

- BUDDY:** Wow, Joy. Thanks for inviting me to your college homecoming.
- JOY DOLO:** No sweat. My time at U Pen was the best time of my life.
- BUDDY:** You know, this isn't what I expected the University of Pennsylvania to look like.
- JOY DOLO:** Pennsylvania? No, not that U Pen. I went to U Pen, the University of the Pen.
- BUDDY:** You went to a university to study pens?
- JOY DOLO:** No, it's University for Pens, you silly.
- BUDDY:** Joy, you're not a pen.
- JOY DOLO:** Oh, right. Well, OK, here it is. I spent my junior year there through this amazing exchange program, met the most amazing pens. Man, I can't wait to introduce you to all my pen pals. But hey, can we pick up the pace a little bit? The big game is about to start?
- BUDDY:** What big game?
- JOY DOLO:** Every year we face off against our arch rival in the annual Information Communication Showdown. Look, it's starting.
- HOST:** All right. All right, everyone. Classmates, alumni, honored guests, we're so glad you're here because in the blink of an eye, you're going to see a truly phenomenal display of talent.
- JOY DOLO:** I've never seen the stadium this packed. It's practically pen-demonium in here. See down there? That's Penny, our school mascot. You know I tried out to be a mascot my first semester here? I even rented the pen costume and everything. But I just couldn't nail the backflip, still can't.
- BUDDY:** Wait. The school mascot is a pen dressed up like a pen?
- JOY DOLO:** Yep. Oh, and here comes Teller.
- BUDDY:** Are you talking about that giant mouth?
- JOY DOLO:** Yep. He's from a rival school, Talksmore College. They think talking is better than writing.
- SPEAKER 2:** We're here to debate which is the better way of conveying information. I say that speaking is the best. Here's how it works. I see something, and then I go home and tell my wife. And she tells her sister what I told her, and then her sister tells her family. And they all tell their friends, and before you know it, the whole town knows exactly what happened.
- BUDDY:** Did that talking about you say you had a wife and family and-- how?
- JOY DOLO:** Thank you, Teller, for what I'm sure was your very best effort. But the truth is your way never turns out exactly right, does it? Am I right, folks? Once you tell a story to one person, that person never remembers it quite right, so when they tell the next person, it's a little different. And it gets more and more mixed up each time it's passed on. Ever played a game of teller-phone?

The joke is, it never works. Ideas need to be written down to make sure that they capture the message accurately. Yes. Pens rule. Talking stinks.

**BUDDY:** You literally talk for a living, Joy.

**JOY DOLO:** Don't embarrass me, buddy.

Welcome to *Forever Ago*. I'm Joy Dolo.

**BUDDY:** And I'm Buddy.

**JOY DOLO:** And today we're at the U Pen Homecoming, where we'll be meeting pens from throughout history. Buddy, I got a question for you. Do you like to write?

**BUDDY:** I don't like writing, no.

**JOY DOLO:** You don't like writing?

**BUDDY:** Nope.

**JOY DOLO:** Why?

**BUDDY:** It's really boring, and my hand gets tired very quickly.

**JOY DOLO:** Oh, OK, so you don't like physically writing with a pen or pencil. What about like texting?

**BUDDY:** Yeah, I'd rather do that.

**JOY DOLO:** Are there other ways that you write?

**BUDDY:** The only reason I would-- the only reason I would like to write is like if I'm doing bubble letters or something.

**JOY DOLO:** What's bubble letters?

**BUDDY:** Basically drawing letters. I don't really know how to--

**JOY DOLO:** Letters shaped like bubbles?

**BUDDY:** Yeah.

**JOY DOLO:** Like drawing?

**BUDDY:** Yeah.

**JOY DOLO:** Oh, I see, I see. OK, so like sketching. I get it, OK. But do you have a favorite-- I guess if you don't like writing you don't have a favorite kind of pen, or pencil, or anything, huh?

**BUDDY:** I like pens more than.

**JOY DOLO:** You like pens more than pencils?

**BUDDY:** Yeah.

**JOY DOLO:** So do you draw with pens?

**BUDDY:** I draw with pencils, but when I do bubble letters I use pens because they look a lot cooler. I don't know why.

**JOY DOLO:** Yeah, yeah. Can you use different colors for it and make them look gnarly?

**BUDDY:** Yeah.

**JOY DOLO:** What's your favorite kind of pen to draw with?

**BUDDY:** I like-- I would like using those metallic pens. I like using the metallic pen sometimes, and I would use red pens if I see one. Yeah. They're like-- they look really cool.

**JOY DOLO:** I like red.

**BUDDY:** And my favorite color is red.

**JOY DOLO:** Oh that's really cool.

**BUDDY:** Yeah. You know, I never thought this much about pens. They're kind of boring, and we have so many new ways of writing like texting or typing.

**JOY DOLO:** Boring? Boring? Pens are wonderful. Think of all the things they help us do write grocery lists, love letters, doodles, drawings, even those little notes that your parents sneak in your lunchbox that you pretend are embarrassing but you actually kind of love.

**BUDDY:** You're right, but that's more about the writing, right? Not the thing that wrote the writing.

**JOY DOLO:** Wrong. We wouldn't have the right writing without the right writing thing. Right? Sure, today you get free pens at your dentist, your dermatologist, or your doggy day care. But that wasn't always true. Pens were once revolutionary. They not only helped us record history. They changed who could record it, and without the development of pens and other writing tools, we might not have had written language.

**BUDDY:** OK. I need to know more. School me, Joy.

**JOY DOLO:** You got it. Class is in session. It turns out the desire to record goes way back. Even our oldest ancestors wanted to share their daily lives. Thousands of years ago, when saber-tooth tigers and woolly mammoth still walked the Earth, early humans would use sharp stones to scratch out pictures of their daily lives and activities on the cave walls.

**BUDDY:** I've seen some of these, like the Cave of Swimmers in Egypt.

**JOY DOLO:** Right, from the episode we did about swimming.

**BUDDY:** Yeah.

**JOY DOLO:** Over time, those cave drawings evolved into symbols and eventually into the first alphabet. Today, we communicate with each other in a bunch of different ways, texting, social media, and, of course, good old pen and paper. But for most of history that hasn't been the case.

**BUDDY:** Yeah. Having the ability to write things down has helped us understand human history and how much of it we remember. If someone wasn't able to write their story down, it would be harder for it to be remembered by someone else.

**JOY DOLO:** That's a great point. Oh, wait. Is that-- oh, boy.

**BUDDY:** What is it?

**JOY DOLO:** It's just-- you see that guy over there next to the cotton candy machine?

**BUDDY:** I just see a stick.

**JOY DOLO:** No, that's Reed. He's so ancient. I honestly didn't even think he was going to be able to come to homecoming. He's really nice, but he's always telling the same stories over and--

**REED:** Joy? Joy Dolo? Is that you?

**JOY DOLO:** Reed, what a delightful surprise to see you.

**REED:** How have you been? What's the latest in Minneapolis? And who's this young whippersnapper?

**JOY DOLO:** This is my friend, Buddy. He's tagging along at home coming today to learn about the history of pens.

**REED:** The history of pens-- why, how lucky we ran into each other. Buddy, did you know I was perhaps the very first pen? Joy, have I ever told you the story of my birth.

**JOY DOLO:** Oh, maybe once, or twice, or a dozen different times.

**REED:** It was more than 3,000 years ago, before the Greeks built the Parthenon and before the Great Wall of China. The Pharaoh-- that's what the ancient Egyptians called their kings-- was about to make an important announcement.

**PHARAOH:** Attention palace staff. I have a decree to make, and I want to tell everyone in my vast kingdom. This is going to be a really long decree, so I hope you all have really good memories.

**STAFF MEMBER:** Actually, your pharaohness, I have a better idea.

**PHARAOH:** You have a better idea than the decree I'm going to make?

**STAFF MEMBER:** Oh, no, no, no, no, no. Decrees are your department. I have a better idea about how to spread your announcement far and wide, and no one will forget a single word.

**PHARAOH:** I like the sound of that. Not a single word, you say? OK. What's your idea? Quickly now. I have a lot of peeled grapes to eat today.

**STAFF MEMBER:** OK. You know those strips of papyrus that we use for mats, and ropes, and baskets? Well, it turns out, if you cut them into very thin sheets, you can actually make impressions on them to record all your decrees.

**PHARAOH:** But how do you make such impressions?

**STAFF MEMBER:** OK, first we use burned wood mixed with water to make a Black liquid that will stick to papyrus sheets, and we call that ink. Then we take one of those long reeds that grows down by the Nile River. We hollow it out, make a tiny little slit up the middle, and then sharpen the tip of that Reed at the narrow end.

And finally, you dip the read into the ink, and it sucks it up inside. Here, here, watch this. And with that, your pharaohness, I have written down your decree.

**REED:** Oh, those were the days. It reminds me of the time when the Roman Empire was just about to get under way, but the important thing is--

**JOY DOLO:** Oh, boy, would you look at that? U Pen's flock of geese has escaped again. Buddy and I better go around them up. We'll have to hear that story another time, Reed.

**BUDDY:** Nice meeting you.

**JOY DOLO:** That guy can talk. Great timing, geese. OK, Buddy. If you hold your arms out wide, like this, and walk behind them slowly, we can hurt them back to the quad.

**BUDDY:** They're leaving little goose presence in the grass.

**JOY DOLO:** Almost there. Just shoo the rest of them in there. Nice work, Buddy. High five.

**BUDDY:** OK. But why are they here? I thought geese were wild.

**JOY DOLO:** Oh, not these geese. U Pen keeps them for their feathers. I bet my favorite professor could explain, Professor de Ville.

**PROFESSOR DE VILLE:** Joy Dolo, it's been ages.

**BUDDY:** Is that a talking feather?

**PROFESSOR DE VILLE:** Hello there. I'm Professor Jill de Ville, the quill.

**JOY DOLO:** Professor de Ville taught some of my favorite classes at U Pen, and she knows all about a big innovation in pen history, the quill.

**BUDDY:** Oh, a feather pen. I've heard of those.

**PROFESSOR DE VILLE:** Quite right. Quills could be made with the feathers of any large bird, but geese are some of the most commonly used. The quill was the must-have pen for hundreds of years, starting in the sixth century. In fact, the word pen comes from the Latin "penna," which means plume or feather.

**BUDDY:** So that's why there are geese.

**PROFESSOR DE VILLE:** Yep, we make quills from their feathers. Quills were a big improvement over reeds because they're thinner, and bendier, and--

**JOY DOLO:** Buddy, grab her before she blows away.

**PROFESSOR DE** OK. Thank you. Don't worry, happens all the time. I once wrote a gust of wind all the way to Tulsa, fun times.

**VILLE:** Anyway, quills are a lot lighter than reeds, which means the writer can write much faster.

**JOY DOLO:** That was important because in the Middle Ages people started making a lot more books, books about religion, history, medicine, and more. This meant knowledge could be kept and shared like never before. But printing machines didn't show up until much later.

So for hundreds of years, the only way to make a book was for a person called a scribe to write it out and copy each page by hand.

**BUDDY:** Wow. So nearly all the writing was done with quill pens for hundreds of years? Did a quill sign the Declaration of Independence?

**PROFESSOR DE** Yep.

**VILLE:**

**BUDDY:** And the Constitution?

**PROFESSOR DE** Of course. And the Emancipation Proclamation.

**VILLE:**

**JOY DOLO:** And probably lots of medieval birthday cards.

**PROFESSOR DE** OK. So much of what we know today about this long period of history is thanks to quill pens like me and the

**VILLE:** scribes who painstakingly wrote from dawn until dusk every day.

**JOY DOLO:** And boy, was it a pain. The quills were hard to write with. They'd leave ink splotches or break, and you had to constantly dip them in a little pot of fresh ink. Writing with one was a whole thing.

**PROFESSOR DE** What can I say? You've got to have skill to handle a quill.

**VILLE:**

**JOY DOLO:** But most people alive during this time couldn't read or write. They were sharing and receiving information by word of mouth or by having it read to them.

**BUDDY:** There's a point for that giant mouth guy.

**JOY DOLO:** You mean Teller?

**PROFESSOR DE** That guy-- you know, I told him I didn't like the cafeteria food a few weeks ago in confidence, and the next

**VILLE:** morning half the campus knew. What a big mouth.

**JOY DOLO:** But Buddy's right. Historians think that, for most of the Middle Ages, less than one out of every five people in Western Europe could read or write.

**BUDDY:** That's a lot of stories that didn't get written down, so we couldn't learn about them.

**PROFESSOR DE** Very true. But us pens-- we helped change that, too. Oh, I got to run. I'm late for an ink-gulping contest. I guess

**VILLE:** I'll just have to waft over there on a breeze. It's the fastest way to travel.

**JOY DOLO:** All right, Buddy. There are lots more pens I want you to meet. But let's take a break for a minute and play--

**SINGERS:** "First Things First."

**JOY DOLO:** It's the game where we try to put things in order from oldest to newest. Today's items are whiteboards, rubber erasers, and Crayola crayons. Now we have to guess which one came first, which came second, and which came most recently in history. What do you think?

**BUDDY:** I think that erasers came first because it's just rubber.

**JOY DOLO:** Rubber is, again, one of those natural resources, huh?

**BUDDY:** Yeah. And like pencil is-- I think that came out a long time ago.

**JOY DOLO:** Yeah, yeah, they seem like they've been around for a long time.

**BUDDY:** Yeah. So I think I think that erasers are definitely made first.

**JOY DOLO:** So if rubber erasers are first, then we have whiteboards and crayons. Which one do you think is most recent, and which one do you think came right after rubber erasers?

**BUDDY:** I think that Crayola came before whiteboards.

**JOY DOLO:** Oh, OK, OK. I can get-- OK, so we have erasers, Crayola crayons, and whiteboards. So I understand rubber erasers because I think rubber has been like a part of the Earth forever. And so what are crayons made out of?

**BUDDY:** What is it? I forgot. How did I forget this? It's like wax. Wax?

**JOY DOLO:** It's made out of wax. Good job, Buddy.

**BUDDY:** Thank you.

**JOY DOLO:** You do get a million dollars. I was lying. I'm going to find a million bucks, and I'm going to give it to you. So it's made of-- I guess that makes sense. So we have rubber and then wax, which-- candles and stuff were probably around, too. And then I bet somebody just put dye in a candle, and they started drawing with it. And they're like, here, color this.

And then whiteboards must be made out of white boards.

**BUDDY:** I don't even know what that-- and they had to come-- and they had to come up with-- and they would have to come up with ink that you can erase so I think that will take a while.

**JOY DOLO:** Yeah, just the science of it seems like it's something that's a little more modern. Those are great guesses. I'm around that, rubber erasers, Crayola crayons, and whiteboards. That's awesome.

**BUDDY:** We'll hear the answers in just a bit.

**JOY DOLO:** We love it when you send us ideas for this show because it turns out there's cool history all around us. So we're going to explore some topics picked by you, our listeners. It's time for "Did You Know?"

**HISTORIAN:** History is everywhere, even in your favorite games and TV shows. Did you know that most Pokémon characters have different names depending on where you live? *Pokémon*, short for Pocket Monsters, was a game created by a Japanese game designer named Satoshi Tajiri in 1996.

Two years later, kids all over the world were playing with the Pocket Monsters a big part of getting *Pokémon* ready to grow international was translating the names of the characters. Translators had to figure out ways to take the original names from Japanese to a new language while still describing the character, like Girafarig. The name of this giraffe-like Pokémon is a palindrome, which means it's the same spelling front to back, like radar, or kayak, or poop.

In Japanese, his name is Kirinriki. Kirin is the Japanese word for giraffe, and when this name is written out in Japanese characters, it's a palindrome, too. Or Charmander-- his name is always a combination of words for "burning" and "salamander." In Japanese, his name is Hitokage. In Spanish, it's Quemandra.

One notable exception, though, is Pikachu. Pikachu's name is the same in every language. Pikachu's name comes from the Japanese word for "sparkling" and the squeak mice make. Sparkly Mouse just doesn't have the same ring to it, though.

**JOY DOLO:** Thanks to our listeners for sending in great suggestions. Keep them coming.

**BUDDY:** We'll be right back.

**JOY DOLO:** All right, Buddy. Let's reveal which of our First Things First is actually the oldest. Drum roll, please. Buddy, I have to tell you, I might have to give you \$2 million because I think you got them all right. You got the right order, round of applause.

All right, first up, rubber erasers-- it was not until 1770 that someone figured out that a natural rubber made from plants could be used as an eraser. Before, people used pieces of white bread, yum. The story goes that an English engineer picked up a piece of rubber instead of breadcrumbs and discovered that rubber could erase pencil markings.

The name "rubber" came from rubbing. Before that, the material was called gum elastic or cow chuck. They put cow chuck on their pencils. This kind of eraser didn't work too well. When it got cold, it broke apart.

The solution to that problem came in 1839, when inventor Charles Goodyear invented the method of drying the rubber, vulcanization. This process made rubber more durable and allowed for the eraser to become a household item. It used to be bread. What? That's what I eat with my mouth. We were eating rubber erasers.

Anyway, Crayola crayons was second. The crayons most of us are familiar with, Crayola, launched in 1903 with eight colors, red, orange, yellow, green, blue, violet, brown, and black. They had your favorite color in their, Buddy, red.

But using colored wax to draw is a much older technique. It's believed Leonardo da Vinci used crayon-like pastels way back in the late 1400s, and artists began using Conté crayons, something between a pastel and a modern crayon in the 1700s.

And finally, as you predicted, Buddy, whiteboards-- the earliest whiteboards date back to the 1950s and '60s, but they weren't in an instant hit. These ones didn't have special erasers. You had to use a wet rag to clean the ink, which is what we're talking about, the science of actually getting it to go away.

But an inventor came up with dry erase markers in 1975, making it fast and easy to wipe a whiteboard clean. After that, they started replacing chalkboards since they were easy to write on and didn't create all that nasty chalk dust. Isn't that interesting? You were right, too.

**BUDDY:** I wonder how much times I've been right in a row.

**JOY DOLO:** You've been right a lot, not just in this but just in life in general. You've been read a lot.

We're back with *Forever Ago*. I'm Joy.

**BUDDY:** And I'm Buddy.

**JOY DOLO:** So before the break, we were talking about the feather quill. It was used for over 1,000 years. But things were about to change. The Industrial Revolution was coming.

**BUDDY:** That's when things started to be made in the factories in the 1700s instead of by hand at home, and it meant we could make more stuff, way cheaper and way faster.

**JOY DOLO:** By this time, machines were being used to make all kinds of things, including really big, really thin sheets of metal. At first, these were used to build parts of steam engines for trains, but then people figured out the metal sheets could also be used for-- you guessed it-- pens.

**BUDDY:** Instead of going through the long process of cutting feather quills with the knife. They could quickly make tons of pens with stamped metal tips.

**JOY DOLO:** Right. And metal-tip pens were a big deal. They it break as easily. They could be much more precise, and overall, they made life easier. Like think about a classroom.

Before these metal tipped pens were invented, a teacher would have to cut quills from feathers for every student in the room. The feathers bent and got dull quickly, so the teacher had to fix them constantly on top of everything else they were dealing with.

**TEACHER:** Students, line up at the front of the classroom, and bring your quills. Josephine, is that a hamster in your pocket? I told you, no hamsters in class. No, no chameleons either. They do not pay me enough to do this.

**JOY DOLO:** But with these new pens, suddenly things got a lot easier. The pens didn't need as much upkeep, and they were much cheaper. So you could just pass out pens to everybody.

**TEACHER:** You get a pen, and you get a pen.

**JOY DOLO:** But even then, writing still had to be done at a desk because you still needed to dip your pen in a jar of ink over and over again for each line you wrote out. So you couldn't just whip out a pen and notebook from your pocket any time you had an idea or wanted to send a postcard from the top of a mountain or draw a picture of a really cool spider you saw on a walk.

**BUDDY:** Drawing spiders is very important.

**JOY DOLO:** Very. But still, thanks to these metal-tipped pens more people were writing, and more stories were being written down and saved.

**BUDDY:** So how do we get from there to--

**FOUNTAIN PEN:** Cowabunga. Marco.

**JOY DOLO:** Nice one, bro.

**FOUNTAIN PEN:** Hey, dig this.

**FOUNTAIN PEN:** Oh, yeah.

**BUDDY:** What are those pens doing in that fountain?

**JOY DOLO:** Those are the brothers of Phi Epsilon Nu. That's a fraternity with some real big pen on campus energy. What's up, bros?

**FOUNTAIN PEN:** Hey, jamming Joy Dolo.

**FOUNTAIN PEN:** Joy.

**FOUNTAIN PEN:** You thirsty?

**FOUNTAIN PEN:** Check this out.

**BUDDY:** What are they doing?

**JOY DOLO:** They're fountain pens. They're filling up their ink reservoirs. And these were the next big thing in pen technology after those metal-tipped ones. In a fountain pen, the ink is stored inside the pen itself. This means you don't have to constantly be dipping it. When it's empty, you just refill it.

**FOUNTAIN PEN:** That's right. We made it possible to write on the go, no more desk, no more jar of dipping ink.

**FOUNTAIN PEN:** Pretty impressive, huh? The key was designing an ink reservoir that allowed ink to flow out slowly so it wouldn't spill out all over the page and make a huge mess.

**JOY DOLO:** Most of the time. I remember that one night we were cramming in the library and you got a little too excited when you had a breakthrough on your chemistry assignment, ink everywhere.

**FOUNTAIN PEN:** I'm pretty sure you're confusing me with another pen. Joy, you're going to ruin my cred with these guys.

**JOY DOLO:** Oops, sorry. Anyway, fountain pens were a huge improvement over even the metal-tipped ones.

**FOUNTAIN PEN:** Right on. When we hit the market around the early 1900s, you could snag one of us for about 250. Today, that would be about 75 buckaroos.

**BUDDY:** That's a lot of money for something that would still sometimes leak all over your homework.

**FOUNTAIN PEN:** Hey, man, I don't know who you've been talking to, but I've never leaked in my life. Guys, no, no, I haven't, really.

**FOUNTAIN PEN:** And yeah, we were a little pricey, but we were meant to be kept, treasured, cherished. We were keepsakes.

**FOUNTAIN PEN:** Family heirlooms, even.

**BALLPOINT PEN:** Yeah, but no one really uses fountain pens anymore.

**BUDDY:** Who is that?

**JOY DOLO:** I think-- wait, is that a pen in your backpack?

**BUDDY:** Oh, yeah, just in case you want to play tic-tac-toe later. Wait, you can talk?

**BALLPOINT PEN:** Of course I can talk. Oh, boy, oh, boy. I've always wanted to attend a university. And now here I am at U Pen.

**FOUNTAIN PEN:** Oh, no, not a ballpoint.

**FOUNTAIN PEN:** Fountain pens had barely been around when the ballpoint showed up.

**BALLPOINT PEN:** Look, it's not my fault your forefathers were such a leaky mess. Yes, I showed up in the mid-1900s, a time full of life-changing innovations like passenger jets, credit cards, hula-hoops, and I was a big deal, too.

You see, instead of an open tip or a nib like all the pens of the past had, I have a tiny stainless steel ball at the end of my ink reservoir.

**BUDDY:** Oh, yeah. What's it for?

**BALLPOINT PEN:** Well, when you're not using me the ball sits tight against the end of the ink reservoir, kind of like a cork stopper in a bottle. It keeps the ink from leaking out or any air from getting in. And when you press the pen to paper, gravity and force smear the steel ball with ink that makes it onto the page.

**BUDDY:** Wow. But if you guys were such a huge improvement over fountain pens, why are ballpoint pens so cheap today?

**BALLPOINT PEN:** Well, originally, ballpoint pens were much more expensive. When the first batch launched in New York City in 1945, they cost \$12.50.

**JOY DOLO:** That would be more than \$200 today. That's a pricey pen.

**BALLPOINT PEN:** Yeah, that's right. At first, we were marketed as extra, extra fancy pens, but that all changed thanks to a Frenchman named Marcel Bich. In the States, we pronounce his company BIC.

**BUDDY:** Oh, BIC pens.

**BALLPOINT PEN:** Exactly. He designed a much cheaper plastic version. He realized that people didn't need glitz and glamour when it came to pens, just an affordable way to write things down. He was a visionary.

**BUDDY:** Wow, so suddenly even more people were able to share their ideas by writing with pens. I bet people loved this invention.

**JOY DOLO:** Well, sure, lots of people did, but not everyone was on board. A statement published in the journal *Federal Teachers* claimed "Ballpoint pens will be the ruin of education in our country. Students use these devices then throw them away. The values of thrift and frugality are being discarded. Businesses and banks will never allow such expensive luxuries."

**BUDDY:** Ooh, harsh. But plastic waste is a pretty big issue. If we only use pens for a short time, we throw them away, and then they end up in landfills, or oceans, or other places where we don't want pens to be.

**JOY DOLO:** On the other hand, because of ballpoints, way more people are able to use pens to jot down funny jokes, sign yearbooks, doodle in the margins of their school assignments, kind of like your bubbles.

**BALLPOINT PEN:** Yeah, we do it all.

**FOUNTAIN PEN:** It could have been me.

**FOUNTAIN PEN:** Should have been me.

**JOY DOLO:** Hey, hey, we're all on the same team, guys, team pens, right? Let's all sing the U Pen fight song to fix the vibe. And then we'll walk over together to get seats for the Pen Cappella concert.

**FOUNTAIN PEN:** Oh, man. Do we have to?

**JOY DOLO:** We're climbing every mountain, whether ballpoint, quill, or fountain. We're full of ink. We don't stink. U Pen.

**FOUNTAIN PEN:** All right.

**JOY DOLO:** That's better. Let's get going.

**BUDDY:** You know, I didn't think much of pens when we got here, Joy.

**JOY DOLO:** Don't say that around here.

**BUDDY:** I mean I didn't think about them. I took them for granted because they're just kind of everywhere, and they're pretty cool when you think about it. They help people write down and remember so much information.

**JOY DOLO:** Right, from ancient texts to handwritten books to diaries, and notes, and so much more.

**BUDDY:** Yeah. The better the pen technology got the easier it became for people to write down their own thoughts and experiences.

**JOY DOLO:** The concert is about to start. I love the note-takers.

**FAN:** Excuse me. Are you Joy Dolo, the host of *Forever Ago*?

**JOY DOLO:** Oh, hi. I am.

**FAN:** Can I have your autograph?

**JOY DOLO:** Oh, I don't have anything to write with.

**FOUNTAIN PEN:** Use me.

**BALLPOINT** Use me.

**PEN:**

**FOUNTAIN PEN:** Use me. Oh my God.

**JOY DOLO:** This episode was written by Nico Gonzales Whistler and Beth Perlman. Our editors are Sanden Totten and Shahla Farzan. We had help from Molly Bloom, Rosie DuPont, Ruby Guthrie, and Anna Weigel, sound design by Rachel Breeze, theme music by Mark Sanchez.

Beth Perlman is our Executive Producer. We had engineering help from Jess Berg. Special thanks to Amanda Jackson, Vernon Neal, and Lulu. The executives in charge of APM Studios are Chandra Kavati, Joanne Griffith, and Alex Stafford.

**BUDDY:** If you have an idea for a topic that we should explore on *Forever Ago*, send it to us at [foreverago.org/contact](http://foreverago.org/contact). It might be featured on our "Did You Know" segment.

**JOY DOLO:** We'll be back next week with an episode all about the first women who wanted to be astronauts.

**BUDDY:** Thanks for listening.