KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

#LearningWithDigital

Instructional Technology Plan 2020-2023

Vision

At KPRDSB technology supports learning by enhancing opportunities to communicate, innovate, and collaborate as responsible global citizens. Our technology-enabled learning environments invite active curiosity, critical thinking, and the creation of new knowledge.

We are educating a generation of children and youth who have no memory of a world without the Internet, without instant access to information, without an array of media at their fingertips.

Ontario Public School Boards' Association

In KPR, we promote...

- **CURIOSITY** — *Ask Questions*
- **CREATIVITY** — *Be Innovative*
- **COLLABORATION** — *Learn Together*
- **CITIZENSHIP** — *Know Your Footprint*
- **COMMUNICATION** — *Value All Voices*
- **COMMUNITY** — *Share Responsibility*

Technology-enabled learning environments…

- Inspire **ACTIVE LEARNING** and ***engagement*** with ideas and people to develop **essential skills**.
- Introduce ways of **INNOVATING** and ***creating*** to extend knowledge and **PROMOTE CRITICAL THINKING**.
- Empower effective **COMMUNICATION** that ***connects*** classrooms to communities, and the world.

Our Moral Imperative:
Reimagining Modern Learning Environments

"If we want learners who can thrive in turbulent, complex times, apply thinking to new situations, and change the world, we must reimagine learning: what's important to be learned, how learning is fostered, where learning happens, and how we measure success. This means creating opportunities that challenge, provoke, stimulate and celebrate learning" *Fullan, M., Quinn, J., & McEachen, J. (2017). Deep Learning: Engage the World Change the World.*

As we work together to reimagine the role of learners and learning alongside technology in KPR, it is critical that we create opportunities that empower students with the skills necessary to engage and participate as citizens within a democratic society. More than ever before, students require the flexibility and adaptability to engage in **"jobs that have not yet been created, technologies that have not yet been invented and problems that we don't yet know will arise".**

The Case for 21st Century Learning. (2016). Organization for Economic Cooperation and Development (OECD).

As we continue to embrace instructional technology in KPR schools and classrooms, the following key questions will guide students, parents, educators and Principals alike in a shared journey towards innovation, inclusion and, most importantly, confident, curious and connected learners.

- **What's Important to Be Learned?**
- **How is Learning Fostered?**
- **Where Does Learning Happen?**
- **How Do We Measure Success?**

Source: Fullan, M., Quinn, J., & McEachen, J. (2017). Deep Learning: Engage the World Change the World.

Technology Use in KPR Classrooms

Technology use in KPR classrooms requires **clear curricular goals and criteria for learning**. Without these goals, students run the risk of being off-task and/or accessing inappropriate content online.

The following questions can support educators when making decisions about effective technology use in the classroom:

- What is the purpose for technology use? Engagement? Access to information? Online collaboration? Social Networking? Content creation?
- How are students using technology to support shared learning goals? In what ways will students refer to co-created success criteria when using technology?
- What structures or routines have you considered to ensure that students navigate online environments safely and responsibly?
- How will you ensure equitable access to technology at school and at home?
- How will you promote student accountability to their learning?
- How do student observations, conversations and products using technology guide and inform your intentional planning and decision-making about next steps for learning (Assessment FOR and AS Learning)?

What's Important To Be Learned?

Digital Leadership

Students need us. The sheer volume of information available, and how it is presented online, demands that KPR educators are thoughtful and critical about the ways students interact with and use technology at school. With technology and innovative practices in mind, learning has the potential to be dynamic and differentiated in the ways it leads students into the future.

Digital leadership is a mindset that equips educators and students with the essential skills necessary to navigate, engage and actively participate in an interconnected, highly technological society. This mindset is modeled through the intentional, explicit and safe use of technology at school in order to prepare students as digital citizens who:

- responsibly access, manage, create and evaluate information online;
- thoughtfully use language and images in varied forms;
- respectfully share their voice on social media platforms and networks; and
- think critically about information and ideas when engaging in digital tools.

Clear connections to digital citizenship and leadership are evident in the Ontario curriculum in areas such as Media Literacy, Health, and Technological Education. The Ontario Citizenship Framework also provides a thoughtful lens for educators and students to make direct connections between KPR character education and our actions and choices online.

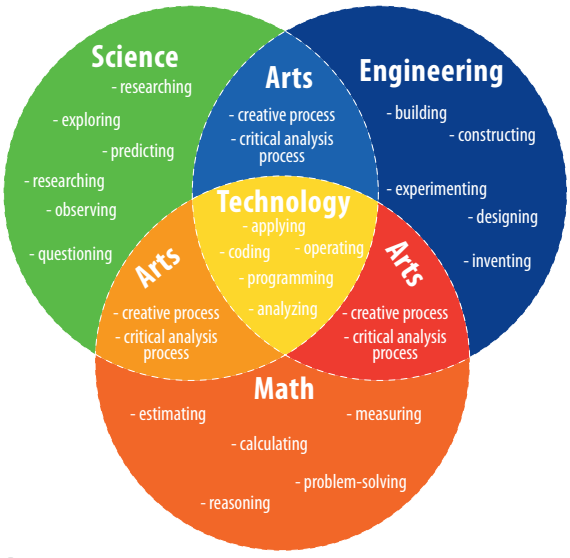
As a Digital Citizen:

- I use media in healthy ways that promote my own and others' well-being, and find a balance between online and face-to-face interactions;
- I build positive relationships through effective communication online;
- I avoid digital drama and cyberbullying to create an online culture of support and respect;
- I cultivate a digital identity to reflect who I am and how I want the world to see me;
- I think critically about what I consume and create online; and
- I protect myself and my information from theft and exploitation

Adapted from: Common Sense Education, Digital Citizenship: Scope & Sequence, 2019

Science, Technology, Engineering, the Arts & Mathematics (STEAM)

STEAM opportunities foster critical thinking, creativity, innovation and problem-solving across the curriculum. The integration of technology with science, engineering, the arts and mathematics is a powerful entry point into authentic, hands-on learning in fields such as computer programming, robotics, artificial intelligence and coding. Together, STEAM learning opportunities challenge students to think outside the box, apply key concepts and promote the integration of skills that support innovative solutions and outcomes. In many instances, the arts offer a rich context for STEAM learning where the creative process and critical analysis process intersect to activate student potential and new possibilities for learning.



Examples of Technology that Support STEAM Learning:

Squishy Circuits, Bluebots, MaKey MaKey, Beebot, Dash and Dot, Code-a-Pillar, Ozbots, and Turing Tumble

How Is Learning Fostered?

Intentional Task Design

Educators need to be intentional in the ways they use technology to support students' understanding of key concepts, skills and expectations as outlined in the Ontario curriculum.

Effective tasks that integrate technology:

- Identify clear goals and criteria that explicitly connect to grade-specific learning expectations in the Ontario curriculum.
- Model assessment practices that promote the seven fundamental principles in Growing Success with a goal of "maintaining high standards and improving student learning."
- Differentiate learning opportunities that answer the question "Why this technology for this student at this time in this way?"

When planning for technology use, educators need to consider the following key questions.

How does the use of technology:

- Connect to a cluster of curriculum expectations, the four categories of achievement and a clear learning progression over time?
- Contextualize learning to create meaning and perceived importance?
- Support differentiation and developmentally-appropriate practices to accommodate varying abilities?
- Invite choice in determining how a task will be approached?
- Present opportunities for clear, ongoing feedback based on learning goals and success criteria?

Guided Inquiry

In KPR classrooms, educators are thoughtful about how they use technology to bring curriculum to life by offering rich, varied opportunities for peer collaboration, accountable talk, meaningful tasks and knowledge creation. Educators honour student voice and, at the same time, clearly know where they are going and how they are going to get there.

Guided inquiry has been described as a powerful approach to learning that lies midway between direct instruction and free or open inquiry:

Direct Instruction	Guided Inquiry	Free or Open Inquiry
Educator-initiated, carefully selected learning opportunities All students use technology to complete the same task often at the same time Students are mostly passive recipients High educator intentionality; Limited or no student ownership	Educator-initiated and monitored learning opportunities Educators make student thinking and learning visible through the use of technology, enabling the educator and students to explore, interact and reflect meaningfully with intended concepts and ideas High intentionality; High student ownership	Students choose their focus for learning with technology without active guidance from an educator often for the purpose of engagement; No imposed structures or explicit outcomes for the use of technology to support student learning Limited educator intentionality; High student ownership

The following actions can promote guided inquiry when using technology in the classroom:

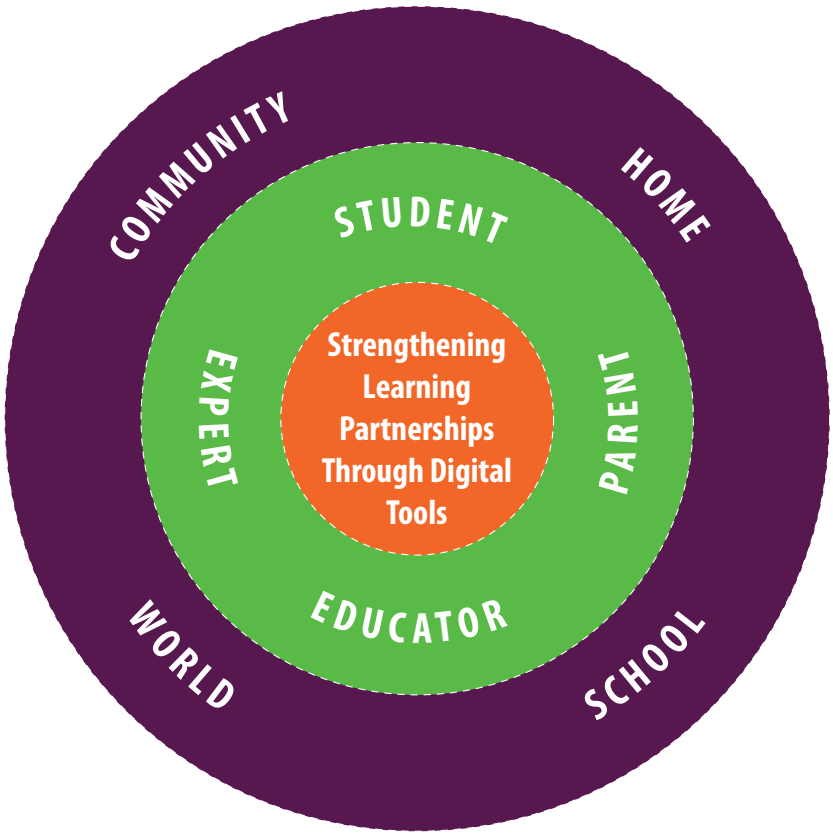
- Express curriculum as key questions for research and investigation;
- Invite experiential and hands-on learning with varied tools and technologies;
- Engage in group knowledge-building circles that consolidate key concepts and ideas that emerge as a result of online collaboration and/or research;
- Create contexts for real-world problem-solving and innovation;
- Access information from authentic sources;
- Apply learning within and beyond school by leveraging digital technologies; and
- Consider alternate perspectives through varied online sources and digital tools.

Adapted From: Connecting the Dots: Key Strategies that Transform Learning (2014)

Learning Partnerships

By its very nature, technology brings people, information and ideas together. It defies the limitations of geography, forming authentic, dynamic partnerships and online networks that extend learning beyond the classroom into local and global communities.

These partnerships expose learners to different forms of communication and collaboration, and equip them with immense possibilities to access, share and create knowledge with others at school, at home and across the world.



Edsby

In an effort to promote safe learning partnerships in KPR, Edsby provides a consistent and secure platform connecting home and school. The streamlining of communication, assessment and reporting practices strengthen parent partnerships while ensuring the privacy of student information.

In KPR, Edsby will be the platform for:

- Attendance (K-12)
- Kindergarten Communication of Learning
- Grades 1-8 Report Cards

Information & Communications Technology Plan 2020-2023

KPR ICT PLAN ROADMAP

SUM/FALL'20

- Student Information System Migration Planning
- Edsby Attendance Trial
- Edsby Secondary Assessment & Evaluation
- Acceptable Use Policy Update
- Digital Citizenship Program

WIN/SPR'21

- Security Awareness Campaign
- Microsoft 365 Security Pilot
  - EndPoint Protection
  - Email Security
- Equitable Access Pilot Gr 9-12
- Aspen Student Information System Training

SUM/FALL'21

- Aspen Student Information System Go Live
- Edsby Kindergarten Communication of Learning Pilot
- Edsby Grades 1-8 Report Card Pilot
- Evaluate/Expand Digital Citizenship Programing
- Policy Creation/Edits
  - Data Storage and Security
  - Acceptable Use of Technology
  - Acceptable Use of Social Media
- Equitable Access Expansion for Gr 9-12

WIN/SPR'22

- Edsby Kindergarten Communication of Learning Pilot Expansion
- Edsby Grades 1-8 Report Card Pilot Expansion
- Microsoft 365 Security Go Live
  - EndPoint Protection
  - Email Security

SUM/FALL'22

- Evaluate/Expand Security Awareness Campaign
- Edsby Kindergarten Communication of Learning Go Live
- Edsby Grades 1-8 Report Card Go Live
- Evaluate/Expand Digital Citizenship Programing
- Microsoft 365 Security Pilot
  - Identity and Access Management
  - Data Loss Prevention

WIN/SPR'23

- Microsoft 365 Security Go Live
  - Identity and Access Management
  - Data Loss Prevention
- Consolidation and Assessment of YR1 & YR2 of IT Plan

SUM/FALL'23

- Planning for Renewed IT Plan
  - Consultation with Trustees
  - Consultation with Senior Administration
  - Consultation with Focus Groups
- Evaluate/Expand Digital Citizenship Programing
- Evaluate Equitable Access
- Expansion into Gr 7-8 Equitable Access Program

Investigating Innovative Technologies

Key Priorities

Equitable Access

- Ensuring equitable access to online learning environments

Data Management & Security

- Ensuring the security of Student and Administrative data
  - o Security awareness education
  - o Stewardship of student created data
- Creating/Updating security policies

Digital Leadership

- Promoting positive and responsible use of digital tools (CommonSense, MediaSmarts)

Enterprise Systems

- Creating efficiencies in the management of our student and staff data
- Modernizing platforms

Communication

- Streamlining communications through a consistent platform (Edsby)
- Promoting safe learning partnerships between home and school

KAWARTHA PINE RIDGE DISTRICT SCHOOL BOARD

Where Does Learning Happen?

KPR is committed to learning spaces that promote equity, inclusion and accessibility for all students. Educators continually make decisions about technology integration that appreciate and respect the cultural, cognitive, social, linguistic and developmental diversity that exists within our K-12 classrooms, schools, community and world.

Equitable learning environments in KPR are defined by the ways that educators carefully consider and co-construct physical, social and virtual spaces with students. These spaces invite opportunities for dynamic learning relationships between students, educators and the environment.

Physical Environment

- A large gathering space for whole-group conversations, located near Smartboards, whiteboards, and/or easels;
- Flexible and configurable spaces that promote small-group collaboration;
- Instructional materials, routines and technology organized to promote independence, differentiation and access to technology.

Embracing a Learning Commons Approach

"A Learning Commons is a flexible and responsive approach to helping schools focus on learning collaboratively. It expands the learning experience, taking students and educators into virtual spaces beyond the walls of a school...Within a Learning Commons, new relationships are formed between learners, new technologies are realized and utilized, and both students and educators prepare for the future as they learn new ways to learn.

And best of all, as a space traditionally and naturally designed to facilitate people working together, a school's library, provides the natural dynamics for developing a Learning Commons."

Together for Learning: A Vision for the 21st Century, p. 3 (2010).

Makerspaces

"Makerspaces provide hands-on, creative ways for students to design, experiment and invent as they engage in science, technology, engineering, arts and mathematics."

From: http://www.makerspaceforeducation.com

Makerspaces occur in many of our schools. A successful Makerspace:

- Promotes learning opportunities through collaboration, guided inquiry and hands-on experiences
- Integrates clear goals from across the Ontario curriculum; and
- Provides intentional, flexible materials and spaces that invite students to synthesize and create knowledge.

Social Environment

- Clear, consistent routines and expectations that support accountable talk and self-reflection using technology;
- Collaborative tasks that encourage students to use digital tools to capture their thinking for further reflection;
- Technology that supports observations, conversations and products to assess growth in learning and identify next steps for instruction (assessment for and as learning);
- Time embedded to engage in technology for the purpose of information and idea-sharing;
- Spaces in the classroom that intentionally encourage small group collaboration, engagement and talk.

Virtual Environment

- Online spaces that are easily accessible, consistent and thoughtfully organized;
- Tasks that embed time and space for online collaboration, accountability and knowledge creation;
- Learning goals and tasks are clear, explicit and visible;
- Images and multimedia are used to engage learners and strengthen connections to learning;
- Relationships are built through the use of discussion boards and required contributions;
- Online learning is enhanced through face-to-face interactions (blended learning) and/or real-world application.

Blended learning environments use digital learning tools in a classroom setting. Blended learning can use just a few digital tools or it may use a wide array of tools, courses and resources (e.g. Google Classroom, Google Docs, Padlet, blogs).

eLearning environments utilize digital technologies to access learning outside of a traditional classroom. In most cases, learning is delivered completely online. In KPR, eLearning is delivered through the Desire to Learn (D2L) platform.

http://www.edu.gov.on.ca/elearning/courses.html

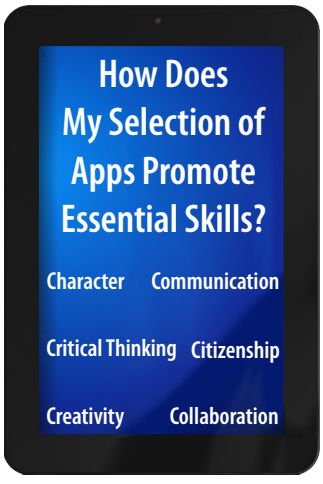
When considering virtual learning environments, KPR educators are responsive to their local communities where access to technology and/or the internet may be limited. In these situations, educators make thoughtful decisions to ensure equitable access to technology for all students at school and at home.

App Use in KPR Classrooms and Schools

Making decisions about using apps in the classroom requires thoughtful reflection about the educators' purpose and the user's role in the learning experience. In particular, it is important to be mindful of apps that support **content consumption** and apps that support **content creation** when making decisions on behalf of learners and learning. As a general rule, it is important that students do not focus on one type of app more than another. Instead, these apps often support each other by offering students the tools they need to gather information (content consumption) and subsequently use this information to create new knowledge and ideas (content creation).

Content Consumption Apps

- Content has been created by developers or a third party for students to consume and/or play to initiate learning;
- Students are typically passive participants in the experience, often simply clicking to access information or perform a single function (e.g. one way transmission of information).
- These apps require thoughtful educator involvement and intentional interactions to assess the impact of these apps on student learning.



Content Creation Apps

- Platforms and online spaces have been designed for students to create, communicate and share their learning with others.
- Students are actively involved in the learning experience, typically engaging in multiple platforms, sources and content simultaneously. The goal of content creation is often to synthesize learning.
- These apps require an explicit introduction to the online space, thoughtful planning, and ongoing individual or small group feedback related to learning goals and success criteria.

How Do We Measure Success?

Using technology to simply access information is not enough. Instead, effective technology integration demands that students interact with online content in increasingly complex and thoughtful ways. To do so, educators must design tasks that empower students as active, critical consumers and creators of information.

The following chart supports educators in reflecting on and designing authentic tasks that move from **information** in isolation towards a goal of **knowledge creation** in collaboration with others and new ideas.

Knowledge Creation	
Guided Inquiry	**Educators:** • articulate a clear context for learning; intentionally design and scaffold learning opportunities using digital tools that develop inquiry skills and content knowledge that reflects clear expectations for learning from the Ontario curriculum **Students:** • look beyond the obvious, examine information for validity, point of view and bias, and construct meaning from all of these endeavours.
Critical and Creative Thinking	**Educators:** • offer intentional opportunities online for students to read and write for different purposes; evaluate texts; create texts in a variety of formats; and interpret media texts, images and graphics by using the critical analysis process. **Students:** • reflect, make connections between and question information interactively; • Students use information to develop their own learning experiences
Multiple Literacies	**Educators:** • design learning opportunities that encourage students to use a broad range of literacies online to meet their goals. **Students:** • use technology and online platforms to communicate and collaborate with others in rich and varied ways.
Engagement	**Educators:** • Identify and share a clear purpose for pursuing information online that directly connects to learning goals and success criteria. **Students:** • are motivated by this purpose and recognize their role in gathering information • Differentiation has been considered to ensure all students can access this learning opportunity (e.g. reading levels, background knowledge).
Information	

Adapted From: Together For Learning: A Vision for the 21st Century, 2010.

Bloom's Taxonomy for Digital Tools and the SAMR Model provide direction into the types of tasks that we plan with technology. The diagram below supports educators in considering worthwhile tasks and powerful tools that leverage technology to promote higher order thinking skills.

Bloom's Taxonomy for Digital Tools

CREATING

Animating, Blogging, Collaborating, Composing, Designing, Filming, Making, Podcasting, Producing, Programming, Publishing, Solving, Wiki-building

EVALUATING

Assessing, Checking, Critiquing, Experimenting, Hypothesizing, Posting, Predicting, Rating, Reflecting, Reframing, Reviewing, Testing, Validating

ANALYSING

Appraising, Attributing, Breaking down, Contrasting, Correlating, Deducing, Differentiating, Integrating, Mind-mapping, Organizing, Questioning, Structuring, Surveying

APPLYING

Calculating, Charting, Collecting, Computing, Constructing, Demonstrating, Displaying, Examining, Explaining, Interviewing, Editing, Operating, Presenting

UNDERSTANDING

Advanced search, Annotating, Categorising, Classifying, Commenting, Contrasting, Demonstrating, Extending, Identifying, Interpreting, Predicting, Summarizing, Tagging

REMEMBERING

Googling, Highlighting, Identifying, Listing, Matching, Networking, Quoting, Recording, Retrieving, Searching, Selecting, Tabulating, Visualizing

Adapted from: Churches, A. (2008). Bloom's Digital Taxonomy. p. 5

Click on the links above to access digital tools that promote higher order thinking.

SAMR Model

Redefinition

Technology creates new tasks that were previously inconceivable.

Example:

- Creating and delivering a webinar to students at another school.

Modification

Technology redesigns learning opportunities for students.

Example:

- Integrating audio, video and text in a blogpost to share a unified message with others.

Augmentation

Technology replaces the use of another tool with some enhancements.

Example:

- Interviewing peers and sharing a recording on Flipgrid for others to see.

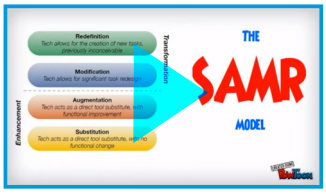
Substitution

Technology simply replaces the use of another tool with no functional change.

Example:

- Projecting information on the Smartboard instead of providing a photocopy.

Adapted from: SAMR Smash: Using SAMR & Bloom's Taxonomy to Integrate iPads in the Classroom, 2019



From: Rich Colosi Media. (2014). The SAMR Model Explained By Students, YouTube.

Reimagining Modern Learning Environments

The goal in KPR is "to prepare [our] students to lead fulfilling lives, be productive contributors in a knowledge economy, and thrive in an information and technology-intensive globalized world. Within this context, Ontario continues to be focused on the province's core priorities of high levels of student achievement, ensuring equity, promoting well-being, and enhancing confidence in publicly funded education."

Towards Defining 21st Century Competencies for Ontario, 2016, p. 53

What's Important To Be Learned?

- Technology use in KPR classrooms
- Digital leadership
- STEAM

How Is Learning Fostered?

- Intentional task design
- Guided inquiry
- Learning partnerships

Where Does Learning Happen?

- Physical environment
- Social environment
- Virtual environment

How Do We Measure Success?

- Information to knowledge creation
- App use in KPR classrooms & schools
- Bloom's Digital Tools/SAMR

Source: Fullan, M., Quinn, J., & McEachen, J. (2017). Deep Learning: Engage the World Change the World.