

Orion Spacecraft

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Why is in news? NASA's Orion capsule reaches key milestone on its demonstration mission around the Moon

The US space agency NASA's Orion capsule has reached a key milestone on its demonstration mission around the Moon.

It moved some 4,30,000 kilometer beyond the Earth, the furthest any spacecraft **designed to carry humans** has travelled.

The capsule is uncrewed now, however, if it completes the current flight without incident, the astronauts will be on the next outing in two years' time.

They're **part of the agency's Artemis programme**, which seeks to return people to the lunar surface after a gap of 50 years.

It is a **powerful**, advanced launch vehicle for a new era of human exploration beyond Earth's orbit.

It is designed to **take astronauts to deep space destinations** such as the Moon and Mars.

Orion will serve as the exploration vehicle that will carry the crew to space, provide emergency abort capability, sustain the crew during the space travel, and provide safe re-entry from deep space return velocities.

Orion will launch on NASA's new heavy-lift rocket, the Space Launch System (SLS)

SLS will launch crews of up to **four astronauts** in the agency's Orion spacecraft on missions to explore multiple, deep-space destinations

Offering more payload mass, volume capability and energy to speed missions through space than any current launch vehicle, SLS is designed to be flexible and evolvable and will open new possibilities for payloads, including robotic scientific missions to places like Mars, Saturn and Jupiter