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October 2, 2013



5 Ways Scientists Can Engage Youth On Classroom Visits

Posted: 10/01/2013 11:40 am

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Editor's Note: This post is part of a series produced by HuffPost's [Girls In STEM](#) Mentorship Program. [Join the community](#) as we discuss issues affecting women in science, technology, engineering and math.

On one episode of "The Big Bang Theory", Leonard, Sheldon and Harold visit their local high school to speak with girls about science. [The result isn't pretty](#). The class was unimpressed by the presentation to say the least. The guys weren't only engaging but made fools of themselves by describing their careers in a boring way.

Career outreach to young people is something all scientists will be called to do at some point. Shortly after I watched the episode, a fellow PhD student told me, "We all have to do outreach, we just don't know how!" It hit me that I have friends like Sheldon, Harold and Leonard. So how can I help them do outreach?

I realized I can help by sharing my experiences [visiting middle school classrooms](#), writing lesson plans and taking part in [activities specifically targeted at getting girls interested in STEM](#). I thought I would put together my top five pieces of advice for scientists visiting K-12 classrooms.

1. Be colorful. Wear purple pants! Okay, maybe you don't have to wear purple pants but... think about it! In March I visited a middle school class and as I walked with the students to lunch, one of the girls ran to the front of the line and said, "I LOVE your purple pants." I didn't think twice about this until recently when I asked a group of middle-schoolers, ["What does a scientist look like?"](#) White lab coats and crazy hair they responded, definitely not purple pants. I asked them, "Do you think of me?" They shook their heads but then one of the parents chimed in and said, "Maybe now they will!" The point is to be stylish and present your self well.

2. Meet them where they are. This should come as no surprise that to do outreach with students, you need to go to where the students are. But you also have to know your audience and meet them where they are developmentally. Sometimes they want to talk about their favorite ice cream. Sometimes they all proclaim that they want to be dolphin trainers one day. And that's okay. Never shoot them down. Tell them you like vanilla with rainbow sprinkles and encourage them to continue pursuing science no matter what. You never know when that little girl who says she wants to be a dolphin trainer will turn out to be a PhD student at Duke studying wild Hawaiian spinner dolphins. They just aren't there yet, and that's okay!

3. Be dynamic. No really, move around! Especially with the younger grades it is essential to get them moving. I visited a kindergarten class and had them all be spinner dolphins and spinner dolphin scientists. This involved having some students leaping and jumping around the room and others carrying clipboards, paper cutout binoculars and cameras following "the dolphins" while noting their behaviors. They ate it up! So think about activities, not just a lecture. Sure you're going to want to tell them some stuff, but have them do something too!

4. Be encouraging. I was speaking to a group of 5th graders and their parents on a multi-day field trip and one of the first things I told them was, if they like science to tell someone!

I tell students this quite often and always try to provide some examples of things they can do at their age if they like science. I know this was well-received because I had parents run up to me and thank me for saying that to their son or daughter. I also try to give an extra dose of encouragement to the girls. I tell them, "Don't EVER let anyone, I mean anyone, discourage you from pursuing science."

5. Be you. One of my favorite things to do when I visit with K-12 students is to show them pictures of when I was their age and to tell them how I got to where I am today. Everyone's story is a little bit different but sharing what makes you unique and what got you to where you are today is an extremely powerful story and it deserves to be told.

So if you follow these five easy tips, you'll be an expert science communicator. Well... it's not that easy. Like anything it takes practice and time. But I promise, even if it is just a fleeting moment with a student who wants to take a picture with you before you leave them, it will be worth it. And plus, outreach to young girls can change the world.

Follow Heather Heenehan on Twitter: www.twitter.com/spinnerheather
