

The Pop Ups. Stay seated. Three, two, one, ignition. Get ready for an adventure of magnificent proportion.

The Pop Ups. (Singing.) I don't know what you've been told, but we're in a golden age - so many discoveries that are jumping off the page. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world. Wow in the world.

The Pop Ups. With Guy and Mindy. We're on our way, Houston.

Guy Raz. (Singing.) Floor one, floor two, floor three, four, five. Elevators are so cool. So come on. Let's ride in the elevator. Elevators are so - what in the...

Mindy Thomas. Good morning, Guy Raz. Can I interest you in some fancy coffee and a tiny cup fit for a baby?

Guy. Mindy, what in the world are you doing in my kitchen at this hour?

Mindy. Mine caved in again. Got any fish tacos in here?

Guy. What? No. Mindy, you've got to find someone to rebuild your own kitchen. This is my kitchen. And everything is in its right place. And - are you using my Elevate Your Soul magazine as a placemat?

Mindy. And as a bib.

Guy. Mindy!

Mindy. Why? What is this magazine anyway?

Guy. This, Mindy, is only the most popular elevator music magazine in America.

Mindy. Yeah, I'm pretty sure it's the only elevator music magazine in America.

Guy. What?

Mindy. What?

Guy. It's one of my favorites. Check it out - the latest band interviews, where to listen to the latest hits.

Mindy. Let me see that. An exclusive interview with the biggest name in interfloor transportational music? What is this?

Guy. That's them, Mindy!

Mindy. What's what?

Guy. The band that they're interviewing, The Elevates.

Mindy. The Elevates?

Guy. Yeah! Their new album is playing in an elevator in a building downtown. And I wanted to double check where they were playing. Ah, let me see here. Ah! There it is. The Elevates' new track will be playing from top to bottom, bottom to the top of 345 Block Street.

Mindy. Hold the phone, Guy Raz. Are you telling me that you travel to different office buildings all over town just to listen to their elevator music?

Guy. Of course I do, Mindy. Where else would you listen to elevator music?

Mindy. Um, there's - yeah, you got a point.

Mindy. (Yelling.) Reggie.

(Soundbite of bird trilling.)

Dennis. Morning, Guy. Morning, Mindy. Morning...

(Soundbite of bird trilling.)

Dennis. ...Giant pigeon.

(Soundbite of bird trilling.)

Guy. (In monotone voice.) Hi, Dennis.

Mindy. (In monotone voice.) What's up, Dennis?

Dennis. Did I overhear you saying that you were going to go listen to some new elevator music? I love elevator music.

Mindy. (Groaning.)

Dennis. Which band are you going to go listen to?

Guy. It's a band called The Elevates.

Dennis. Oh, no, no. You've got to stick with the classics. My favorite elevator band is Awkward Silence.

Mindy. OK, Reg. We're going to need you to step on it.

Dennis. Their instrumental arrangement of "The Girl From Ipanema" changed...

Mindy. Come on, Guy Raz.

Guy. Coming.

Dennis. ...The world. Look it up. Ooh, and Elevator To Heaven? No? Come on, you two!

Guy and Mindy. Here we go!

(Soundbite of music.)

Guy. Thanks, Reg.

Mindy. Yeah, thanks, Reg. You are now free to go sit on the ledge with all the other pigeons. Have fun.

(Soundbite of bird trilling.)

Mindy. OK. So, Guy Raz, this must be the - wait a minute. Are you sure this is the right place?

Guy. Yep - 345 Block Street.

Mindy. Kind of looks like a boring old, concrete office building.

Guy. I know. Isn't it perfect?

Mindy. Well, to ride an elevator while listening to elevator music, yeah, I guess it is perfect. Oh, look. A revolving door! Run, run, run, run, run, run, run, run, run.

Guy. Mindy, wait up.

Mindy. Come on, Guy Raz. You're going to miss out on all the fun.

Receptionist. Hello, sir. Welcome to 345 Block. Can I help you with anything today?

Guy. We're here to listen to the new Elevates soundtrack.

Mindy. Yeah. Can you direct us to the elevator that's playing it, please?

Receptionist. Yes, of course. That's playing in the elevators just down the hall.

Guy. Great.

Receptionist. Then, you're going to want to take that all the way up to the fifty-fourth floor.

Mindy. OK, so, Guy Raz, what is so special about this album anyway? I mean, I don't think I've seen you this excited since - I don't think I've ever seen you this excited.

Guy. Oh, Mindy, you can't even begin to understand. This record is an experimental piece that they've created just for...

Mindy. What?

Guy. Wait for it.

Mindy. What?

Guy. Just for...

Mindy. Just for what?

Guy. Just for...

Mindy. (Groaning.)

Guy. Just for space.

Mindy. Did you just say that The Elevates have created this album for space? Like what? Like, for the next shuttle launch or...

Guy. Well, no, Mindy. This album is being designed specifically for a new space program that's being developed at JAXA, which is better known as the Japan Aerospace Exploration Agency.

Mindy. Oh, I know JAXA. JAXA's like the NASA of Japan.

Guy. That's right. And they're planning on building the world's first-ever space elevator.

Mindy. Wow. That's what I call taking an elevator to new heights.

(Soundbite of rimshot.)

Mindy. Thank you.

Guy. Speaking of, here we are. OK, fifty second floor, here we come. Oh, I love this part. This is so great!

Mindy. Hold your horses, Guy Raz. You were saying that JAXA, the NASA of Japan, is building the world's first space elevator?

Guy. Yeah.

Mindy. So what in the wow is a space elevator?

Guy. OK. The year was 1895. The place was Paris, France. A Russian scientist named Konstantin Tsiolkovsky was on vacation...

Konstantin Tsiolkovsky. Oh, how do I enjoy the French sun. It is so much kinder than the Russian snow (laughter).

Guy. ...When he came across a newly built and rather spectacular monument in the middle of the city.

Mindy. Oh, the Eiffel Tower.

Guy. Exactamundo, Mindy. Tsiolkovsky would later go on to invent rocket travel. But on this trip, he was so inspired by the Eiffel Tower, this magnificent feat of engineering, that he proposed a different way of getting to space - and not by rocket but by...

Mindy. Elevator? Whoa.

(Soundbite of elevator door opening.)

Mindy. Hello. Welcome to the elevator. Come on in. There's plenty of room for everyone.

Elevator Rider. No, thanks. I'll just catch the next one.

Mindy. Well, OK. Well, suit yourself. Bye. OK, Guy Raz. So how exactly does a space elevator work? I mean, what does it even look like?

Guy. Well, it sort of looks like a giant version of those two tin cans with a piece of string between them. You know, that we use to talk to each other sometimes.

Mindy. Oh, yeah. My Guy Phone X.

(Soundbite of can falling.)

Guy. Right. It kind of looks like that, with one end attached to a giant platform out at sea and the other one way up in space, orbiting the planet.

Mindy. Huh, like a satellite?

Guy. Exactly like a satellite.

Mindy. And so what would the string be made of?

Guy. It's called carbon nanotube composition ribbon.

Mindy. Carbo nano what who-ins?

Guy. Carbon nanotube composite ribbon. It's a type of cable that's incredibly strong but also really, really light.

Mindy. Huh. OK, I think I get it. So you have this cable that goes from here all the way out into space, and then you attach an elevator car to the cable that can travel up and down the cable?

Guy. You got it, Mindy.

Mindy. OK, Guy Raz. So I get how a space elevator might work, but why?

Guy. Well, Mindy, space travel is expensive.

Mindy. Oh, man, you're telling me. I'm still trying to pay off those space suits we bought at that Black Hole fashion store at the mall.

Guy. Well, Mindy, it's not just the space suits that are expensive. I mean, refilling the International Space Station with everything from medicine to snacks, using a rocket, costs almost forty-three thousand dollars per pound of stuff.

Mindy. Whoa, that's like - hang on, let me see here. Carry the one. That's, like, twenty thousand dollars per kilogram.

Guy. And scientists over at JAXA...

Mindy. The Japanese space agency.

Guy. Right. They've predicted that once the space elevator is built, it would only cost around one hundred dollars to send up a pound of stuff, or two hundred and twenty dollars per kilogram. This idea of a space elevator has been around for some time, but it's never actually been done before.

Mindy. But...

Guy. But the Japanese space agency has proposed building one of these space elevators to deliver cargo and astronauts to places like the International Space Station.

Mindy. That's so wow. So you'll just get into an elevator like this one, press the button that says space deck and then just ride on up into space?

Guy. Well, that's the plan. Yeah.

Mindy. So when can I take a ride on this interstella-vator?

Guy. Well, sooner than you might think, Mindy.

Mindy. Yes. Just what I wanted to hear. OK, let me just get my phone out here. Clearing my calendar for next week.

(Soundbite of tapping buttons.)

Guy. Not so fast, Mindy. At Shizuoka University, where researchers are working with JAXA on the space elevator program, they're predicting that we could have an operational space elevator by 2050.

Mindy. 2050? That's, like, a million years away.

Guy. Well, it's a pretty big project, Mindy. I mean, it would easily be the longest structure on the planet.

Mindy. Yeah. Speaking of, how far will this space elevator be able to reach?

Guy. Mindy, this elevator will have enough cable attached to it to float as far as sixty thousand miles above the earth.

Mindy. Whoa. That's bonker-balls. Let me see here, that's like traveling from New York to Los Angeles twenty-one times, or two and a half times around the world.

Guy. That's right, Mindy. And although this astronomical structure won't be ready for another forty years or so, the Japanese space agency is already performing tests in space to try out some of their materials.

Mindy. You mean parts that might be used on the real space elevator?

Guy. That's right.

Mindy. So Guy Raz, how are they testing out these future space elevator parts?

Guy. OK, so JAXA has recently sent two mini satellites into space, which, when in orbit...

Mindy. Timeout.

(Soundbite of whistle.)

Mindy. "In orbit" is when an object - whether manmade, like a satellite, or natural, like our moon - is stuck circling around the earth because of the planet's gravitational pull. Time in.

(Soundbite of whistle.)

Guy. Once they're circling around the planet, these two satellites will split apart. But they won't get far because these two satellites will be attached to each other by a cable about ten meters long.

Mindy. Just like my Guy Phone X made out of tin cans and string.

Guy. And just like a mini version of the space elevator. Because over the next year or so, these two satellites...

Mindy. ...That are tied together by a tight piece of cable...

Guy. Right. These two satellites are going to be sending back and forth along that cable a teeny-tiny, little box.

Mindy. A mini-elevator car.

Guy. Exactly, Mindy. A mini elevator car about the size of a matchbox.

Mindy. Huh. So I guess these scientists first have to figure out how this kind of elevator is going to work in low-gravity situations.

Guy. You got it.

Mindy. Well, I guess I'm going to have to wait until they work out all the kinks before I can take a ride in the space elevator. Let me just set a reminder in my calendar for 2050. And set.

(Soundbite of elevator brakes squeaking.)

Guy. Oh, looks like we're here at the top, Mindy.

Mindy. Guy Raz, we've been standing in this elevator for, like, fifty-two floors, and I've barely even listened to the album.

Guy. Well, I'm glad you said that, Mindy, because I have a surprise for you.

Mindy. A surprise?

Host. Hello, and welcome to The Elevates, live and in concert. Tonight, the band will be performing their brand-new, space-themed album in its entirety.

(Applause.)

Guy. They're doing a live show.

Mindy. Wait. So we don't have to sit in the elevator for fifty-two floors to listen to it?

Guy. Yeah, that's exactly right, Mindy.

Mindy. Oh, thank you, Guy Raz. Thank you. Thank you. Wait a minute. Did you say that this album was going to be for the JAXA space elevator?

Guy. Yeah.

Mindy. And didn't you also say that the elevator was sixty thousand miles long?

Guy. Yeah.

Mindy. So exactly how long is this concert supposed to be?

Guy. Let me see. Ah, here it is - seven and a half days.

Mindy. This concert goes on for a week?

Guy. And a half day. Isn't that great?

Mindy. Um.

Host. Folks, put your hands together for The Elevates.

(Applause.)

Guy. Ah, Mindy, there they are!

Mindy. Huh.

Elevates Musician. How's everyone doing out there?

(Soundbite of audience cheering.)

Elevates Musician. Oh, wow. Cool. Thank you so much. Thanks for coming out to the live performance of our new elevator music experience, "Making Space." Cool, cool, super cool.

(Applause.)

Elevates Musician. All right. Let's kick it off. One, two, three, four.

(Soundbite of music.)

Guy. Whoo! Isn't this great, Mindy?

Mindy. Oh, yeah. How much longer does this go on for?

Guy. Seven days, eleven hours and fifty-eight minutes.

Mindy. Oh. Eh. Ugh.

(Soundbite of music.)