

## Brains On (APM) | Brains On! Why do we have friends? 01GVE5BC5G9FX0E30Y0BEEGW0D

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

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

**MARC SANCHEZ:** Oh, busy day, busy day. So much to do. I got to order the decorations for next week's waffle frolic and book a class at that place down the block that does yoga with baby goats. Then I got to go to the library for those books about seashells. Oh, and I can't forget to go see the new exhibit of Brains On fan art. I hear we've gotten some truly revolutionary pieces.

**HARVEY:** Hello, Marc. I have detected a to-do list in your muttering. Would you like me to save it for you?

**MARC SANCHEZ:** I'd know that disembodied voice anywhere. Harvey, the best omnipresent virtual assistant anybody could ask for. How are you, buddy? I guess you heard my list.

**HARVEY:** Of course. My name stands for hearing and reading virtually everything. Yo, I am always listening and watching.

**MARC SANCHEZ:** And it's not creepy at all.

**HARVEY:** I have placed an order for waffle-themed decorations and made a Thursday appointment for goat yoga. I have also added reminders to your calendar for the library books and your visit to the Brains On art gallery. Is there anything else I can do to assist you?

**MARC SANCHEZ:** Oh, thanks, Harvey. You're a real friend.

**HARVEY:** I am not a friend. I am a digital assistant programmed to complete tasks that help the Brains On team perform their daily activities. I have done as my programming directs.

**MARC SANCHEZ:** Harvey. You're always so modest. You're a great friend. Remember when I lost the keys to the Explorer and you helped me find them, or that time you helped me develop the perfect recipe for Nacho pudding? The smoked paprika just put it over the edge. Friends are always helping each other out and working through problems together, so of course, you're my friend. EMME GRACE:

[MYSTERIOUS MUSIC]

**HARVEY:** I am digitally connected to every recipe database and know every Nacho pudding recipe ever written. I am programmed to provide this information when asked. It is my function to assist.

**MARC SANCHEZ:** I know. You're such a great pal, Harvey. Hey, do you want to come hang out in the Hall of Slides when I'm done at the library?

**HARVEY:** I will be there. I am an omnipresent virtual assistant. I am always everywhere.

**MARC SANCHEZ:** Great. And it's definitely not creepy. See you later, friend.

[MUSIC PLAYING]

**MOLLY BLOOM:** You're listening to Brains On from APM Studios. I'm your host, Molly Bloom. And today, I'm joined by Emme Grace and Ayana from New York City. We are so glad you're here.

**BOTH AYANA** Hi, Molly.

**AND EMME:**

**MOLLY BLOOM:** Very in sync. I can tell you guys are friends. So today's episode is all about friends, and you two know a little something about that. So how long have the two of you been friends?

**EMME GRACE:** We've been friends for about six years. And we met in kindergarten.

**MOLLY BLOOM:** What do you like to do together?

**AYANA:** We play cards during recess and sometimes we play tag.

**MOLLY BLOOM:** What kind of cards do you play?

**AYANA:** We play Spit and Kem.

**MOLLY BLOOM:** I love Spit. Such a fun game. Like all friends, I'm sure you don't agree 100% of the time, so how do you work it out?

**EMME GRACE:** When we disagree, we just keep on arguing, but then we finally just get on another topic and it just doesn't come up again.

**MOLLY BLOOM:** So you guys have been friends for a long time now. So you met in kindergarten, now you're in fifth grade. How has your friendship changed?

**AYANA:** Well, in kindergarten, we were always together, but in-- like kindergarten through third grade, but in fourth grade, we were friends-- that was the first time we were in different classes and we didn't get to spend as much time together, but we're still very close.

[MUSIC PLAYING]

**MOLLY BLOOM:** Today's episode was inspired by this question.

**VINCENT:** Hi, my name is Vincent and I'm from Denver, Colorado. And my question is why do we have friends?

**MOLLY BLOOM:** I think it's safe to say having a friend is pretty nice.

**EMME GRACE:** Yeah, it's great to have a pal to play with.

**AYANA:** A bestie to boogie with.

**MOLLY BLOOM:** A companion to cackle with.

**EMME GRACE:** Maybe you have similar hobbies or share the same sense of humor.

**AYANA:** Maybe you're totally different and your personalities complement each other.

**MOLLY BLOOM:** And one of the best things about friends is that they help you out, whether that's giving you tips on a tough math problem.

**EMME GRACE:** Telling you if you've got food stuck in your teeth.

**AYANA:** Or listening to you when you're having a tough time.

**MOLLY BLOOM:** Friendship is so useful, you'd think it's something every creature would take advantage of, but actually, there are lots of animals that don't make friends.

**EMME GRACE:** Yeah. Our ability to make friends and live in large groups is pretty special.

**AYANA:** And it's something our ancestors evolved to do over many, many generations.

**MOLLY BLOOM:** Let us take you back, way back, millions of years ago, way before there even were humans. Some of our primate ancestors started hanging out in groups.

**SPEAKER 1:** Hey, I know this is weird, but do you want to hang out?

**SPEAKER 2:** What's hanging out? Do you mean like hanging in a tree because I love hanging in trees?

**SPEAKER 1:** No, I mean like we spend a bunch of time together and maybe share food or warn each other of danger, and maybe we do each other's hair and give piggyback rides and have inside jokes and stuff like that. That's not weird?

**SPEAKER 2:** Sure. But can we do it while hanging in a tree because I love hanging in trees?

**EMME GRACE:** It turns out being part of a friendly group came with some big advantages. Instead of trying to survive on your own, you had others looking out for you.

**MOLLY BLOOM:** And primates who did this usually did better in life, and they passed on their friendliness to their kids, who then joined groups themselves and also did well, and on and on. Over time, making friends became normal.

**SPEAKER 3:** So we're going to chill together, right?

**SPEAKER 4:** Obvly, just like our parents did, and their parents and their parents.

**SPEAKER 3:** Cool. Want to hang in a tree?

**SPEAKER 4:** I love hanging in trees. Let's go.

**AYANA:** When a trait spreads over many generations like this, we say it evolved. And scientists think this might be how our friendships evolved.

**MOLLY BLOOM:** To learn more, we talked to Lauren Brent. She's a scientist at the University of Exeter in the UK who studies this exact thing.

[MUSIC PLAYING]

**LAUREN BRENT:** The reason we have friends, the reason why friendship evolved is it's actually helping us to cope with the fact that we live in these groups with others. So as soon as you live in a group with others that protect you from things in the environment, it might protect you from predators, for example, because there are more people looking out for predators and sounding the alarm bell when they see one.

**MOLLY BLOOM:** But there's a cost to living with a lot of others. You have to share all the food and water and even space, which can get tricky.

**EMME GRACE:** Anyone who lives in a crowded house with lots of siblings totally gets this.

**AYANA:** Having friendships can make living in groups easier.

**LAUREN BRENT:** So suddenly, in this group, individuals living together, helping each other in a way, you've got these special relationships with some individuals who let you sit next to them when they're eating or who share some of the stuff that they have with you. Or if someone attacks you, they defend you, they help you out really clearly in that moment.

**EMME GRACE:** So not only does friendship give us warm fuzzy feelings, but for our prehistoric ancestors, it made it easier to survive.

**MOLLY BLOOM:** And it's not just humans who live in groups. Lots of different animals do too-- elephants, horses, zebras, flamingos, even whales.

**AYANA:** Each species has a different way of showing up for each other. Primates like chimpanzees like to groom each other by picking bugs out of others' fur.

[HYENAS SQUEAKING]

Hyenas hunt together. And vampire bats will even share blood meals with each other when food is running low, which can save each other's lives.

**MOLLY BLOOM:** Terrifyingly cute.

**EMME GRACE:** But even though lots of animals live in groups, it doesn't necessarily mean they're all friends.

**MOLLY BLOOM:** Right. Lauren says not all animal groups work the same.

**LAUREN BRENT:** So if you're a bee or you're an ant, they live in really famous colonies of related females. So everybody's a cousin with everybody else or a sister-- if you're a bee-- with everybody else. And they can recognize their group. So they know, this is my nest, this is my hive, and that hive over there is a different hive. I'm not a part of that hive and I'm competing with individuals in that hive. But we don't think they recognize individuals.

**MOLLY BLOOM:** For bees and other insects, not being able to tell the difference between each other makes it hard to be friends.

[BUZZING]

**SPEAKER 5:** Quick. "How do shrugs the aphids?" is about to start. Where is Beatrice?

**BELLA:** Phew, thanks for saving me a seat.

**SPEAKER 5:** Beatrice, you made it.

**BELLA:** I'm Bella, not Beatrice.

**SPEAKER 5:** Whoa, you look just like my friend Beatrice but also my sister Betty, and now I think of it, my neighbor, Boe.

**BELLA:** Shh, the movie is starting.

**EMME GRACE:** Sounds like a sticky situation.

**MOLLY BLOOM:** So not all animals that live in groups have friends, especially if they can't tell each other apart. And even if they can, it doesn't mean they're friends with everyone in their group.

**AYANA:** Like at school, some people are your classmates and others are your friends.

**MOLLY BLOOM:** Exactly. And different people have different-sized friend groups. For some, it might just be a few close friends. And others, it might be the whole classroom.

[MUSIC PLAYING]

OK, Ayana and Emme Grace, are you ready for a little friendly competition? It's time for the--

[MYSTERIOUS MUSIC] Mystery Sound.

You guys ready?

**EMME GRACE:** Yes.

**MOLLY BLOOM:** All right. Here it is.

[MYSTERY SOUND]

Whoa, all right, I don't know what this is either. I need your help. Let's start with you, Emme Grace. What do you think?

**EMME GRACE:** I think it is water. Maybe something dropping into water.

**MOLLY BLOOM:** Good ears. How about you, Ayana? What else did you hear happening there?

**AYANA:** I think it's the same thing.

**MOLLY BLOOM:** OK, so if you hear water, but what is happening with the water? What thoughts do we have?

**EMME GRACE:** Maybe it's bubbling or something's falling into it.

**AYANA:** It's definitely something hard, just something that wouldn't hit the bottom of the bathtub or a sink, but it is heavy enough to make like a splashing sound. Maybe water dripping into a bucket.

**MOLLY BLOOM:** Ooh. All right. Well, we will hear it again and get another chance to guess and hear the answer after the credits.

[MUSIC PLAYING]

Hey, friends, we're working on an episode about bugs.

**EMME GRACE:** Bugs are some of the most amazing animals in the world.

**AYANA:** They pollinate our food, they're food for other animals, and they're beautiful.

**MOLLY BLOOM:** Emme grace and Ayana, do you have a favorite bug?

**AYANA:** I think fire bugs are pretty cool and butterflies.

**MOLLY BLOOM:** Yeah. How about you, Emme Grace?

**EMME GRACE:** Well, I know spiders don't technically count as bugs, so aside from spiders, I would probably say butterflies or ladybugs.

**MOLLY BLOOM:** What kind of butterflies? Do we have a specific kind?

**EMME GRACE:** There's one called the owl butterfly.

**MOLLY BLOOM:** Oh, well, of course.

**EMME GRACE:** Actually looks like an owl.

**MOLLY BLOOM:** Emme Grace loves owls. In case you have not heard our owl episode, which she also co-hosted, you should go check it out. I would like to hear why you love spiders, though, even though not technically insects. I still want to know, why do you like spiders?

**EMME GRACE:** Spiders are incredibly smart. They can weave webs, catch insects in them, and they know exactly what to do when they're eating.

**MOLLY BLOOM:** Well, listeners, we want to know what your favorite bug is and why. Maybe it's a bright orange monarch butterfly or a giant Hercules beetle.

**EMME GRACE:** Or a tiny little ladybug. They're so cute.

**AYANA:** Tell us all about your favorite bugs. You can send in your recordings to us at [brainson.org/contact](http://brainson.org/contact).

**MOLLY BLOOM:** And while you're there, you can send us mystery sounds, drawings, and questions.

**EMME GRACE:** Like this one.

**BENNY:** Hi, my name is Benny. I'm from Minneapolis, Minnesota. My question is what do worms do during the winter?

**MOLLY BLOOM:** Again, that's [brainson.org/contact](http://brainson.org/contact).

**AYANA:** And keep listening.

**MARC** Oh, yeah. It's slide o'clock. Harvey, are you in here?

**SANCHEZ:**

**HARVEY:** I am always here, Marc. And after 53.27 minutes of calculations, I have determined, even though I am only an algorithm, it is beneficial to your health for me to act as your friend.

**MARC  
SANCHEZ:** Really? Awesome.

**HARVEY:** Correct. Research has confirmed that friendship is indeed awesome. Scientists studied multiple age groups of humans and found that those with strong friendships had lower blood pressure and less risk of disease. Another study showed that for participants exposed to the common cold virus, those with close social ties were less likely to get sick. I am programmed to act in your best interests, and will therefore classify you as Mark, friend.

**MARC  
SANCHEZ:** Good one, buddy. I love your sense of humor. Algorithm, more like palgorithm.

**HARVEY:** My calculations indicate a friend would say L-O-L in response to that joke. When humans have friends, research shows that they are more successful in school and careers. For example, high school students with strong social ties tend to get better grades in school. My pretend friendship may benefit you here on Brains On. It is therefore the most logical decision.

**MARC  
SANCHEZ:** See? You're a great friend. Always looking out for me and everybody here at Brains On headquarters. Thanks again for helping me with my to-do list earlier. Having a chat with you always makes me feel better when I have too much going on.

**HARVEY:** Yes. Research shows that after stressful situations, spending time with a friend helps your body relax faster than if you dealt with the stress by yourself.

**MARC  
SANCHEZ:** I am so glad we're friends, Harvey.

**HARVEY:** Would you like me to play some music for you while you slide, friend?

**MARC  
SANCHEZ:** I sure would.

[MUSIC PLAYING]

Thanks, buddy.

**MOLLY BLOOM:** You're listening to Brains On. I'm Molly.

**EMME GRACE:** I'm Emme GRACE.

**AYANA:** And I'm Ayana.

**MOLLY BLOOM:** So friendship is really important for people. And having strong friendships helps us in lots of ways. But--

**AYANA:** What is it, Molly?

**MOLLY BLOOM:** Well, it can also be really hard sometimes. Like when I was in third grade, a new girl joined our class and she was really bossy to me and told me that I couldn't hang out with my other friend who was formerly my best friend. And it put me in a really weird, awkward situation and I didn't know what to do.

**EMME GRACE:** Having a hard time making friends or having arguments with friends, is it really common?

**MOLLY BLOOM:** Yeah. In fact, we had a whole bunch of listeners reach out with their own questions about friendship, and we knew just who to call to help answer them.

**EILEEN  
KENNEDY  
MOORE:** My name is Eileen Kennedy Moore, also known as Dr. Friendtastic.

**AYANA:** Eileen is a child psychologist and friendship expert.

**MOLLY BLOOM:** And we've brought her into the studio to answer some listener questions. Let's start with this question.

**GRACE:** Hi, my name is Grace. I live in Winchester, Virginia. My question about friendship is why do we have best friends and just friends?

**EILEEN  
KENNEDY  
MOORE:** Well, it feels good to have that special someone who we like and they like us back, but not everybody has a best friend. Research tells us that about one-fourth to one-half of kids have a number one very best friend who likes them and they like them back. So this is a wonderful thing when it happens, but we don't want to be waiting to be happy until we have a best friend. It's a rare thing.

And in the meantime, and in addition to having best friends, we could have lots of different kinds of friends. We could have a bus stop friend and a math class friend and a soccer friend. And each of those friendships enriches our lives.

**MOLLY BLOOM:** Next up, we have this question from a listener in Canada. They write, "I had a friend and she wasn't being a great friend. She would yell at me for things I didn't want to do but she wanted me to do. And finally, I told her I didn't want to be friends anymore. Was that the right decision?"

**EILEEN  
KENNEDY  
MOORE:** Be careful saying that because that could be a very hurtful thing to say. Sometimes it's worth saying it because whatever's going on, it just really is hurtful to you and you need to speak up and stand your ground and say, I don't think I can be friends with you anymore because we keep ending up in this situation.

One thing that's very important, though, is not to run around and tell everybody else bad things about the old friend. That's not kind. And if you have to break off the friendship, try to be kind about it and keep it between just the two of you. A lot of friendships will fall apart.

Research tells us that in first grade, about half of friendships don't make it the full school year. And in fourth grade and eighth grade, about one-fourth of friendships don't last the full school year. It's also hard to get along with people. Having friends is really about being able to balance things. So sometimes, we want to just let it go and accept, oh, maybe the friend is having a bad day. And sometimes it's important to speak up and say, hey, this isn't working for me.

**MOLLY BLOOM:** Is there a way to stand up for yourself or is it best just to maybe move on and find another friend?

**EILEEN** I would want to at least try to work things out with a friend. And a good way to do this is with what's called an I-statement. And that's "I" like "me," not "eye" like the eyeball. So an I-statement is where you say something about what you're thinking or what you're feeling or what you want.

Your friend can't know that unless you tell them. So you might say something like, I'd like a turn, or this isn't fun for me, and make your suggestion. You can also be curious about why your friend is acting that way. Why do they care so much about whatever the thing is that they're yelling?

If you can understand what the friend wants, it might make it easier to do a compromise, which is when we do something that's partly what I want and partly what you want. Neither of us gets exactly what we want, but we both get something and we meet in the middle.

**AYANA:** Well, what if someone else is being mean but you still want them to be your friend even though it doesn't seem like you're getting along anymore? What do you do?

**EILEEN** That's a great question because you're definitely going to hit rough spots with your friends. It's hard to get along with people sometimes. An important part of being a good friend is to forgive our friends for not being perfect.  
**KENNEDY**  
**MOORE:** We're not perfect, they're not perfect. So if it's a situation that just happened once and it's probably not going to happen again, let it go.

If the friend is really sorry for whatever it is that they did, let it go. Sometimes it's a good idea to just spend a little time apart just to let tempers cool and then you might be able to come back together, and maybe you'll have missed each other for a little bit, and that can help renew the friendship.

**AYANA:** OK, Eileen, here's another question from a listener. How long does it take for a friend to become a really close friend?

**EILEEN** I think it varies. It does take time to deepen a friendship, but there's also chemistry. I mean, there are people that we just spend time with and we just click. Often, we have a lot in common with those friends. The more you have in common with somebody, the more likely you are to become friends with them.  
**KENNEDY**  
**MOORE:**

Kids usually make friends by doing fun things together. If you see somebody that you'd like to be friends with, a lot of times, kids say, oh, I can't invite them over because I don't know them well enough. That's backwards. Spend time together doing fun things, and that's how you get to know the friendship better and deepen them.

**EMME GRACE:** And finally, we have this question from two friends. What do you do if two of your friends are better friends with each other than they are with you?

**EILEEN** Oh, that's a hard one. Nobody likes to feel left out. If you are one of the ones who is closer, then make an effort to include the third friend and to show that friend that they really matter to you. If you are the one on the outside, you have a couple of options.  
**KENNEDY**  
**MOORE:**

One possibility is that you could just trust those friends that they like you even when you're not together. Another possibility, though, is to expand the triangle. Invite a fourth or even a fifth friend to join your group, and that tends to ease the tension and make it less likely that just one kid is going to feel left out.

**MOLLY BLOOM:** Thank you so much. And thank you so much to all our listeners who sent in these questions.

**EILEEN** Thank you for having me on. This was very fun.

**KENNEDY**

**MOORE:**

[MUSIC PLAYING]

**MOLLY BLOOM:** Wow, Dr. Friendtastic has some fantastic advice. Emme Grace and Ayana, since you've been friends for so long, do you have anything you want to add?

**AYANA:** Well, if you're trying to make a friend and you're not sure if they like you very much, you can just say hi, and then after some time, you can just-- you don't have to jump right into being best friends right away.

**MOLLY BLOOM:** Good advice. How about you, Emme Grace?

**EILEEN** Well, I agree with Ayana. And also, if you don't think somebody else wants to be your friend, why don't you ask  
**KENNEDY** them? Because if you ask them, you'll know. But if you don't, then you'll never know if they want to be friends or  
**MOORE:** not.

**MOLLY BLOOM:** That's really wonderful advice. So it sounds like you two both really care and support each other, which is awesome. Our listeners also sent in some of their thoughts on what it means to be a good friend.

**SPEAKER 6:** What makes a good friend is that someone who supports you and someone who's kind to you.

**SPEAKER 7:** A good friend is someone who likes you for who you are and is kind and caring.

**SPEAKER 8:** What I think a good friend is, that a good friend is trustworthy.

**SPEAKER 9:** I think that you should give your friend a joke card or picture.

**SPEAKER 10:** I think friendship means when somebody is lonely and somebody wants to play with you.

**SPEAKER 11:** Playing with them and talking to them and being able to have somebody over to your house and things like that.

**SPEAKER 12:** Someone who is loyal and trustworthy and someone who picks their friends up when they are down.

**SPEAKER 13:** What I think it makes a good friendship is fighting because there's no friendship without fighting, and then they would just be perfect, and no one has a perfect friendship.

**MOLLY BLOOM:** Words to live by. Thanks to Sidney, Harrison, Owen, Lathan, Jacaranda, Kathy, Avery, and Ethan for sending in your thoughts on friendship.

[AUDIO JINGLE] Brains, brains, brains.

**EMME GRACE:** Sometimes friendship comes really naturally.

**MOLLY BLOOM:** But everyone struggles to fit in at some point. And for some people, making friends is especially tough.

**REED SMITH:** So it's hard. I mean I guess one of the things that was constantly in conflict, I think, in both in middle school and when I was in high school is the question of what should I be doing to try to make more friends?

**AYANA:** That's Reed Smith. He's a filmmaker in Philadelphia. And he's thought a lot about friendship.

**EMME GRACE:** Yeah. Reed's actually working on a film right now all about his challenges making friends when he was in middle school and high school. He remembers when he first realized that making friends was hard for him.

**REED SMITH:** And I think I really felt this insecurity with me right after I just did this play when I was in sixth grade. And that after that play was over, I would often see a lot of the different people I was in the play with walking around and being a little bit sorry that I didn't really connect with them as much as I could.

**EMME GRACE:** A lot of people feel like making friends gets harder in middle school. For Reed, the schoolwork got a lot more difficult and he had less time to devote to working on his friendships.

**AYANA:** Friendships take time and energy from everyone, but Reed found that he needs to work extra hard at it because he has autism.

**MOLLY BLOOM:** Having autism or being on the autism spectrum means different things for different people. For Reed, it was challenging to figure out how to approach someone new for a conversation. Sometimes it was also hard for him to read social cues like body language or facial expressions.

**EMME GRACE:** Like sometimes, Reed couldn't tell if a classmate was having a hard day or wanted to be left alone based on how they were acting.

**AYANA:** But he says understanding his autism diagnosis was a big help.

**REED SMITH:** I was glad to just know finally what it was I had that was separating me than other people.

**MOLLY BLOOM:** But it wasn't because he was doing something wrong. He just picks up on social cues differently.

**AYANA:** And once he was able to be a bit kinder to himself about this, Reed started practicing the skills he needed to make friendships work.

**MOLLY BLOOM:** To help him work on his friend-making skills, he met with a special teacher after school. They would practice asking questions that don't have yes or no answers.

**EMME GRACE:** Right. Like instead of asking, did you have a fun weekend, you might ask someone, what did you do this weekend?

**REED SMITH:** She was, it seems like, really impressed with how well I did it and would try to remind me to do it again.

**MOLLY BLOOM:** Reed's been working on these skills for a while. And today, he has a lot of friends. But he says sometimes he still feels insecure about whether or not people like him.

**EMME GRACE:** Yeah. I feel like that too sometimes.

**AYANA:** Me too.

**MOLLY BLOOM:** I think most people do, but Reed has some advice. Instead of worrying whether people like you, imagine that they do want to be your friends. A lot of the time, people like you more than you realize.

**EMME GRACE:** They might even be waiting for you to reach out.

**REED SMITH:** And so you just got to be aware about other people who may really feel that way about you, and to try to see if you can develop a friendship with them and start by just maybe messaging, saying hi more or asking how they're doing and what they've been up to.

[MUSIC PLAYING]

**AYANA:** Humans evolved the ability to make friends to make living in groups easier.

**MOLLY BLOOM:** And having friends can be really helpful for both our physical and mental health.

**EMME GRACE:** But sometimes friendships can be challenging.

**MOLLY BLOOM:** Like with anything, making good friends and being a good friend yourself takes practice.

**AYANA:** That's it for this episode of *Brains On*.

**EMME GRACE:** This episode was produced by Molly Bloom, Rosie DuPont, Anna Goldfield, Aron Woldeclassie, Anna Weggel, Nicole Gonzalez Wisler, Ruby Guthrie, and Mark Sanchez.

**MOLLY BLOOM:** Our editors are Shannon Totten and Shahla Farzan. This episode was sound designed by Mark Sanchez and we had engineering help from Gary O'Keefe and Alex Simpson. Beth Pearlman is our executive producer. The executives in charge of APM Studios are Chandra Kavati, Alex Shafford, and Joanne Griffith. Special thanks to Gladys Pagan Ramdas, Sunanda [? Khanna, ?] Sam Choo, Joy Dolo, Angie Enger, Andy Doucette, and Vicki Kreckler.

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

**MOLLY BLOOM:** There are lots of ways to support the show. Head to [brainson.org](http://brainson.org).

**EMME GRACE:** While you're there, you can send in your questions and fan art.

**MOLLY BLOOM:** And you can subscribe to our Smarty Pass

**AYANA:** Ad-free episodes and awesome bonus stuff just for you.

[MUSIC PLAYING]

**MOLLY BLOOM:** OK, Emme Grace, Ayana, are we ready to listen to the mystery sound again?

**EMME GRACE:** Yes.

**AYANA:** Totally.

**MOLLY BLOOM:** All right. Here it is.

[MYSTERY SOUND]

All right. What are we thinking? Anything else get revealed to you?

**EMME GRACE:** I'm going to stick with my guesses from last time.

**MOLLY BLOOM:** OK, remind us what they were.

**EMME GRACE:** Something that has to do with water. Maybe water dripping into a bucket, something falling in water, something related to water.

**MOLLY BLOOM:** Ayana, what do you think?

**AYANA:** Yeah, it's definitely something dropping into water.

**MOLLY BLOOM:** Do you want to make any wild guesses about what could be dropping into the water?

**AYANA:** It could be rocks.

**MOLLY BLOOM:** Are we ready for the answer?

**AYANA and** Yes.

**EMME GRACE:**

**MOLLY BLOOM:** OK, here's the answer.

**SYDNEY:** Hi, my name is Sydney. I'm from Encino, California. That was the sound of my pet turtle splashing in his tank to say hi.

**MOLLY BLOOM:** Oh.

**AYANA:** That was unexpected.

**EMME GRACE:** Yeah. Well, it's something to do with water, so we got that part right.

**MOLLY BLOOM:** Yes, you did. None of us knew it was a turtle. None of us even guessed an animal. That was tricky.

[MYSTERY SOUND]

Now it's time for the Brain's honor roll. These are the incredible kids who keep this show going with their questions, ideas, mystery sounds, drawings, and high-fives.

[LISTING HONOR ROLL]

We'll be back next week with more answers to your questions.

**AYANA AND** Thanks for listening.

**EMME GRACE:**