SHIFTING MINDS 4.0

SHIFTING MINDS *Imagine a new generation*
SHIFTING SYSTEMS *Imagine the possibilities*
The Learning and Innovation Inventory

www.c21canada.org

Imagine students exploring worlds; finding passion and purpose; inspiring each other; reaching beyond

Imagine teachers energized, equipped, empowered; working together; learning along with their students; sharing *what if*… and *wow*…!

Imagine parents participating with confidence; enriching and being enriched by what the family is learning

Imagine leaders inspiring possibilities and sharing insights; modelling, supporting and scaling

7Cs

Competencies for learning and leading

Creativity & innovation
New ideas and bold possibilities

Critical thinking
Fresh insights and durable solutions

Collaboration
Partnerships that work

Communication
Making sense and expanding perspectives

Character
Reaching higher and growing stronger

Culture & ethical citizenship
Sharing what we value

Computer & digital technologies
Transforming how we learn and lead

SHIFTING MINDS

Imagine a new generation…

The C21 Canada Learning And Innovation Inventory
PART 1: C21 Canada 7Cs Competencies

At the core of educational practice are seven competencies required for learning and innovation success in the global digital world. *Shifting Minds 1.0: A 21st Century Vision of Public Education for Canada* describes C21 Canada's 7Cs. The Inventory below provides a contiuum of development of the 7 Learning Competencies in their complexity, innovation and impact on learning.

ARTICULATING Expectations	**TRANSFORMING** Competencies	**INNOVATING** for Deep Learning

CREATIVITY, INNOVATION AND ENTREPRENEURSHIP

Today's economic, social, environmental and financial challenges require creative, innovative and entreprenurial thinking to solve problems and keep pace for the ongoing and escalating demand for new and innovative solutions and products.

Curiosity drives the construction of knowledge, theories, designs and understandings in new problems and unknown situations where standard protocols have failed.	Intrinsic interests, creativity and risk-taking are applied in problem-based solutions that benefit others.	Empathy and entrepreneurship are modeled in real world solution-finding that sustain future life, work and play.

CRITICAL THINKING AND SOLUTION FINDING

The knowledge and digital era rquires citizens with higher-order reasoning skills, the ability to think dynamically, and solve ill-defined problems by engaging a process of inquiry and design to create practical, prototyped solutions and action.

Deep learning drives the need to acquire, process, interpret, rationalize and critically analyze large volumes of often conflicting data and engage higher-order thinking.	High-yielding visual, spatial, computational and temporal reasoning skills are used to design solutions for ill-defined problems.	Informed decision-making and timely action is taken in real world problem solving relating economic, financial, environmental and social contexts.

COLLABORATION

Social networks and information technology have created a dominant impact on the collaboration dynamic experienced in life, work and play. Interpersonal skills are the foundation for mediating collaboration and deeping understandings.

Social and Emotional Learning Competencies: Self-awareness, social awareness, self-management, responsible decision-making and relationship skills are the foundations for successful collaboration.	Learning partnerships are nurtured by feedback on Social Emotional Learing competencies from self, peers, mentors and others.	Social emotional learning competencies are developed to lead and serve, engage others in a variety of contexts, including the capacity to manage and resolve conflict.
Collaboration includes interacting and sharing information, decision-making responsibilities and accountability across internal or external, diverse networks, face-to-face or virtually.	Sharing and distributing leadership, group decision-making and concensus reflect sensitivity to issues, processes and perspectives.	Interdependence is achieved through individual and group roles and tasks, resolving conflict, seeking consensus and engaging in global collaboration.

COMMUNICATION

Communication is the ability to engage human interaction to build understanding and make meaning using a variety of media and technologies.

Vocabulary, appropriate language and literacies are used to construct knowledge and interact using a variety of media and technologies.	Critically interpreting, gathering perspectives and evaluating ideas are shared through a variety of media and technologies.	Cooperation and interpersonal knowledge construction are extended beyond local settings and include multi-lingual and global perspectives.

CHARACTER

Strength of character, persevernance, self reflection and interpersonal skills are required in a complex, fast-paced, multi-cultural knowledge economy and social environment and to achieve deep learning.

Life-long learners are empowered by self-direction, ownership, resilience, tolerance and personal productivity in adapting to change.	Decision-making is tolerant, ethical and fair, modeling a proactive disposition and seeking to do "the right thing the right way."	Leadership is a assumed responsibly with self and peer accountability in all aspects of knowledge building, the social environment and the economic community.

CULTURE AND ETHICAL CITIZENSHIP

Canadians place value on the history and culture which shapes our country and its people. Indigenous people wish to see their culture reflected in Canadian eduction policy, programs and services. Canadians must be global citizens with a clear identify of their own along with sensitivity and respect for the diversity which sustains the country.

Key ideas and concepts of democracy, social justice and human rights within the global context of Canada's political, social, economic and financial systems is understood.	Societal and environmental interdependence and global sustainability are considered in ethical leadership and decision-making.	Civic engagement and action considers our fundamental connection to all living things and the collective impact of humans on the global environment.
The history and culture which shapes Canada and its people, including the contributions of First Nations Aboriginal communities and diverse communities and cultures is respected.	First Peoples Principles of Learning are reflected in pedagogy and instructional design.	Truth and reconciliation Calls to Action are embedded and sustained.

COMPUTER AND DIGITAL TECHNOLOGIES

It is critical that skilled digital talent is available so that the Canadian economy can effectively adopt and leverage technologies to respond to the changing realities of the global economic landscape.

The Internet of Things (IoT), Social, Mobile, Apps, Analytics and Cloud (SMAAC) technologies enabler and accelerate learning competency development.	Computational thinking, coding, robotics, neural networks, STEM/STEAM stategies are embedded in competency development.	Internships, job shadowing and industry applications service learning opportunities are included in the processes of inquiry and investigation.
Intellectual and attitudinal dispositions favour a culture of creating new knowledge and doing things with digital technology in the world.	The discover and creation of digital learning tools and resources are used to explore new content, concepts, information and ideas.	Autonomy using digital tools empowers learners to scale new knowledge with peers and experts throughout the world.

This document has been developed as an on-line assessment and reporting resource. It is recommended for use with *Shifting Minds 4.0: Shifting Minds Shifting Systems* products.

Change is inevitable; transformation is possible

C21 Canada provides a forum for education leaders to share ideas and build the capacity for system-wide transformation. Our seminal report, *Shifting Minds* (2012), identified seven competencies for learning and leading in the 21st century. We call these the 7 Cs.*

In *Shifting Minds 3.0* (2015), we proposed a shift from traditional policy-driven systems toward networks of strong, responsive schools with educators collaborating continuously. We identified six system drivers that can enable the transformation or hold it back: curriculum, assessment, pedagogies, learning environments, governance, and community engagement.

The work continues as C21 Canada develops tools and resources to assess school-wide and system-wide indicators of change and growth. *Shifting Minds 4.0: Shifting Systems for Learning and Innovation* offers new ways to empower change in your organization.

Find out more at **C21canada.org**

Curriculum
Organize learning to address key questions about the world, using the 7 Cs.*

Assessment
Integrate assessment into daily practice to guide learning and to encourage growth.

Pedagogies
Instill the habits of inquiry and the pursuit of solutions. Make learning richly personal in ways that ignite curiosity, creativity, and collaboration.

Learning environments
Connect students and teachers in information-rich communities, locally and globally, in ways that empower learning *anytime anywhere*.

Goverance
Loosen the knots; strengthen the supports for innovation.

Community engagement
Involve families, employers, and community services in sustaining the culture of inquiry.

SHIFTING SYSTEMS

Imagine the possibilities...

CEO Academy

*7 Cs: creativity and innovation; critical thinking; collaboration; communication; character; culture and ethical citizenship; and computer and digital technologies.

Canadians for 21st Century Learning & Innovation

The C21 Canada Learning and Innovation Inventory
PART 2: System Drivers for Scaling Innovation

C21 Canada in its 2015 publication *Shifting Minds 3.0 Redefining the Learning Landscape in Canada* identifies 6 drivers at work in transforming system-wide culture for learning competencies and pedagogical innovations to thrive. The Inventory below provides a continuum of development for these 6 System Drivers to scale up and scale out learning and innovation school and district-wide. This inventory has been developed as a on-line tool and can be used with *Shifting Minds 4.0: Shifting Systems Imagine the possibilities.*

	ARTICULATING Beliefs	TRANSFORMING Pedagogy	INNOVATING System Scaling
CURRICULUM and ASSESSMENT	*The C21 Canada 7Cs, Competencies are infused to support student inquiry and autonomy driven by assessment practices that encourage 21st century instructional design and refined pedagogical practices. It is important that high yielding learning experiences engage competencies that require relevant higher-order reasoning for students to achieve deeper learning and meaningful solution design.*		
1. Curriculum is relevant, assessment-driven and the shared responsibility of all stakeholders of the organization.	Academic and Social Emotional Learning goals, outcomes and targets are articulated in a Strategic Improvement Plan.	Performance and Competency Standards for literacy and numeracy and developmental continua guide assessment and instruction across the organization.	Staff teams share responsibility and differentiate roles to support learning success for all students.
2. The C21 Canada 7Cs, learning competencies, are infused to engage, personalize and deepen learning.	21st Century Learning Competencies and Skills required to drive formal curricular goals are embedded in daily learning inquiry.	Students use feedback from self, peers and others to assess the impact of developing skills and competencies on learning and curricular achievement.	Teachers, staff teams and students use learning evidence and feedback to increase skill competency and drive the inquiry process to deepen learning experiences.
4. Learning outcomes are rationalized across subject areas to reduce redundancy while strengthening curricular applications in the world.	School teams map curricular outcomes to eliminate repetition and redundancy and identify competencies and skill requirements to achieve higher-order reasoning.	Student-led service and global outreach and solution-based problem design focuses on increasing skills and competencies (7Cs) and inquiry-driven applications of curricular content.	Student assessment is based evidence of the development of 21st Century Learning Competencies along with new understandings of curricular goals applied in meaningful solution-based designs.
5. Assessment seeks evidence of curricular content and understanding made visible by students engaged in deep purposeful learning.	Students engage formative feedback using self and peer-assessment and collaboration with teachers, mentors, coaches and experts to confirm criteria and evidence of learning.	Students document how mistakes, error analysis, design prototying and re-construction show evidence of personal growth, learning competencies and academic learning.	Students use assessment to self-direct their own skill acquisition, seek relevant curricular content to build new knowledge, and develop learning partnerships with others.
5. Digital technologies are harnessed to ensure data and content generation is dynamic, timely and accurate and used to enhance engagement and collaboration.	IT including social media is accessible and ubiquitous to Wi-Fi on a 1:1 basis, offering full access to curricular content and collaboration by teachers and students.	Digital technologies are integrated to increase the complexity of 21st Century Learning competencies and foster deeper engagement in curricular inquiry.	Digital technologies accelerate student autonomy in managing curricular content and extending the learning community beyond the classroom.

	Naming	Transforming	Innovating
PEDAGOGY	*Instruction is developed from ongoing observations of performance, conversations with students about criteria and expectations, feedback from peer and self-assessments and personalised through partnerships with students. Teachers gather and use data about their students' learning to inform the engagement 21st century competencies to deepen learning and further understanding.*		
6. Teachers embrace a culture of professional collaboration in aligning and sharing roles and responsibilities to support personalize instruction for students.	School teams are coordinated to establish roles and build relationships that model a proactive disposition towards engaging students in creating knowledge through deep relevant learning.	Multi-level curricular teams and multi-disciplinary school teams share IT-embedded pedagogies and refine criteria to develop 21st century competencies across disciplines.	School teams collaborate regularly to reflect on student performance and achievement, update student learning profiles and construct ways to innovate their practice for improved student learning.
7. Student interest and learning profile data is gathered and used to create developmentally appropriate instruction and resources to align with learner capacity, need and interest.	Student-centred instruction is scaffolded and aligned with students' proximal zones of development.	Literacy and numeracy standards and assessment continua are used to track and support learning.	Teacher-learner relationships reflect the role of student as equal partner with emphasis on reciprocal and peer-teaching to develop metacognitive learning competencies.
8. Project-based learning opportunities and solution-based academic achievements reflect student interest and passion in pursuing deep an relevant learning engagement.	School teams collaborate to design and deliver instructional support to inquiry models which engage students' talents, interests and learning profile needs.	Collaboration and feedback from students, mentors and peers build mutual understanding for students and teachers to develop 21st century competencies to deepen learning and understanding.	Students and teachers engage social media to extend feedback and collaboration beyond the classroom and school day to apply their solutions to problems of value.
9. Digital tools and social media are used fluently and appropriately to engage and support student learning, construct new knowledge, communicate learning and collaborate with others.	Teachers model digital resources and social media to support the development of 21st century competencies for knowledge construction.	Students access digital technology as needed to engage collaboration and knowledge construction.	Students collaborate beyond the school to enhance and communicate their learning through problem-based solutions that address needs in their community.
LEARNING ENVIRONMENT	*Children develop first through interactions with their parents, peers and teachers and ultimately with the environment around them A critical link exists between the environment at school and how children learn. Social spaces and the opportunity to make thinking visible can optimize further learning and engagement.*		
10. Learning spaces are flexible and accessible, allowing opportunities for social engagement, movement, collaboration and the pursuit of personalised learning, creativity and visual thinking.	Learning environments are rich in IT resources for documenting learning along with reference material and instructional materials for differentiated learning support.	Flexible and adaptive space configurations allow for large and small group physical movement, hands-on learning and social interaction.	Design considerations align with student profile needs to optimize learner performance.
11. Networks are designed to facilitate seamless transition between digital devices with full access to the internet and social media.	Ubiquitous access to IT and Wi-Fi is available throughout the building to support learning, ensure integrity and safety and allow seamless access.	Student requirements for collaboration are supported by regular adaptations to space configurations and flexible learning time with mobile access available anytime, anywhere.	On-line blended learning and virtual school options can be pursued as viable and relevant options to meet learning needs, talents and interests.

	Naming	Transforming	Innovating
GOVERNANCE	*System change requires a culture of support and risk-taking so that educators can reshape the foundations on which their practice is built. Transformational leadership provides a balance between improvement planning and strategic innovation, maintaining stability so that innovations in instruction and assessment can be investigated.*		
12. A System Improvement Plan articulates a 21st Century model including the C21 Canada system enablers and their strategic approach and alignment within the system.	Central governing policies, regulations, communication and practices articulate support for risk taking, creativity and innovation in the classroom.	A leadership culture of risk-taking and empowerment is evident in professional collaboration of staff.	Stakeholders, including parents recognize and foster 21st Century models of learning in their partnership with the school.
13. A strategic plan articulates IT infrastructure requirements and ongoing support aligned to learning and pedagogical needs.	A plan for 1:1 IT and Wi-Fi access describes infrastructure and support requirements for the system.	IT enhancement of professional development and training support is articulated.	IT enhancement of access extends beyond the school to address societal, economic, environmental and fiscal issues.
14. Leadership is a shared responsibility, distributed to all partners and stakeholders and reflected in collaboration and communication design and implementation processes.	*School leaders build time for collaboration into daily practice and leadership is distributed to facilitate coordinated teamwork.*	Staff assumes and coordinates lead and support roles, self-directs meeting times and priorizes agendas on student learning.	The school community recognizes the work shared by coordinated school teams and participates as needed, mirroring the collaborative process in their role as parent partners.
CITIZEN ENGAGEMENT	*Parent and community stakeholders serve a stewardship role in the school community in upholding a shared culture of risk-taking, innovation and respect. Parents recognize the impact of 21st century competencies on their children's future and the community appreciates the social, economic and political return on investment to the community-at-large.*		
15. Parent and community stakeholders engage as partners in 21st Century Learning Models.	21st Century Learning outcomes are articulated in regular communication to parents and the community and modeled in interactions with staff, students and stakeholders. Displays of 21st Century goals and icons are evident in the school.	Staff and students communicate their learning progress with parents on an ongoing basis, engaging parents in feedback and support.	Community members serve as partners in service learning and in developing community-based solutions for inquiry-driven problem solving.
16. A strategy for stakeholder support and awareness of the return on investment of 21st Century Learning models is articulated in the strategic plan in terms of its economic, social, environmental and fiscal impact on the community.	Parents are actively involved in the life of the school as volunteers, committee members, in addition to supporting student learning.	Parents and community members engage shared leadership roles in the school, mirroring 21st Century models of collaboration to support the inclusive goals of the school improvement plan.	Stakeholders partner with students in applying knowledge construction and developing competencies to create solutions that address social, environment or political problems required to thrive in future life, work and play.

Shifting Minds 3.0 Redefining the Learning Landscape in Canada was a product of the collaboration by C21 Canada's CEO Academy, a national network of 25 district Superintendent/CEOs leading learning and innovation in 10 provinces coast -to-coast.

the spiral of inquiry

Canadians for 21st Century
Learning & Innovation

Develop a hunch
What is leading to this situation?
How are we contributing to it?

Focus
What will have
the biggest impact?

Scan
What is going on
for our learners?

3 big-picture questions
What is going on for our leaners?
How do we know?
Why does it matter?

Learn
What do we need to learn?
How will we learn this?

Take action
What can we do to make
a meaningful difference?

Check
Have we made
enough of a difference?
How do we know?

4 key questions for learners
Can you name two people in this setting
who believe you will be a success in life?
What are you learning and
why is it important?
How is it going with your learning?
What are your next steps?

OECD seven principles of learning

• Put learners at the centre
• Emphasize the social nature of learning
• Understand that emotions are central to learning
• Recognize individual differences
• Stretch all learners
• Use assessment for learning
• Build horizontal connections

Source: Organization for Economic Cooperation and Development,
Centre for Educational Research and Innovation

First Peoples Principles of Learning

Learning...

▶ supports the wellbeing of the self, the family,
the community, the land, the spirits, and the
ancestors

▶ is holistic, reflexive, reflective, experiential,
and relational

▶ involves recognizing the consequences of one's actions

▶ involves generational roles and responsibilities

▶ recognizes the role of Indigenous knowledge

▶ is embedded in memory, history, and story

▶ involves patience and time

▶ requires exploration of one's identity

▶ involves recognizing that some knowledge is sacred

Source: First Nations Education Steering Committee, British Columbia
(For the full text go to fnesc.ca/learningfirstpeoples)
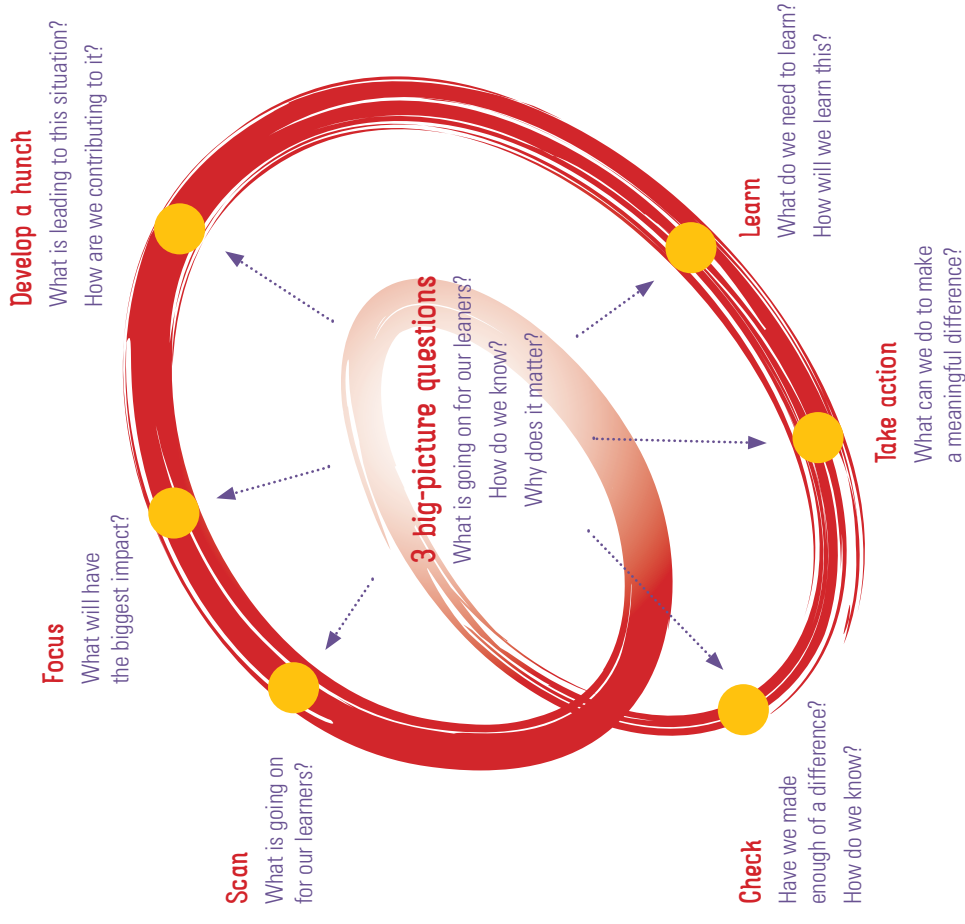
Inquiry
is about being open to new learning
and taking informed action.