

Prime Minister's Awards for Teaching Excellence

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Table of Contents

| Introduction | |
|----------------------|----|
| CharlesBazilewich | 5 |
| Armand Doucet | 6 |
| Jean-Paul Dupont | 7 |
| Nicole Dmytruk-Blais | 8 |
| Emmanuel Escueta | 9 |
| Yvan Girouard | 10 |
| Monica Lee | 11 |
| Anand Mahadevan | |
| Scott Onuczko | 13 |
| Steve Revington | 14 |
| Resources | 15 |

Prime Minister's Awards for Teaching Excellence 2015 Exemplary Practices

Welcome. Put fifteen educators in a room and they will find plenty to talk about. That was certainly true of the 2015 national recipients of the Prime Minister's Awards for Teaching Excellence and Excellence in Early Childhood Education. Despite the differences among them—they hailed from communities small and large from across the country, and worked with children and young people from toddlers to teenagers on a wide variety of subject matters and in a range of educational settings—the educators had much in common in their approach to preparing children for life in the 21st century.

During the Teacher's Talk session, held when the recipients were in Ottawa in May 2016 to receive their awards, each educator spoke about some of his or her innovative and successful teaching practices.

The assembled group heard about how both kindergarteners and senior high school students use technology to enhance their learning, and how educators seek to give their charges the lead to pursue their interests while still covering the curriculum.

Many presentations reminded listeners of some of the fundamentals that underlie education no matter what the age or circumstances of the students: developing curiosity and imagination, getting exercise and a chance to explore the natural world, and ensuring families remain an important part of children's education.

But the most common theme the fifteen recipients' short presentations brought to light was the challenges and benefits of providing authentic learning experiences. The nods around the table were numerous as various educators talked about how their students interact with the community, with experts and with peers to solve real-world problems, develop relationships and expand their knowledge.

Exemplary Practices gives a glimpse into some of these award-winning educators' approaches and techniques. Individual articles focus on a slice of the work these professionals do in their respective classrooms and early childhood education centres. These are complemented by a list of resources for other educators to tap into, and <u>biographies</u> that provide background on the recipients' philosophy and more of their best practices and achievements.

The Prime Minister's Awards for Teaching Excellence honour well-rounded educators who provide exemplary educational experiences to students in Kindergarten to Grade 12 across Canada. The Prime Minister's Awards for Excellence in Early Childhood Education recognize the crucial work being done in the many and varied child care settings in the country to ensure the sound development of young children, and to start them on a journey of life-long learning.

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Educating students to take on the cyber security challenge

By 2020, billions of devices will be connected to the Internet, permeating every aspect of private and business life. Ensuring the security of critical infrastructure, such as power grids and financial services, is crucial to the safety and prosperity of every Canadian.

The <u>Network and Cyber Security Academy</u> was started at Sisler High School in 2012 and helps ensure there will be skilled workers in the cyber-security industry in the future. The program includes courses in networking and cyber security (including industry certifications) and prepares students for international cyber security competitions. (These events engage students and allow them to apply their skills in a fun team environment.)



There were three important aspects of my work to develop this program: use the vast resources available on the web to develop your own expertise, make



Charles Bazilewich Sisler High School

Winnipeg, Manitoba

Subjects and Grades Taught:

Technology education, grades 10 to 12

connections with industry, and allocate time to promote the program to future and existing students. Early in the promotion process students quickly realized the post-secondary connection and employment potential when taking courses that emphasize technology education.

In addition to allowing students to develop skills much sought after by industry, the program fosters a welcoming community for students who

may not fit into other areas of typical school culture such as sports, performing arts, or social action groups. Enrolment has grown to more than 380 students, including an increasing number of girls. But the most rewarding increase has been the team of individuals that have come together to help the program grow. Teachers and former students contribute to sharing their knowledge to help everyone grow as a community of technology learners.

To introduce students across Canada to cyber security best practices, the program has been instrumental in developing <u>Cyber Titan</u> a collaborative effort between the Information and Communications Technology Council and the American Airforce Association's <u>CyberPatriot</u> program. Through a combination of online learning activities in a simulated game-based learning environment students are challenged to find and fix embedded computer vulnerabilities hackers typically exploit. Eventually, these students could participate in a Canadian National Cyber Defence event to bring together students from across Canada to showcase their talents in IT security.

If you are interested in starting a technology club, or program similar, don't fear the unknown. The journey you will travel with your students will be rewarding. Cyber security is the future of information and communications technologies, and we owe it to our students to push the boundaries of traditional education in order to expose them to the opportunities of tomorrow.

Developing divergent, risk-taking thinkers through passion projects

believe that the classroom is a place where <u>risk-taking should replace reluctance</u>, <u>ingenuity replace incapacity and autonomy replace dependency</u>. To make such a classroom reality, I foster divergent thinkers by having them approach projects using a design-thinking process and with a growth mindset.

The design-thinking process relates to innovation. Taking a cue from industry, I show students how to quickly come up with an idea, get feedback from their peers on it, make adjustments and repeat the cycle as needed. I see the growth mindset as being one in which students are constantly learning and realize that there's no set ceiling for what they can accomplish.

But for this to succeed, it's essential to create a classroom culture that fosters collaboration, and helps students give and take criticism. I wasn't taught this in teacher's college, but I did learn it as a coach, having to figure out how build a team out of a disparate group of athletes.



Armand Doucet

Riverview Middle School (Now at Riverview High School) Riverview, New Brunswick

Subjects and Grades Taught:

Physical Education, Health, grades 6 to 8 (now Modern History and World Issues)

Here is my three-step approach:

- Building relationships and learning what the kids are passionate about. Rather than focusing on the curriculum in the first three
 weeks of the year, my class does icebreaker and team-building exercises to help them learn to communicate, collaborate and think
 critically. Sometimes we record these activities, so we can see the improvements students make as they learn these skills. At the
 same time, I get them to think about what are they passionate about, and then connect those topics to the curriculum.
- Challenging paradigms. Autonomous students need the skills to support their learning. I focus on developing students' social emotional skills and the World Economic Forum's Top 10 skills for 2020, and ask students to assess their level for each. Then, I push the envelope to help them develop those skills. I set short deadlines in particular, to help students gain organizational and timemanagement skills.
- Embracing the problem. With successful grounding in the first two steps, students are ready to exceed their own expectations by embracing a problem, rather than fearing it, and setting out to discover the multiple ways it could be solved.

Students apply what they've learned to their year-long "passion projects," which they work on one day a week, intertwining their 2020 skills and the curriculum with integrated technology. For example, a student looking at women's role in code breaking during the



Second World War created her own code breaking machine to send students on a scavenger hunt.

Students learn to collaborate using modern tools (Google Docs and Evernote), develop skills they'll need in higher education and the workplace, and figure how to present what they've discovered in a way that suits their audience and circumstances. Evaluation looks not so much at whether the student got the "right" answer but how they kept improving.

In the end, I hope my students are empowered to make a difference in the world, looking at problems with multiple solutions and never giving up no matter what the obstacles.

Start with the impossible to build a better lesson

Teachers are constantly revamping, revising and refining lessons in order to get the most out of them. But, where to start? Most level-headed and sensible teachers begin with education ministry standards and learning goals, and work backwards to draw a clear path to where they expect their students to be.

For better or for worse, I have never been that kind of teacher. I like to start with the impossible. Why can't students build a city to study medieval culture? Why can't they have a conversation with Beethoven or Mozart in order to better understand their music? Why can't they travel to the far reaches of the galaxy to study astronomy?

When you think of those ideas as impossible, it's easy to dismiss them for something more practical. But these brief flickers of inspiration are like the fireflies I used to catch in mason jar on camping trips. If I waited too long, they would be gone. Many teachers let their "impossible" ideas slip away because they don't think they have a mason jar... but they do.



Jean-Paul Dupont

Holy Cross Catholic Secondary School
St. Catharines, Ontario

Subjects and Grades Taught:

Music, Math, Food and Nutrition, grades 9 to 12

Advances in technology bring opportunities that were unfathomable even a decade ago. Augmented reality, virtual reality, data collection, virtual classrooms, file sharing, mobile audio and video editing, and 3D printing all have the potential to transform student learning and boost student engagement.



Sometimes when I come up with a daunting question I want students to answer, I think of a curriculum expectation and try to fit technology in. Other times, I might read about a really cool bit of technology and then figure out where it would best suit my teaching practice.

Here's an example. A few years ago, I wanted to give my students a real sense of what it would be like to live in a medieval city. My first thought was to organize a field trip but that wasn't possible. Instead, I decided to bring a medieval city to them. This eventually led to my having them create a virtual city using the online game Minecraft.

Other technology I use regularly with my students includes Garageband (to create music), iMovie (to create movies), Aurasma (augmented reality software) and Todaysmeet (a website that allows students to give feedback in real time).

Keeping up with trends in technology and critically analyzing their usefulness in the classroom is extremely important. This fall, for example, innovative teachers will take the time to learn about Pokemon Go and try to extract some kind of meaning from it to make a lesson culturally relevant

and exciting for students. That being said, however, technology should only be used when it can help students do something they couldn't with books, paper and pens.

So the next time you sit down to figure out how you're going to teach an upcoming lesson, dream big and search out the tools to help you do the impossible in your classroom. I guarantee that if you do this enough, your students will learn the most important lesson of all: Things are only impossible until they aren't.

Technology facilitates a hands-on approach to learning

offer my Grade 6 students as many learning opportunities as possible to help them develop the skills they need for their future success. My own children and what kind of people I want them to become have fuelled this passion of mine. Their growth and development have to start now.

Being a member of school-based technology team in my school division has given me so many opportunities—workshops, seminars and sessions both as a participant and as a facilitator—that have inspired my work with my students. The more I experienced learning content through hands-on activities involving technology, the more I realized that this is what I wanted for my students. So I began my quest for hands-on learning experiences.



After many successful small projects involving Skype and virtual field trips, I felt confident enough to try



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Lloydminster, Alberta

Subjects and Grades Taught:

Grade 6, All subjects

something larger. I began learning about how to reach out to other students throughout the world, first by joining forces with "Our Village Uganda," an outreach project started by a woman from Lloydminster who now lives in Africa. My class interacted with students of all ages in the African community through Skype. We learned about each other's culture, prayed together, laughed together and learned from one another. My students saw the opportunity to give these children in Africa a hand up and began fundraising for them. We have since raised more than \$2,000 that has gone into windows and doors for their new school, and we are currently fundraising for playground equipment.

My most recent project is a living wall in the main entrance of the school, thanks to a \$10,000 grant from BP Energy. Writing up the proposal took a lot of hard work and research. Once I received the money, my students and I had to figure out how to build and sustain the wall of living plants. We used design software to configure the wall, and my students did online research to determine what types of plans would be best suited to the environment. My students now care for all of the plants in the school. It has taught them responsibility and given each of them a sense of accomplishment as they watch the wall thrive and grow.

Like the plants in the living wall, technology is only going to grow. Why not expose our students, teach them the value of technology and all of the educational uses for it? Many will have jobs in their future centered around technology, so exposing this generation to it will only benefit and prepare them for their lives ahead.

Technology is also allowing students to experiment in ways that were unimaginable, even 10 years ago. And, it facilitates the variety of ways that children learn.

Throughout my journey, I have realized that I am blessed to be a teacher now, when I can teach not only from a textbook but also from the world through hands-on experiences, made all the more valuable with the help of technology, to help create future global citizens.

Have fun with verbs and grammar to engage learners of all ages

When I first started teaching, back in 1989, I was a French as a Second Language (FSL) educator in northern Manitoba. In that role, I faced the herculean task of motivating and engaging my Grades 7 and 8 students who had a negative attitude about learning French. I had no experience and few materials, so I decided to invent my own. I created Verbathon® because I needed to survive in the classroom.

I designed a customized wall chart into which one can insert combinations of colour-coded cards marked with pronouns, verbs in various tenses, adjectives, negations and more. Verbathon is also a relay game. Students form sentences and are timed on how fast they can conjugate verbs as individuals and as teams.

Once I made learning into a game, the students had a paradigm shift. Grammar was now a sport! The very same students who had hated learning at the beginning of the year changed their attitude. Once put into teams, they created an identity by making flags, chants and t-shirts! When I organized a Verbathon tournament, the whole learning community became involved—students, teachers, administration, parents and even businesses.



Emmanuel Escueta

École Irvine Elementary School

Port Coquitlam, British Columbia

Subjects and Grades Taught:

Grade 2, French immersion

Verbathon is based on what I refer to as the INFINITE principle:

- Inclusive: Balanced teams are carefully organized so that everyone can participate. Students with learning or even physical disabilities are accommodated.
- Fun: It's an exciting race-against-the-clock relay with a spirit of positive competition.
- Interactive: Visual and kinesthetic learners benefit from manipulating colour-coded cards on the wall chart.
- Integrative: Music, math and social studies are woven into the tournament.
- Team-oriented: Teams develop an identity by choosing their name, and creating their flag and group chant.
- Empowerment: Each student gets an opportunity to exercise leadership by being a peer teacher when practising the verb conjugations.

Fast forward to 2016. Verbathon has snowballed into a national competition, held every two years. Immersion, Late Immersion, Francophone, Intensive French and FSL students in schools across Canada—from Grade 2 to Grade 9—take part. Even teachers at the college and university level use Verbathon. There are also Verbathons for Spanish and German, and the relay concept could easily be adapted to other subjects such as math, social studies and science.



Along the way, I've learned a few lessons. For example, I realized that the way I learn is also the way I teach. I'm a visual-kinesthetic learner so creating materials that are tactile, colour-coded and that involve hands-on activities and movement reflect my learning as well as teaching style. I also found that short daily warm-ups of between two and five minutes are key to reinforcing basic concepts, such as verb conjugation or grammar.

Finally, creating balanced teams fosters positive competition among the students. Students with the fastest times in the relay become team captains, with everyone else distributed equally according to their speed. The result is that everyone, especially the weaker students, realize that every team has an equal chance of winning. The best feedback I've received from teachers is that weaker students greatly appreciate having a fair chance to shine.

Creating a science museum classroom

rom the very start of my teaching career, my top priority has always been to spark an interest in young people to make them appreciate school and, even better, love science. My passion as a teacher though was not limited to issues of pedagogy and integrating ICT. I have always loved getting involved in school and extracurricular activities. Students always appreciate it when teachers participate, especially when they give them time and attention, whether as a volleyball coach, school trip and outing organizer, or photographer or videographer for the school.

For 20 years now, our school has included a museum classroom in geography and history. I told myself this type of classroom would be perfect for science, but the old level 4 program only included chemistry and electricity. When the new program of the Quebec Ministry of Education was established in September 2009, the introduction of the 4 environments (Material, Earth and Space, Living, and Technology) allowed me to turn my dream into reality: I decided to transform my lab class into a science museum.

Over the next five years, I bought many objects to complete my personal collection. It includes about one hundred stuffed animals and fish, twenty or so aquariums, and about one hundred science posters to cover all the walls of my classroom. I even built

Doors work in the control of the con

Yvan Girouard

Les Etchemins High School

Lévis, Québec

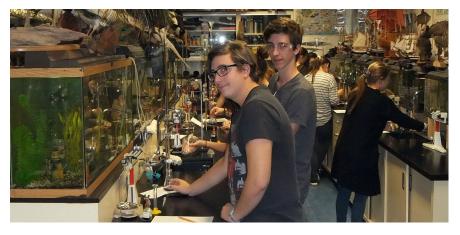
Subjects and Grades Taught:

Science and Environmental Technology, level 4 secondary school

a 10-meter long Diplodocus dinosaur in the museum classroom out of tin can covers and aluminum rivets, which was submitted to the Guinness Book of World Records in June 2015.

My science classroom has become a living scientific attraction. Since 2012, about 400 students from primary schools in our school board come for a visit each year during the Science Fair at our school. The young people are fascinated by their visit and many tell me they look forward to doing science when they get to high school.

Of course, creating and maintaining a museum classroom requires a major investment from the teacher: I had to fund the entire project, except for a few donations; I travelled thousands of kilometers all over Quebec to find aquariums and stuffed animals; during school holidays, I go to school twice a month to check on equipment maintenance and security.



I put a lot of time and energy into my museum classroom, but a teacher without the same resources could still come up with something interesting. I recommend telling as many people as possible about the project: everyone at the school, parents, and the local media. When such a motivating project is being put together for students, many people are ready to donate or lend material.

No matter how much time and energy you put into the adventure, it is well worth it. Having a museum classroom sparks the curiosity and

interest of my students and others in the school and makes them passionate about science. My museum classroom is always open at noontime so students can come and eat lunch, do their homework or take remedial classes. It's a great place to prepare students for Canadian science contests. Students say they are happy to be in this unique and colourful museum classroom.

Beyond the rainbows and stars: Nurturing the learning languages of children

Indergarten teachers often hear, "Oh, how cute! You guys get to play all day!" And, young students themselves often encounter the obstacles of their "cuteness" and "playfulness" in their learning journey. Popular culture commonly banishes anything "cute" to the lightweight category reserved for rainbows and stars—fun but lacking substance. The important tenet of learning through play is often undervalued, precisely because it is play.

In my classroom, I give due credit to my students' sophisticated learning capabilities, which they show in a style that is all their own. And, in my view, it's up to educators to listen and tease the capabilities out, since they're not always obvious.

For example, I once recorded a student sharing a long, protracted puppet play pierced with screeching sound effects and flying puppets. At the time, neither his audience nor I could make sense of it. However, upon revisiting the video and the student's explanation of the play over the next few days, a completely coherent and sophisticated narrative emerged, with characters and a plot that matched the play point for point. When educators provide



Monica Lee

David Livingstone Elementary School
Vancouver, British Columbia

Subjects and Grades Taught:

Kindergarten

a safe space for young children to explore and express themselves in a way that is meaningful yet true to their way of understanding—their "learning languages"—then very sophisticated learning capabilities emerge.



This, in turn, means that my students can tackle projects that are not commonly considered to be "Kindergarten curriculum." They planned and hosted the school's Welcome to Kindergarten event for incoming students, for instance. They also collaborated with their Grade 6 and 7 big buddies to create and perform in anti-bullying public service announcements that were broadcast on the school's television in the main hallway. Each of my students also designed and printed a piece of anti-bullying jewellery using a 3D printer as a science, technology, engineering, arts and math project.

The success of these projects relied on students and teachers communicating, collaborating, problem solving and innovating together. I also need to scaffold and adapt activities so my young students can become actively involved without getting to the point of complete frustration. For the anti-bullying videos, for instance, I wanted my students to grasp the public service announcement, drama and communication aspects rather than video creation, so I had the big buddies handle, among other things, the video side.

When my class moved into the 3D printing part of the project, I had parents come in to help with the software, maneuvering the computer mouse and reading certain

instructions. As long as having support to scaffold an activity does not take away from the main goal of *meaning-making*, I think it is perfectly acceptable and even necessary to have help.

Showing confidence in students' ability to achieve reveals the meaning and value in what is happening in the classroom. By pushing against the obstacle of "cuteness" and challenging the common understanding of what young learners can and will do—whether it be using new technologies, filming social justice messages or presenting at conferences—my students can soar beyond the rainbows and stars.

Changing up teaching practices to give students room to learn

Children are curious and innovative. They want to know how the world works, and how they are going to find their place within it. Often, figuring this out involves making mistakes. But, how do teachers celebrate these mistakes and encourage students to keep at the task of changing themselves and thus helping bring change to the world? In my career, I've looked at ways I can improve my practice to make such progress possible.

Early in my career, for example, I noted that some students were erasing values from graphs because they made the results "look bad," which they feared would cost them marks. As a result, I modified my marking schemes to no longer allot points for getting good data. In fact, I do not care whether experiments work. Indeed, most scientific experiments in the world fail. Most drugs tested do not cure cancer or Alzheimer's. When I shifted value from the product to the process of science, my students were also able to move away from getting the "right" answer to finding their own answers.

Another observation was that students never have enough time. Genuine inquiry—to develop the knowledge and understanding of scientific ideas, and of how scientists study

Anand Mahadevan
University of Toronto Schools

Toronto, Ontario

Subjects and Grades Taught:

Science and Biology, grades 10 to 12

the natural world—requires patience and a focused mind. It certainly does not come in 45- to 75-minute chunks between gym and art. Students would routinely beg me to stay after school so that they could work without distraction and interruption, and I began to let them.



Seeing how changing my practices allowed students to blossom as investigators led me to start <u>Bright Lights in the Lab.</u> For two weeks in the summer, seven hours a day, Monday to Friday, students review current scientific knowledge, pose questions, learn to use tools to design experiments, and collect data. Camp staff pair participants with graduate students and post-doctoral candidates, and let them perform research in an environment free of grades and exams. Students realize that science is a collaborative, iterative process that requires both risk-taking and hard work. Brilliant insights can come at any time in the process and to anyone involved.

Bright Lights in the Lab helps students celebrate failure, devoting time to deconstructing the learning that takes place and new knowledge that becomes available when things do not go as expected. In fact, staff and students spend less time on experiments that work and try to get to points where things stop working. That's when real learning in science begins.

But being ready for the unexpected requires planning, planning and more planning. I have also learned to give up the comfort of certainty and embrace the challenge of guiding projects and participants through areas with which I'm not all that familiar. Becoming a co-discoverer with students is far more satisfying for everyone than being the all-knowing sage.

Bright Lights in the Lab began with 20 students and now 60 students sign up each summer. Scholarships are now available for students in the Greater Toronto Area, with the hope of being able to bring in young scientists from across the country.

Camp participants dream of being future leaders and change-makers, and my dream is to provide as many students the space and time they need to make their dreams come true.

Student-directed learning: One size fits all?

The communications technology curricula in Alberta encompass several topic areas, including photography, graphic design, screen-printing and audio/visual work, packaged into individual courses. Teachers can require all students in their class to take the same courses. However, finding examples, activities and assignments that are relevant and interesting to all students is virtually impossible. So, in my class, students choose the courses they want to take, work on them at their own pace, and create and design their own projects based on their individual skills, interests and passions.

But how are you supposed to teach 30 students 30 things, all at the same time?

The short answer is you cannot. To overcome this, I have tried to create a learning environment in which I give students the resources, tools and training to learn what they want when they need it. The most fundamental belief I hold is that my role as a teacher is to help students "learn how to learn."

I have done a number of things in designing my program to work towards this ultimate goal:

- I developed open-ended projects. I provide students with the criteria. Then, they design, plan and create their own projects, based on their own interests. The major (although not exclusive) focus of my evaluation is on the design and planning process rather than the final product. This allows me to effectively assess a much wider variety and scope of work done by students with a broad range of abilities. I have also found that this helps create an environment in which students can work with each other on vastly different projects. For their part, students learn to reflect upon what aspects of their project went well and what could be improved.
- I created an <u>online learning environment</u>. This website helps facilitate the logistics associated with each student working on his or her unique program. It also handles enrolment, and the tracking, submission and grading of student work. The site features assignment descriptions, exemplars, resources and a forum for student interaction.
- I assembled a library of helpful resources. The Internet is the textbook for my course, but the Internet is a very big place. I gather and regularly update relevant and quality resources to facilitate student learning. I also encourage students to contribute to the knowledge base by creating and sharing tutorials.
- I offer authentic assignments. Students can work on client service projects, partnering with local businesses and organizations to solve real problems and create real finished products—team uniforms and event videos, for example. Each year, students also have





Scott Onuczko
Spruce Grove Composite High School
Spruce Grove, Alberta

Subjects and Grades Taught:

Communications technology, grades 10 to 12

the option to take a one-week international photography trip, to practise their photography skills. These are options that students may choose when they wish to produce an actual product or solve a real problem instead of a hypothetical one, as part of their self-directed learning.

The challenges of focusing on student directed-learning have been significant. However, there have also been real opportunities. For example, while there is considerable upfront work in establishing the program, the projects that students create are relevant, authentic and meaningful.

Authentic learning: Getting the "real" in education

When education is relevant, has purpose and provides a student with meaningful, personal connections, then genuine, positive, engrossing learning ignites. This is what I call "authentic learning."

Over my career I have implemented a <u>variety of long-term authentic events</u> such as The Egg Drop Project, ancient living museums and bridge building challenges. As well, I have developed specific, skill-driven games, such as class auctions and Dragon's Den invention simulations, to provide potent learning opportunities.

Taking this approach, I have consistently seen my students become more curious and more willing to take on challenges. Brain-based research supports these observations, revealing that learning is optimal when students engage all their senses and perform tasks utilizing multiple intelligences. Students become more motivated and more likely to take ownership of their knowledge. I have also seen far greater personal growth on a variety of levels. It does not seem to matter what the students' socio-economic status, cultural background, age, academic level or gender are: Authentic learning events provide an optimal learning experience for all.



Steve Revington

Emily Carr Public School

London, Ontario

Subjects and Grades Taught:

Grade 4, all subjects

After years of exploring a large variety of authentic events, I have identified twelve elements for success:

- 1. A tangible product. The goal is to produce a tangible product that can be shared with the world.
- 2. Clearly defined audience. It is very important to identify what the product and event are and target them.
- 3. Design-back planning. A list of specific skill sets, support information, curriculum connections and learning to facilitate a successful outcome.
- **4. Well defined criteria.** A clearly communicated success criteria must include quality, reasonable expectations and be specifically aligned to the audience it is intended for.
- 5. Role Playing. It's like a form of heightened creativity when students get to be someone else or to assume roles as in real life. It allows them to be fully immersed in the educational journey.
- 6. Integrated Learning. As in real life situations, most undertakings are not subject specific. Extract and deliver curriculum expectations from the curriculum that aligns with your event. Reading, maths, social studies, technology, art, music, drama, health, physical education, science and even the languages can be present in your authentic learning event.
- 7. **Blended Scheduling**. Consult with your administration and colleagues to create large blocks of time that will allow for creativity and deeper learning to flourish.
- 8. Cooperative Learning. Team Based Approach. No great accomplishment ever happened without a good team. Provide lots of opportunities to participate in team-based activities that support learning concepts as well as social interaction opportunities from early on in the school year.
- 9. Personalized Experience. The more input the students have, the more ownership they'll have. Provide open ended opportunities to allow students to explore their personal interests and creativity.
- 10. Portfolios. They are a collection of papers that support student research, planning, drafts, contacts, consultation notes, lists, diagrams, work sheets, reflection notes, articles, dimensions and even budgets.
- 11. **Community Involvement**. It's not authentic unless your students are directly interacting with the real world. Either the community comes in to share your student's product(s) or they go out to the community to share their product.
- 12. **Professional Development.** You will require some instruction or consultation in an area of expertise that is related to your classes' authentic event success.

Your students may require direction and consultation beyond what you can provide. The genuine "guide-on-the-side" supports the parents and students to attain these skills beyond the classroom. What's so wonderful about the authentic model is that every pursuit becomes a unique journey with its own diverse challenges. It also provides the best kind of professional development there is—the relevant kind.

Resources*

Online Tools & Resources

- <u>Aurasma</u>
- <u>100 Languages of Children</u>
- Authentic Learning
- <u>Evernote</u>
- GarageBand
- Google Docs
- <u>iMovie</u>
- <u>TodaysMeet</u>

Organizations & Communities

- <u>Cyber Patriot</u>
- Bright Lights in the Lab
- <u>Fairy Lane</u>
- Information and Communications Technology Council
- Sisler High School Network and Cyber Security Academy
- <u>The Firefly Foundation</u>
- World Economic Forum's Top 10 skills for 2020

Multimedia

- Our Village Uganda (YouTube video)
- <u>Time to Play (film)</u>

^{*}For both 2015 Prime Minister's Awards for Teaching Excellence and Excellence in Early Childhood Education