Podcast: Imagine This

Episode: Where does poo go when I flush it down the toilet?

Duration: 8’17

[ABC Podcast sting - This is an ABC Podcast]

Bri: Hello, I'm Bri, and today, I'm wondering if you can imagine this -

[Magical chime]

Bri: You're in your bathroom, and you hear this sound:

[Water gurgling]

Bri: What do you think it is? It's the water in your bath going down the plug hole. Here's another sound you might hear in your house:

[Washing machine sound]

Bri: It's the sound of a washing machine washing your clothes. I wonder if you can guess what this sound is?

[Toilet flush]

Kids: A toilet.

 Toilet!

Bri: Yep. That's right. It's a flushing toilet. [Toilet flush] Well today on Imagine This, four-year-old Clancy has a question about the toilet.

Clancy: Where does my poo go when I flush it down the toilet?

Bri: Now this is a great question, Clancy. And, it's a really important one. Where do you think all the wastewater in our house goes when we're finished with it?

[Classical music]

Kids: Uhh, into the...

 To the ocean, to the ocean.

 To the ocean.

Bri: So how would it get from our toilet, to the ocean?

Kids: I don't know.

 To the pipe.

 To the pipe to go from the ocean.

 I think when they go through the pipe, I think they um...

 The water slides.

 Yeah.

Bri: Well that's a long way for the water to slide all the way to the ocean. Should we take a closer look down these pipes?

[Sound of droplets in a big hollow pipe]

Kids: Yeah!

 And have a torch to look down.

Bri: A torch? That's a great idea.

Kids: Because its so dark.

Bri: It is really dark. What's down there? Hello?

[Bri’s voice echoes]

Ian: Hello!

Bri: Who's that?

Ian: I'm way down here.

Bri: Ian, is that you?

Ian: Yes, it's me. Can you hear me?

Bri: Ian as in the Dr. Ian Wright from Western Sydney University.

Ian: It is.

Bri: Ian what are you doing down the drain?

Ian: I'm just checking the pipes and it's very dark and it stinks.

Bri: Can you come up here for a second and help us? We want to know more about the pipes.

Ian: Okay! I'm coming right up. Please don't flush the toilet.

Bri: All right, I'll turn off all the taps.

[Curious classical music]

Ian: Hello.

Bri: Hello, Ian. Thanks for popping up.

Ian: Sure.

Bri: A water scientist like you must know all about where the water in our house goes. Can you help us find out more?

Ian: Yes, absolutely.

Bri: So what happens when we flush the toilet?

Ian: So when you flush the toilet the water goes down the pipe.

[toilet flush]

Bri: And what about the other water in our house?

[Water gurgling down a drain]

Ian: The bath water, you're washing up water or dishwasher, your washing machine, all the pipes in your house are connected.

Bri: Where all the drainpipes go?

Ian: Let's call the drain what it is, and that is a sewer.

Bri: A sewer. Well, okay then, let's go on a journey with our imaginations down the sewer pipes to find out where our poo goes. Are you ready?

[Dramatic music]

Bri: Flush those toilets!

[Kids make flushing sounds]

Bri: Then it goes down the sewer pipes.

[Kids make flushing sounds]

Bri: Under the house.

[Kids make flushing sounds]

Bri: And then where?

Ian: The little pipe from your house will join up under your local street and join the pipes from all your neighbours and your neighbourhood. Little ones join medium ones that join bigger ones and eventually they're massive.

Bri: So, everyone's houses are connected by a big maze of pipes under the street.

[Bustling city]

Ian: It is like a maze, absolutely. And in a city like Sydney, can you guess how long this maze is of size?

Kids: Aww...not sure.

 I know! Million thousand, hundred million, eighteen thousand.

Ian: And it's actually about 20,000 kilometres of sewer pipes. It's about enough to nearly go right around the world. Just Sydney.

Bri: Enough pipe to go around the world?

Ian: [Laughing] Seriously. It is massive.

Bri: That's amazing. So where do these pipes take out dirty water?

[water flowing]

Ian: It's called a sewage treatment plant and that's where it goes. And yes, it does look like a swimming pool, but it is a grey to brown swimming pool that you wouldn't want to get in. You can't see the bottom and it stinks.

[Kids make disgusted noises, giggle]

Kids: Stinky smells.

 Stinky, really, really, *really* stinky.

Bri: How stinky?

Ian: It smells like a stinky garbage bin.

Kids: Ewww.

 It’s blocking our nose.

 How they going to clean it?

Bri: Good question. How do they clean that stinky brown water?

Ian: The first thing they do is they'll filter the water. So filtering is like straining all the gunk.

Bri: What kind of stuff do they find that shouldn't go down the toilet?

Ian: All kinds of stuff that's thrown down that shouldn't, cotton buds, rubbish, baby wipes, watches, money.

[Kids gasp]

Ian: A $20 note. Would you pick it up?

[Dramatic classical music]

Kids: Need gloves and washing, then you can have it.

 Otherwise you’ll hold this stinky money.

[Kids laugh]

Bri: So, after they filter out all the rubbish, what happens to the water?

[Water bubbling]

Ian: The next thing that happens is a bubble air through the water.

[Kids make bubbling noises]

Bri: What do you think these bubbles do to the water?

Kids: Washing it.

Bri: Yes. The bubbles help to clean the water, but there's something else that they add to make the water clean. What is it?

Ian: Then the next step is add chemicals to it.

[Droplets falling sfx]

Bri: The chemicals help clean the water. It'll turn sewage from stinky, bubbly, nasty, brown stew into clear water that you can actually see through.

[heavenly music]

Bri: So where does this water go?

Bri: When the water is nice and clean, it can go out into the ocean.

Kids: Yeah. To the ocean.

Bri: How big is the pipe that goes to the ocean?

Ian: That pipe, that is big enough to drive a bus down. That is a massive pipe.

Bri: It's big enough to drive a bus through it?

Ian: It is.

Bri: Imagine that!

[Kids exclaim in excitement]

Kids: On the bus, everyone on the bus, we are going on the pipes. To see everybody.

[car beeps]

Bri: So this big pipe, that's big enough to drive a bus through, takes all of this new water out into the ocean.

[Sound of the ocean]

Ian: It actually is piped under the ocean floor and it goes out to sea and then it mixes with the ocean water with all the waves, the currents, the tide, way out to sea.

[Dramatic classical music]

Bri: And that's what happens to your poo when you flush it down the toilet. So Clancy, when you flush the toilet or pull the plug in your sink, the water goes down the sewer pipes that join up to bigger pipes under the street.

[water gurgling]

Bri: Then the water gets cleaned up so it can be piped out into the sea. So the next time you flush that toilet of yours, wave good bye and know that water is on a big adventure across the ocean [sounds of the ocean]. Who knows where it might end up, Hawaii maybe?

[laid back Hawaiian music],

Bri: Imagine This is produced by me, Brianna Peterson, and is a co-production between The Conversation and the Australian broadcasting corporation. For more episodes of Imagine This plus a range of music and stories for young children, download the ABC kids listen app.