

Lake Trail Middle School Technology Plan 2018/2019

The purpose of the Technology Plan for Lake Trail Middle School is to establish and maintain a common focus for the direction of technology additions and replacements within the school that aligns with the School Learning Plan. Our aim is to provide a strategic plan that outlines the priorities, timeline, rationale, future directions and guides decisions related to technology within the school. This is the second year of our Technology Plan.

Part 1: Context

A. Background and School Learning Plan

Our student population is composed of students enrolled in grades 6 to 9 with a total number of 331 students. We serve a diverse community with many families struggling to meet their basic needs; we feed a large percentage of our students at our concession. As such, we cannot rely on students to supply their own technology. Another key aspect of our context has been staff turnover (only 4 teachers from September 2016 are still working at our school; however, only two are new to our school this year) and the fact that we are building a new school due to open in September 2021.

The addition and transition of technology within our school is guided by our Student Learning Plan (also referred to as Framework for Enhancing Student Learning (FESL)). Our implementation is prioritised to maximise students learning, success, engagement and experience, in order to better prepare our students for future learning. It is our hope that the clear outline of a Technology Plan that fits within our School Learning Plan will help to prioritise areas of importance and support changing curriculum. Our schools Technology Plan is aimed at prioritising and optimising our future technology decisions, while being mindful of our transition to a new school building.

Our School Learning Plan for the 2018/2019 school year is:

How can we make each student's life better?

- We will increase the feelings of connectedness our students feel. This includes connectedness to our school and to what they are learning. Our goal is that by the end of the year each student will be able to identify two adults, at least one of them being a staff member of our school, that they know believe that they can and will be successful.
 - A significant subset of this is our strategy to reduce the feelings of bullying our students report.
- We will increase student learning in core areas (reading, writing, numeracy).

- We will increase each student’s development of the Core Competencies.
- We will improve each student’s Executive Functioning skills.

We are working towards our school goals while supporting the redesigned curriculum through focussing on and increasing the following areas:

- First Peoples Principals of Learning
- Trauma informed practice
- Continuous reporting
- Service/ Citizenship
- The Arts
- Athletics
- Inquiry
- Hands-on contextual learning
- Place based learning

B. Technology Deficit Prior to 2017

Prior to the implementation of the Technology Plan, the school was in a technology deficit phase. The school had 3 computer labs plus a library lab with aging computers reaching their end of lease date and end of use life cycle. As well, before the 2017 school year, the school had no current mobile technology, such as iPads or laptops, limited digital projectors and no inventory management system.

In addition to limited technology many of the computer labs were powered by “thin client” networked computers. These computers possess limited processing power and are unable to run many current programs or application (e.g. unable to run Rosetta Stone, which is use by our languages program).

The deficit of technology prior to 2017 meant that as a result of limited and outdated technology at the school many aspects of modern educational practice and redesigned curriculum that could be augmented by technology were being left out. An example of this is digital literacy, assistive technology and design-based technology (e.g. 3D printing). All of these areas reinforce core competencies in student learning and promote modern educational practice.

C. Technology Additions as a Result of the Technology Plan

Since the implementation of the 2017/2018 Technology Plan we have add the following technology to the school;

- 1 “Tech Tub” (10 iPads) to the LST rooms as assistive technology
- 1 laptop cart (30 Laptops) for general classroom use
- 3 “Tech Tubs” (30 iPads) for general classroom use

- 19 single iPads (#3 to #22) for staff and student use
- 12 robotics kits (Vex IQ) plus 2 fields and a competition game
- 2 green screens
- Various audio/ video recording equipment
- 12 Apple TV units (allows staff and students to share learning)
- 30 headphones with microphone for computers
- 30 headphones with microphone for iPads
- 2 GoPro units and 8 laptops – from Synergy grant
- 1 “Tech Tub” (10 iPads) – from previous Synergy grant
- 1 New printer/ copier for staff and students, setup in the Library Learning Commons
- Upgraded lab of desktop computers in room 113 (with software suite)

For detailed information regarding cost and expenditures see Attachment #1

D. Inventory Management Strategy

With the addition of new technology to the school, our inventory management system needed to be updated, aligned and robust. In the first phase of our 2017/2018 technology plan we updated our current school inventory by cleaning our database, removing out-dated equipment and disposing of out-dated physical equipment (e.g., old TVs, VCRs and overhead projectors). This process allowed us to inventory the new equipment free from the clutter and errors that existed in our previous system.

Our current inventory management system is controlled through the Library Learning Commons. Having a central system and using inventory management software that was already in existence allows us to maintain an accurate and up to date tracking system for all technology within the school using the current Library Learning Commons barcoding and management system. This system allows us to track the usage, maintenance and age of equipment while maintaining a current, connected and robust inventory management system.

For a detailed list of our current inventory see Attachment #2

E. Bring your Own Device (BYOD)

Our students have access to “bring your own device” (BYOD) and many do bring devices daily. However, these devices range in capability and functionality. An informal survey of our school population revealed that 60% of our students have a device with them that can connect to Wi-Fi. We may be able to augment instruction and lessons with these devices, but we cannot rely on all students having access to technology based on BYOD alone.

Our parent population cannot be counted on to have a computer such as a desktop or laptop at home. The same informal survey of our student population found that 30 to 40% of our students do not have a home computer.

F. Wi-Fi

In consultation with the district information technology (IT) department, the current status of our Wi-Fi is “working”. If problems arise related to speed and connection, IT will address, and repair as needed. We are not scheduled to receive any major upgrades until the transition to our new school takes place. The new school building will have an upgraded network system in place.

G. Sustainability

The majority of our new technology was purchased within the past year. This means that we can expect end of life to occur around the same time in 3 to 6 years, depending on the technology. In order to avoid this, a staggered replacement option needs to be built into the Technology Plan in future years. Using our inventory management system, we can assess which technology will be first to need replacement and plan accordingly in our 2019/2020 Technology Plan.

H. Digital Literacy - Social Media and Safe Technology Use

With access and use of technology within the school increasing, digital literacy is a priority for future-ready learning. Digital literacy encompasses the development of hands-on skills, the exploration of ethical issues related to technology, social media awareness and digital safety. Currently our Library Learning Commons is developing a strategy and resources to meet this need through consultation with staff and students.

Currently, digital literacy is being delivered by classroom teachers with support from district IT support teachers. Material being delivered for digital safety currently includes lessons in online safety, and how to use technology responsibly (e.g. support materials are available through NetSmartz.org).

The school’s Teacher Librarian is developing resources to offer further instruction and supports to build technology awareness, skills in digital citizenship, safe technology use, social media awareness, responsible search strategies, and plagiarism prevention. Opportunities to address and practice these topics are available throughout a variety of curricular areas (e.g. PHE curriculum contains “health relationship, both physical and digital”).

Our digital literacy strategy within the 2018/2019 Technology Plan is to continue to develop an aligned and comprehensive set of resources and a delivery strategy for digital literacy. Our Teacher Librarian and Library Learning Commons will lead this initiative by developing a

resource set and delivery strategy in consultation with staff and students.

I. Assistive Technology

The increase in technology within the school has allowed us to look at improving student access to assistive technology. Assistive technology is defined as adaptation, augmentation and enrichment options available through the intentional application of technology and learning support. Assistive technology allows students to show their learning in a variety of ways which target students' strengths. It can also be used as a bypass strategy for students with exceptionalities, allowing access to curriculum that may otherwise be out of reach (e.g. E-books which provides access a wide range of reading levels for an emergent reader).

Prior to the 2017/2018 Technology Plan, learning support had access to 6 desktop computers. Teachers and EAs worked with students using technology to support written output and reading (e.g. typing, videos and games).

Since the implementation of the Technology Plan in 2017/2018 learning support has increased access to technology with the addition of a Tech Tub (10 iPads) and headphones with microphones. Teachers and Educational Assistants (EA) use the technology to support written output and reading. The new iPads provide students with applications (apps), beyond those on the computer, to assist in written output and reading. The apps available are numerous and beneficial to supporting students (e.g. students can take pictures of worksheets and the iPad will read it). As well, the headphones with microphones allow students to using speech-to-text, text-to-voice and eBooks apps.

Student Services has also supported additional technology for individual students, based on need. Currently we have 3 iPads and 3 laptops on loan from Students Services. This technology is signed out to specific students for the year.

J. Programs Working with Technology

We have a variety of programs that depend on technology within our school to run:

- Blended Learning
 - Languages
 - Our languages program runs as a blended instruction model working with NIDES to have students complete their language of choice using Rosetta Stone
 - Accelerated students working on a blended program
- Coding, Makerspace, Robotics, Film and Digital Music
 - Run as an elective for 8/9 and rotations for 6/7 students
- Digital Portfolio
 - Currently used by all our students and teachers
- Classroom Learning

- Many of our classes have built-in instruction that supports redesigned curriculum using the technology available to them
- Career Education
 - My Blueprint, the Real Game, and inquiry used by all of our students
- Learning Assistance
 - Assistive Technology is used to help with written output and reading

Part 2: School Technology Plan 2018/2019

A. Goals

<u>Goal #1</u>	Removal and replacement of off-lease desktop computers
By: September 2019,	
Removal of computer lab 104, 117 and Library Learning Commons computers and replacement with mobile laptop carts	
Rationale: The current “thin client” computers in the labs cannot run the needed programs and are approaching their end of lease date. Shifting to mobile technology will allow for better student access to technology and increased access to technology school wide.	
The removal of the computer lab space will provide added classroom space for other programs (e.g. Lab 117 could transition to a school Makerspace).	

<u>Goal #2</u>	Develop a school wide Digital Literacy strategy
By: April 2019,	
Develop a digital literacy strategy that encompasses the development of hands-on skills, social media awareness and digital safety. The Library Learning Commons and Teacher Librarian will lead this by developing a resource set and delivery strategy in consultation with staff and students.	
Rationale: With an increased technology presence, the development of a digital literacy strategy needs to educate and inform students on proper use and safety.	

<u>Goal #3</u>	Support of staff Professional Development (Pro-D) with new technology
By: Ongoing starting in 2019	
Develop opportunities for staff to collaborate and share knowledge regarding new technology and best practice on how to use the new technology to support student growth and learning (e.g. built-in time during each staff meeting for peer to peer share out of new technology)	
Rationale: With an increased technology in the school we have started to see some staff become proficient at using this technology in a variety of area. Peer to peer support would allow for this knowledge to be shared among staff, to better support both staff and student learning.	

Goal #4	Addition of applications (apps) and software
By: Ongoing 2018/2019	
Purchase apps and software (approved by the district) to support student learning	
Rationale: The addition of apps and software complement the school's new technology devices and are essential to get the most out of the hardware.	

Goal #5	Assess "other" technology needs
By: 2019	
Assess other technology needs as they arise.	
Rationale: Other technology (e.g. 3D printers, robotics equipment, film equipment) enables delivery of programs and curriculum. Through assessing needs and requests, we can identify items that should be added to future Technology Plans.	

Goal #6	Review and update Technology plan yearly
By 2019/2020,	
The technology plan needs to be reviewed and updated on a scheduled basis	
Rationale: With changing technology and practice it is important to maintain an up-to-date, effective and accurate Technology Plan.	

B. Future considerations

Future Consideration #1	State of Wi-Fi
Review in 2019/2020	
The IT department is committed to maintaining current Wi-Fi and addressing issues as they arise.	
Rationale: The state of our current Wi-Fi is "working"; however, future considerations need to be given to upgrading the network in the new school as part of the transition.	

Future Consideration #2	Staggered replacement of equipment
Review in 2019/2020	
Plan a staggered strategy to replace the technology before it reaches end of life.	
Rationale: The majority of our new equipment was purchased within the last year. This means we need to plan for a staggered replacement to offset the expected end of life from happening all at once.	

Future Consideration #3	Transition to new school
Review in 2019/2020	
What do we need to build into our plan to help with the transition?	
Rationale: The opportunity to transition to a new school will be exceptional for our school learning community. However, our future planning of technology needs to fit within the pedagogy of the new school and be transferable to the new building.	

Future Consideration #4	Align printing with Technology Plan
Review in 2019/2020	
Address school wide printing and find cost saving measures.	
Rationale: Working with the IT department, we are aligning and updating our printing hardware. As the transition takes place, we can assess cost saving measures (that can be reallocated) related to staff and student printing.	

C. Professional Learning and Building Capacity

This is listed in the Goals section as “Goal # 3”. Although it is a goal, it also needs to become common practice when adding any new technology to develop capacity amongst the staff. The addition of new technology will come with an increased focus on Professional Learning and how to best use this new technology to gain maximum benefit for student learning. Focus will need to be made to identify lead teachers and to develop a “train the trainer” model to support shared learning for all staff. Peer to peer support will need to be developed as a part of the school culture to support integration of technology into all classrooms. We, as a school, need to encourage sharing of practice to build strong interschool collaboration and sharing of capacity. This in turn will support student learning allowing students’ different avenues to explore new concepts and varying ways to share understanding.