



10:30am – 12:00pm

Canada 2067 – Lessons learned in building a national vision for STEM education

*Panel Organizer: Bonnie Schmidt
Let's Talk Science*



canada2067

The science of a successful tomorrow

Lessons Learned in Building a National Vision for STEM Education





Today, the pace of life and learning
is faster than ever,

Canada 2067 Resources

(English & French)

Canada 2067 Learning Roadmap

Imagining the future of STEM education
Key Recommendations Overview

Background

In a time when most Canadian youth studies before high school graduation and changes in the labour market development of the Canada 2067 youth will be prepared to contribute



Canada 2067 Vision

All students develop the full range of skills needed to navigate an complex world and have equal opportunity to study and pursue d

How we teach:

Teachers have the opportunity to participate in professional development at least once per year in areas related to STEM.

Teachers and community partners across regions are linked together, forming dynamic professional learning communities.

Implement competency and inquiry-based curricula and initiatives to help teachers develop the necessary skills to instruct STEM and encourage critical inquiry.

How we learn:

Curricula and community learning experiences should include interdisciplinary, competency and inquiry-based, and hands-on approaches to learning.

Take advantage of new information and communications technologies (ICTs) to transform teaching and learning into an interactive and student-centred experience.

Provide appropriate training, support and resources for teachers to implement these approaches.

Evolve post-secondary education entry requirements to recognize and value students who have engaged in innovative approaches to learning.

What we learn:

All students graduate high school with at least one senior level interdisciplinary STEM course.

All students engage in hands-on learning opportunities with partner's outside the school at least once per year.

Number of students enrolled in STEM-related fields in post-secondary education increases each year.

Who's involved:

STEM learning community partners align their programs with the Canada 2067 recommendations and work together to provide hands-on learning opportunities that are accessible to all students.

Industry aligns 20% of community investment funds in education to support the achievement of Canada 2067 recommendations.

Governments commit to at least 1% of STEM research budgets to support the achievement of Canada 2067 recommendations.



SPOTLIGHT ON SCIENCE LEARNING
THE EVOLUTION OF STEM EDUCATION:
A Review of Recent International and Canadian Policy Recommendations

10 KEY INSIGHTS GATHERED FROM 1,000 YOUTH ACROSS THE COUNTRY

- 1 **Personalized learning**
Education doesn't look the same for every student.
- 2 **Student collaboration**
Students work and learn from each other and play a key role in shaping their education.
- 3 **Technology in the classroom**
Technology is critical to improving the learning process.
- 4 **Changing the education curriculum**
Engage students in science, technology, engineering and mathematics (STEM) as early on in their education.
- 5 **Experiential learning**
Connect STEM learning to real life problems in a hands-on way.
- 6 **Mentorship**
Students seek meaningful relationships with caring and trustworthy adults.
- 7 **Critical thinking & problem solving**
Resilience and flexibility are essential for today's education and to overcome life's jobs.
- 8 **Self-awareness & counselling**
STEM education and self-awareness are connected and help students develop the skills to manage their own improvement and move towards new directions.
- 9 **Well-being**
Students wish for a school culture that is supportive, encouraging and inspiring a place where diversity and inclusion are practiced and valued.

- 1 "Netflix knows me better than my teacher."
Student from Calgary school
- 2 "We learn best when we are involved in designing our own learning."
Student from Vancouver school
- 3 "It's weird to use paper to learn advanced robotics."
Student from Vancouver school
- 4 "Teach students how to apply their knowledge and let them practice solving problems."
Student from Vancouver school
- 5 "We would like to give our students the best open education they can get today, not with all open curriculum."
Student from St. John's school
- 6 "This new way of evaluation favour other types of intelligence and other definitions of success."
Student from Montreal school
- 7 "Please help me decide what's good or bad for me."
Student from Montreal school
- 8 "We should have a specific class to..."
- 9 "I want to see more..."
- 10 "I want to see more..."

Canada 2067 Learning Roadmap



Canada 2067 Global Shapers Report
SHAPING THE FUTURE OF K-12 STEM EDUCATION
Insights from young professionals and post-secondary students in Canada

Canada 2067 STEM Learning Framework:
An Invitation to Contribute

event videos; career profiles; Emerald Code web series and more



Canada 2067 panel

- Bonnie Schmidt, Let's Talk Science @BMSchmidt
- Andrew Parkin, The Mowat Centre @parkinac
- Rob Mariani, Hill + Knowlton Strategies @hk_Canada
- Ruth Silver, Groundswell Projects @groundswellgang
- Rohan Nuttall, Global Shapers

