ORION SPACECRAFT

LAUNCH ABORT SYSTEM
CREW MODULE
SERVICE MODULE
SPACECRAFT
ADAPTER
JETTISON PANELS
EXPLORATION DESTINATIONS

- Mars: 34,600,000 miles
- International Space Station: 220 miles
- Lagrangian Point L2: 274,000 miles
- Near-Earth Asteroid: 3,100,000 miles
- Moon: 239,000 miles
- Mars: 34,600,000 miles
- Europa: 390,400,000 miles

- Human Space Operations
- Human Space Exploration
- Robotic Science
EXPLORATION MISSION TIMELINE
ORION’S LAUNCH ABORT SYSTEM
BEYOND EARTH ORBIT
CREW SAFETY COMPLEXITY

220 MILES
45 MINUTES TO EARTH

240,000 MILES
5 DAYS TO EARTH

34 MILLION MILES
>180 DAYS TO EARTH
Built for Going Beyond Earth Orbit

Oxygen
- BEO: 190 L
- LEO: 36 L

Food
- BEO: 14.8 ft³
- LEO: 2.8 ft³

Propellant
- BEO: 18,965 lb
- LEO: 7,800 lb

Advanced Carbon Dioxide Removal System
- BEO
- LEO

Carbon Dioxide Filter
- BEO: 42
- LEO: 8

Drinking Water
- BEO: 210 Liters
- LEO: 40 Liters

Reentry Speed
- BEO: 11.2 km/s
- LEO: 7.8 km/s

Radiation
- Dose
- ISS
- BEO
- LEO

Built for Going Beyond Earth Orbit
ORION TECHNOLOGY INNOVATION

ADVANCED LIGHTWEIGHT STRUCTURES

THERMAL PROTECTION SYSTEMS

RISK MITIGATION FACILITIES

LIFE SUPPORT SYSTEMS
ORION HEAT SHIELD MDU
WATER IMPACT TEST
EM-1 SPACECRAFT PROGRESS

Crew Module Flight Tunnel
Crew Module First Weld
Heat Shield Demonstration Unit
Launch Abort Motor
Crew Module Forward Bulkhead
Crew Module Barrel
Crew Module Adapter
Crew Module Mockup
Structural Test Article
Backshell Cone Panel
Crew Module Aft Bulkhead
Testing Structures
EM-1 CREW MODULE
EXPLORATION MISSION 1
EXPLORATION MISSION-1
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