Name:

Date:

History of NASA and American Spaceflight Notes

Early Years

* Late 1940’s
  + in technology
  + DOD researched and upper atmospheric sciences
* Dwight D. Eisenhower
  + Plan to orbit a
  + Scientific data about the Earth
  + Part of the (IGY)
* follow suit

IGY Project

* Naval Research Laboratory
* Project
  + Did not interfere with research
  + - Non-military
  + Military’s
    - Backup plan
* Not very successful
  + to overcome technical challenges

Sputnik 1

* win the race to space
* Launch

  + October 4, 1957
* like effect on the American people
  + Technological gap between U.S. and Soviets
  + Justified on aerospace endeavors, technical and scientific , and to oversee these programs

Explorer 1

* U.S.’s first satellite
  + Launched
* Van Allen Radiation Belt
  + Explorer 1 documented around the Earth
  + Shaped by the
  + Influences electrical charges in the atmosphere and amount of solar radiation
  + Proved that research was

NASA

* The
  + Begins operations on October 1, 1958
  + “An act to provide for research into the problems of flight within and outside the Earth’s atmosphere, and other purposes.”
* Directly related to the pressures of
  + between the U.S. and Soviet Union
    - Conflict over the and of nonaligned nations
  + crisis
* Absorbed the
  + 8000 employees
  + $100 million budget
  + Three major research laboratories and several organizations
    - Laboratory
    - Ames Aeronautical Laboratory
    - Laboratory
    - Space science group from the Naval Research Laboratory
    - Jet Propulsion Laboratory from the California Institute of Technology
* Currently has 10 locations around the country

Project Mercury

* First high-profile program involving
  + Next competition between U.S. and Soviets
  + Wanted to learn if people could even
  + Ran from 1959-1963
  + Used as test subjects
* Cosmonaut
  + win again, April of
  + First to
* + First to fly in space
  + May 5, 1961
  + 15-minute mission
* + orbits around the Earth
  + Project Mercury met its
  + February 20, 1962
    - Soviets did it in August of 1961
* Project ended in May of 1963
  + men in space

Project Gemini

* Built and expanded on successes
  + Spacecraft built for people
  + 10 low Earth orbits between 1965 and 1966
    - Program spanned from 1961 until 1966
* Brought U.S. into the in the space race

  + Perfected procedures
  + and in space
* Headed by
  + Head of engineering at the (STG)
* Designed to develop the space technologies necessary for program
  + Missions long enough for a
  + - First U.S. space walk on June 4, 1965 by
  + First program to use as mission control

Project Apollo

* “I believe that this nation should commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to Earth.”   
  - President John F. Kennedy, May 25, 1961
* Direct response to in space
  + Used to demonstrate
* Next years spent accomplishing the goal
* VERY EXPENSIVE
  + over the life of the program
  + Building of the rivaled the cost of the Apollo program
    - Non-military technological endeavors
  + - Wartime technological endeavors
* Project largely successful
  + January 27, 1967 astronauts
    - Roger B. Chaffee, Virgil “Gus” Grissom, Edward H. White Jr.
* Apollo mission, October 1968

  + Tested the redesigned Apollo
* Apollo mission, December 24-25, 1968

  + Proved that we could
* Apollo

  + and
  + Took soil samples, photographs, etc.
* Rendezvoused with ship in lunar orbit
  + did not get to go down to the surface
  + Returned to Earth without incident
* Apollo
  + April 1970
  + burst midway through their trip to the Moon
  + Proved that NASA had the ability to in VERY challenging situations
    - Ready for space travel
* astronauts walked on the Moon

Apollo-Soyuz

* First
  + venture between the and the
  + Took place in
  + Launched separately from their respective countries
* Used to test joint and procedures
  + Performed experiments for two days once docked

Space Shuttle

* NASA returned to spaceflight in
  + Six year gap
* First mission STS-1
  + April 12, 1981
  + Proved the could take off and perform an landing
* STS – 6
  + April 4-9, 1983
  + and performed the
* STS – 7
  + June 18, 1983
  + became the to fly in space
* orbiter
  + January 28, 1986
    - Grounded for over years to redesign
  + returns to service
    - Flew missions
* orbiter
  + February 1, 2003
  + while returning to earth
    - Damage to reinforced on wing allowed into the shuttle
* Three shuttles

  + Enterprise currently retired in New York

Space Stations

* + Relatively small
  + Post Apollo program, 1973
  + Skylab missions
    - Crews stayed for days
  + Proved people could and in space
* + Based on plans for a
  + Joint planning began
  + Construction began
    - Spent time on Russian to prepare for endeavor
  + began with the launch of the crew on October 31 and docking on November 2, 2000