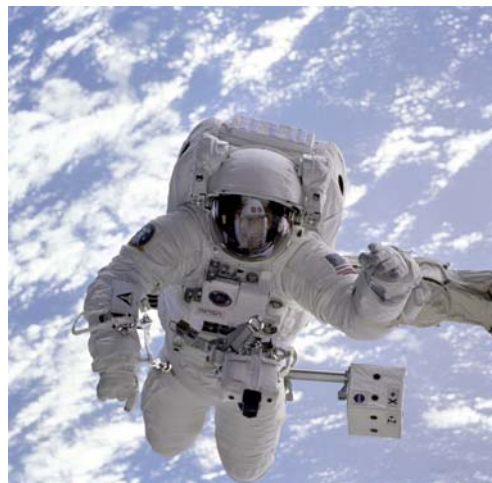


25 Things You May Not Know About Space Travel

What we discovered through online chats with astronauts and NASA trainers

[Online Chat Archive](#)

1. A spacecraft needs to accelerate to just over 17,000 miles per hour to penetrate Earth's orbit (approximately 5 miles per second). It also must travel much faster when reentering the atmosphere than when leaving. [Chat with Former Astronaut Col. Mark Lee](#)
2. Most shuttles fit 7 crew members. [Chat with Richard Covey](#)
3. Astronauts in space use Mission Elapse Time (starting at lift-off) rather than traditional time zones. [Chat with Former Astronaut Col. Mark Lee](#)
4. Astronauts fasten themselves in for lift-off using 5-point seatbelts (much like racecar drivers) – one strap over each shoulder, around each hip, and between the legs all connecting to a big buckle at the waist. [Chat with Astronaut Janice Voss](#)
5. Booster rockets come off just over two minutes into the shuttle's flight (approximately 25 miles from launch pad). [Chat with Former Astronaut Col. Mark Lee](#)
6. Space shuttles include two rooms called a flight deck and a mid-deck, complete with thousands of controls and many storage compartments. [Chat with Former Astronaut David Low](#)
7. The average journey into orbit takes about 8.5 minutes. [Chat with Scientist & Former Astronaut Dr. Tony England](#)
8. It takes 3 to 5 days for a spacecraft to reach the moon. [Chat with Richard Covey](#)
9. Average space travel missions are 10 to 16 days. [Chat with Astronaut Trainer Lou Carfagno](#)
10. Reentry into the atmosphere generates a large amount of heat; however, astronauts inside the cabin are kept at a cool 70 degrees. [Chat with Former Astronaut Col. Mark Lee](#)
11. Astronauts train for over 2 years with NASA in preparation for their space travel. [Chat with Astronaut Trainer Lou Carfagno](#)
12. A space suit can weigh between 50 and 350 pounds—on Earth, that is. [Chat with Former Astronaut Col. Mark Lee](#)



The pale blue Earth serves as a backdrop for astronaut Michael Gernhardt, who is attached to the Shuttle Endeavour's robot arm during a spacewalk on the STS-69 mission in 1995. Unlike earlier spacewalking astronauts, Gernhardt was able to use an electronic cuff checklist, a prototype developed for the assembly of the International Space Station. Image Credit: NASA.

13. Launch and entry space suits are orange as an aid to search and rescue operations in case of emergency. Suits for spacewalks are white to reflect the sun's heat. [Chat with Astronaut Trainer Lou Carfagno](#)
14. Jetpacks weigh around 80 pounds, and they may have tiny thrusters to control altitude and direction. [Chat with Former Astronaut Col. Mark Lee](#)
15. Spacewalkers have a system called Simplified Aid for Extravehicular Activity Rescue that they use to return to their spacecraft in case they become disconnected. [Chat with Richard Covey](#)
16. Dangers in outer space include radiation, temperature extremes, and lack of atmosphere. [Chat with Former Astronaut Col. Mark Lee](#)
17. In orbit, there is zero gravity; on the moon, gravity is 1/6 that of on Earth. [Chat with Scientist & Former Astronaut Dr. Tony England](#)
18. Although stars look similar in space as they do on Earth, the lack of atmosphere removes their twinkling appearance. [Chat with Astronaut Janice Voss](#)
19. There is no sound in space because of the lack of air. [Chat with Scientist & Former Astronaut Dr. Tony England](#)
20. Since zero gravity causes astronauts to float around within the cabin, they must secure themselves to the floor if they want to be still. [Chat with Astronaut Janice Voss](#)
21. Astronauts train for microgravity in a Neutral Buoyancy Laboratory (NBL) at NASA. The NBL is a pool about 40 feet deep with over 6 million gallons of water. [Chat with Astronaut Trainer Lou Carfagno](#)
22. Many shuttles use robot arms or free-flying robots to aid their mission. [Chat with Astronaut Janice Voss](#)
23. It is important for an astronaut to exercise while in orbit in order to minimize the loss of muscle mass. [Chat with Former Astronaut Dr. Edward Gibson](#)
24. Recent technology allows the use of phones in space. [Chat with Astronaut Janice Voss](#)
25. Shuttles are currently being developed to enable space travel for public use. [Chat with Former Astronaut Dr. Edward Gibson](#)



Space Shuttle Atlantis, mounted on a mobile launch platform atop a crawler transporter, sits on Launch Pad 39A awaiting flight on mission STS-117. Photo credit: NASA/Ken Thornsley.