

2009 AP® ENGLISH LANGUAGE AND COMPOSITION FREE-RESPONSE QUESTIONS

**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.

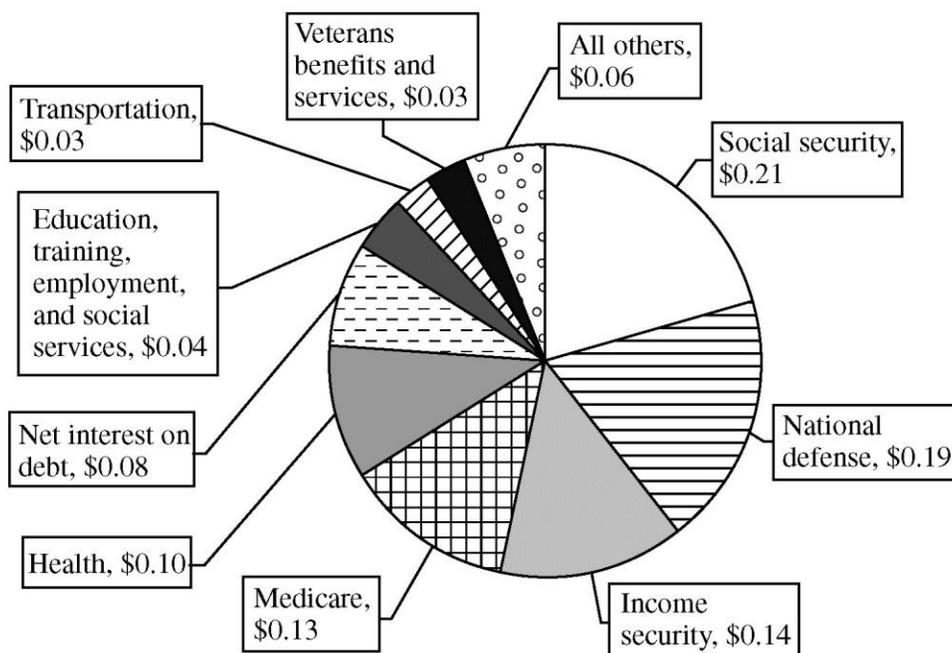
*The Space Review* © 2008 Used by permission of Dr. David Livingston, [www.thespaceshow.com](http://www.thespaceshow.com).

**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



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**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
<i>Total</i>	<i>\$ 1.00</i>
*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 <a href="http://www.whitehouse.gov/omb/budget/fy2007/">http://www.whitehouse.gov/omb/budget/fy2007/</a> ); Tax Foundation calculations.	

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**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.