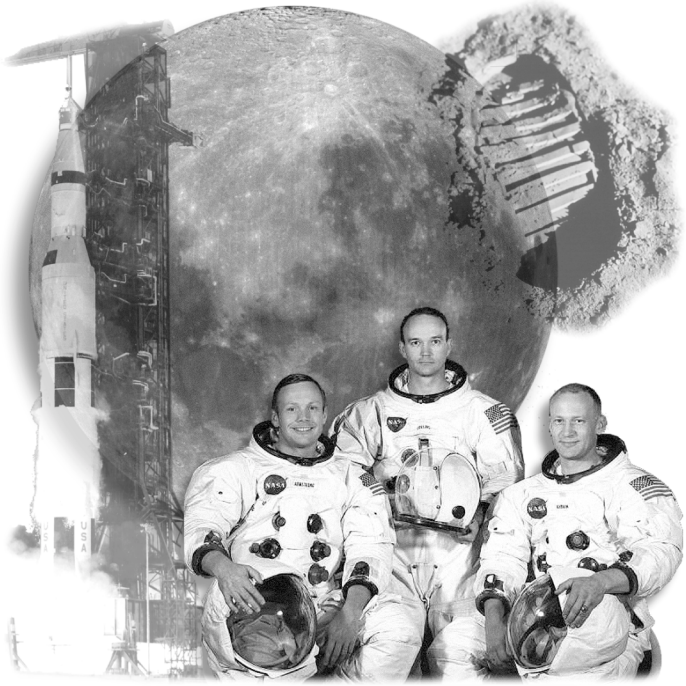
Canberra Space Centre

FACT SHEET

www.cdscc.nasa.gov

Apollo

One small step...one giant leap



The Saturn V (5) lift-off, the Moon, footprint in the lunar surface, and the crew of Apollo XI (11) - Neil Armstrong, Michael Collins and Edwin 'Buzz' Aldrin.

The Apollo Project began in July 1960, when NASA announced that a program to fly astronauts around the Moon would follow the planned Mercury and Gemini program. With President Kennedy's famous speech on May 25, 1961, the focus shifted to a lunar landing with the concrete goal of achieving this before the end of the decade.

The Apollo program included uncrewed test missions and 11 crewed missions. These included two Earth orbiting missions, two lunar orbiting missions, a lunar swingby and six Moon landings.

Apollo started in tragedy, when a fire on the launch pad in the Command Module of Apollo 1 claimed the lives of Virgil I. "Gus" Grissom, Edward White, and rookie astronaut Roger Chaffee on January 27, 1967.

Apollo 7, tested the Command Module, and 9, tested the Lunar Module, both were Earth orbiting missions. Apollo 8 and 10 tested various components while orbiting the Moon. Apollo 13 did not land on the lunar surface due to a malfunction, and used the Moon's gravity to return the crew to Earth. Apollos 11, 12, 14-17 were crewed landing missions.

Apollo missions were launched atop two different boosters, the Saturn 1B used for the Earth orbiting missions (including Skylab and Apollo-Soyuz), and the gigantic, 110-metre tall, Saturn V (5), the rocket to the Moon.

The spacecraft was in three parts: The conical Command Module where the crew ate and slept; the Service Module, supplying electricity, maneuvering power and thrust to get home from lunar orbit, and water to the spacecraft; and the Lunar Module, or LM, a two-part, totally self-contained spacecraft that used its own rockets to land on and take off from the surface of the Moon.

Apollo	Astronauts		Dates	Highlight
7	Walter M. Schirra, Jr. Don F. Eisele Walter Cunningham	L: M: S:	October 11, 1968 *Earth orbit only* October 22, 1968	*Test of CM in Earth orbit*
8	Frank Borman James A. Lovell, Jr. William A. Anders	L: M: S:	December 21, 1968 *Lunar orbit* December 27, 1968	*10 orbits around Moon*
9	James A. McDivitt David R. Scott Russell R. Schweikart	L: M: S:	March 3, 1969 *Earth orbit only* March 13, 1969	*Test of LM in Earth orbit*
10	Thomas P. Stafford John W. Young Eugene A. Cernan	L: M: S:	May 18, 1969 *Lunar orbit* May 26, 1969	*Dress rehearsal of Moon mission. Came within 10kms of surface.*
11	Neil A. Armstrong Michael Collins Edwin E. "Buzz" Aldrin	L: M: S:	July 16, 1969 July 20, 1969 July 24, 1969	*First Moon landing. 12:56pm (Sydney time) July 21st in Australia.*
12	Charles "Pete" Conrad Richard F. Gordon, Jr. Alan L. Bean	L: M: S:	November 14, 1969 November 18, 1969 November 24, 1969	*Second mission, with pin-point landing near Surveyor 3 spaceprobe.*
13	James A. Lovell, Jr. Fred W. Haise, Jr. John L. Sweigert. Jr.	L: M: S:	April 11, 1970 *Did not land* April 17, 1970	*Explosion of oxygen tank prevented landing. Crew returned safely to Earth.*
14	Alan B. Shepard, Jr. Stuart A. Roosa Edgar D. Mitchell	L: M: S:	January 31, 1971 February 3, 1971 February 9, 1971	*Third manned mission landed and carried out extensive experiments.*
15	David R. Scott James B. Irwin Alfred M. Worden	L: M: S:	July 26, 1971 July 30, 1971 August 7, 1971	*First mission to use the Lunar Rover. Lunar geology featured heavily.*
16	John W. Young Thomas K. Mattingly II Charles M. Duke, Jr.	L: M: S:	April 16, 1972 April 20, 1972 April 27, 1972	*Fifth Moon landing. Included use of Rover.*
17	Eugene A. Cernan Ronald E. Evan Harrison H. Schmitt	L: M: S:	December 7, 1972 December 11, 1972 December 19, 1972	*Last Moon mission (to date). First scientist astronaut on Moon.*

L: Launch **M:** Moon Landing **S:** Splashdown **CM:** Command Module **LM:** Lunar Module

Neil Armstrong stepped onto the Moon's surface, left foot first, leaving an imprint of his boot in the lunar dust to be the first person to walk on the Moon.

Millions of people around the world watched and heard him make the historic statement, 'That's one small step for man, one giant leap for mankind.'

Honeysuckle Creek tracking station

The television shots were transmitted around the world via a system linking the Australian tracking stations at Parkes and Honeysuckle Creek.

Twelve men in all walked on the Moon. The last three missions featured the Lunar Rover, which permitted the astronauts to drive about and explore various terrain. On the last Apollo mission, astronauts spent three days on the Moon, including 22 hours in moon walks.

Total funding for the Apollo program (1965-1972) was about US$19.5 billion.

Information on Apollo can be found at:
http://www.ksc.nasa.gov/history/apollo/apollo.html

Concerned about a hoax? Learn the facts:
www.badastronomy.com/bad/tv/foxapollo.html
www.redzero.demon.co.uk/moonhoax

PO Box 1035 Tuggeranong ACT 2901 Info: 02 6201 7880 Fax: 02 6201 7975 www.cdscc.nasa.gov