

The SAT[®]

Practice Essay #8

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As you read the passage below, consider how Bobby Braun uses

- evidence, such as facts or examples, to support claims.
- reasoning to develop ideas and to connect claims and evidence.
- stylistic or persuasive elements, such as word choice or appeals to emotion, to add power to the ideas expressed.

Adapted from Bobby Braun, “Space Technology: A Critical Investment for Our Nation’s Future.” ©2014 by Capitol Hill Publishing Corp. Originally published in the *Hill*, October 27, 2011.

- ¹ Aerospace remains a strong component of our national fabric and is the largest positive contributor to our nation’s trade balance. However, this technological leadership position is not a given. To remain the leader in aerospace technology, we must continue to perform research and invest in the people who will create the breakthroughs of tomorrow, preserving a critical component of our nation’s economic competitiveness for future generations.
- For NASA,¹ past cutting-edge technology investments led to design and flight of the Apollo missions, the space shuttle, the International Space Station and a myriad of robotic explorers that allowed us to reach destinations across our solar system and peer across the universe. NASA remains one of the nation’s premiere research and development agencies, pursuing breakthrough technologies that will expand the frontiers of aeronautics and space.
- Unfortunately, the pioneering spirit embodied by this storied agency is endangered as a result of chronic underinvestment in basic and applied research. In a recent report on the state of NASA’s technology plans, the National Research Council offered a stark assessment: “Success in executing future NASA space missions will depend on advanced technology developments that should already be underway. However, it has been years since NASA has had a vigorous, broad-based program in advanced space technology. NASA’s technology base is largely depleted. Currently, available technology is insufficient to accomplish many intended space missions. Future U.S. leadership in space requires a foundation of sustained technology advances.”
- America is beginning an exciting new chapter in human space exploration. This chapter centers on full use of the International Space Station, maturation of multiple American vehicles for delivering astronauts and cargo to low-Earth orbit, development of a crew vehicle and an evolvable heavy-lift rocket—two critical building blocks for our nation’s deep-space exploration future—and advancement of a suite of new in-space technologies that will allow us to send explorers safely into deep space for the first time.

¹ National Aeronautics and Space Administration

- 5 By investing in the high payoff, transformative technology that the aerospace industry cannot tackle today, NASA will mature the systems required for its future missions while proving the capabilities and lowering the cost of other government agency and commercial space activities. Developing these solutions will create high-tech jobs.
- 6 NASA's technology investments continue to make a difference in the world around us. Knowledge provided by weather and navigational spacecraft, efficiency improvements in both ground and air transportation, super computers, solar- and wind-generated energy, the cameras found in many of today's cellphones, improved biomedical applications including advanced medical imaging and more nutritious infant formula, and the protective gear that keeps our military, firefighters and police safe, have all benefitted from our nation's investments in aerospace technology.
- 7 For many of the tens of thousands of engineering and science students in our nation's universities today, the space program provides the opportunity to invent technologies today that will form the foundation for humanity's next great leap across the solar system. For this new generation of engineers and scientists, and for those working across NASA at this moment, the future starts today. Modest, sustained federal investment in space technology, at a funding level approaching 5 percent of NASA's budget (well below the R&D² budget of many corporations), is the key ingredient to their success. A NASA that is reaching for grand challenges and operating at the cutting-edge is critical not only for our country's future in space but also for America's technological leadership position in the world.
- 8 Nearly 50 years ago, a young president gave NASA a grand challenge—one chosen not for its simplicity, but for its audacity, not for its ultimate goal or destination, but to “organize and measure the best of our energies and skills.” In accomplishing that goal, NASA not only defined what we now call “rocket science,” but also made a lasting imprint on the economic, national security and geopolitical landscape of the time.
- 9 NASA can do the same today. This is the task for which this agency was built. This is the task this agency can complete. America expects no less.

Write an essay in which you explain how Bobby Braun builds an argument to persuade his audience that the US government must continue to invest in NASA. In your essay, analyze how Braun uses one or more of the features listed in the box above (or features of your own choice) to strengthen the logic and persuasiveness of his argument. Be sure that your analysis focuses on the most relevant features of the passage.

Your essay should not explain whether you agree with Braun's claims, but rather explain how Braun builds an argument to persuade his audience.

² Research and development

