

Brains On (APM) | Brains On! Could you walk around the world? 01FVZD299GMXF7JEPT0K59EB5P

ENADA: You're listening to *Brains On* where we're serious about being curious.

CHILD: *Brains On* is supported in part by a grant from the National Science Foundation.

[CLATTERING]

MOLLY BLOOM: Marc, is it done?

SANDEN Yeah, Marc. Is it done? We want to see it.

TOTTEN:

MOLLY BLOOM: Yeah, we want to see it.

MOLLY AND Please, please, please, please, please, please, please, please, please, please.

SANDE:

MARC Hold on. Keep your eyes closed, just 1 second longer while I finish (STRAINED) one thing.

SANCHEZ:

And there.

[WHEELS ROLLING]

OK, now, you can see it. Feast your eye holes on the EXPLORERER.

[MUSIC PLAYING]

- Ooh.

MOLLY BLOOM: Wow.

MARC Obviously, the EXPLORERER stands for Extremely Practical Land and Ocean Rover Exploring Remote Realms.

SANCHEZ:

MOLLY BLOOM: Obviously.

SANDEN It's so obvious. Wow. Marc, this vehicle is stunning!

TOTTEN:

MOLLY BLOOM: Is that a drill on the front?

MARC To tunnel through the Earth.

SANCHEZ:

SANDEN And are these wings?

TOTTEN:

MARC For flying in the sky.

SANCHEZ:

MOLLY BLOOM: Oh, look, skis!

MARC Yeah, for snowy roads.

SANCHEZ:

SANDEN Fins?

TOTTEN:

MARC For diving underwater!

SANCHEZ:

MOLLY BLOOM: Wow, Marc, you thought of everything.

SANDEN Yeah. Oh, this will be the perfect vehicle for our ultra epic super surprising total planet road trip!

TOTTEN:

[AIR HORN]

[HORN HONKING]

This is going to rule.

MARC Yeah, it better rule. We're going to turn our adventures in the EXPLORERER into our next book, *Road Trip Earth*.

SANCHEZ: So I figured, we need to see all of the Earth.

MOLLY BLOOM: Ooh, check out the cockpit! There are so many buttons. What does this one do?

[BEEPS]

MARC That one gives you a taco. See?

SANCHEZ:

SANDEN Emergency taco dispenser, nice, Marc. Hey, how about this button?

TOTTEN:

MARC Also, a taco.

SANCHEZ:

SANDEN And this one?

TOTTEN:

MARC (MOUTH FULL) Oh, it's another taco.

SANCHEZ:

SANDEN And this one?

TOTTEN:

[BEEPS]

MARC Taco.

SANCHEZ:

[CHUCKLES]

That's four tacos.

SANDEN And this one?

TOTTEN:

MOLLY BLOOM: Sanden, I'm going to take a wild guess and say, every one of those buttons leads to more tacos.

MARC Not this one.

SANCHEZ:

[CHEWING]

This one gives you salsa.

[BEEPS]

[LIQUID POURS]

MENAKA Hi, friends. Are you ready to hit the road? Whoa. This vehicle is so cool. Is that a radar and bunk beds? And oh

WILHELM: man, it has taco buttons? Yes, please.

MOLLY BLOOM: How did you know that was a taco button?

MENAKA Doesn't every car have a taco button?

WILHELM:

[CRUNCH]

Mm. Tastes like it was cooked on the engine. Man, you all are going to have so much fun!

SANDEN Too bad you can't come, too, Menaka.

TOTTEN:

MENAKA Yeah, but someone's got to hold down the fort and make sure Bob doesn't start alphabetizing the contents of the
WILHELM: studio again. It makes it really hard to record an episode when the headphones are up by the hanging plants or when the microphones are over by the mirrorball in the ceiling. And I overheard Gungador talking about how he wants to turn Elevator into a mobile home gym. And she would not be happy about that. Plus, whenever we're not around, Harvey just starts online shopping to fill the void. We're still finding new homes for all those lava lamps he ordered last time.

MOLLY BLOOM: Yeah, it makes sense. But we'll miss you.

SANDEN We'll make sure to call you from the road.

TOTTEN:

MARC And we'll definitely bring you back some super sweet souvenirs.

SANCHEZ:

MOLLY BLOOM: And thank you so much for hosting the show while I'm gone. You're going to be amazing.

MENAKA Aw, thanks, Molly.

WILHELM:

SANDEN All right, big group hug, everybody, before we go. Bring it in. Bring it in.

TOTTEN:

[PATS]

See you soon.

MENAKA Safe travels!

WILHELM:

[ENGINE STARTS]

MOLLY BLOOM: Bye, Menaka!

SANDEN So long!

TOTTEN:

[EXPLORERER DRIVES OFF]

[CLEARS THROAT]

BOB: Menaka? Just wondering. Are you using the studio this afternoon? If not, I'd love to get in there and do a little--

MENAKA Oh, yeah, Bob. I do have a taping in there today. In fact, Enada will be here any minute. Why don't you go ahead
WILHELM: and alphabetize Molly's socks?

BOB: Oh, great idea. Should I alphabetize by color, material? Oh, maybe material first and then within each material, color and pattern. So we'd start with the alpaca wool socks, and then within the alpaca category, it'll go to aubergine, beige, cream, denim, emerald green, forest green--

[MUSIC PLAYING]

MENAKA You're listening to *Brains On* from APM Studios. I'm Menaka Wilhelm, and my co-host is Enada from Silver Spring,
WILHELM: Maryland. Hi, Enada!

ENADA: Hello.

MENAKA This episode was inspired by a question you sent us.

WILHELM:

ENADA: Yeah, my question was how long will it take for me to walk around the world, and by the end, how old would I be?

MENAKA I love this question. Do you remember what made you think of it?

WILHELM:

ENADA: Yeah, I was just thinking about time and how cool it was. And then I thought, well, walking around the world should take a long time. So how long would it take really?

**MENAKA
WILHELM:** Yeah, and when you thought about that question, were you thinking they would be in the range of like weeks or months or years? Did you have an idea of how long it would be?

ENADA: Maybe a few months.

**MENAKA
WILHELM:** Do you know where you'd want to stop, like which route you'd want to take?

ENADA: Maybe straight up and then to Canada because I don't think you can walk on water.

**MENAKA
WILHELM:** That is definitely the tricky part about going around the Earth. Do you feel like you like walking enough to go all the way around the world?

ENADA: Not at all.

[LAUGHS]

**MENAKA
WILHELM:** What kind of walks do you do in your normal life?

ENADA: A one-hour to two-hour walks usually.

**MENAKA
WILHELM:** That's a really long walk.

ENADA: Yeah.

**MENAKA
WILHELM:** You could definitely be on your way to walking around the world. And we asked our listeners what spots they would want to make sure they saw on their walks around the world. Here's what they had to say.

[MUSIC PLAYING]

AMANIA: Hi, *Brains On*. My name is Amania. I'm 10 years old, and I live in Delhi, India. If I was walking around the world, I would definitely visit NASA in Washington D.C., America.

EMMETT: My name is Emmett, and I live in Dover, New Hampshire. The place I want to visit is [INAUDIBLE] in Ethiopia.

AMALIA: Hi, my name is Amalia, and I want to go to Australia. Bye.

JACK: Hi, my name is Jack. If I walked around the world on my bare feet, I would stop in Sweden to go see Mojang Studios.

ASHRA: My name is Ashra, and I live in Potomac, Maryland. If I could walk around the world, one place I would have to see would be the Amazon rainforest so I could see and discover new birds.

BRADEN: If I was walking out around the world, and I had to stop to see one place, I would definitely stop to see the Eiffel Tower in Paris, France.

INGRID: Hi, my name is Ingrid from Pennsylvania. If I was going on a really, really long trip across the world, I would go to Rabbit Island in Japan.

ELLIE: My name is Ellie, and anywhere I want to walk around the world is to visit the Great Wall of China.

LIAM: Hi, my name is Liam, and I'm from Granby, Connecticut. And if I could walk around the world, I would definitely visit the volcanoes in Hawaii.

BELLAMY: My name is Bellamy. I'm from Fayetteville, Arkansas. If I were traveling around the world, I would make sure to visit the beautiful island of Sri Lanka.

JULIAN: My name is Julian, and I live in Delaware. I would swim in the cenotes of the Yucatan Jungle in Mexico because I can swim under water not on top yet, and I'm really interested in cave diving.

[MUSIC PLAYING]

**MENAKA
WILHELM:** Thanks to Amian, Emmett, Amalia, Jack, Ellie and Liam, Ashra, Braden, Ingrid, Bellamy, and Julian for sending in those cool sights.

CHILDREN: Brains on!

**MENAKA
WILHELM:** All right, Enada, so being able to see all of those spots would take a lot of walking. So let's answer your question about how long it would take to walk around the world. To answer it, we've got to do a little math. So first, let's look at a globe. You'll see there's kind of a line right around the Earth's middle, and we call that line the equator.

ENADA: The equator is kind of like the Earth's belt, but it's not holding up pants or anything.

**MENAKA
WILHELM:** That's right. We all know the Earth doesn't wear pants. But anyway, let's just assume you walked in a straight line around that equator. And let's just pretend for simplicity's sake, that you can walk straight through the mountains and over the oceans and everything.

ENADA: Like I'm some kind of walking wizard. Oh, and that's [? how the ?] [? Ambler. ?] There's magic in my stride.

**MENAKA
WILHELM:** I like it. OK, so at the equator, the Earth is approximately 24,901 miles around, and the average person walks 3 miles per hour. So let's say you're walking 24,901 miles at a pace of 3 miles an hour.

ENADA: That means we just need to divide 24,901 by 3 to get the number of hours it would take.

**MENAKA
WILHELM:** Exactly. So I'll do the math, and the answer is--

[DRUM ROLL]

--8,300.33 hours.

ENADA: 0.33 hours? So that would be like 20 minutes?

**MENAKA
WILHELM:** Yes, exactly. It would take you 8,300 hours and 20 minutes to walk around the Earth's belt at a speed of 3 miles an hour. But honestly, 8,300 hours is kind of hard to make sense of. So let's talk days. There are 24 hours in a day. So if you divide 8,300.33 hours by 24 hours, you get 345.85 (ECHOING) days.

Round up, and you get 346 (ECHOING) days.

So Enada, if you didn't stop, didn't sleep, and walked around the equator, which would mean walking thousands of miles across the ocean--

ENADA: All of which is no problem for a walking wizard.

[CHIMES]

MENAKA
WILHELM: Of course, given all that, it would still take you 346 days to walk around the world. And that's just a little less than a year. So you'd be a year older than you are now, Enada, which would be--

ENADA: 10, 10-ish?

MENAKA
WILHELM: Got it. So you'd be 10. So if you left on January 1, you'd be back where you started on December 13, which is a long time to be awake. So let's get real. Magic and wizardry aside, it's just not possible to walk around the Earth that way.

MAN: Not for me.

MENAKA
WILHELM: Huh? Who are you?

WALKMAN: I am Walkman! I never sleep. I never stop. And I can walk on water!

ENADA: Wait. Are you a wizard? Or maybe a robot?

WALKMAN: Who knows. I just walk. That's what's important. See? I got this inflatable treadmill with wave stabilization--

[AIR SIPHONING]

--and a waterproof bubble that envelops me. And it protects me from getting water in my ears.

MENAKA
WILHELM: I mean, wow.

WALKMAN: And to pass the time, I listen to my favorite cassette tape on my Walkman!

[MUSIC PLAYING]

MENAKA
WILHELM: You only have one cassette tape with 8,300.33 hours to kill?

[WORDLESS SINGING]

WALKMAN: Walkman is off to walk around the world! See you in 346 days!

MENAKA
WILHELM: OK, bye, Walkman!

[MUSIC PLAYING]

Anyway, as I was saying, walking roughly 24,901 miles around the Earth in 346 days isn't humanly possible. But there's more than one way to get across the globe.

ENADA: Who says you have to stick to the equator? You could map a different route, find shelter to sleep in, and feed yourself along the way.

MENAKA Right, if you do that, then it can be done, and it has been done. Here to tell us more about an amazing
WILHELM: adventure, who's made that journey, is our friend Rosie DuPont. Hi, Rosie.

ROSIE DUPONT:Hi, Menaka. Hi, Enada. Thanks for the intro, and yes, I'm here to tell you about another Rosie, Rosie Swale-Pope. She's a writer and adventurer who has sailed solo across the Atlantic in a 17-foot sailboat, trekked 3,000 miles through Chile on horseback, and walked and ran around the world. If anyone can answer the question, how long would it take to walk around the world? Rosie can. So I decided to give her a call.

[PHONE RINGS]

ROSE SWALE- (OVER THE PHONE) Hello?

POPE:

ROSIE DUPONT:Hello, Rosie!

ROSE SWALE- (OVER THE PHONE) Hello.

POPE:

ROSIE DUPONT:How are you?

ROSE SWALE- (OVER THE PHONE) Well, kind of been a wild night, preparing and with storms and everything. But I am fine, and

POPE: here we are.

ROSIE DUPONT:Rosie took my call from a campsite in Brighton, England on a cold, rainy January afternoon where she was training for a journey and living out of something called a jog pod. It's a shelter she takes with her on her adventures.

ROSE SWALE- There's a red, bouncy little cart. It's 10-foot long, and it's 4-foot wide. And I do everything in there, cooking,

POPE: cleaning myself, and also I have many visitors like animals coming in.

ROSIE DUPONT:It's got a harness that she slips over her shoulders and a belt that fastens around her waist so she can pull it behind her as she runs.

ROSE SWALE- My home follows me everywhere I go. And it's amazingly neat and comfortable, too.

POPE:

ROSIE DUPONT:Rosie traveled with a cart like this on her journey around the world. Today, she is--

ROSE SWALE- 75 years old.

POPE:

ROSIE DUPONT:But her trip around the world began on her 57th birthday. She set off on October 2, 2003 on a route no one had ever taken before.

ROSE SWALE- The route I took was from my own hometown Tenby to Harwich, and then from Harwich across Holland, Germany, Poland, Lithuania, Latvia, Riga to Moscow, and then all the way through Russia, Siberia, and then Alaska. Then I ran all the way to New York, and then to Nova Scotia, and then to Greenland, and then through Iceland, and then back home, down the length of Britain to my own front door again.

ROSIE DUPONT:Woo! It took her 5 years, and she covered 20,000 miles. That's around 1,826 days on the road. She survived on simple foods like olive oil, muesli, jam, and buckwheat and went through 53 pairs of shoes.

ROSE SWALE- Sometimes, it had to last for a thousand miles because I was so remote. Other times, it would just be a question of not having any shoes except normal carpet slippers or something.

ROSIE DUPONT:Running is hard. Running in slippers across Siberia, almost unbelievable. The journey was difficult. So difficult I had to know why she did it.

ROSE SWALE- I was inspired to run around the world because I believe you need to fight darkness with light.

ROSIE DUPONT:Rosie's journey was fueled by a desire to, as she described it, highlight the preciousness of life. She decided to make the journey shortly after her husband passed away. And she said it gave her a sense of purpose. Along the way, she raised money for cancer awareness and an orphanage in Russia. And when I asked her how she started each day on the road, she said--

ROSE SWALE- Opening my eyes and saying thank you for the day.

ROSIE DUPONT:Whether you're running around the world or just waking up for another school day, saying thank you is a really amazing way to start the day. And feeling grateful requires courage sometimes, especially when you're spending years of your life trekking solo through thousands of miles of wilderness.

MENAKA Wow, that's incredible. So Rosie Swale-Pope traveled 20,000 miles around the world, and it took her 5 years.

WILHELM: What do you think about that, Enada? What surprised you about Rosie's story?

ENADA: That's really cool. Something that surprised me, the 50 pairs of shoes?

MENAKA It's a lot of shoes, yeah. I had never heard of a jog pod.

WILHELM:

ENADA: Me neither.

MENAKA So that was quite a surprise for me. Would you want to do a journey like that one day?

WILHELM:

ENADA: Maybe. Probably not.

MENAKA It would be a big undertaking, but I bet Rosie has some amazing stories from her travels.

WILHELM:

ENADA: True, true.

ROSIE DUPONT:Oh yeah. She definitely does. And we'll hear some of her wild adventures right after this.

MEN: (SINGING) Ba ba ba ba ba ba ba ba ba ba brains on.

MENAKA It's time for the--

WILHELM:

[MUSIC PLAYING]

CHILD: (WHISPERS) Mystery sound.

MENAKA Here is the mystery sound.

WILHELM:

[MYSTTERY SOUND]

ENADA: Hmm, that sounds like ruffling a paper or something.

MENAKA Should we listen to it again? It's pretty short.

WILHELM:

ENADA: Yeah, I think so.

[MYSTERY SOUND]

ENADA: Maybe somebody putting stuff in folders or getting a work desk full of papers neat?

MENAKA Mm, so straightening papers?

WILHELM:

ENADA: Yeah.

MENAKA That's a great guess. And you'll have another chance to guess a little later in the show.

WILHELM:

[MUSIC PLAYING]

We're working on an episode about worms, and we want to know what would you name a pet worm? Enada, what's your answer?

ENADA: Sir Wormis.

[LAUGHS]

MENAKA Sir Wormis is a great name. You can share a recording of your answer with us by heading to

WILHELM: brainson.org/contact. And while you're there, you can also send us your mystery sounds, drawings, ideas, and questions.

ENADA: Like this one.

GIRL: Do spiders have ears?

ENADA: You can hear an answer to that question on the *Moment of Um* podcast.

MENAKA
WILHELM: It's a brand new podcast we made to provide bite-sized answers to your awesome questions. Search for *Moment of Um* wherever you get your podcasts.

[MUSIC PLAYING]

ENADA: Molly, Marc, and Sanden are on the road right now, and you can read all about their journey in the new *Brains On* book.

MENAKA
WILHELM: It's called *Road Trip Earth*, and it's full of fascinating facts and colorful comics all about our incredible planet. Plus, you'll see the sights with Molly, Marc, and Sanden and meet some amazing creatures along the way. The book comes out March 1, but you can preorder right now by heading to brainson.org. It's a great way to support our show and get an awesome book! Again, that's brainson.org and thanks!

[MUSIC PLAYING]

ENADA: You're listening to *Brains On* from APM Studios. I'm Enada.

MENAKA
WILHELM: And I'm Menaka. Our pal Rosie DuPont is telling us about the epic solo journey that another Rosie, Rosie Swale-Pope, took around the world on her own two feet.

ROSIE DUPONT: Yeah, and Rosie told me one of the longest and most daunting parts of her journey around the world was her trek through the dense forests of Siberia. Stretching from the Ural Mountains to the Pacific Ocean, Siberia is over 3,000 miles across. She was very alone during this part of her journey, and it was here that she had some of her most frightening encounters.

ROSE SWALE-POPE: I was in my tent in a nice summer evening in Siberia. I was quite happy because the snow had gone, and it's a very, very beautiful part of the world. And I was just going to go into my tent, which I had then, and a man just jumped out of the trees in the moonlight and ran straight at me with his eyes bulging it seemed with fear and rage.

ROSIE DUPONT: Can you imagine being all alone in the forest at night, far, far away from any town or village, only to see a man jump out of a tree and run at you?

MENAKA
WILHELM: That's very hard to imagine and would be very scary.

ROSIE DUPONT: Enada, what does that make you feel?

ENADA: Just scared like someone just creeping up on you? I would be running.

ROSIE DUPONT: Yeah, I would, too. I would be running very fast, very far,

ENADA: Or taking something like--

[GASPS]

--get away. Something like that.

ROSIE DUPONT: Yeah. Do you know any self-defense, Enada?

ENADA: I know how to push someone over easily. I've done that a lot of times.

[LAUGHS]

MENAKA That would be a great start.

WILHELM:

ROSIE DUPONT: Yes, great start. But it turned out, the man who jumped out of the tree wanted to help Rosie.

ROSE SWALE- And then he confessed he'd come to invite me to a party. And I said, no, because it's 2:00 in the morning. I was
POPE: struggling to control my fear. So I went to sleep believing it would be all right, using strength, and in the morning, the old man had left a little parcel beside my tent with bread, sausages, and a bit of drink just in case.

ROSIE DUPONT: Phew, that was a close one. But that wasn't Rosie's only wild run-in. She also had encounters with frightening animals like this one time in Germany. She set up camp in a forest there and was jolted awake when the little tent she'd pitched started moving.

[SQUEALING]

Suddenly, she realized a wild boar had climbed into the tent with her.

ROSE SWALE- Eric the wild boar was in the tent, and I was in the tent. And neither of us could get out, and he was frightened. I

POPE: realized then that this little pig was both frightened than I was.

ROSIE DUPONT: I never found out why she named the wild boar Eric or how he got out of her tent. But I assume he exited safely. Then there was her encounter with a wolf.

ROSE SWALE- I was in Siberia. It was a pretty ordinary day. I still got 10,000 miles to run and walk. And I was making my

POPE: supper. I'd collected the snow and brought it inside to melt it on the Primus stove. And then suddenly, a wolf stuck his head in the tent.

ROSIE DUPONT: She says, it stared at her with piercing eyes.

ROSE SWALE- I was so frightened my heart was pounding. I thought, please don't eat me, and I was all alone in 500 miles of

POPE: wilderness.

ROSIE DUPONT: But then, the wolf disappeared. Poof just like that, off into the night.

[HOWLING]

Rosie had some close calls. But the trip wasn't just scary moments. It also showed her that she could do anything, even something unthinkable. And that sums up Rosie's philosophy about life.

ROSE SWALE- Anyone can do anything if they work hard. When I was a girl, I wasn't much of an athlete, but now, I've run

POPE: around the world.

ROSIE DUPONT: She didn't start running until she was about 50 years old, and she thanks her grandmother and her local running club for encouraging her and making her believe anything is possible.

ROSE SWALE- If someone believes in you, you can do it. The best long word in the whole world is encouragement.

POPE:

ROSIE DUPONT: By the end of our conversation, I felt invigorated like I could do anything if I put my mind to it. Rosie Swale-Pope agreed.

ROSE SWALE- You've got the life in front of you and never, never give up and saying, I can't take no more breath than saying I can't. You can do it. The best is a movable thing. It's a moving horizon, and you can go further and do more than you ever thought you could.

ROSIE DUPONT: So Enada, if you want to run a mile, a marathon, or even around the world, Rosie believes you can do it, and I do, too. If you can believe it, Rosie has also run 27 marathons in 27 days, sailed around the world, and run across the Sahara Desert twice, all just by planning ahead and saying, I can do it.

ENADA: So cool, thanks so much, Rosie.

ROSIE DUPONT: You bet. Bye, Enada. Bye, Menaka.

[MUSIC PLAYING]

ROBOT: Brains on, on, on.

MENAKA All right, Enada, are you ready to go back to that mystery sound again?

WILHELM:

ENADA: Yeah.

MENAKA Here it is.

WILHELM:

[MYSTERY SOUND]

ENADA: Kind of sounds like it still sounds like papers, but now I hear like markers maybe putting on caps.

MENAKA Mm. So papers, markers putting on caps. We're thinking kind of arty desky supplies? Do you want to hear it one more time since it's short?

ENADA: Yeah.

[MYSTERY SOUND]

MENAKA I have a hint for you, Enada, which is that this is related to this episode and one of the things that we've talked about that you need to walk around the world.

ENADA: That's difficult now that I think of it. How could something running with shoes sound like paper? Maybe somebody running in the rain with some kind of weird flooring?

MENAKA That's a great guess. You're very close. The answer is that it's the sound of untying shoelaces. So that's why you
WILHELM: were hearing the sort of rusty slipping noise.

ENADA: Wow.

MENAKA Yeah, so you're really close. And if you're going to walk around the world, one of your biggest concerns is going to
WILHELM: be finding the right pair of shoes.

ENADA: Or as we learned from Rosie, 53 pairs of shoes!

MENAKA Yeah, that's a lot. I wonder if there's a way she could make the whole trip using just one pair of shoes.
WILHELM:

ENADA: Oh, like with some totally tough, long lasting, ultra cushioning, foot funk repelling super sneakers!

MENAKA Preferably with sparkly laces.
WILHELM:

ENADA: To find out about something like that, we'd need to talk to a shoe designer.

MENAKA Yeah, someone like D'Wayne Edwards.
WILHELM:

D'WAYNE I am the President of PENSOLE Lewis College of Business and Design in Detroit, Michigan.
EDWARDS:

MENAKA D'Wayne started a design school specifically for shoes. He's designed shoes for performers as well as all kinds of
WILHELM: athletes like Olympians, boxers, baseball players, and lots of basketball players. Ever heard of Air Jordans? Yep, some of those shoes were brought to life by D'Wayne. But depending on what you're doing in your shoes, your shoes need to do different things for you.

D'WAYNE If you are a performance footwear designer, then you're studying the athlete or the person that needs this
EDWARDS: product to work like to be an extension of their body. If you take a sport like say basketball versus skateboarding, in basketball, you're somewhat moving in all these directions, and you're stopping on a dime. The bottom surface is different versus a skateboard that has hard sandpaper that creates this grip. But it's all in the movements and what the athlete is doing in the product that totally dictates how you design it.

ENADA: But what about shoes for a super walker like Rosie?

D'WAYNE I would approach it less like designing a shoe, but more so designing like equipment for her feet because she
EDWARDS: would need attachments that she can add on that would give her more support, attachments that she can add on that would give her more energy, as far as her feet moving a lot more from a massage point of view, and you almost develop this walking system.

MENAKA So instead of changing shoes for different occasions--
WILHELM:

ENADA: Like sandals for the beach and boots for hiking--

MENAKA D'Wayne's idea would be to make one shoe frame that you could change parts for to suit your different needs.
WILHELM:

D'WAYNE If it's snowing, you want to have different grip. You want to have different warmth. So it would be one foot frame
EDWARDS: that has multiple components that you can add on and take off based on the conditions that you're experiencing.

ENADA: So cool! You could look at the weather and map your route for the day and build the perfect shoe on the spot.

MENAKA Genius! That's why D'Wayne is such a famous shoe designer. He thinks outside the shoe box.
WILHELM:

ROBOT: Brains, brains, brains on.

SANDEN Are we there yet?
TOTTEN:

MOLLY BLOOM: Yeah, it feels like we've been driving forever.

MARC Well, technically, we're drilling not driving. There's a lot of planet to dig through to get to the center of the Earth.
SANCHEZ: But come on. How rad will it be to start our trip at the very core of the planet.

SANDEN Very rad.
TOTTEN:

MARC You know, now, would be a good time to start taking notes for our book. If you want to write something, just hit
SANCHEZ: that button, and a journal will pop out for you.

MOLLY BLOOM: Oh, cool. This one?

[BEEP]

MARC No, that's a taco.
SANCHEZ:

SANDEN This one?
TOTTEN:

[BEEP]

MARC Also a taco.
SANCHEZ:

MOLLY BLOOM: Oh, it's this one.

[BEEP]

MARC Oh, oh, no. That one's for tacos.
SANCHEZ:

SANDEN How about this one?

TOTTEN:

[BEEP]

MARC Oh, no, no, no, no, no, no. That's a taco. It's just over there, right past the taco button.

SANCHEZ:

[MUSIC PLAYING]

ENADA: It's not exactly possible to walk all the way around the world, but you can get close.

MENAKA Rosie Swale-Pope is one of the people who got pretty much all the way around the world.

WILHELM:

ENADA: She did it in 20,000 miles, and it took her 5 years! She also went through more than 50 pairs of shoes.

MENAKA The design of a shoe depends on what you need to do in that shoe. Someone like Rosie would need a shoe that
WILHELM: could morph depending on the conditions. That's it for this episode of *Brains On*.

ENADA: This episode was produced by Molly Bloom, Rosie DuPont, Ruby Godfrey, Marc Sanchez, Sanden Totten, Menaka Wilhelm.

MENAKA Our fellow is Anna Goldfield. We had production help from Philip [? Blodger, ?] and we had engineering help from
WILHELM: Johnny Vince Evans. Our executive producer is Beth Pearlman, and the executives in charge of APM Studios are Lily Kim, Alex Schaffert, and Joanne Griffith. Many thanks to Amal [? Al-azay, ?] Eric Ringham, James [? Rabe, ?] Ash [? Rotim, ?] and Megan Bryant.

ENADA: *Brains On* is a nonprofit public radio program.

MENAKA There are lots of ways you can support the show. You can donate, buy our books, or tell your friends about us.

WILHELM:

ENADA: Head to brainson.org to find the links to donate and buy the books.

[MUSIC PLAYING]

MENAKA And remember, you can find an answer to the *Moment of Um* question, do spiders have ears on the *Moment of Um* podcast.

WILHELM:

[MUSIC PLAYING]

WOMAN: Um.

MENAKA I'm so excited to read this list of names. It's time for the Brains Honor Roll. These are the incredible listeners who
WILHELM: send us their drawings, mystery sounds, questions, and high fives.

[MUSIC PLAYING]

[LISTING HONOR ROLL]

ROBOT: (SINGING) Brains Honor Roll, high five.

MENAKA We'll be back soon with more answers to your questions.

WILHELM:

ENADA: Thanks for listening!