

## Title: Breakthrough: The Volcano Trekker

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Short Description:	Meet Volcanologist Kayla Iacovino as she collects rock samples from volcanoes across the world in order to better understand the powerful forces that created them.
Long Description:	<p>When volcanoes erupt, gases blast from the earth in fast-moving pyroclastic flows destroying everything in their path. Torrents of molten magma create new landscapes. Massive calderas launch explosive boulders miles away. But how do these destructive forces work? Scientists don't have a full picture yet. It is currently impossible to fully understand the geochemical forces that lead to these destructive scenarios. But what if we could unravel this mystery by examining millennia-old cooled rocks and soils from these same eruptions?</p> <p>Kayla Iacovino—part science fiction sleuth, part mountaineer—is doing just that. By hiking mountainous terrain or meandering through a city built on a dormant volcanic crater, the volcanologist collects rock samples from across the world in order to better understand the forces that created them. At her experimental petrology lab at Jacobs-NASA Johnson Space Center, she subjects these samples to extreme pressure and temperature in “mini magma chambers” to recreate the conditions under which they formed. Ultimately, understanding how the molten materials deep within the Earth became rocks provides Iacovino insights about the overall geological makeup and origins of Earth.</p>
Production Credits:	Produced in collaboration with HHMI Tangled Bank Studios  Directed and Produced by Emily Driscoll Cinematography by Luke Groskin and Michelle Lotker

	<p>Edited by Erika Sutter and Emily Driscoll  Animations by Lottie Kingslake  Music by Audio Network  Series Producer Luke Groskin  On-Location Production Assistance Gino González Ilama, Volcanes Sin Fronteras, Área Conservación Central, National System of Conservation Areas  Additional Photos and Video Provided by Shutterstock, Pond5, Kayla Iacovino, NASA Goddard Flight Center Jacobs Technology/NASA Johnson Space Center.  Footage from Star Trek: The Next Generation Courtesy of CBS Television Studios  Project Advisors for HHMI Tangled Bank Studios Richard Stone Aileen O'Hearn  In Memory of John P. Driscoll</p>
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