



Teek and Tom Explore Planet Earth

Episode 1: What's the Difference Between Weather and Climate?

TRANSCRIPT

Teek

Oh, no! I'm late for class! Hey, BARY, pull up the classroom feed.

Teacher Pika

All right. All right, students.

Teacher Puna

Let's settle in.

Students

No, I sit there!

Anybody wanna play zerbits at recess?

I bet I'm gonna win this time.

I wonder what's for lunch today.

I really hope they have kelp burgers.

Teachers Pika and Puna

It's time for your final planet project.

Teacher Pika

And my favorite. Today, you're going to apply everything you've learned this year.

Teacher Puna

I'd like you to find a planet in this galaxy and explain how its atmosphere works. Go all out and have fun.

Teacher Pika

Seriously, I want you all to have a good time. Let's do it.

Teacher Puna

Heh. I remember my final planet project. Lost an engine getting too close to one of the planet's rings. Ha ha ha ha. Met the weirdest creatures on this ice-covered moon.

Teacher Pika

Oh, and that volcanic planet...the whole place almost exploded on me. Haha.

Teacher Puna

Ah, good times!

Teacher Pika

I want all of you to really dig into these planets. There's a lot out there to explore.

Teachers Pika and Puna

Best of luck.

Teacher Puna

Extra credit ...

Teacher Pika

...for anyone who finds those ice creatures ...

Teacher Puna

... and tells them teachers Pika and Puna ...

Teacher Pika

... say "hi."

Teek

[singing] Looking for planets. Looking for planets. Looking for planets.

Hmm, nope. Not that one. Not that one either. Whoa! Check that planet out!

It's like 70 percent water.

Hello, intelligent life! Anyone out there who can help me understand this world?

Teek

Hi! I'm Teek.

Whale

[whale vocalizations sound like "Hi Teek!"]

[whale vocalizations sound like "Try N-O-A-A."]

Teek

Okay, BARY. Look up N-O-A-A.

Huh. The National Oceanic and Atmospheric Administration. They seem like intelligent life.

BARY

They call it NOAA for short.

Teek

Ohh, Tom Di Liberto, climate scientist at NOAA. I bet Tom knows a lot about how the ocean and atmosphere work on this planet. Let's go visit. BARY, take me to NOAA to see Tom.

BARY

Okay, going to Tom at NOAA.

Real Tom

Bye, everyone.

Hey Eric, Sharon, have a nice weekend.

Eric and Sharon

Thanks Tom. You too.

Voice in Tom's head

I can't wait to set up that new weather station this weekend. Oh, I'm gonna have so much new data: temperature data, pressure data, precipitation data. I can calculate my own heat index. Is five thermometers too many thermometers? Meh!

Real Tom

Hey! Hehe.

Voice in Tom's head

What's better than one temperature reading?

Real Tom

Five temperature readings!

Teek

Wheee! Haha.

Whooo!

Voice in Tom's head

Mmm. Clouds. Cirrus. Stratus. Ooh! Altocumulus.

[singing] Gonna collect some data. Gonna collect some data. Gonna collect—

Real Tom

What was that?

Whoa. Wait. What? How? Who?

Teek

Hi NOAA climatologist Tom Di Liberto. I'm Teek from Planet Queloz. I come in peace. Can you help me understand your planet for a school project?

Real Tom

Whoa! You're real. And you know my name. Um, always happy to help students. Welcome to Earth. But just to be clear, this isn't part of a giant plot to take over our planet? Because I really like Earth. It's kind of awesome.

Teek

Hahahaha. You're funny. We stopped conquests thousands of years ago. Kind of primitive, if you ask me.

Real Tom

Of course. Of course. Well, nice to meet you. I'm Tom, but you know that already. What do you want to know?

Teek

Oh, okay. I have so many questions. How old is your planet? You have a lot of water—why don't you live in it? Does water fall from those white fluffy things in the sky? Do any of your ice creatures know my teachers Pika and Puna?

Real Tom

[interrupting] Whoa. Haha. Slow down. That's a lot. It sounds like you want to know how our ocean, water cycle, and atmosphere interact on Earth to affect our weather and climate? Well, you've come to the right person!

Teek

Yes! It sounds like we might need to take a trip to space to check out those fluffy things! Whoooo! Why don't you hop aboard BARY, my bioluminescent alien research yacht?

Real Tom

I can do that?

Teek

BARY, take us to space!

BARY

Caution, Tom. Non-Queloz lifeforms may not maintain molecular cohesion.

Real Tom

Huh?

BARY

Beginning assimilation in 3, 2, 1...

Real Tom

Whooooaaaaa...

Teek

High tentacle?

Cartoon Tom

Oh my gosh. Oh my gosh. I'm in space! I'm in space! I'm in space!

LOOK AT EARTH! IT'S SO BEAUTIFUL! WHY AM I YELLING?!

Teek

Wait, is this your first time...in space? Wow, you Earthlings need to get out more. But your planet is really pretty. And I've seen a few.

Cartoon Tom

Yeah. It is. Calm down, Tom. Breathe. Okay, so, let's go over the difference between weather and climate on Earth. Those white fluffy things, clouds, are water droplets. And, yes, some of them even release water onto Earthlings. We call it rain.

Teek

Huh. I only experience rain when I order it. Do you get *caught* in the rain?

Cartoon Tom

Noo, that's a hypothetical.

BARY

Tom, that's inaccurate. My intergalactic intelligence system shows you getting soaked... yesterday.

Cartoon Tom

Haha. Wa—Wait, how did you get that video? Okay. Yeah. Yesterday I got caught in the rain.

That's why it's important to check the weather forecast before you go out. Otherwise, you might end up wet. But did you also know there are climate outlooks that look at weather trends weeks and months into the future?

Teek

Like for whether it'll be a good season for growing zworples?

Cartoon Tom

Um, well, yes, growing food for the Earthlings. But we don't have zworrr-ples.

Teek

Ohh. So, what *is* the difference between weather forecasts and climate outlooks?

Cartoon Tom

Weather forecasts give us exact numbers. BARY, what's today's weather forecast at NOAA?

BARY

In Washington, DC, today's high will be 80 degrees Fahrenheit with a low of 64.

Cartoon Tom

Thanks! So, that's today's weather. But if you're ever thinking the weather is hotter, colder, wetter or drier than normal, now you're thinking climate. Climate's just the average of many, many years of weather data.

Teek

But that still seems weather-y to me. What about climate outlooks? And who on Earth uses them?

Cartoon Tom

Well, for that, I think we need to head to a farm, because farmers plan months in advance. Ooh, see that area right there? That's where a lot of farms are.

Teek

I'll take us there quick! Hold on! BARY, take us to a farm!

Cartoon Tom

I'll miss you, space.

Teek

Yeah! A farm! Earthling food production! Haha. What's that machine? Can I ride it? How fast does it go?

Cartoon Tom

That's a tractor. Have fun. Promise you'll pay attention?

Teek

Promise. Heh.

Cartoon Tom

TEEK, THE CROPS YOU'RE DRIVING BY ARE SWEET CORN. Many, many months ago, the farmer used a NOAA climate outlook to decide what to plant this year: corn or soybeans? When the farmer looked at the climate outlook—which we Earthlings create using past years of weather data and predictions of the future—they noticed that it was likely to be wetter than average. And that meant corn would be a better crop, which, by the looks of it, the farmer was right.

Teek

Mmm. Mmm. This sweet corn is tasty!.

Cartoon Tom

I know, right? So while climate outlooks can't *prevent* drought or lots of rain, the climate outlooks help farmers decide *what* to plant and *when* to harvest.

Teek

Oh, that's really cool. Here on Earth, knowing what the weather and climate will be can be really important.

Cartoon Tom

Yup. But did you know that the ocean also affects the weather and climate?

Teek

I believe you, Tom from NOAA. So, is the ocean making those dark, fast moving clouds?

Cartoon Tom

Wait. What? Oh gosh. We've got to get out of here.

Teek

Perfect. Yeah! Okay, BARY, let's get out of here and go to the, uh, ocean!
[voice muffled by water] Why are you making that weird face?

Cartoon Tom

Em. Mmm. Hmmph. Ehh.

Teek

Ohh! Sorry about that. I didn't realize you couldn't breathe underwater. We can breathe everywhere. Maybe one day you will. Your kind is so delicate.

Cartoon Tom

[panting] Yes. Delicate. Teek, you might be surprised how often Earth's atmospheric scientists are looking out on the ocean and not up for a clue on what's to come. All of that water that falls out of the sky, like from those storms at the farm, has to come from somewhere.

Teek

This is so great. I love that the ocean and atmosphere work together. I have so many more questions.

Cartoon Tom

Our ocean is a wild place. And there's so much more to talk about. There's hurricanes and computer models and robot ships and satellites and climate change and—

Teek

Aww, no. That's my parental figure. I really need to get home. Maybe next time?

Cartoon Tom

Deal.

Teek

BARY, let's drop Tom off back at NOAA. Here, we can communicate with this.

Cartoon Tom

Great. I can't wait to help you find all the answers. Oh. looks like it's about to rain. Oh, and I don't have my umbrella.

Teek

Ughh. Earthlings. BARY, print Tom an umbrella.

Cartoon Tom

Whoa. Thanks.

Teek

My friends aren't gonna believe that I met a creature that can only breathe above water.

BARY

[loud belch]

Real Tom

[giggling] I was just in space. What is this? Gross! Ugh.

Teek

That went way better than I could have hoped. BARY, please open my student log.

BARY

Student log opened. Ready to record.

Teek

Day one. Final project. Landed on a beautiful planet that inhabitants call Earth. And it's over 70 percent water. And get this: the intelligent life there don't order their weather! Instead, scientist Earthling Tom told me that they make weather forecasts and climate outlooks to help other Earthlings prepare and be safe.

BARY

Accurate. And don't forget: Weather forecasts are forecasts for exact weather conditions, while climate outlooks are more about how things will be different than normal.

Teek

Tom also explained how farmers use climate outlooks to help determine what and when to plant. Then I almost drowned Tom. I didn't know he couldn't breathe underwater! After that, Tom was

just about to explain how important the ocean is to how weather and climate work on Earth. But then the parental figure called. And I had to leave, fast.

BARY

Yes! Parental Figure is expecting you back at agreed upon curfew.

Teek

[sighing] I know. End student log day one. BARY, I'm gonna rest for a bit. Wake me up when we're close to Queloz. Oh, and remind me to bring Tom some zworples next time.

BARY

Affirmative. Log complete.

Teek

Aww, no. Whee! Haha.

Real Tom

Whoaaaaa! Whoaaaaa! Ahhhh!

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