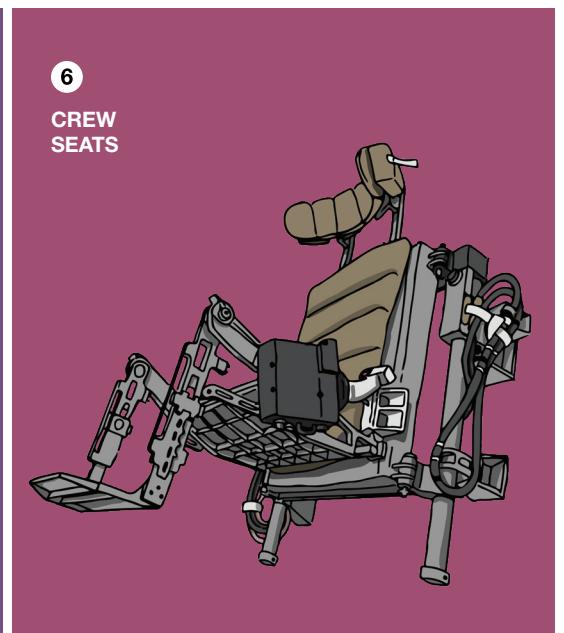
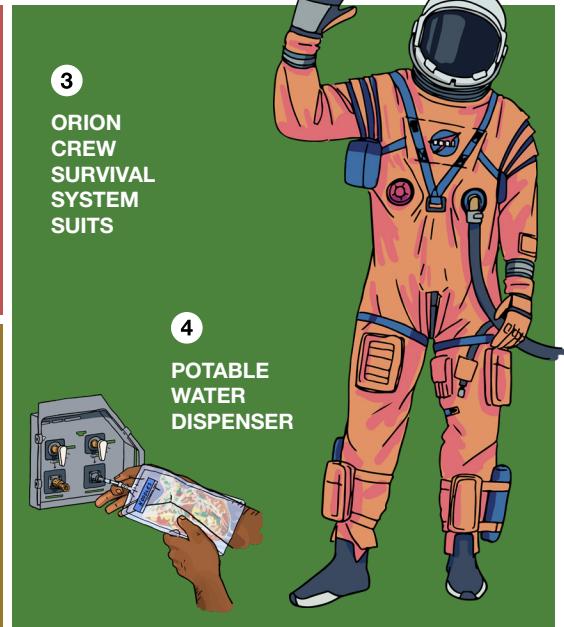
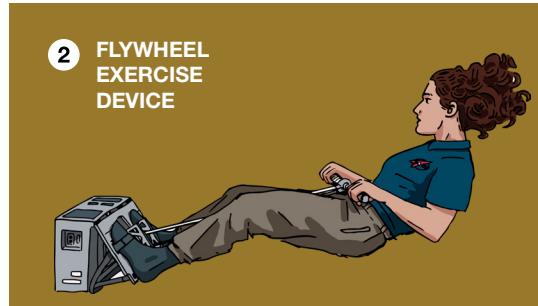
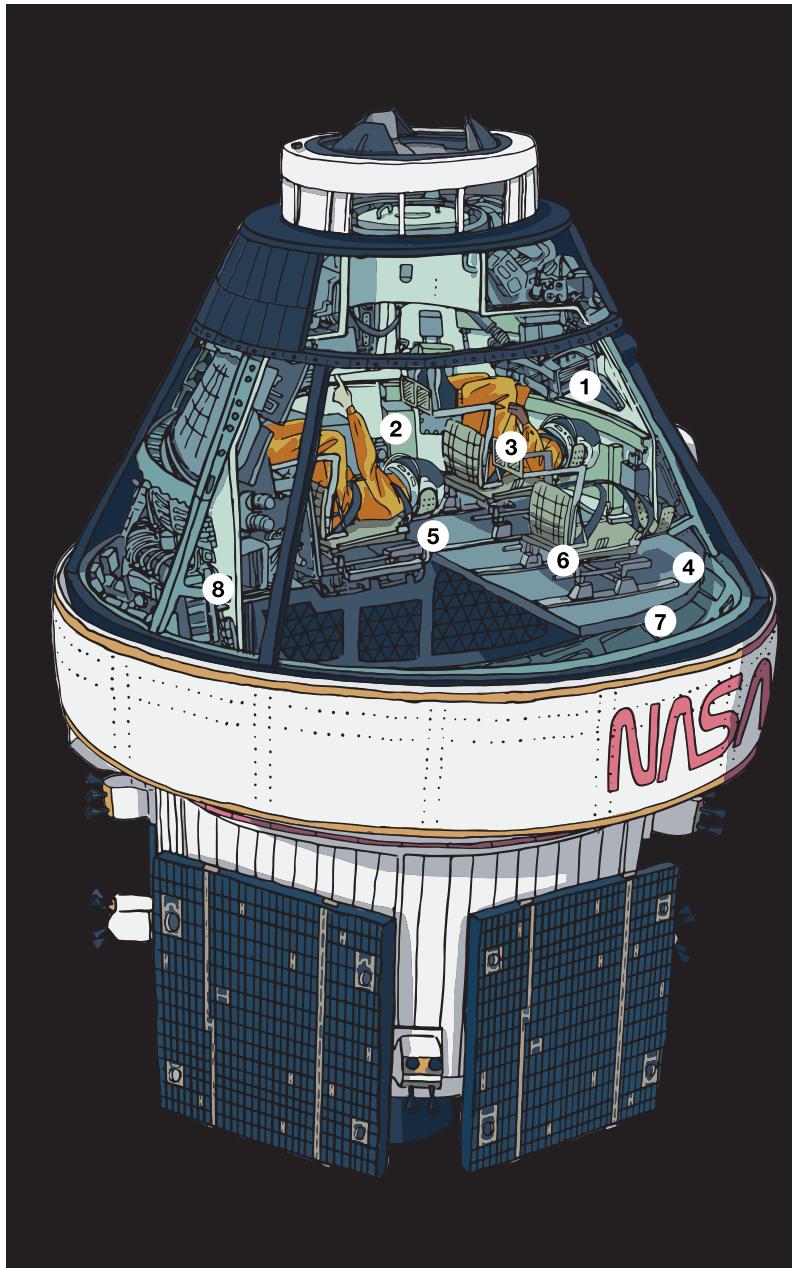


Life Inside Orion



Life Inside Orion



The Orion spacecraft is a key part of NASA's Artemis campaign to return humanity to the Moon and prepare for missions beyond. During the Artemis II mission, four astronauts will venture around the Moon inside Orion, traveling a total of 685,000 miles before returning home to Earth. The 10-day mission will confirm all the spacecraft's systems operate as designed with crew aboard in the actual environment of deep space. Orion is equipped with systems designed to ensure the crew can live, work, and stay healthy on their journey to the Moon.

1 DISPLAYS AND CONTROLS

The displays and controls system includes three display units and seven switch panels that give the commander and pilot full control and status of Orion's systems. Hand controllers and cursor control devices allow for precise maneuvering and interaction with displays, even under high g-forces. Electronic procedures are integrated to guide the crew through routine tasks and anomaly responses.

2 FLYWHEEL EXERCISE DEVICE

The flywheel exercise device is a compact, power-free system that enables daily aerobic and resistive workouts aboard Orion. It supports exercises such as rowing, squats, and deadlifts with adjustable resistance levels. Mounted below the side hatch, it also functions as a step for crew members entering or exiting the spacecraft.

3 ORION CREW SURVIVAL SYSTEM SUITS

The Orion Crew Survival System (OCSS) Suits are custom-fit pressure suits designed to protect astronauts during launch, reentry, and in the event of cabin depressurization. They feature fire-resistant outer layers, integrated cooling garments, and a high-visibility orange color for easier detection during ocean recovery. Each suit is equipped with essential survival gear, including a life preserver, locator beacon, and signaling tools.

4 POTABLE WATER DISPENSER

The potable water dispenser supplies water for rehydrating food, preparing drinks, and supporting medical needs in Orion. It connects to four pressurized tanks in the service module using manual valves and quick disconnects. A built-in filter assembly with a needle punctures and fills crew food or drink packages efficiently.

5 UNIVERSAL WASTE MANAGEMENT SYSTEM

The universal waste management system is a compact, 5-cubic-foot toilet designed for microgravity, using airflow to manage both urine and solid waste. It features a redesigned seat and funnel to improve comfort and usability for all astronauts. Solid waste is stored in odor-controlled canisters, while pre-treated urine is vented overboard daily.

6 CREW SEATS

The four crew seats are designed to accommodate astronauts ranging from the 1st to 99th percentile in size. Each seat features a 5-point harness, foot pan locks, and bolsters to secure the crew during flight. A built-in crew impact attenuation system helps absorb shock during landing. Once in space, the commander and pilot foot pans are stowed to maximize cabin space.

7 FOOD WARMER

The food warmer heats rehydratable and thermostabilized food and beverages during crew mealtimes. It stows compactly and can be secured to cabin surfaces using Velcro when needed. The unit plugs into Orion's power utility panel for operation.

8 ENVIRONMENTAL CONTROL AND LIFE SUPPORT SYSTEMS

Environmental control and life support systems (ECLSS) maintain a safe and livable environment for the crew by managing air, pressure, water, and waste. A regenerable air system efficiently removes carbon dioxide and humidity, conserving mass and volume. Systems also continuously monitor temperature, humidity, and pressure to detect and respond to unsafe conditions.