Caldera Formation Video Clip
(1:26:13—1:29:06) (Total time: 2 minutes, 53 seconds)

Transcription

Ranger Molly: Let's pretend for a minute that this little, thin layer is the crust, okay? Now, has anybody ever heard of plate tectonics? It's kind of a crazy, big word. Do you know what it kind of means at all? I mean, you can guess, it's okay.

ParKid Cody: Oh! I think I. . .dried lava moves around in big plates?

Ranger Molly: Yeah, basically it means that the crust isn't just a big crust like an orange peel. It's more like once you start peeling an orange and you have pieces that can move around. So a hotspot. . .again, this is theory, this is a scientific theory. The hotspot doesn't really move, it kind of stays in one place. But the crust does move and it can move over the hotspot. Now what's something you can tell me about heat?

ParKid: It rises?

Ranger Molly: It rises, right? So, if you had crust on top of a big heat source, what might happen?

ParKid: The crust would move up?

Ranger Molly: How about that? Yeah? You get a big bubble, a big dome? And there's actually evidence out near Hayden Valley and some other places in Yellowstone that there is, even now, pieces of crust that are doming up, that are actually showing evidence of volcanic activity underneath, a hotspot underneath. Okay?

Now, a long time ago, something happened after this scenario that made Yellowstone look the way it does today. What was that?

ParKid: A volcano. A giant one!

Ranger Molly: Basically this big dome erupted, right? It was like a giant volcano, and then (explosion noise) we get this scenario. What would this represent now? Does anybody know the word? There's another geology word! Matthew?

ParKid Matthew: Crater?

Ranger Molly: Crater? Or there's another "C" word too. Crater is a good one. Crater is one, but there's even a bigger kind of word that starts with "C." You know, Laura?

ParKid Laura: Caldera?
Ranger Molly: Caldera. Okay? So now we have the crust over the hotspot that's erupted. It has let off all this pressure, and all this lave, and it's just gone crazy, basically, and we

have this big kind of hole left over—a crater or caldera. Now that happened a long time ago and we'll talk about when it happened later today, but for now, all you need to kind of think is, "Man, that was a long time ago!", okay?

But what started to happen after that is that things kind of started to fill in again. There was some lava flows inside the caldera and things kind of flattened out. And now, if you were to look across Yellowstone, would you see a giant, giant hole?

ParKid: No.

Ranger Molly: Not really, right? What do you kind of more see?

ParKid: Like a dip?

Ranger Molly: A little bit of a dip, but it's really pretty flat, isn't it? It's kind of a plateau, actually, because things have kind of filled in again.