



A Math and Science @ Work Special Series

CELEBRATING APOLLO

AP* HUMAN GEOGRAPHY Student Edition



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THE IMPACT OF NASA CENTER LOCATIONS

Background

On May 25, 1961, President John F. Kennedy spoke before a special joint session of Congress and challenged the country to safely send and return an American to the Moon before the end of the decade. President Kennedy's vision for the three-year old National Aeronautics and Space Administration (NASA) motivated the United States to develop enormous technological capabilities and inspired the nation to reach new heights.

Eight years after Kennedy's speech, NASA's Apollo program successfully met the president's challenge. On July 20, 1969, the world witnessed one of the most astounding technological achievements in the 20th century. Neil Armstrong and Edwin "Buzz" Aldrin became the first humans to set foot on the Moon, while Mike Collins orbited the Moon in the Command Module. Armstrong's words, "That's one small step for [a] man, one giant leap for mankind," were heard around the world and inspired a generation. This amazing accomplishment required the collaboration of hundreds of thousands of determined individuals and the committed resources of our nation.

NASA officially began operations on October 1, 1958; a few months after President Dwight D. Eisenhower signed the National Aeronautics and Space Act providing for research into the problems of flight within Earth's atmosphere and space. As the Cold War heated up a race to space between the United States and the Soviet Union, NASA's importance continued to grow. It soon became evident that specialized facilities would be necessary to house the developing space flight program. Various existing military and research facilities around the country were used as the program began its initial phase, but as the focus continued to expand, new sites were needed that would fall completely under the direction of NASA.

Two of the most significant NASA facilities were designated and developed in Texas and Florida. Each location contributed crucial elements to the success of the space program and became the focal points of man's quest to reach the moon and beyond. On October 24, 1961, the Manned Spacecraft Center, which was later renamed the Johnson Space Center (JSC), was formally established in Houston, Texas. It became the home of Mission Control and astronaut training, as well as many other functions, including research and development that spawned a peripheral support economy. The Kennedy Space Center (KSC), originally called the Launch Operations Center, was opened in 1962 on Merritt Island adjacent to Cape Canaveral, Florida. Its proximity to the U.S. Air Force's Cape Canaveral launch site made it an ideal location to launch and process the rockets that took men to the Moon.

Due to the political and geographical components of their locations, these NASA facilities developed into linchpins of the manned space program's early success. Each center has also overcome challenges associated with the geographical implications of their locations. People continue to flock to JSC and KSC to learn about the history of space exploration as well as NASA's plans for the future.

For more information about NASA's Apollo program visit www.nasa.gov.

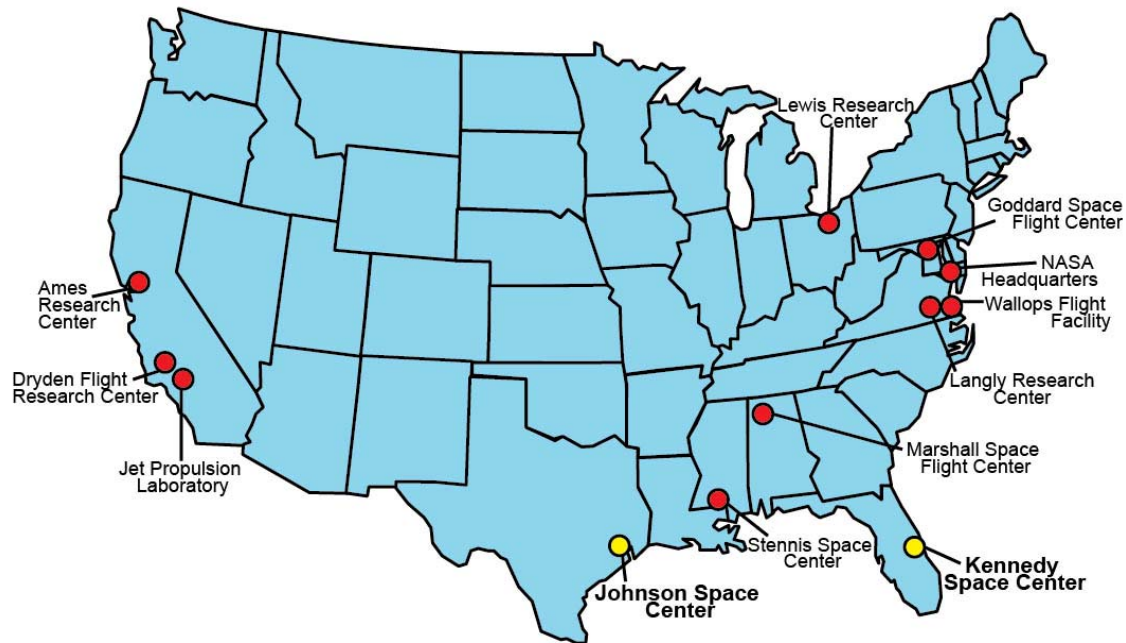


Free-Response Question

Directions

You have 25 minutes to answer all parts of the following question. While a formal essay is not required, it is not enough to answer a question by merely listing facts. Your answer should be based upon your critical analysis of the question posed. It is recommended that you spend 5 minutes of your allotted time to plan or outline your response. Make sure you letter each of your answers with the corresponding question.

NASA Center Locations



Question

Johnson Space Center in Houston, Texas and Kennedy Space Center near Cape Canaveral, Florida are two of NASA's key sites for human space flight missions. Answer the following questions as they relate to the aforementioned NASA locations.

- With regards to the geographical advantages and disadvantages of the space flight centers, site one primary physical advantage and one primary human advantage that made each of these centers an ideal location for their various functions and responsibilities.
- With regard to one of the aforementioned sites, explain how politics may have played a role in the site selection of those two locations.
- Identify two significant geographical problems relating to weather, that may hamper the effectiveness of NASA's JSC and KSC. Cite specific examples to illustrate these problems.