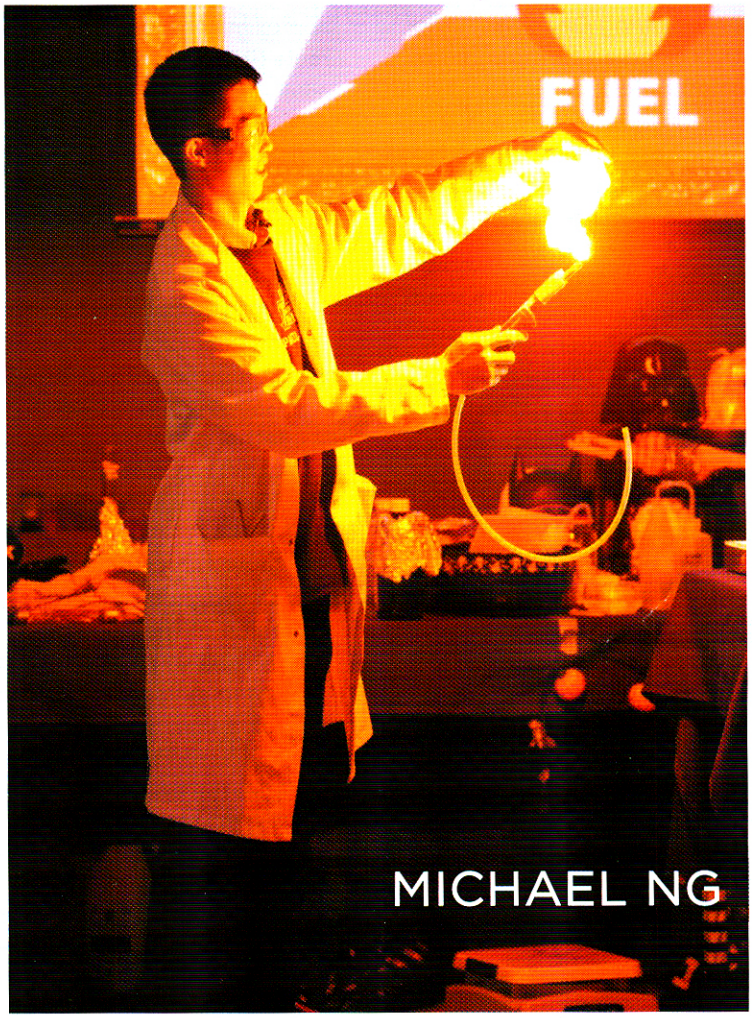
2016 Canadian chemistry teacher of the year



Michael Ng of Paul Kane School, St. Albert, Alberta has won the Beaumier Award for High School/CÉGEP Chemistry Teachers. This annual award is presented in recognition of excellence in teaching chemistry. The award is a one-year high school teacher membership in the Chemical Institute of Canada (CIC), a plaque and a $1,000 educational grant to use towards chemical supplies, equipment, books or other material to enhance the teacher's classroom.

We asked Michael to reflect on teaching chemistry. These are his words...

I've learned that my teachings are not perfect — it is a never-ending journey towards self-discovery, laughter, acceptance and happiness. One piece of advice I'd like to share is to take the time to listen to others, learn from them and work with them. Life is too short to be alone in your own classroom. I've worked my way learning from great mentors and colleagues in my science department along with the inspiring speakers at science teacher conferences like David Suzuki, Joe Schwarcz, Jane Goodall, Bill Nye and Bassam Shakhashiri. They all have passion in common.

When I started teaching, I was inspired by Shakhashiri's book *Chemical Demonstrations: A Handbook for Teachers of Chemistry* [1]. His books and teachings taught me that "demonstrations capture interest, teach, inform, fascinate, amaze and perhaps, most importantly, involve students in chemistry."[1] Science demonstrations not only illustrate key concepts but also provide an avenue for further inquiry. The key to science does not lie in the students' ability to follow a set of procedures or steps — that is the key to following directions! The key to success in science lies in a student's ability to think beyond the activity. Teaching is the ultimate performing art, and performing arts are interactive. You don't just present — you have to connect.

I would like to share three concepts learned from my mentors that I hold dear to my heart.

First, you can tell a healthy school from an unhealthy one by just listening for laughter. This idea can get shunned in education because we teachers do take our subjects seriously — we've got standards, we've got this, we've got that, we've got metrics. But in a healthy school, teachers have fun and enjoy being there. When you allow yourself to be funny, you allow others to be funny as well. How do you do it? Just laugh yourself. The next time something crazy happens — safety first of course — in your science classroom, laugh. You show students you cherish a sense of humour. Your laugh gives permission to share humour and have fun in the science classroom. Can kids be learning in the classroom if you are "playing around"? Yes, laughter and humour create valuable learning experiences. When a graduate comes back years later stating "You know, you really were teaching us" — wow, what a thrill! They actually get it.

These unforgettable learning experiences rekindle a child-like sense of wonder — in both children and adults. This applies particularly to teaching — one of the hardest jobs on the planet. Laughing is good for us. Those little neurons open up, and our bodies react in positive ways. Studies indicate that teachers who know how to get their students laughing create a wonderful learning environment. This keeps students coming back for more. So go out there and smile to your students before they "argon"! Science jokes will always make your students laugh.

Second, the world is filled with many good science teachers, but nobody is drawn into teaching because they once had a good teacher. It is typically because of a great teacher. A good teacher will tell you how to do something — that's the Food Network. Move four channels down and you get the Discovery Channel — a whole different world. They show you the passion behind the why. A good teacher has activities whereas a great teacher will take an activity and tie it to a real world experience. A great teacher takes the science stuff and turns it into learning experiences. This will ultimately get to the dinner table conversation — when this happens, you win.

Third, a teacher is always on stage. The lights come on, the sound comes up and for six hours we are guiding the kids through the learning process. It is important to stop and think "why are we in this profession in the first place?" It is not because of the great pay, the super benefits or because it is a glamorous science job — and we get to play with chemicals. For me, it is because there are students who are going to really get it. They might be the next Marie Curie or Einstein; they might be the next Elon Musk of Tesla. It is this possibility that makes me teach. So continue to innovate and share best practices, teaching ideas and creative ways to make science education more exciting and meaningful. It takes years of practice with trial and error, revision, refinements, practice, practice and more practice. The greatest teaching ideas and the coolest science experiments are worthless unless students can integrate them into practice. Recently I was inspired by a quote from the CEO of Microsoft: "Our industry does not respect tradition — it only respects innovation."

Furthermore, remember to have a passion in what you do. Science will always be fun but we as teachers are what make it inspiring. Enjoy it as best as you can. And as the Dalai Lama once said, "Life is not something readymade. It comes from your own actions." Take the time to listen to others and remember to smile. We're in this together, so live bravely in the time you have and smile at the void. It is your students, your colleagues, your lab aides and the ones most dear to you that make the very best of you.

1. University of Wisconsin Press, website. *https://uwpress.wisc.edu/books/0302.htm*

» National awards for chemistry teachers nomination deadlines

Do you know someone in your department who should be recognized? Let's showcase the work of chemistry teachers! To find more information, go to the websites of the national institutes. Here are some of the national awards to consider.

Beaumier Award for High School/CÉGEP Chemistry
Canada (Chemical Institute of Canada) Teachers, deadline: October 15, 2016

James Bryant Conant Award in High School Chemistry
USA (American Chemical Society)
Teaching, deadline: November 1, 2016, Thermo Fisher Scientific, Inc. sponsored

RSC Schools Education Award
UK (The Royal Society of Chemistry)
Deadline: January 15, 2017 ■