chief Michael Griffin claimed that this new budget would set the stage for "the expansion of human presence into the solar system."

But before we think about exploring—and potentially exploiting—"the final frontier," we would do well to remember that we do not have a very good track record in protecting our planet home. We have expanded human presence into pristine forests resulting in the disruption of migratory routes, soil erosion, and species extinction. What can be learned from our presence on Earth about the potential impact of our forays into the outer reaches of the solar system?

We are the only earthly creatures with the capacity to extend our influence beyond the 4 corners of the globe. This puts on us the responsibility to acknowledge that, despite the depths of space, it is not so limitless as to be able to weather mistreatment or suffer every demand we may place on it.

One way to think about expanding our presence in the solar system is through the lens of stewardship. Stewardship envisions humans not as owners of the solar system but as responsible managers of its wonder and beauty.

Stewardship holds us accountable for a prudent use of space resources. Such responsibility may support exploration of the final frontier, but at the same time it warns against exploitation of its resources. We must account for our urges and actions in terms of their impact on others, the universe, and the future.

As we boldly plan to extend ourselves to places where no one has gone before, we would do well to consider the following principles:

1. Space preservation requires that the solar system be valued for its own sake, not on the basis of what it can do for us.
2. Space conservation insists that extraterrestrial resources ought not to be exploited to benefit the few at the expense of the many or of the solar system itself.
3. Space sustainability asks that our explorations "do no harm" and that we leave the moon, Mars, and space itself no worse—and perhaps better—than we found them.

As we expand human presence into the solar system, we ought not to park ethical considerations next to the launching pad. We must take our best ethical thinking with us as we cross the frontier of space exploration.

Source F

Greenberg, Richard, and B. Randall Tufts. "Infecting Other Worlds." American Scientist Jul.-Aug. 2001. 24 Feb. 2008 <http://www.americanscientist.org/issues/num2/2001/7/infecting-other-worlds/1>.

The following is excerpted from an article about spreading infection via space.

Because extraterrestrial life may exist, planetary exploration could bring trouble if people are not careful enough. This danger was recognized decades ago, when astronauts ventured to the Moon. When the crews returned, they were quarantined to prevent "back contamination," the hazard that some infectious extraterrestrial germ might be riding with them. The safety procedures were largely symbolic: After all, who knew the incubation period for some hypothetical other-worldly microbe? Whether the hardware and samples returned needed sterilization was also largely a matter of speculation. Subsequent planetary exploration has not involved astronauts, nor have samples or hardware been returned, so back contamination has not been an issue. But forward contamination—that is, the infection of alien ecosystems by terrestrial organisms hitchhiking on a spacecraft—is a distinct possibility.

American Scientist, magazine of Sigma Xi, The Scientific Research Society.

Source G

Collins, Michael. Carrying the Fire: An Astronaut's Journeys. New York: Farrar, Straus and Giroux, 1974.

The following is excerpted from a book written by one of the first astronauts in space.

I really believe that if the political leaders of the world could see their planet from a distance of, let's say, 100,000 miles, their outlook would be fundamentally changed. That all-important border would be invisible, that noisy argument suddenly silenced. The tiny globe would continue to turn, serenely ignoring its subdivisions, presenting a unified façade that would cry out for unified understanding, for homogeneous treatment. The earth *must* become as it appears: blue and white, not capitalist or Communist; blue and white, not rich or poor; blue and white, not envious or envied. I am not a naïve man. I don't believe that a glance from 100,000 miles out would cause a Prime Minister to scurry back to his parliament with a disarmament plan, but I do think it would plant a seed that ultimately could grow into such concrete action. Just because borders are invisible from space doesn't mean that they're not real—they are, and I like them. . . . What I am saying, however, is that all countries must begin thinking of solutions to their problems which benefit the entire globe, not simply their own national interests. The smoke from the Saar Valley may pollute half a dozen other countries, depending on the direction of the wind. We all *know* that, but it must be *seen* to make an indelible impression, to produce an emotional impact that makes one argue for long-term virtues at the expense of short-term gains. I think the view from 100,000 miles could be invaluable in getting people together to work out joint solutions, by causing them to realize that the planet we share unites us in a way far more basic and far more important than differences in skin color or religion or economic system. The pity of it is that so far the view from 100,000 miles has been the exclusive property of a handful of test pilots, rather than the world leaders who need this new perspective, or the poets who might communicate it to them.

Source H

Roberts, Russell. "Funding Space Travel." Morning Edition. 26 Jan. 2004. National Public Radio. Transcript. 19 Feb. 2008 <http://www.invisibleheart.com/Iheart/PolicySpace.html>.

The following excerpt is the text of an oral commentary aired on the radio.

I own a telescope.

I own a lot of books on the nighttime sky and cosmology and the big bang.

I get goose bumps when I see a picture of the earth from space.

The Imax space movies bring tears to my eyes.

But I get no thrill from the Bush plan to put Americans on Mars.

As much as I like space and the idea of people on Mars, I don't see the case for using taxpayer money to get it done. Don't tell me about all the spin-off technologies . . . . Leave the money here on earth.

By permission of Professor Russell Roberts.

Question 2

(Suggested time—40 minutes. This question counts for one-third of the total essay section score.)

The two passages below, both written by noted contemporary scientist Edward O. Wilson, appear in Wilson's book *The Future of Life* (2002). In the passages, Wilson satirizes the language of two groups that hold opposing attitudes about environmentalism. Read each passage carefully. Then write an essay in which you analyze how Wilson's satire illustrates the unproductive nature of such discussions.

THE PEOPLE-FIRST CRITIC STEREOTYPES THE ENVIRONMENTALISTS

Environmentalists or conservationists is what they usually call themselves. Depending on how angry we are, we call them greens, enviros, environmental extremists, or environmental wackos. Mark my word, conservation pushed by these people always goes too far, because it is an instrument for gaining political power. The wackos have a broad and mostly hidden agenda that always comes from the left, usually far left. How to get power? is what they're thinking. Their aim is to expand government, especially the federal government. They want environmental laws and regulatory surveillance to create government-supported jobs for their kind of bureaucrats, lawyers, and consultants. The New Class, these professionals have been called. What's at stake as they busy themselves are your tax dollars and mine, and ultimately our freedom too. Relax your guard when these people are in power and your property rights go down the tube. Some Bennington College student with a summer job will find an endangered red spider on your property, and before you know what happened the Endangered Species Act will be used to shut you down. Can't sell to a developer, can't even harvest your woodlot. Business investors can't get at the oil and gas on federal lands this country badly needs. Mind you, I'm all for the environment, and I agree that species extinction is a bad thing, but conservation should be kept in perspective. It is best put in private hands. Property owners know what's good for their own land. They care about the plants and animals living there. Let them work out conservation. They are the real grass roots in this country. Let them be the stewards and handle conservation. A strong, growing free-market economy, not creeping socialism, is what's best for America—and it's best for the environment too.

THE ENVIRONMENTALIST STEREOTYPES THE PEOPLE-FIRST CRITICS

"Critics" of the environmental movement? That may be what they call themselves, but we know them more accurately as anti-environmentalists and brown lashers or, more locally out west, wise users (their own term, not intended to be ironic) and sagebrush rebels. In claiming concern of any kind for the natural environment, these people are the worst bunch of hypocrites you'll ever not want to find. What they are really after, especially the corporate heads and big-time landowners, is unrestrained capitalism with land development *über alles*.* They keep their right-wing political agenda mostly hidden when downgrading climate change and species extinction, but for them economic growth is always the ultimate, and maybe the only, good. Their idea of conservation is stocking trout streams and planting trees around golf courses. Their conception of the public trust is a strong military establishment and subsidies for loggers and ranchers. The anti-environmentalists would be laughed out of court if they weren't tied so closely to the corporate power structure. And notice how rarely international policy makers pay attention to the environment. At the big conferences of the World Trade Organization and other such gatherings of the rich and powerful, conservation almost never gets so much as a hearing. The only recourse we have is to protest at their meetings. We hope to attract the attention of the media and at least get our unelected rulers to look out the window. In America the right-wingers have made the word "conservative" a mockery. What exactly are they trying to conserve? Their own selfish interests, for sure, not the natural environment.

* German for "above everything else"

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Question 1

The score should reflect a judgment of the essay's quality as a whole. Remember that students had only 15 minutes to read the sources and 40 minutes to write; the essay, therefore, is not a finished product and should not be judged by standards appropriate for an out-of-class assignment. Evaluate the essay as a draft, making certain to reward students for what they do well.

All essays, even those scored 8 or 9, may contain occasional lapses in analysis, prose style, or mechanics. Such features should enter into the holistic evaluation of an essay's overall quality. In no case may an essay with many distracting errors in grammar and mechanics be scored higher than a 2.

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9 Essays earning a score of 9 meet the criteria for a score of 8 and, in addition, are especially sophisticated in their argument, thorough in development, or impressive in their control of language.

8 Effective

Essays earning a score of 8 **effectively** develop a position on what issues should be considered most important in making decisions about space exploration. They develop their position by effectively synthesizing* at least three of the sources. The evidence and explanations used are appropriate and convincing. Their prose demonstrates a consistent ability to control a wide range of the elements of effective writing but is not necessarily flawless.

7 Essays earning a score of 7 meet the criteria for a score of 6 but provide more complete explanation, more thorough development, or a more mature prose style.

6 Adequate

Essays earning a score of 6 **adequately** develop a position on what issues should be considered most important in making decisions about space exploration. They develop their position by adequately synthesizing at least three of the sources. The evidence and explanations used are appropriate and sufficient. The language may contain lapses in diction or syntax, but generally the prose is clear.

5 Essays earning a score of 5 develop a position on what issues should be considered most important in making decisions about space exploration. They develop their position by synthesizing at least three sources, but how they use and explain sources is somewhat uneven, inconsistent, or limited. The argument is generally clear, and the sources generally develop the student's position, but the links between the sources and the argument may be strained. The writing may contain lapses in diction or syntax, but it usually conveys the student's ideas adequately.

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* For the purposes of scoring, *synthesis* means referring to sources to develop a position and citing them accurately.

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Question 1 (continued)

4 Inadequate

Essays earning a score of 4 **inadequately** develop a position on what issues should be considered most important in making decisions about space exploration. They develop their position by synthesizing at least two sources, but the evidence or explanations used may be inappropriate, insufficient, or less convincing. The sources may dominate the student's attempts at development, the link between the argument and the sources may be weak, or the student may misunderstand, misrepresent, or oversimplify the sources. The prose generally conveys the student's ideas but may be less consistent in controlling the elements of effective writing.

3 Essays earning a score of 3 meet the criteria for the score of 4 but demonstrate less success in developing a position on what issues should be considered most important in making decisions about space exploration. They are less perceptive in their understanding of the sources, or their explanation or examples may be particularly limited or simplistic. The essays may show less maturity in control of writing.

2 Little Success

Essays earning a score of 2 demonstrate **little success** in developing a position on what issues should be considered most important in making decisions about space exploration. They may merely allude to knowledge gained from reading the sources rather than citing the sources themselves. These essays may misread the sources, fail to develop a position, or substitute a simpler task by merely summarizing or categorizing the sources or by merely responding to the prompt tangentially with unrelated, inaccurate, or inappropriate explanation. The prose of these essays often demonstrates consistent weaknesses in writing, such as grammatical problems, a lack of development or organization, or a lack of control.

1 Essays earning a score of 1 meet the criteria for a score of 2 but are undeveloped, especially simplistic in their explanation, weak in their control of writing, or do not cite even one source.

0 Indicates an on-topic response that receives no credit, such as one that merely repeats the prompt.

— Indicates a blank response or one that is completely off topic.