Orion is America’s next generation spacecraft that will take astronauts to exciting destinations never explored by humans. It will serve as the exploration vehicle that will carry the crew to distant planetary bodies, provide emergency abort capability, sustain the crew during space travel, and provide safe reentry from deep space.

**Orion Summary**
Number of crew ................................................................. 4
Total change in velocity ................................................. 4,390 ft/s
Gross liftoff weight ......................................................... 78,010 lbs
Injected mass ................................................................. 58,467 lbs

**Launch Abort System – Emergency Crew Escape System**
*Mass Properties*
Dry mass/propellant ......................................................... 11,120 lbs
Gross liftoff weight ......................................................... 16,850 lbs

**Crew Module – Crew and Cargo Transport**
Pressurized volume (total) ................................................. 690.6 ft³
Habitable volume (net) ..................................................... 316 ft³
Reaction control system (RCS) vacuum engine thrust...160 lbf/engine
Return payload ............................................................... 220 lbs
*Mass Properties*
Dry mass/propellant ......................................................... 22,397 lbs
Oxygen/nitrogen/water ..................................................... 133 lbs
Propellant ................................................................. 370 lbs
Landing weight .............................................................. 20,500 lbs
Gross liftoff weight ......................................................... 22,900 lbs

**Service Module – Propulsion, Electrical Power, Fluids Storage**
*Mass Properties*
Dry mass ................................................................. 13,635 lbs
Gross liftoff weight ......................................................... 34,085 lbs

**Orion-to-Stage Adapter**
*Mass Properties*
Jettisoned Fairings ......................................................... 3,050 lbs
Spacecraft Adapter ......................................................... 1,125 lbs
The Orion Spacecraft

Launch Abort System
The launch abort system, positioned above the crew module, can activate within milliseconds to pull the crew to safety and position the module for a safe landing.

Crew Module
The crew module is capable of transporting four crew members beyond low-Earth orbit, providing a safe habitat from launch through landing and recovery.

Service Module
The service module provides support to the crew module from launch through crew module separation prior to entry. It provides in-space propulsion capability for orbital transfer, attitude control, and high altitude ascent aborts. While mated with the crew module, it also provides water, oxygen and nitrogen to support the crew module living environment, generates and stores power while in space, and provides primary thermal control. The service module also has the capability to accommodate unpressurized cargo.