

Video Makes Science Pop

An Ontario Certified Teacher partners with Science North to bring hands-on activities to classrooms.

BY STEFAN DUBOWSKI



Tom Doherty, OCT, facilitates staff training with teachers from Wasaho Cree Nation School.

THE CHALLENGE Make science as engaging as possible for students across a range of grades.

THE SOLUTION Work with Science North, the science-education resource centre, to bring activities to classrooms via video conference.

LESSONS LEARNED When he started as student retention lead at the Keewatinook Okimakanak Board of Education (KOBÉ) in Balmertown, Ont., in 2016, Tom Doherty, OCT, learned students and teachers faced particular problems with the science curriculum. First, there weren't enough supplies to run experiments and activities; materials weren't always replenished and getting replacements often involved extremely high shipping costs to reach KOBÉ's northern Ontario communities. That made learning and teaching especially difficult since hands-on, activity-based education is integral to the KOBÉ approach. He wanted to find a way to help teachers make science engaging and experiential.

Doherty contacted Science North, the science-education resource centre in Sudbury, Ont. He knew this organization sent facilitators out to schools to help bring science activities to students in places too far away to visit the centre in person. But he also knew bringing Science North's people to Deer Lake, Poplar Hill and other KOBÉ schools wouldn't work. Many are in small communities with no extra space to house facilitators.

So rather than in-person facilitation, Doherty and Science North chose the virtual route: a facilitator would "visit" classrooms via video conference to help prepare teachers for the lessons, and then go on to conduct the classroom activities that way, too.

Science North sent all the materials the schools would need to conduct the activities — for example, all the gears, pulleys and motors needed for an activity on simple machines and electricity, in which students would build a motorized character that pulls itself along. The resource centre, rather than the schools or board, covered material and shipping costs.

YOU CAN DO IT TOO!

- 1) Learn about Science North's Outreach Program (sciencenorth.ca/outreach).
- 2) Discuss with a Science North facilitator what you'd like them to help you teach.
- 3) Conduct teacher-education sessions to prepare for the activities.
- 4) Use video conferencing to bring the facilitator into the classroom.

OBSERVATIONS This solution checked all the boxes for Doherty and KOBÉ's students and teachers. It made science class fun and hands-on. If they paid attention and followed along with the facilitator on the video-conferencing screen at the front of the classroom, students would not only learn a thing or two about mechanical and electrical science, they'd also have a neat little robot to take home.

Classroom management shifted, too. "The teachers were able to facilitate the learning, which meant that they could take time to help those students who would have otherwise struggled without the extra hands in real-time learning," Doherty says.

What's more, the video-based lessons helped Doherty meet his mandate of making sure students come to class. "Everyone's there, because they knew that day they'd get that little robot to bring home and play with," he says. "I knew my attendance rates would be 80 to 90 per cent." **PS**

The College's professional advisory Use of Electronic Communication and Social Media — Updated (oct-oeeo.ca/ecom) guides members' professional judgment in the use of technology.