U03\_Intro\_MasterOfTheLamp

Hey, groovy cats. Welcome to my pad. This is the G-Side 10 '70s show, in which we're going to talk about vinyl, bell bottoms, platform boots, and most importantly, lava lamps.

What? You mean you don't have a lava lamp? Run down to Uncle Eli's right now and get one. I'll wait.

So what do lava lamps and G-Side 10 have to do with each other? Well, they're a wonderful analog for this whole first section of G-Side 10. First section, if you remember from looking at the syllabus, is building mountains. And the short story for building mountains is heat from within the Earth.

We're going to talk about tearing down mountains later on, but right now we're talking about building mountains, and the heat within the Earth is what drives that whole process. And a lava lamp is a beautiful example of that. Let's take a look at it.

What we have here is a glass tube with some water in it, and then these globules of a slightly different material, and at the bottom we just have a light bulb that produces heat and heats up the bottom of this glass bowl.

All right, I'm going to take this apart here, and just take a look on the inside. I don't know if this is going to be too bright for you, but we have a light bulb underneath here, and its only purpose is to produce heat and to light up this glass bulb a little bit.

These green globules in here get heated up at the bottom, and as they get heated up, they get less dense. This is fundamentally what's happening inside the Earth. Rocks get heated up at depth, because there's a lot of heat trapped inside the Earth. As they get heated up, they get less dense, and just like these lava lamp globules, they rise up like this one's doing right now, up to the surface of the Earth.

When they get to the surface they cool off, and then just like this one, they sink back down into the Earth and the whole process goes on and on again. This inside the Earth we would call a convection cell. In a lava lamp, we call it cool.