

# TRANSFORMING HOW WE LEARN AND WORK

## Technology Plan

Fall 2023 – Fall 2027



### **Business and Learning Technology's Vision:**

To create a seamless and innovative technological experience.

### **Business and Learning Technology's Mission:**

We care about the success of our students, so we strive to provide and support a learning and technical environment that is innovative, safe and accessible for the entire OCDSB community.



OTTAWA-CARLETON  
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# Transforming how we learn and work

This renewed version of the Business and Learning Technology Plan builds on the success of the previous plan and will determine our journey for the next four years (2023-2027). It aligns with the 2023-2027 OCDSB Strategic Plan. Many different groups were engaged to ensure a diversity of voices, to build on the strengths of our District and to reflect the needs in our school communities. This plan was developed with three main themes: Learning, Seamless and Innovative Technologies, and Privacy and Security. Each theme includes measurable goals to be achieved by Fall 2027 with desired outcomes for students, staff, and the system.



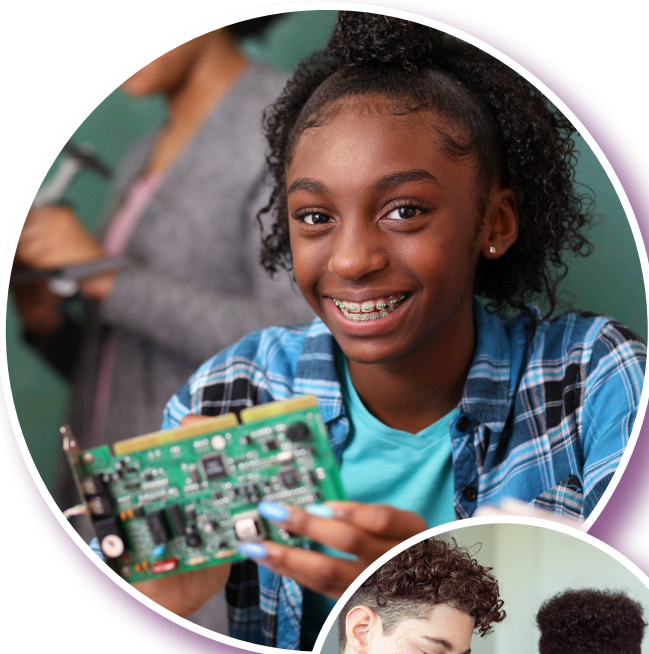
**Learning**



**Seamless and Innovative Technologies**



**Privacy and Security**



Digital transformation grows the knowledge, skills, and abilities of individuals through digital connections and collaboration. It modifies processes and practices of the organization for improved outcomes. We will leverage digital technologies to:

- increase students' level of digital fluency;
- help educators deepen the learning experience;
- improve student mental health support and resources;
- make business processes and workflows more efficient and effective; and
- support culture and experiences that meet the diverse needs of our students and families.

Every year, a detailed plan will be co-created with departments and staff to guide the direction of Business and Learning Technologies in each of the three themes. Projects will be monitored by team managers and progress will be shared twice a year.

Key performance indicators, such as lead and lag measures, will be used to monitor progress, which will inform the department's plans for the subsequent year.

**Example of a lead measure -**

Student survey feedback on what could be changed to support student use of technology to create knowledge, or enhance the learning experience.

**Example of a lag measure -**

More students are using technology to create new knowledge or demonstrate learning in new ways, as determined through student portfolios.

Deliverables are projects or work efforts that will be achieved by the conclusion of the plan.

**Strategies to Support the Achievement of the Three Goals:**

- Professional learning and training to assist staff in building their capacity to achieve the desired outcomes in each area of the plan.
- Foster the conditions to support staff in having an open learning stance to use technology in creative and innovative ways.
- Collaborate with departments to ensure alignment of tools and processes across the District.
- Develop a communication plan to ensure all stakeholders are aware of the technology plan *Transforming How We Learn and Work*, and the goals within.
- Continue to align the work of *Transforming How We Learn and Work* with the OCDSB's 2023-2027 Strategic Plan.
- Create an implementation and monitoring process to ensure *Transforming How We Learn and Work* is effectively implemented and monitored for impact.

**Our digital transformation will support Social Responsibility. We will continue to:**

- use equipment until it is no longer supported, or at end of life;
- dispose of equipment in an eco-friendly manner; and
- reduce our reliance on print-based materials.

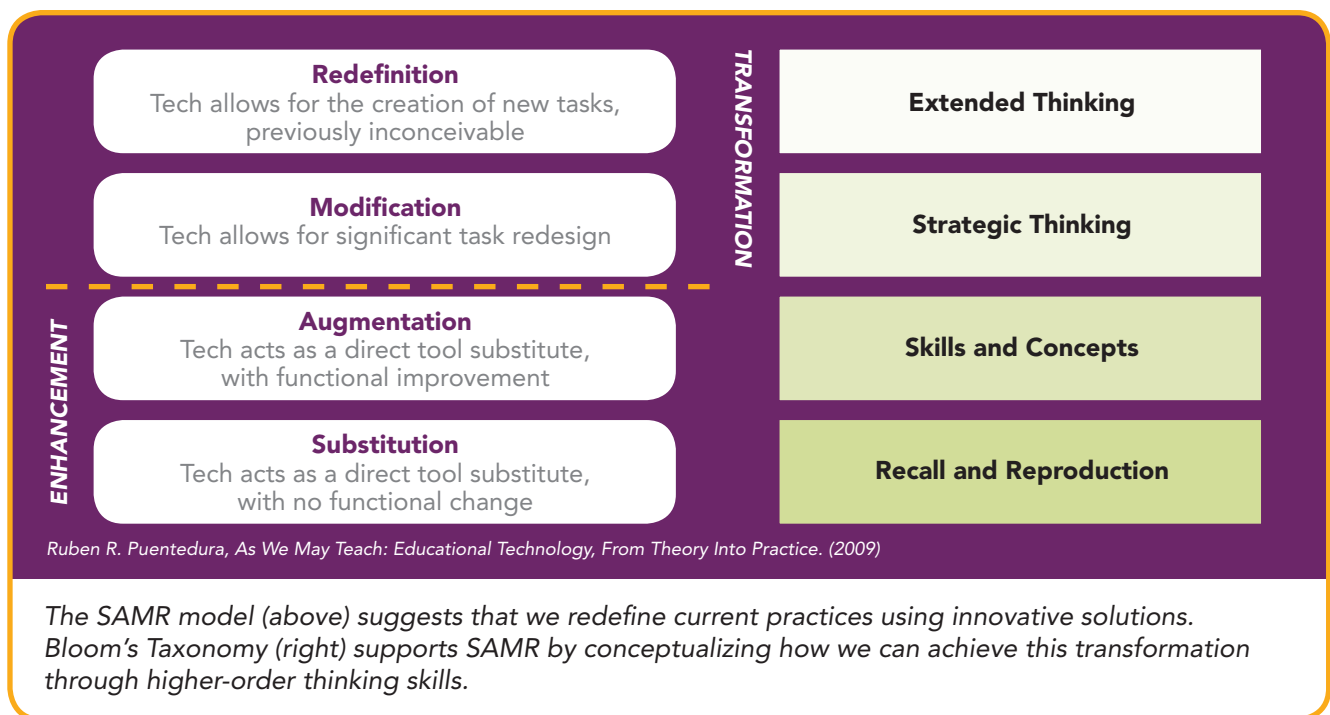
# Why transform how we learn and work?

Technology is embedded in every aspect of our personal and professional lives. As staff members of the OCDSB, creating intentional goals and strategies is an important part of focusing our priorities and being accountable. As we evolve as human and digital beings, we must build upon previous knowledge and skills in order to ensure success. In Business & Learning Technologies, we strive to provide the necessary tools for everyone to work effectively with a singular goal in mind: to provide students with equitable opportunities to reach their fullest potential and create responsible, contributing citizens of the future.

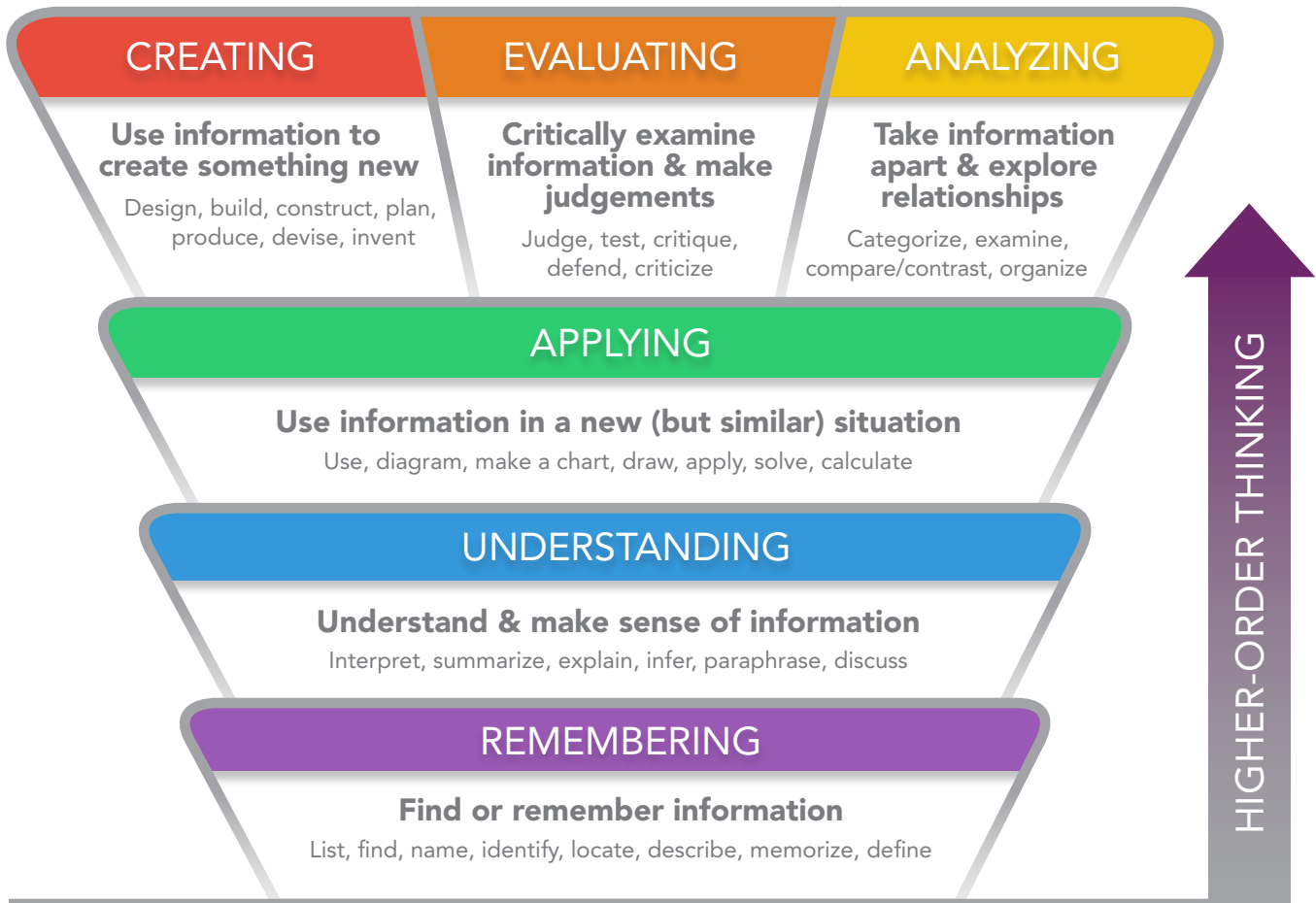
In the OCDSB, we value meaningful and effective teaching & learning that develops

higher order thinking. The SAMR model (below) empowers us to reimagine the status quo. It challenges us to re-evaluate current practices for areas of improvement, and helps us strive towards extended thinking and redefinition of learning.

Bloom's taxonomy (right) uses action verbs to conceptualize what learning can look like. Redefinition can be achieved through creating, evaluating and analyzing. It establishes a foundation for productive project development through higher-order thinking goals. Using both models in a digital context will assist in the implementation of innovative ideas toward increasing productivity and successful outcomes for students. They help validate why we must transform how we learn and work.



Higher-order thinking and actions (Applying, Creating, Evaluating and Analyzing) build upon and combine established knowledge and experiences (Remembering and Understanding) in a revised Bloom's Taxonomy. The three pillars of this technology plan help weave human and digital skills together for improved learning, well being and social responsibility.



## Transforming How We Learn and Work: Technology Plan Pillars



### Learning:

Improving student achievement and program quality with digital technologies



### Seamless and Innovative Technologies:

Empowering learning, ensuring equity of appropriate access while fostering inclusion, community building and innovation



### Privacy and Security:

Protecting data, building digital citizenship and ensuring secured technological resources and infrastructures

Churches, Andrew. (2008). *Bloom's Digital Taxonomy*. <https://www.structural-learning.com/post/higher-order-thinking-skills>  
 Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of educational objectives (Complete ed.)*. Longman.



# Learning

## Improving Student Achievement and Program Quality with Digital Technologies

An effective learning experience incorporates research-based pedagogical practices that foster future-ready skills such as critical thinking, authentic problem solving, communication and collaboration. Students are given agency through meaningful learning tasks that leverage technology, that are driven by their needs, interests, and the big ideas of the curriculum. Flexible, learning spaces enable students to learn and create in different ways, at different times.

### GOAL

We commit to providing digital tools, resources, and technologies that empower effective, responsive, and equitable learning experiences.

### Connections to Exit Outcomes:

- GOAL-ORIENTED
- INNOVATIVE/CREATIVE
- COLLABORATIVE
- GLOBALLY AWARE
- RESILIENT
- ETHICAL DECISION-MAKERS
- DIGITALLY FLUENT
- ACADEMICALLY DIVERSE
- EFFECTIVE COMMUNICATORS
- CRITICAL THINKERS

### What does success look like?

#### Students:

- Know what tools to select to support their learning and achievement in various subjects, including literacy and mathematics.
- Show increased level of digital fluency, and empowerment to leverage technology in effective ways.
- Demonstrate greater voice in what and how they are learning.
- Leverage technology to engage in authentic, relevant and challenging learning tasks.

#### Staff:

- Leverage technologies, including assistive technology, in redefining instructional practices to improve student learning.
- Exhibit improved confidence and capacity to integrate digital learning in instructional practice, with ongoing professional learning opportunities.

#### System:

- Display increases in innovative teaching and learning experiences in blended and online learning environments.
- Acknowledge and celebrate innovative teaching and learning experiences in blended and online learning environments.



Technology has revolutionized the way we learn and teach. By using technology in innovative ways, educators can redefine the learning experience and create opportunities where students are creating, evaluating, and analyzing in new ways. Technology also allows students to access content in engaging ways by providing them with the tools they need to succeed in changing learning environments. Educators can take advantage of digital resources to differentiate tasks and create equitable opportunities for students.

## Measures of progress

- Various surveys and educator feedback tools will indicate:
  - 50% more educators are using technology effectively to provide innovative learning activities that meet the needs of all learners.
  - 75% of students critically select, evaluate, and use digital tools and resources to deepen learning on a regular basis.
- Various surveys and student feedback tools will indicate a 50% increase in:
  - Opportunities to have a voice in what and how they learn.
  - Feeling challenged in their learning.
  - Knowing how to use technology to create and share information in a responsible and ethical way.
  - What could be changed to support student use of technology to create knowledge or enhance the learning experience.

## Work to do

- Through collaboration with other central departments, support infusing digital technology into authentic learning tasks in a variety of subjects, in both blended and online learning.
- Continue to expose intermediate students to experiences offered through the Virtual Learning Environment.
- Provide professional development opportunities for staff to develop best technological practices.
- Engage and inspire educators to redefine learning and assessment tasks.
- In collaboration with other central departments, inform and guide the use of AI in support of learning.



# Seamless and Innovative Technologies

## Empowering learning, ensuring equity of appropriate access while fostering inclusion, community building and innovation

Learning, teaching and business experiences using technology must be simple, reliable, and robust. Digital tools, resources and technological infrastructure are foundational to all organizations. In order to stay relevant, engaging and effective, innovative technologies must be chosen, tested, and utilized to equitably meet the needs of all stakeholders.

### GOAL

We will optimize devices, assets, infrastructure, and services to maximize our educational and business practices.

### Connections to Exit Outcomes:

- INNOVATIVE/CREATIVE
- DIGITALLY FLUENT
- ACADEMICALLY DIVERSE
- COLLABORATIVE

### What does success look like?

#### Students:

- Enjoy equitable and immediate access to digital tools, resources, and infrastructure to support their learning.

#### Staff:

- Have equitable and immediate access to digital tools, resources, and infrastructure to support planning, instruction, assessment, and administrative duties.

#### System:

- Possess robust infrastructure, digital tools, and technologies support learning and business (e.g. Modern Enterprise Resource Planning System, Standardized Communication Tools).
- Ensure equitable and inclusive access to technology across the system.
- Establish a formal project management process to include purchases vetted by Business and Learning Technologies.
- Provide access to reliable digital resources.





## Measures of progress

- Data will indicate reliable network connectivity (99% of the time) at a minimum of 0.5 Mbps (speed of internet) per user.
- Data will show students have access to digital tools (99% uptime during regular working hours).
- Data will show staff have access to business services (99% uptime during regular working hours).
- Updated inventories will show staff and students have access to technological devices, refreshed as per the Equitable Access to Technology Plan.
- Data will indicate all OCDSB staff consults with B&LT prior to the purchase of any new technologies (hardware or software) to ensure equity, accessibility and security for all.
- Established plans to improve scalability, agility, and cost-effectiveness will show B&LT migrating 100% of all on-premises workloads to the cloud. This will enable B&LT to leverage the latest technologies and innovations and to easily scale computing resources without large initial investments.

## Work to do

- Prepare equitable Access To Technology plan.
- Establish single sign on.
- Standardize project management and procurement process.
- Create Cloud Migration Roadmap.
- Integrate Student Safe Arrival module.
- Update student, staff and parent portals.
- Integrate new Student Information System with other systems.
- Institute new Enterprise Resource Planning (ERP) system, including HR, finance, payroll and purchasing system.
- Develop Artificial Intelligence (AI) framework.
- Implement business processes supporting digitization.
- Standardize teacher communication tools.



# Privacy and Security

## Protecting data, building digital citizenship and ensuring secured technological resources and infrastructures

If learning is the journey, and seamless and innovative technologies are the vehicle, then privacy and security embody the safeguards. A complex set of tools and strategies, proactive measures, and responsive actions, secure our organization's confidential information and protect our infrastructure against data breaches and potential cyber attacks.

With evolving technologies and societal changes also come significant digital challenges and opportunities that demand modern solutions. Immersive virtual environments, generative artificial intelligence, and connection in digital spaces requires everyone to develop new critical thinking skills and become active participants in safeguarding personal data. We must move beyond basic security practices and develop a shared sense of urgency and responsibility.

### GOAL

We will protect data by building a culture of privacy, security, and digital leadership.

### Connections to Exit Outcomes:

- RESILIENT
- DIGITALLY FLUENT
- ETHICAL DECISION-MAKERS
- GLOBALLY AWARE

## What does success look like?

### Students:

- Demonstrate the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world and make mindful, ethical choices.
  - Build a safe and kind online presence.
  - Place healthy limits on digital time.
- Exhibit an increased awareness of Privacy and Digital Security practices.
  - Create and maintain strong passwords/passphrases.
  - Keep devices updated and secure.
  - Defend against online phishing scams and cyber attacks.



## Measures of progress

- 100% of our staff will participate in security and privacy training.
- Cyber Security framework is developed and implemented.
- Business Continuity, Disaster Recovery Plan and Incident Response maintained and practiced.
- 50% reduction in the number of privacy breaches due to human error.
- 100% of OCDSB staff and students will be able to successfully identify security risks.

## Work to do

- Secure data.
- Develop learning and business practices.
- Create a privacy and security training plan for staff.
- Establish a consistent process for selecting, documenting and reviewing fully supported, safe and secure software, apps and services.
- Continue regular phishing simulations.

### Staff:

- Demonstrate the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world and model mindful, ethical choices, and ensure the protection of student data.
  - Only use OCDSB vetted software, apps and resources.
  - Keep student accounts and information fully anonymized and private.
- Show an increased awareness of Privacy and Digital Security practices.
  - Create and maintain strong passwords/ passphrases, use MFA (Multi-factor Authentication) and consider a password manager.

- Adjust and revisit privacy settings on devices and apps.
- Read and develop an understanding of end user agreements.
- Defend against online phishing scams and cyber attacks.

### System:

- Create a governance structure for privacy and security.
- Establish policies, procedures, and practices that prioritize the protection of student, staff, and District data and technologies.



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## Strategic Plan 2023–2027



### EXIT OUTCOMES – What we want for our graduates

#### CHARACTERISTICS

|               |                         |
|---------------|-------------------------|
| Goal-oriented | Innovative/<br>Creative |
| Collaborative | Globally Aware          |
| Resilient     |                         |

#### SKILLS

|                            |                            |
|----------------------------|----------------------------|
| Ethical<br>Decision-makers | Digitally<br>Fluent        |
| Academically<br>Diverse    | Effective<br>Communicators |
| Critical<br>Thinkers       |                            |