Unit 04 Introduction: Duck Mountain

[RUNNING WATER]

Oh, hi. Welcome to the GEOSC 10 Tectonics III Section, Mountain Building. We're going to be talking about how the Appalachians were built, why they're still as high as they are now. And we're gonna talk a little bit about icebergs. Now, what does all that have to do with rubber duckies, and why am I in the bath tub surrounded by rubber duckies? Well, let's find out.

So why are we in a tub with rubber duckies? Imagine that these ducks represent the mountains that surround us right here in Happy Valley. This is Mount Nittany. Here's the Great Smoky Mountains. And these are all the ridges and valleys that spread up and down the east coast of North America known as the Appalachian Mountains.

About 300 million years ago, North America and what's now Europe and Africa all collided to form a super-continent known as Pangaea. And when these continents collided, because they're both about the same density, neither one subducted beneath the other. In fact, as they crashed together, they formed larger and larger mountains that wrinkled up. And that's what we had 300 million years ago with the Appalachians. This big duck represents the mountains at the end of that mountain building phase.

So after that collision, we have the proto-Appalachians. They were big. They were tall. They were high.

But for the last 300 million years, they've been eroded, and eroded, and eroded. But still, we have mountains around here that are a couple thousand feet high. If you go further down towards Tennessee and Kentucky, there are mountains that are 4,000 or 5,000 feet high. Why are they still high? Well, it has to do with buoyancy.

[RUNNING WATER]