SPACESHIPTWO SEPARATES FROM THE LAUNCH PLANE.

ticket to SPACE

AN ASTRONAUT FLOATS IN ZERO GRAVITY.

Your next trip could be out of this world.

BY STEPHANIE WARREN DRIMMER

If you could visit space you'd be able to bounce off the walls of your spacecraft and turn midair somersaults in the weightlessness of zero gravity. You could float to the window and look down at the curve of Earth, a bright blue ball floating in the total blackness of outer space.

For hundreds of people, the dream of blasting off to space is about to become a reality. A company called Virgin Galactic hopes to start sending up space tourists at the end of this year. And it could change the way everyone travels around the world.

Winning Design

In 2004 a vehicle called SpaceShipOne won the Ansari X Prize, which awarded ten million dollars to the first privately funded team to send a manned, reusable vehicle to space twice in two weeks. Months later, Virgin Galactic's founder teamed up with the makers of SpaceShipOne to create a larger craft called SpaceShipTwo that can carry six passengers and two pilots 60 miles above Earth—to the edge of space.

Until now, only about 540 people have ever been to space, nearly all of them professional astronauts. Virgin Galactic plans to change that, sending up daily flights that will carry hundreds of space tourists each year. "I grew up wanting to go to space," says Virgin Galactic's CEO, George Whitesides. "The idea that we're opening up space travel to everyone is really exciting." More than 700 people have already put down deposits on the $250,000 ticket price to reserve a seat on the two-hour trip to space.

Travel at Superspeed

Eventually suborbital flight could be more than a tourist's dream vacation—it could become the practical way to travel long distances. The flight from New York City to Tokyo, Japan, takes nearly 14 hours. But a future version of Virgin Galactic's spacecraft could zoom the 6,700 miles in just 90 minutes. This super-speedy suborbital plane would take off and land from a runway, just like a normal plane. But for a portion of its flight, it would travel outside the atmosphere, where no air exists to create slowing friction. In the time it takes to watch a movie, you could travel halfway around the world.

First Tourist Flights

But before suborbital flight becomes commonplace, Virgin Galactic will start with quick tourist flights. The space tourists will arrive in the New Mexico desert at Spaceport America, the world's first commercial spaceport. They'll be fitted for flight suits and go through three days of training. On the fourth day, they'll get up early in the morning and walk across the tarmac toward the spaceship.

SpaceShipTwo starts out cradled between the twin fuselages of a launch plane called WhiteKnightTwo. After the passengers are strapped into their seats, WhiteKnightTwo will take off from a runway, just like a regular airplane. But that's where the similarities end. Once the plane gets high enough in the sky, it drops SpaceShipTwo from its center. The rocket engine lights. The ride to space begins.

Turn the page to see what this amazing flight will be like.

Space Sick?

About one-third of all astronauts experience space sickness. Similar to motion sickness from boats and roller coaters, space sickness is caused by changes in g-forces. Symptoms range from mild disorientation to intense vomiting.

Astronauts prepare by riding a NASA aircraft called the Weightless Wonder (sometimes called the Vomit Comet), which flies in up-and-down arcs to create short bursts of zero gravity. No one knows whether suborbital flights will make passengers sick, but Virgin Galactic plans to use similar training flights just in case.

SPACE TOURISTS GET A TASTE OF WEIGHTLESSNESS.

COURTESY VIRGIN GALACTIC (MAIN IMAGE, SEPARATING, SINGLE ASTRONAUT); JAMES EDWARD BATES / BILOXI SUN HERALD / MCT / GETTY IMAGES (WEIGHTLESS WONDER)

<<< Blast Off

Follow the path of SpaceShipTwo to get a sense of what each stage feels like—from takeoff to floating in space and all the way back to Earth.

1

WhiteKnightTwo takes off, carrying SpaceShipTwo with you on board.

2

After about an hour, WhiteKnightTwo carries you up to 47,000 feet—around 8,000 feet higher than the cruising altitude of most commercial airplanes.

3

When WhiteKnightTwo reaches the 47,000-foot drop point, the countdown begins. You hear the pilots say, "10-9-8-7-6-5-4-3-2-1, release, release, release!" Then SpaceShipTwo is released from the carrier aircraft. You're free-falling.

4

After a few seconds, the pilots activate the rocket motor. "It will feel like accelerating in the fastest car you've ever imagined," says Virgin Galactic's CEO, George Whitesides. For 60 seconds, you're pinned back in your seat. The g-forces (the force of gravity) are so strong—about three times the force of gravity you normally feel—that you struggle to lift your arms off the armrests.

5

The motor shuts off, and suddenly you float up against your seat belt. You're experiencing zero gravity. You and the other passengers unbuckle your seat belts. For several minutes, you can float through the cabin, performing flips and tricks.

6

It's time to head back home. You get back in your seat, and SpaceShipTwo re-enters Earth's upper atmosphere. The vehicle becomes a glider, swooping in gentle loops as it cruises back to Earth. Between 10 and 15 minutes later, you're back on the ground.

MONDOLITHIC (ART); ROBYN BECK / AFP / GETTY IMAGES (WHITEKNIGHTTWO ON RUNWAY)