

Bill Nye the Sidedoor Guy

Lizzie Peabody: This is Sidedoor, a podcast from the Smithsonian with support from PRX. I'm Lizzie Peabody.

[MUSIC]

Lizzie Peabody: Back when I was in elementary school, in the '90s, I loved science class.

[MUSIC]

Lizzie Peabody: I remember pushing carpet squares together to simulate the movement of tectonic plates ...

[MUSIC]

Lizzie Peabody: ...watching celery slurp up colored water through capillary action ...

[MUSIC]

Lizzie Peabody: ...and sprouting seeds between layers of wet paper towel.

[MUSIC]

Lizzie Peabody: But the very best days were when my teacher would wheel in the big television trolley into the classroom and pop in a VHS tape of this guy.

[MUSIC]

Lizzie Peabody: Bill Nye the Science Guy wore a blue lab coat and bowtie and was incredibly excited about science. With the help of kids just like me and my classmates, Bill Nye did zany demonstrations to explain serious scientific concepts in his steamy, bubbling laboratory.

Billy Nye: We're going to take a look. This is the aquarium of science. And it's still light to the brim.

Lizzie Peabody: Then, he'd venture out into the real world to explain things like buoyancy by driving a car into a river, lift by parasailing ...

Bill Nye: That difference in air pressure that's where the lift comes from. Whoa!

Lizzie Peabody: ...and gravity by throwing a computer off the roof of a building. The show had funny voice-overs and snappy interludes.

Bill Nye: Good evening.

Lizzie Peabody: Okay. It was snappy in the '90s. I loved "The Science Guy" show. And I loved Bill Nye, because he made the world make sense, explainable by science. And it felt like he was talking directly to me. I almost felt like I knew him. Though, of course, I didn't. Yet.

Bill Nye: All right.

Lizzie Peabody: I'm so used to seeing your face perched on top of, like, '90s-era rolling TV cart...

Bill Nye: Yes! Yes!

Lizzie Peabody: ...That I, I feel like I should put my laptop on, like, a trolley or something. Do you mind introducing yourself?

Bill Nye: No, I don't mind.

Lizzie Peabody: Okay. Who are you?

Bill Nye: Oh! I am Bill Nye and I'm known publicly as "The Science Guy."

[MUSIC]

Lizzie Peabody: "Bill Nye the Science Guy" was one of the first shows to talk to kids about real science. And it was a hit. Over a hundred episodes ran on TV between 1993 and 1998. The show won 19 Emmys.

[MUSIC]

Lizzie Peabody: And just last year, Bill Nye's signature blue lab coat was placed on display in an exhibition at the Smithsonian's National Museum of American History called "Entertainment Nation." It shows how entertainment isn't just laughing along at a sitcom while we tune out the world. Entertainment shapes our culture, reinforces the social fabric, provokes discussions, expands our minds.

[MUSIC]

Lizzie Peabody: And that mind expansion is what Bill Nye and his show did for me and many others.

[MUSIC]

Lizzie Peabody: So, this time, on Sidedoor, we're doing something a little different: sitting down with Bill Nye for a conversation that starts where his early love of science began, growing up in D.C.

Bill Nye: Yeah. Before formal daycare, we had the Smithsonian. And that's where I'd spend all day.

Lizzie Peabody: It's Bill Nye, the Sidedoor guest guy. On science education, comedy, and a few of his favorite Smithsonian moments. Plus, ever the teacher, a few lessons and pop quizzes along the way.

Bill Nye: Number of protons in technetium, Lizzie? 43.

Lizzie Peabody: Sorry. That one, I was not going to come up with.

[MUSIC]

Lizzie Peabody: All that, after the break.

[MUSIC]

Lizzie Peabody: So, Bill Nye the Science Guy is a character that you created.

Bill Nye: Well, a "character." Yeah. He's not that different from me.

Lizzie Peabody: Bill Nye the Science Guy looks and sounds a lot like Bill Nye the Guy.

Bill Nye: There was an editor on the show who said, "When it comes to Bill, what you see is what you get." And she's right.

[MUSIC]

Bill Nye: I am passionate about science. I'm passionate about science education. I mix vinegar and baking soda, inflate a balloon. It gives me a thrill every time.

[MUSIC]

Lizzie Peabody: Bill Nye has loved science ever since he was a kid, especially machines and how they worked. And there was one machine in particular that Bill remembers falling in love with.

Speaker 3: Every Indianapolis car is a special one, designed and built for championship racing. But this year, something really special rolled in.

Bill Nye: I was coming of age in 1967, when the STP-Paxton Turbine Car almost won the Indianapolis 500.

Lizzie Peabody: THE STP-Paxton Turbocar, which you can see today at the Smithsonian's National Museum of American History, was one of the most innovative and controversial cars ever to compete in the Indy 500, the annual 500-mile race.

Bill Nye: Would you get in that car? Have you seen it? It's, like, the size of an egg carton or something. And it's going 200 miles an hour.

Lizzie Peabody: This car's engine was unlike any other in the brickyard in 1967. It was a turbine engine, the kind used in helicopters. And to 12-year-old Bill, putting a helicopter engine in a race car ...

Bill Nye: I don't want to shock anyone, but it's just sexy. It's just cool.

Speaker 4: Gentlemen, start your engines!

Speaker 5: And the race is on.

Lizzie Peabody: The snazzy bright red STP-Paxton Turbocar led the pack in the Indie 500 until just eight miles from the finish. The connection between the transmission and the axle burned up. The car broke down.

Speaker 5: The car lost power to the wheels.

Lizzie Peabody: But it made a big impression on Bill.

Bill Nye: Let's have new ideas, people. Let's do things in new ways.

[MUSIC]

Bill Nye: The thing is I would read "Popular Science" and, once in a while, "Popular Mechanics," which I would get at the library. I would read those magazines fascinated and then I'd go to the Smithsonian equally fascinated when I was in fourth grade. I spent a lot of time at the Smithsonian.

[MUSIC]

Lizzie Peabody: Growing up in Washington D.C., Bill would take the bus down to the National Mall and spend the day wandering the Smithsonian museums.

Bill Nye: I remember when the Air and Space Museum was literally a Quonset hut next to the castle building. And it was experimental. "Will anybody come to this museum if we build it?"

Bill Nye the Sidedoor Guy

Lizzie Peabody: This was the mid-'60s, and the National Air and Space Museum didn't have a permanent building yet, just a corrugated metal hut on the Mall, with launch missiles lined up outside, in an area called "Rocket Row."

[MUSIC]

Lizzie Peabody: Nearby, at the Smithsonian's Arts and Industries Building, Bill remembers marveling at the Spirit of Saint Louis, the plane that aviator Charles Lindbergh flew across the Atlantic Ocean, the first solo transatlantic flight in history.

Bill Nye: Man, to think that you could get in that airplane and fly across the Atlantic, just—. It really boggles the mind. It's so small. And, you know, he couldn't see out the front because he had so much gas tank. Like, "Dude, really?" And so, do you know the expression "fly by the seat of your pants?"

Lizzie Peabody: Yeah.

Bill Nye: Apparently, he was an expert at that. So, he could feel the performance of the airplane in his empennage.

Lizzie Peabody: Did you use the word "empennage?"

Bill Nye: Oh, empennage! Do you know the word "empennage?" Man, "penna" is Latin for "feather." So, the empennage or the tail feather is the fletching of an arrow, and the empennage is the tail of an airplane.

[MUSIC]

Lizzie Peabody: Here's a lesson from Bill Nye: If you want to talk about behinds on the radio, do it in the fanciest way possible.

[MUSIC]

Bill Nye: Back to you, Lizzie.

Lizzie Peabody: The National Air and Space Museum of the '60s was filled with dioramas.

Bill Nye: Oh, my goodness. They were striking. I was struck. And I wanted to work in airplanes. And I did, eventually. So, the Smithsonian changed my life, Lizzie.

Lizzie Peabody: Bill went off to college and studied mechanical engineering. And after graduating, he moved to Washington state, where he worked as an engineer at Boeing.

Bill Nye: There's a hydraulic tube on 747. You know, I think it was my tube.

Lizzie Peabody: But he got restless. When his boss tapped him to work on a new airplane, the 767 ...

Bill Nye: I said, "When's it going to fly?" He said, "You know, 15 years." When you're a young guy—. "Wow. You want me to live in Everett, Washington, for 15 years to make a—. Okay. Let me think about that."

Lizzie Peabody: He thought about it for a while. And then, he fulfilled every parent's nightmare. He quit engineering to do comedy.

Speaker 6: Bill, they love you!

Lizzie Peabody: Bill wrote and performed on the Seattle sketch comedy show, "Almost Live!"

Bill Nye: So, I wrote a bit, Lizzie, for the comedy show, called "Tangent Man."

Lizzie Peabody: Yeah.

Bill Nye: Tangent Man is at the bank, and he gets the teller distracted by going off on a tangent. Then, a bank robber shows up, holds the place up. And Tangent Man gets the bank robber distracted, so the cops can show up. But then, Tangent Man gets the cops distracted, and the bad guy gets away. Hilarious. Back to you.

Lizzie Peabody: Is Tangent Man another example of, like, "what you see is what you get with Bill Nye?"

Bill Nye: Yeah. I'm afraid so.

Lizzie Peabody: The comedy show is also where Bill first tried out his character of "The Science Guy." He'd come on in a blue lab coat and bowtie and do things like set hydrogen on fire.

Speaker 7: Jesus, man. Jesus. Light another one.

Lizzie Peabody: It was while moonlighting as a sketch comedian that Bill developed the concept for "The Science Guy" show. And that, he says, is no coincidence.

Bill Nye: That's a big part of the success of "The Science Guy" show, is it's funny. The people I worked with were really funny. I mean, they're just brilliant. And I'm not just talking about the writers, who were great. The camera guys were funny.

Bill Nye: So, look, an earthquake of magnitude 3.

Bill Nye: Like, in the earthquake show, you look over, there's Arlo Smith shaking the camera with his hand and eating an apple.

Bill Nye: And the bigger the energy there

Bill Nye: And then, I say to the camera, I say to you, the viewer ...

Bill Nye: Uh, you weren't, you weren't supposed to see that.

Speaker 8: Oh, sorry.

Bill Nye: And it's funny.

Lizzie Peabody: But the goal of the show was more than just to get laughs. Bill wanted to make a TV show that got kids and grownups excited about science.

Bill Nye: Objective: Change the world.

[MUSIC]

Bill Nye: And I'm not joking you. I wanted to get a generation or more of young people excited about science, so that we would have scientists, engineers, and technicians, along with, rather, voters and taxpayers who would support them, so that we could make a better world for everyone.

[MUSIC]

Lizzie Peabody: The first episode of "Bill Nye the Science Guy" hit TV airwaves in 1993, partially funded by the National Science Foundation and the US Department of Energy. And it quickly became one of the most popular kids shows on TV.

[MUSIC]

Lizzie Peabody: A 1996 study showed that kids who regularly watched the show were better at explaining scientific concepts than those who didn't. It was educational, yes. But it was genuinely fun. In fact, it was the first show to air simultaneously on both public and commercial programming.

[MUSIC]

Lizzie Peabody: By age 40, Bill Nye the Science Guy was a household name, an entire generation's favorite science teacher. It's hard to find a '90s kid who doesn't know and love him.

[MUSIC]

Lizzie Peabody: Case in point, the FedEx guy. I tried to be very, very subtle when I was mailing you this microphone, but when I went to FedEx, I just gave the address. And they were like, "Well, we need a last name." So, I gave the last name. I was like, "Nye." And he goes, "Well, we need a first name." And I just was like, "Um, Bill." And his eyes got so big. It was—. I've never seen such an immediate reaction ...

Bill Nye: That's good.

Lizzie Peabody: ... from somebody like that. So, you have real, real power among, especially among my generation.

[MUSIC]

Bill Nye: "The Science Guy" show is the greatest job in my life.

[MUSIC]

Lizzie Peabody: But Bill's job today is still pretty cool: heading up the Planetary Society, an international nonprofit dedicated to engineering projects relating to astronomy, planetary science, and space exploration. Bill says, while the forum is different, his goal is the same: Change the world.

[MUSIC]

Bill Nye: And that's still the objective of everything I do. I'm doing my best to leave the world better than I found it. With what, Lizzie? With what? With?

Lizzie Peabody: Science.

Bill Nye: Yes! Yes! Yes.

[MUSIC]

Lizzie Peabody: When we come back, we'll talk shop with Bill Nye about the challenge of making complex concepts into something fun, without oversimplifying. Plus, a look ahead at the future and the case for optimism. After the break.

[MUSIC]

Bill Nye the Sidedoor Guy

Lizzie Peabody: A lot of us can relate to the young Bill Nye walking through the Smithsonian museums, admiring the planes. But very few of us will ever grow up to see something of our own on display in a museum. That is a pretty exclusive list.

Bill Nye: Here's Cecil B. DeMille's Oscar. Here's Dorothy's Ruby slippers. Okay? And here's Bill Nye's lab coat in the same—. Like, dude! Dude.

Lizzie Peabody: To return to a place that meant so much to him as a kid and find his own belongings there, what does that feel like?

Bill Nye: It's, it's, it's, it's really hard to get. The remarkable turn of events that's led to this is really—. It's, it's quite moving. I get choked up.

Lizzie Peabody: Bill Nye the Science Guy's powder blue lab coat and periodic table of elements bowtie are currently on display in the Smithsonian's National Museum of American History. But when Bill first went to the museum to see them, he noticed something was amiss with the mannequin's white shirt.

Bill Nye: They had purchased a shirt that did not have a placket, speaking of etymology. So, you know—.

Lizzie Peabody: Yeah. What's a placket?

Bill Nye: You know just what it is. This is the part behind the buttons on a shirt, so that the buttons are presented in, essentially, a ribbon or a strip.

Lizzie Peabody: Oh. Fashion lesson from Bill Nye: If you're going to be on TV, wear a white shirt with a placket.

Bill Nye: Only a chump doesn't wear a white shirt.

Lizzie Peabody: But at the museum, Bill took one look at the white shirt on the mannequin and saw no placket.

Bill Nye: So, I literally took the shirt off my back and presented it to the Smithsonian. And that's the one.

Lizzie Peabody: What?

Bill Nye: Yeah, yeah. They gave me the shirt that was on the mannequin, and I gave them the shirt off my back.

Lizzie Peabody: Did you alert them as to what was happening or did you just start stripping off your clothes and let them figure it out?

[MUSIC]

Bill Nye: Yeah, no. We, we had a very, a brief discussion.

[MUSIC]

Lizzie Peabody: Are you telling me that the, that the white shirt on the mannequin currently at the National Museum of American History has Bill Nye's, like, sweat on the collar?

Bill Nye: Yeah. It has my DNA in it. Unless it's been, you know, carefully sterilized.

Lizzie Peabody: I don't know. This story betrays a real attention and, I'd say, dedication to details. Is that kind of representative of how you move through the world in general?

Bill Nye: Sure, it is, Lizzie.

[MUSIC]

Lizzie Peabody: Bill Nye's DNA currently resides in an exhibition called "Entertainment Nation." It's not an exhibition about science. It's all about the power of entertainment to captivate, inspire, transform, and how entertainment can be part of our national conversations about, you know, who we are and who we want to be. How important is that entertainment piece for you?

Bill Nye: Now, Lizzie, everybody listening, I did not cue her on this.

Lizzie Peabody: No. That's my own question.

Bill Nye: But I testified in front of the FCC.

Lizzie Peabody: Back in 1990, Congress passed the Children's Television Act, which required broadcast TV stations to air programs that were educational for children. But it was up to the Federal Communications Commission, or FCC, to define "educational programming." In 1993, the FCC proposed guidelines that said the primary purpose of the show should be education over entertainment.

Bill Nye: So, I testified, and I told them, "'The Science Guy Show' is an entertainment show first before it is an education show." "No, you don't—." "Bill, you're speaking dichotomously. You don't know what you're—." "No. You guys, I make the freaking show. Okay? It's entertainment first. It's education first-ish. 1B, if you will. And this fundamental idea, you guys, if you're going to make a TV show, it's got to be worthy of being on the TV. In order to be successful as an educational show, it has to be entertaining to watch."

Lizzie Peabody: Yeah. Well, you know, I'm, I'm glad you brought that up, because this is something we talk about all the time on, on this show, on Sidedoor, is, you know, how to present a subject in a compelling way without sacrificing nuance and accuracy. Like, I remember going back and forth with a former producer when we were doing a show about orchid fungus, and I wrote the word "seedling" into the script, and he thought we should use the word "baby plant" in case people didn't know what a seedling was. And I was like, "Of course, people know what a seedling is!" But that line, you know. When, when you're trying to entertain but also educate and inform, you're always walking that line where some people will think you're oversimplifying or watering down. But to make it accessible to the most people, you do have to leave some stuff out. So, was that ever a challenge to strike the balance between what feels important and what will be entertaining and accessible?

Bill Nye: Lizzie, are you kidding? That's the whole thing. No. That's the whole thing, is what to leave out. What to not say is the great challenge.

[MUSIC]

Bill Nye: Let's take the word "seedling." What you might do there is say "seedling—also known as a baby plant." With an em dash. "Seedling—also known as a baby plant."

Lizzie Peabody: Both words in the same—. Yeah.

Bill Nye: An em dash, everybody, is a dash as long as the letter M. Okay? That's where it came from. And I'm so old, Lizzie. I'm so old, Lizzie.

Lizzie Peabody: Yes?

Bill Nye: No. You say, "How old are you?" I'm so old.

Lizzie Peabody: Oh. How old are you, Bill?

Bill Nye: When I was in high school at Alice Deal in Washington D.C., they let me take print shop.

Lizzie Peabody: Well, what I'm hearing in your answer about what to leave out is your permission for me to cut the em dash portion of this interview when I cut it together.

Bill Nye: Suit yourself. But I'm going to entreat you to leave in "empennage."

Lizzie Peabody: Okay.

Bill Nye: But you don't have to. I mean, it's your, it's your freakin' show.

Lizzie Peabody: For me, talking to Bill Nye was a little like getting to go back and talk to a favorite teacher, someone you looked up to as a person with answers. And I guess I was looking for some guidance about how to think about the future when I asked him this question: If you were going to come back and make one more episode of "Bill Nye the Science Guy," what would it be about?

Bill Nye: Oh, it'd be about climate change. But it would include three ideas that I talk about all the time: clean water, renewable electricity that's reliable, and access to the internet for everybody on Earth. Clean water, renewable electricity, access to the internet.

[MUSIC]

Lizzie Peabody: I really appreciate that answer. I am one of this generation that came of age watching your show. And so, I think—. For, for everyone, it's different. But, for me, I think you were a grownup at a time when I had faith that grownups knew what to do. And now that I am a grownup and, you know, the world is filled with no shortage of just troubling things to worry about, I mean, in a way, there's a part of me that wants to reach out and, like, ask you—it's like, "Bill Nye, what do we do?"—as a way of getting back in touch with that lost sense of safety. And in a way, you've kind of given me an answer to that question.

Bill Nye: God, that's great, Lizzie. And to be sure, on "The Science Guy" show, we worked very hard to not scare the kids. So, I'm glad that it was effective with you. Because if you stop and think about it, climate change is the real deal. We could go out of existence if we don't address climate change. It's been the main problem for me for the last 40 years. And so, we worked very hard on "The Science Guy" show to not scare the kids, but, nevertheless, provide the information. And also, you know what? Now, that I talk about it, Lizzie?

Lizzie Peabody: What? What?

Bill Nye: It's optimism!

[MUSIC]

Lizzie Peabody: You've got to be optimistic or you're not going to get anything done. Don't come running to me, people. But when you play a game, you play to win. You don't go into the game. "I think I'm going to lose" No, you go in optimistic, that you have a chance that you're going to be able to prevail. I am very optimistic about the future, Lizzie, because of people like you. People who watched the show, got interested in the process of science, so that when it's time for you to vote and pay taxes, you will support investment in science and basic research.

Lizzie Peabody: Lesson from Bill Nye: As daunting as the future can look, there's a lot to be excited about, too.

Bill Nye the Sidedoor Guy

Bill Nye: You know, it is very possible that, in your lifetime, Lizzie, people will find evidence of life on another world.

[MUSIC]

Bill Nye: That will change the course of history. It's very possible that, even in the next five years, people will figure out what exactly dark energy and dark matter are.

Lizzie Peabody: Yeah.

Bill Nye: It's quite possible in your lifetime that we will harness or figure out how to have fusion energy on the Earth's surface. If we could do that, it would change the world. Everybody could have electricity. And that could very easily happen in your lifetime, Lizzie. Thank you for having me on this show.

[MUSIC]

Lizzie Peabody: Thank you so much for coming. This was—. It's such an honor to talk to you. I really enjoyed the conversation. And I, I just so appreciate you being so generous with your time.

[MUSIC]

Bill Nye: Oh, man. This is, you know, my thing. Everybody out there, anywhere in the world ...

Lizzie Peabody: Final Lesson from Bill Nye ...

Bill Nye: ...make a point, someday, to go to the Smithsonian.

Lizzie Peabody: And we did not tell Bill Nye to say that.

[MUSIC]

Bill Nye: Back to you, Lizzie.

[MUSIC]

Lizzie Peabody: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX.

[MUSIC]

Lizzie Peabody: Come check out Bill Nye's only minimally sweated-in Science Guy getup at the Smithsonian's National Museum of American History. If you can't make it in person, we'll link the exhibition in our newsletter. We'll also include some goodies about a few of Bill Nye's favorite things at the Smithsonian, like the STP-Paxton Turbocar, the X-15 rocket and, um ...

Bill Nye: Empennage?

Lizzie Peabody: No! No.

Bill Nye: The George Washington sculpture? Calling the signals in Greek?

Lizzie Peabody: No.

Bill Nye: The elliptical trailing edge and the Supermarine Spitfire?

Lizzie Peabody: Wow. You kept really good track of your digressions. That's impressive.

[MUSIC]

Lizzie Peabody: You can subscribe at si.edu/Sidedoor.

[MUSIC]

Lizzie Peabody: Special thanks to Bill Nye and Leah Laneski. Thanks also to our team at the National Museum of American History: Valeska Hilbig, Ryan Lintelman, and Laura Duff. And thanks to the Smithsonian's National Air and Space Museum for inspiring young Bill Nye, who then inspired us.

[MUSIC]

Lizzie Peabody: Our podcast is produced by James Morrison and me, Lizzie Peabody. Our associate producer is Nathalie Boyd. Executive producer is Ann Conanan. Our editorial team is Jess Sadeq and Sharon Bryant. Tami O'Neill writes our newsletter. Episode artwork is by Dave Leonard. Fact-checking by Adam Bisno. Extra support comes from PRX. Our show is mixed by Tarek Fouda. Our theme song and regular episode music are by Breakmaster Cylinder.

[MUSIC]

Lizzie Peabody: If you want to sponsor our show, please visit sponsorship@prx.org.

[MUSIC]

Lizzie Peabody: I'm your host, Lizzie Peabody. Thanks for listening.

[MUSIC]

Bill Nye: George Washington was a very good-looking guy. God, that was part of his success. He was a very handsome man. And so, more power to him. That's really—. And he's so good-looking, everybody. How good-looking is he? Lizzie Peabody just went right to it. Looks at a marble statue of the guy and goes, "Wow, that's sexy. Wow." It shows you the power of art.