

LINGOKIDS TC GEOLOGIST

[00:00:00]

CHOIR: Lingokids!

EMILY: Hey there! Welcome to Grown Up with Emily, a Lingokids podcast that helps kids discover how to be whatever they want to be. Growing

CHOIR: up, be tall enough [00:00:15] to reach the sky. Growing up, growing up, no one else gets to decide what we'll be when we grow up. [00:00:30] Do you

EMILY: enjoy collecting rocks and crystals?

Then tune in today to hear more about what it's like to be a gem hunting geologist!

WINSTON: Whoa! Check it out, Emily! I skipped that rock [00:00:45] super far! I think I got, like, nine hops. I love coming up to the lake.

EMILY: Hey, not bad. You've got quite the arm. Well, I

WINSTON: got two of them. Uh, hey, you want to give it a try?

EMILY: Maybe later, Winston.

I'm [00:01:00] looking for something. Well, what you looking for? My friend George knew we were coming to the lake and asked me to find him a certain type of stone.

CHOIR: Oh,

WINSTON: a fellow rock collector, huh? Well, finding cool rocks on the beach or in the woods is my jam. [00:01:15] I got a great collection, too.

EMILY: I didn't know you collected rocks, Winston.

Oh,

WINSTON: yeah. I've got fool's gold, which is actually silver. Weird rose quartz, some, uh, purple amethyst. I even have a rock that's shaped [00:01:30] like Spongebob. Gah! Uh, kinda. I do really want to get some obsidian, though. It's like black glass. It's so cool.

EMILY: Obsidian, huh? Hmm, maybe I can help you find some. But actually, my friend George is a [00:01:45] geologist, not just a rock collector.

And geologists do actually collect rocks, it's true. But to study them... Study rocks? Well, geologists can find out all kinds of things about the history of the Earth [00:02:00] by examining different rocks. But

WINSTON: I look at my rock collection all the time. Some are really incredible, but I don't think I've ever learned anything about the Earth.

EMILY: Well, geologists study rocks, mountains, and even volcanoes to understand how the Earth [00:02:15] was made and how it's changing. They can also help us understand if a place is safe from earthquakes or tell us how humans and the Earth interact with each other. For instance, geologists can test the water in an area where people are mining to [00:02:30] make sure that no harmful materials have leaked.

And to the community's drinking water. And

WINSTON: geologists can learn all of this

EMILY: from rocks. Yes, here, let me show you. Take a look at this rock. Hold it. What do you see?

CHOIR: [00:02:45] Well,

WINSTON: it's, uh, rough on one side. Not flat, so it wouldn't be good for skipping on water.

EMILY: Okay, what else?

WINSTON: It's kind of grayish blue. But there are some flecks of white in there too, and, ooh, [00:03:00] it's a hard rock, not a crumbly one.

EMILY: Very good. You're on your way to becoming a geologist yourself, Winston. But a pro would probably be able to examine that rock and tell you

where it came from, how old it is, and if any of those white flecks are [00:03:15] valuable or worth any money. Oh, I

WINSTON: get it. So they study rocks that they find in the ground or near volcanoes?

That's pretty neat. Yes,

EMILY: and not just that. They can find rocks that give them clues about the Earth's past in [00:03:30] all sorts of crazy places. Here's a good example. George, my geologist friend, told me about an exciting new discovery down in Antarctica in 2022. You know where that is? Isn't

WINSTON: Antarctica a really big continent made of ice?[00:03:45]

At the very bottom of the planet. Yes,

EMILY: well, people used to think that many years ago. But now, we know that there's land underneath all that ice and snow in Antarctica. It's just been covered up for thousands of years. That's crazy! [00:04:00] It is. But there are still lots of things way down deep that geologists are interested in.

These scientists were from Texas and London, and they were shocked at what they discovered. Guess what they found below when they used special computer and radar [00:04:15] equipment to scan the ice. Uh, piles of

WINSTON: dinosaur bones?

EMILY: Good guess, but no. Try again. Uh, I

WINSTON: know. A giant portal to an alien universe that's led by

EMILY: squid people.

Winston, either [00:04:30] you have an amazing imagination, or you've been watching too many sci fi movies on the weekend. Ha ha,

WINSTON: I, I think it's both. So, what did the geologist find way down beneath all that ice, Emily? I wanna know!

EMILY: Are you sure? It [00:04:45] might blow your mind.

WINSTON: Well then, yes, really tell me, please.

EMILY: Well, way deep down below the ice, the geologist found...

a giant secret lake the size of Las Vegas. Wait,

WINSTON: an [00:05:00] underground lake as big as a city? That's crazy! It's not frozen?

EMILY: No, it's not frozen. Can you imagine? A huge hidden lake that hasn't been seen or touched by humans for tens of thousands of years, just [00:05:15] sitting there beneath the ice.

WINSTON: Now I wonder if there's all kinds of weird, creepy, slimy animals in there, or a...

CHOIR: A sea

EMILY: monster. Again, too much sci fi. There are likely some living things [00:05:30] in there, but they're probably very small like Sea fleas and

WINSTON: shrimp. Oh, well, you know, sea fleas are not as cool as sea

EMILY: monsters. But you know what the geologists are excited to look for once they drill down beneath all that ice?

The [00:05:45] rocks and minerals that have been trapped down there waiting to be discovered. Yeah,

CHOIR: minerals,

WINSTON: cool!

EMILY: What are minerals? Minerals are valuable things people can find in nature, usually inside rocks or underground, like [00:06:00] silver, copper, iron, and gold. Gold?

WINSTON: Ahoy, matey! So, geologists are kinda like rock pirates?

That's what I'm getting. Heh,

EMILY: sort of, yes. But geologists really want to get the rocks and minerals from the lake in [00:06:15] Antarctica to test them. They have a special way of reading stones and sand that will tell us what the Earth was like thousands of years ago.

WINSTON: Reading stones and sand? Okay, that kind of sounds like magic to

EMILY: me.

It's even better than [00:06:30] magic, Winston. It's science. Actually, I want to show you something. Grab my hand. Okay, I'm ready, Emily.

CHOIR: Hold on tight. Let's rock and roll.

WINSTON: Where'd you snap us to, Emily? This place [00:06:45] looks like a jungle.

CHOIR: This

EMILY: is a jungle, Winston. A jungle in Brazil, to be precise. Since geologists study rocks, minerals, and the Earth, most of them work out in nature. I hope you're ready to get dirty today, Winston. Because [00:07:00] this is the entrance to the Mato Grosso Diamond Mine.

WINSTON: Oh boy, sign me up! Let's dig for diamonds to sell to jewelry stores for tons of money! Cha ching! Well,

EMILY: diamonds are mined to make fancy jewelry and engagement rings sometimes. [00:07:15] But geologists also look for diamonds to unlock more secrets about the Earth. Oh

CHOIR: yeah? What kind of secrets? Let's

EMILY: go into the mine and I'll explain.

WINSTON: Oh, this mine is [00:07:30] huge! Hey, did you hear that? An echo! What's up? What's up? Who's the man? Who's the man? Here we go. [00:07:45] Winston, Winston, king of

EMILY: the world. He's gonna

WINSTON: find all the diamonds and the, uh, the... Pearls? Pearls! Dang it, I should have thought of that. Good rhyme, Emily.

EMILY: [00:08:00] Okay, okay, king of the world. Enough echoes.

Let's go see what this geologist is digging up. Ooh!

CHOIR: Ah! Oh my

EMILY: goodness! They've stumbled onto something great! It's an enormous [00:08:15] diamond!

WINSTON: Wow! Whoever wears that on a necklace is going to have a hard time standing up straight because it's so big it'll pull them right to the ground. Hey, what's that geologist doing with that big diamond?

Cutting it open?

EMILY: She is, and that [00:08:30] tool she's using is called a scythe. It has a blade on it that's made of diamond. Since diamonds are so hard, they can only be cut by other diamonds. Crazy,

WINSTON: huh? Yeah, but why would she want to cut that big diamond into [00:08:45] smaller ones? She's ruining it. I bet the bigger ones would be worth lots of

EMILY: money.

Well, she's more interested in what's inside the diamond, Winston. What? Why?

WINSTON: What's inside? Is it more diamonds? That

EMILY: would be something. But she's actually [00:09:00] looking for minerals that were trapped inside the diamond when it fell. formed millions of years ago. They're so tiny, she has to look at them under a microscope.

But they can tell us a lot about the Earth. Oh,

WINSTON: so the clues in rocks and [00:09:15] minerals under a microscope tell us about what the world was like a long, long, long, long time ago. That

EMILY: is crazy! Exactly. For instance, geologists can look at the teeny tiny layers inside of a rock [00:09:30] and they can tell what type of climate the Earth had during a specific time, based on how hard or soft the rock is.

WINSTON: Wow. So being a geologist is kinda like being a rock detective. Hey, Emily, do you think there's any [00:09:45] obsidian in here? I really want to make an owl head, just like the indigenous peoples.

EMILY: That's pretty awesome, Winston, but sorry to disappoint you, it doesn't look like there's any obsidian in here.

WINSTON: Aw, that does not rock.

EMILY: Hmm, but hey, want to see [00:10:00] one more really awesome geological hotspot? Oh, you know I do! Alright, grab my hand, and hold on tight. I'll snap us out of here.

CHOIR: Whoa!

EMILY: Ooh, look out, Winston! Don't stand too close to the geyser! That hot spring is [00:10:15] extremely hot!

WINSTON: Geyser? Oh, wow, it's like a reverse waterfall!

EMILY: This? This geyser's name is actually Old Faithful, and it's one of the most famous geysers in the world.

WINSTON: Old Faithful, huh? [00:10:30] Well, I guess I should speak up. Hey, Emily, I forgot to ask. Where are we

EMILY: exactly? I'm glad you asked. We are actually smack dab in the middle of Yellowstone National Park in Wyoming. It's [00:10:45] really pretty, isn't it? Yeah,

WINSTON: it sure is. Ah, all the trees and the fresh air. Hey, Emily, can I ask you another question about diamonds?

Where do they come from, anyways? Hmm,

EMILY: well, for starters, diamonds are formed [00:11:00] deep inside of the Earth, where it's super duper hot.

WINSTON: How hot are we talking here? Like, summer in the desert hot, or... Ooh, bag of flaming hot Cheetos hot.

CHOIR: Way, way,

EMILY: way, way, way hotter. In fact, it is so hot that it melts [00:11:15] the rocks down into liquid, kind of like candle wax.

And that hot liquid rock is called molten magma. Oh,

WINSTON: yeah. Magma. The red glowy stuff inside of [00:11:30] volcanoes.

EMILY: Exactly! And do you know what the magma is called once it erupts from the volcano and spews out into the world?

WINSTON: Oh, uh, it's, uh, it's called lava, right?

EMILY: Very good, smarty pants. Oh,

WINSTON: that was an easy one. I always [00:11:45] thought lava was cool.

Me and my friends play a game called The Floor is Lava, where you can't touch the ground or you're

EMILY: out. I play that with my daughter a lot, too. And it makes sense, because lava is so incredibly hot that it can even melt metal. [00:12:00]

WINSTON: Yikes! Okay, I am definitely not touching

CHOIR: that. But

EMILY: when lava cools down really quickly on the cool ground, some of the rocks it creates are smooth and can look like...

Shiny black glass. Wait a minute,

WINSTON: Emily. [00:12:15] Are you saying what I think you're saying?

EMILY: Yes, I am. There's obsidian in these hills. Here, I brought a handy dandy pickaxe for us to use. If my calculations are correct, this should be the

CHOIR: spot.

WINSTON: Are you [00:12:30] kidding? I want to dig for

EMILY: it! Go for it, but be

CHOIR: careful. Oh, my

WINSTON: rocks.

It's obsidian. Wow, look how beautiful and shiny and black it is. Oh, [00:12:45] it's so fragile. No wonder they used to make arrowheads out of it.

EMILY: It is still very brittle, so be gentle with it.

WINSTON: Thanks for helping me find it, Emily. This'll be the most awesome addition to my rock collection.

EMILY: No problemo, buddy.

WINSTON: Gosh, it [00:13:00] would be so fun to be a geologist and get to run around the world collecting treasures all day.

EMILY: I think this victory deserves some ice cream. Really?

WINSTON: Uh, Rocky Road for me, please. Get it? Rocky [00:13:15] Road.

EMILY: Thanks so much for joining us on our trip to find out more about geologists. It was awesome to learn more about our beautiful planet.

WINSTON: Yeah, and next time you find a really cool rock, take a good look at it and wonder about where it [00:13:30] came from and the thousands or millions of years it's been around.

And then, rock and roll!

EMILY: All right, all right. Let's

CHOIR: go. You dream of becoming a dancer. A lion trainer, celebrity
[00:13:45] chauffeur Fly to the moon To count the stars Or maybe race past cars
Hey

EMILY: Winston, are you curious for more? You know it! Check out Lingokids, the number one learning app for kids. They have a [00:14:00] ton of original games and videos and songs that are fun, educational, and can help boost your math, reading, and literacy skills.

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