



COLLEGE OF THE ENVIRONMENT
UNIVERSITY of WASHINGTON



GRADUATE STUDENT IN
EARTH & SPACE SCIENCES

DOROTHY METCALF- LINDENBURGER

Dorothy Metcalf-Lindenburger, an Earth sciences and astronomy teacher in Vancouver, Wash., had attended space camps as a child and studied geology—the dirt beneath our feet—as an undergrad. When she found out NASA wanted to send math and science teachers to space, she wondered what might lie ahead for her in the big sky.

“How could I tell my students to follow their dreams if I wasn’t willing to?” she said.

In 2004, Metcalf-Lindenburger got the call—she was part of NASA’s newest astronaut class. She arrived in Florida with her husband and daughter and immediately started wilderness survival training, underwater simulations, and flight school. She also had to memorize the location and functionality of 1,500 switches used to operate the shuttle’s systems.

On a calm, dark morning in 2010, the STS-131 crew stood 195 feet above ground on the Space Shuttle Discovery’s launchpad.

“Three miles away, my family, friends, and colleagues were waiting to watch. I felt this peace and knew it was going to be amazing,” Metcalf-Lindenburger said.

The 8 ½ minute journey into space started off like a jerky rollercoaster ride. When the solid rocket boosters fell into the ocean, the external tank made for a smoother trek. Moving at a top speed of around 17,000 miles per hour, the g-force weighed on the crew. Then, Metcalf-Lindenburger says, “The main engine cuts off, and you’re in space. You float up into your seatbelt and look down at Europe.”

In addition to operating the robotic arm, one of the most demanding skills required of a mission specialist, Metcalf-Lindenburger directed the team’s space walks and relayed information to and from the ground.

In 15 days, the team had successfully unloaded cargo from their primary payload, the Multi-Purpose Logistics Module.

Six years of training, an eight-minute slingshot ride into space, and a once-in-a-lifetime opportunity seized. Metcalf-Lindenburger thought about her family and friends as she passed over a cloudless Pacific Northwest en route to Kennedy Space Center.

“When you see, literally see, how thin the atmosphere is, it drives home the fragility of our planet,” she said.

Metcalf-Lindenburger learned more about the way the planet works by leaving it. She saw a volcanic eruption, calving icebergs, and drought-stricken regions. She witnessed the interconnectedness of Earth’s systems and was inspired to protect the resources keeping those systems functional.

At the University of Washington’s College of the Environment, Metcalf-Lindenburger is part of the interdisciplinary Masters in Earth and Space Sciences, Applied Geosciences program.

She didn’t stop dreaming after returning to Earth. She just shifted her focus to other dreams: immersing herself back into geology at the UW.