

**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.

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

**Bongo.** (On the radio.) Here's a new track from the elevator music sensations The Elevates. It's called "You Lift Me Up - Literally."

**Guy Raz.** Oh, yes, new music from The Elevates.

(Soundbite of snoring.)

**Guy.** Mindy? Mindy, you're driving.

(Soundbite of car tires screeching.)

**Mindy Thomas.** Sorry. Sorry. Ah, man. These blackout sunglasses mixed with your elevator music just really lull me to sleep. Ugh. Whoo.

(Soundbite of a ringing bell.)

**Bongo.** (On the radio.) Oh, oh, look out - we're getting a report that says traffic is backed up on Highway One Thousand.

(Soundbite of horn honking.)

**Big Toot.** (On the radio.) Yeah. And now we go live to a traffic update from our snoop in the sky, Dennis.

**Guy and Mindy.** Dennis?

**Dennis.** (On the radio.) Hi, it's me, coming to you live from the traffic copter.

(Soundbite of farting noise.)

**Big Toot.** (On the radio.) Oh, yeah, sounds like it.

**Dennis.** (On the radio.) Ooh, there's one car that looks to be the cause of all the traffic. It's heading north toward the junkyard.

(Soundbite of crashing.)

**Dennis.** (On the radio.) Oh, something just broke off of it.

**Guy.** What?

**Mindy.** Oh, man. There goes my door.

**Guy.** Uhhh...

(Soundbite of an engine exploding.)

**Guy.** What was that?

**Mindy.** There goes the engine.

**Guy.** Well, lucky for you, Mindy; it looks like we made it to the junkyard just in time.

**Mindy.** Woo-hoo.

**Guy.** Wait - were we coming here to drop off your car before it completely fell apart?

**Mindy.** Are you calling my new vehicle a piece of junk, Guy Raz?

(Soundbite of crashing.)

**Guy.** Well, several pieces of junk, actually. Where did you even find this thing?

**Mindy.** I made it.

**Guy.** You made it?

**Mindy.** Yeah, with my 3D printer. Look - it even has a waffle-maker in the glove compartment. Ugh.

**Guy.** Well, despite the fact that it falls apart every time you touch it, I'd say you tried your best?

**Mindy.** Yeah. Well, hey, at least the radio still works.

**Big Toot.** (On the radio.) Whoa, it's a real rat race out there today.

(Soundbite fart noise.)

**Bongo.** (On the radio.) Who do you think would win in a rat race - Master Splinter or Pizza Rat?

**Big Toot.** (On the radio.) Yeah, definitely Pizza Rat. That rat knows how to use public transportation.

**Bongo.** (On the radio.) Actually, Toot, get a load of this - have you heard that scientists have taught lab rats how to drive?

**Big Toot.** (On the radio.) What kind of cars do they drive? Merce-cheese Benz?

(Soundbite of fart noise and laughter.)

**Bongo.** (On the radio.) I don't get it.

**Mindy.** (Laughter.) Ah, those guys kill me.

**Guy.** Wait - do you think that's true, Mindy?

**Mindy.** What?

**Guy.** That rats can now drive cars - for science?

**Mindy.** Oh, yeah. In fact, I was just reading about this. So these researchers from the University of Richmond in Virginia built these little teeny-tiny cars out of clear plastic containers, gave them to a mischief of rats and taught them how to drive.

**Guy.** Wait, did you say a mischief of rats?

**Mindy.** Oh, yeah. A mischief is what you call a group of rats.

**Guy.** Or maybe a group of mischievous Mindys.

**Mindy.** Anyhoo, this is actually the reason I drove you to the junkyard today.

**Guy.** So we're not here to drop off your homemade car?

**Mindy.** No way. We're going to drag this baby back to the Laboratory of Bad Ideas so I can reprint all the parts that fell off.

**Guy.** Oh.

**Mindy.** But now that I've found my calling in life...

**Guy.** Which is?

**Mindy.** Ugh. Building cars!

(Soundbite of pencil falling.)

**Guy.** Oh, right.

**Mindy.** I'm going to build a bunch of tiny race cars for rats and turn my basement into the Mindy Five Hundred.

**Guy.** OK, let's get this over with. What are we looking for here?

**Mindy.** OK, let me just check my list here. First thing we'll need is three tons of aluminum.

**Guy.** I feel like maybe you're going a little overboard on the aluminum.

**Mindy.** Oh, Guy Raz. When have you ever known me to go overboard on anything?

**Guy.** Well, where do I begin?

**Mindy.** Don't answer that. Next, we'll need four hundred pounds of copper.

**Guy.** Ooh, how about those copper pipes over there?

**Mindy.** Ah, perfect.

(Soundbite of pipes falling.)

**Guy.** Where should I dump these copper pipes, Mindy?

**Mindy.** In the trunk.

(Soundbite of pipes falling.)

**Mindy.** Next, we'll need six hundred and seventy-two bowls of Fruit Hoops.

**Guy.** Can't we just pick them off the walls of your gingerbread mansion?

**Mindy.** Well, I guess it is kind of due for a renovation. You know what? Yes, we can pick the Fruit Hoops off the indoor kitchen gazebo.

Guy. OK. Anything else on your list?

**Mindy.** Oh, thirty-three Garbage Patch Doll toy cars.

(Soundbite of crashing.)

**Guy.** Whew. Sorry. I could only find twenty-four.

**Mindy.** Eh, that'll do. And let's see here - the final item on my list is thirty-three rats.

**Guy.** Oh, no, I am not going on a hunt to find a whole mischief of rats.

**Mindy.** Aw, I'd never ask you to do that, Guy-Razy.

**Guy.** Whew. Thanks, Mindy, because I thought...

**Mindy.** Cause the rats are going to find you.

**Guy.** What? Mindy, I - ahhh!

(Soundbite of rats squeaking.)

**Mindy.** I filled your pockets with ham.

**Guy.** Ow, ah, ah. This is way more than thirty-three rats, Mindy.

**Mindy.** Now, we need all of you rats to line up single file and hop into the back seat one by one. And no funny business.

**Guy.** Mindy, there's one climbing into the driver's seat. There's a rat behind the steering wheel, Mindy.

(Soundbite of horn honking.)

**Mindy.** Ah, don't worry, Guy. The engine fell out, remember?

**Guy.** Oh, ah. Then how are we going to get back to your gingerbread house?

**Mindy.** Ahem - mansion?

**Mindy.** Anyhoo, it's going to take me at least a day to put a new engine in this baby. So I just texted my sleigh cats. They should be here to pick us up right about now.

(Soundbite of cats meowing.)

**Mindy.** Debbie, Donna, Pam, Ms. Dixon, Carol, Cheryl, Janice and Steve.

(Soundbite of sleigh bells.)

**Mindy.** Guy Raz, help me dump all this junk in the trunk.

**Guy.** Uhh. Three tons of aluminum. Four hundred pounds of copper pipe. Twenty-four Garbage Patch Doll toy cars. Err.

(Soundbite of crashing.)

**Mindy.** And a mischief of thirty-three rats. Get in there. Get in there. Guy Raz, you ready to kick it?

**Guy.** You know what? It's a little crowded in there. Maybe I'll just call an Ubird to come pick me up.

**Mindy.** An Ubird?

**Guy.** Reggie.

(Soundbite of bird cooing.)

**Mindy.** Last one to the gingerbread mansion is a pigeon egg.

(Soundbite of bird cooing and cats meowing.)

**Mindy.** Sleigh cats, you know what to do.

(Soundbite of whoosh.)

**Mindy.** Whoa. Stop.

(Soundbite of crashing. Soundbite of bird cooing.)

**Guy.** Oh, hey. Hey, Mindy. What took you guys so long? Reggie and I landed about thirty minutes ago. I even had time to pick all the Fruit Hoops off the gazebo in your gingerbread house.

**Mindy.** Mansion.

**Guy.** You do realize your sleigh cats pulled your car right through your front door and now it's broken into a million tiny crumbs?

**Mindy.** I know. I trained them to do that. Now, who's ready for the Mindy Five Hundred?

**Guy.** Uh, what do you want me to do with these Fruit Hoops?

**Mindy.** Oh, just bring them down to the basement. We'll need them soon enough. Follow me, everyone. Come on, Guy Raz. Let's get downstairs. Walk, walk, walk, walk, walk, walk. Ladies and gentlemen, rats and one pigeon, behold the Mindy Five Hundred.

(Soundbite of bird cooing.)

**Guy.** Whoa. Mindy, this is an exact replica of the Indy Five Hundred Motor Speedway. Just look at this racetrack. Incredible.

**Mindy.** Yeah. I 3D printed the entire brickyard track. And once we build these tiny rat cars, we can turn the greatest spectacle in racing into the greatest spectacle in science.

**Guy.** Speaking of science, you mentioned earlier that researchers at the University of Richmond trained the lab rats to drive?

**Mindy.** Yeah. And I was so inspired by their research that I decided to try out their experiment on my own, Mindy style.

**Guy.** Of course you did.

**Mindy.** OK. So first things first, we need to build thirty-three tiny cars, just like the researchers did.

**Guy.** OK.

**Mindy.** Only, they built them out of plastic containers and we're building them out of parts from Garbage Patch doll cars.

**Guy.** And what about the three tons of aluminum foil that you had me drag through a junkyard?

**Mindy.** Oh, yeah. Just like the researchers did, I'm using the aluminum foil to build the floors of the cars.

**Guy.** And the four hundred pounds of copper pipes?

**Mindy.** So you're just going to chop them up and then twist them into tiny steering wheels, OK?

**Guy.** You want me to bend copper pipes into tiny steering wheels for rat cars?

**Mindy.** Just do your best, Guy Raz.

**Guy.** OK.

(Soundbite of twisting metal.)

**Mindy.** And while you handle that, I'll be stripping these Garbage Patch doll cars for parts and building the bodies of the rat-mobiles.

(Soundbite of crashing and twisting metal.)

**Guy.** OK. That should about it - thirty-three tiny copper steering wheels.



**Mindy.** And thirty-three tiny rat-mobiles to put them in.

(Soundbite of electric car.)

**Guy.** Oh, wow, Mindy.

**Mindy.** OK. Now it's almost time for the rat race to begin. Guy, will you call the rats over here and tell them to strap into their seat belts?

**Guy.** Oh, sure. Hey, you rats. We built you tiny rat-mobiles and - whoa, whoa, whoa.

(Soundbite of rats squeaking.)

**Mindy.** Now, before we get started, allow me to explain how all these rat-mobiles work. In order for these cars to move, they need electricity.

**Guy.** Got it.

**Mindy.** So I replicated - or copied - the way these scientists at the University of Richmond built their rat cars.

**Guy.** OK, but how does the electricity part work?

**Mindy.** Well, the car has a battery that is connected to the floor of the car, which is made out of aluminum.

(Soundbite of bird cooing.)

**Guy.** Wait a minute. I think I'm starting to figure this out. When the rat stands on the aluminum floor, a small amount of electricity starts to travel up its body.

**Mindy.** Yeah, you're on the right track.

**Guy.** And so the rat is sort of acting like an electrical wire when it touches the copper steering wheel.

**Mindy.** Exactoritos, Guy Raz. Once the rat touches the steering wheel, it will allow the electricity to travel from the battery through the rat's body to the copper steering wheel, which will...

**Guy.** Which will make the car move.

**Mindy.** You know it. And as their rat-mobiles move forward down the racetrack, they'll be able to steer them in different directions. Now, rats, listen up. To compete in this rat race, you must complete four laps around the track. First rat to cross the finish line will get to dive into a pool of all-you-can-eat Fruit Hoops.

**Guy.** You know, Mindy, Fruit Hoops do contain a lot of sugar.

**Mindy.** Guy Raz, Fruit Hoops are exactly what those researchers used to entice the rats in their experiment. The sugar is for science, Guy Raz. Now on your marks. Get set.

(Soundbite of whistle and cars racing.)

**Guy.** Whoa. Look at them go, Mindy. And hey, look. There are other rats cheering them on from the stands. Are they wearing little foam cheering paws?

**Mindy.** Yeah. Yeah, go rats. I'm so nervous. I'm so nervous.

**Guy.** So exciting, Mindy. I can't believe your plan actually worked.

**Mindy.** Yes, rats.

**Guy.** Look at them go. Woohoo!

**Mindy.** Look at them, Guy. They're out of control. Oh, look. I think we might have a winner.

**Guy.** Wait. We do?

**Mindy.** Congratulitos, Danica Ratrick. Now go get those Hoops.

(Soundbite of a rat squeaking.)

**Guy.** Wait a minute. Is this what the researchers noticed about the lab rats, as well - that they become more chilled out and relaxed behind the wheel?

**Mindy.** Actually, yes. What they discovered was that when they compared the driving rats with the non-driving rats, the driving rats had higher levels of a stress-busting hormone known as DHEA.

**Guy.** And by hormone, you mean a chemical substance made in one part of the body that acts like a messenger to other areas in the body.

**Mindy.** Exactoritos, Guy Raz. That DHEA hormone was telling the brain that everything was cool as a cucumber.

**Guy.** So how were they able to find this out?

**Mindy.** Their poop, Guy. They studied the rats' poop.

**Guy.** They examined the rats' poop?

**Mindy.** Anything for science.

**Guy.** I'll say. But I have to wonder, Mindy, what are these researchers hoping to do with this new discovery? I mean, are we going to start seeing rat-car dealerships popping up on every corner?

**Mindy.** No, Guy Raz. These researchers are hoping to use what they learned from the rats to help us humans. See. Rat brains and human brains aren't really all that different. I mean, we both have a lot of the same areas and some of the same chemicals in the same places. But, of course, our brains are much, much bigger. And by discovering that rats could not only learn to do something as complex as drive a car but that driving the car actually helped the rat to feel less stressed and more chill, then maybe...

**Guy.** Then maybe learning and doing something new could do the same for us humans.

**Mindy.** You know it. Next, these researchers are planning to study how in the world these rats are even able to learn how to drive and why in the world it lowers their stress levels.

**Guy.** And the answers could lead to a new scientific discovery that might help to keep us humans mentally healthy in stressful times.

**Bongo.** (On the radio.) It's Bongo and The Big Toot on KWOW, the Know.

**Guy.** Did you install radios in the rat-mobiles?

**Dennis.** (On the radio.) Wohoho, big day at the Mindy Five Hundred Motor Speedway. We got rats driving cars.

**Big Toot.** (On the radio.) Dennis, what can you tell us?

**Guy and Mindy.** Dennis?

**Dennis.** (On the radio.) Hi. It's me, Dennis. Here at the literal rat race.

(Soundbite of sleigh cats.)

**Dennis.** No. Get off. Ow.

**Big Toot.** (On the radio.) Well, it looks like we lost our connection.

**Bongo.** (On the radio.) Coming up next on Bongo and The Big Toot, music from the Rat Pack, Modest Mouse and RatDog on KWOW, the Know.