MEMORANDUM

May 24, 2022
Regular Board Meeting

TO	Board of Trustees
FROM	Shauna Boyce, Superintendent
ORIGINATOR	Scott Johnston, Associate Superintendent
RESOURCE	Kathy Mann, Division Principal, Indigenous Education and Numeracy Mark Karaki, Director, Technology Services
GOVERNANCE POLICY	Board Policy 2: Role of the Board Board Policy 12: Role of the Superintendent
ADDITIONAL REFERENCE	Board Annual Work Plan
SUBJECT	**LEARNING AND TECHNOLOGY REPORT**

PURPOSE

For information. No recommendation required.

BACKGROUND

Students experience learning in a variety of ways and effective technology integration is catalyst for teachers, students and parents to communicate learning effectively. This Learning and Technology Report is provided in alignment with Alberta's Education Act s. 33, and the Board's responsibility to deliver appropriate programming to meet the needs of all students.

With an ongoing COVID-19 pandemic, Parkland School Division's teachers and students are required to attend to learning with a greater reliance on technology. This report provides an overview of the readiness that developed through the dual, collaborative perspective of Instructional and Technology Services.

REPORT SUMMARY

The Learning and Technology Report highlights the ongoing projects and innovative measures taken throughout the current school year to support students and staff educationally and professionally.

Administration would be pleased to respond to questions.

SJ:kz

LEARNING AND TECHNOLOGY REPORT
Presented to the Board of Trustees, May 24, 2022

Scott Johnston, Associate Superintendent, Education and System Services
Resources: Katherine Mann, Division Principal, Indigenous Education and Numeracy
Mark Karaki, Director, Technology Services

Our Students Possess the confidence, resilience, insight and skills required to thrive in, and positively impact, the world.

BACKGROUND

In Parkland School Division, the use of technology continues as an essential aspect of educational and professional life. Staff and students use the power of technology in a purposeful and meaningful way to deepen understanding and demonstrate learning.

In the wake of pandemic learning, Parkland School Division continued to evolve and innovate in the use of educational technology. We utilize technology to facilitate collaboration and professional development as well as adapt instruction and resources to meet the needs of our students. This has also led to an increasing awareness of the need for systems and processes to ensure that we have safe and secure online learning environments for staff and students.

This Learning and Technology Report represents the duality of technology services and technology education. It is essential to review how technology is utilized to improve education and also how the application of technology is supported throughout the Division.

INSTRUCTIONAL HIGHLIGHTS AND FUTURE FOCUS

COLLABORATION AND PROFESSIONAL DEVELOPMENT

Access to online meetings continues to be an important part of how we collaborate and offer professional development in Parkland School Division. In reviewing the data collected through our PD registration system (Eventbrite), Parkland School Division has offered 63 professional development sessions since the beginning of November. Of those sessions, 62% were offered in an online environment. Online meetings also continue to be a way that professional colleagues connect with each other, saving time and travel.

APPLICATIONS FOR EDUCATION

Parkland School Division continues to selectively utilize applications to support instruction in the classroom. Applications such as online reading and math programs allow teachers to differentiate their instruction, and provide center work for students while they engage in small group instruction. As well, educators continue to make use of Google Classrooms as a Learning Management System. Parkland School Division currently has 3,283 active Google Classrooms.

Instructional Services continues to offer Digital Art lessons to schools online. These lessons instruct students on how to use digital tools to create art, as well as provide an opportunity to learn about

Indigenous and Black artists. The department has also coordinated the second year of the Visual Arts Celebration in an online format.

Instructional Services maintains an approved list of sites and applications as well as an *Accessibility Feature Comparison Chart* that allows teachers to quickly see at a glance how different platforms provide access to different accessibility and assistive technology features. Training is also provided to teachers on how to access assistive technology features in the classroom.

PRIVACY INFORMATION ASSESSMENTS

Parkland School Division is involved in a Provincial Steering Committee to provide a provincial strategy for evaluating software as required by the *Freedom of Information and Privacy* (FOIP) Act. The intent is to operate under a collaborative model with shareable access to project resources that can be accessed by any School Authority.

The goals of the project include providing templates and exemplars for the most commonly used software, to build capacity of school authorities to meet requirements of the *FOIP Act* and to provide a system with inherent sustainability. Steering committee representatives have included Parkland School Division, Edmonton School Division, the Alberta Technology Leaders in Education (ATLE) Board, Regional Consortia, legal expertise, a Privacy Consortia Group, Cenera, the Office of the Information and Privacy Commissioner of Alberta, and the Alberta Teachers Association. ATLE offers initial seed funding to interested jurisdictions to attend training, offer resources and templates. This project will commence in the Fall of 2022 with more information to come in June.

RESOURCE CREATION AND CURATION

For the remainder of this year and into the foreseeable future, Instructional Services will be tasked with the curation and creation of resources to support curriculum implementation. The digital resources currently provided by Alberta Education are limited and not sufficiently robust and comprehensive to support quality learning. Parkland School Division is currently working to create resources that will include presentation slides and video tutorials to guide teachers in their delivery of the new curriculum.

VIRTUAL LEARNING

Parkland School Division continues to provide choice for families who desire at-home learning with Virtual Learning supports. Our Virtual Learning program continues to provide quality education under the umbrella of the *Connections for Learning* programs.

Additional Highlights

- Ongoing support exists for access to online resources in all subject areas and grade levels;
- Facilitated the development of Parkland-created teacher resources, housed within a shared (Google Shared) drive to ensure that vetted resources are easily available;
- Significant updates over the school year to Google applications within Google Workspace for Education that enable teachers and students to harness more effective research, networking and collaboration opportunities;

- Continued in-class training by our Science, Technology, Engineering and Math Facilitator, to various classrooms throughout the district, in a series of student workshops;
- Celebration of specific educational weeks such as Media Literacy Week, Computer Science Week, and Métis Week with various online resources, experts;
- Celebration of Visual Arts was once again held virtually. 1100+ student pieces of artwork were displayed on the public website.

TECHNOLOGY SERVICES HIGHLIGHTS AND FUTURE FOCUS

From the start of the 2021 school year, the Technology Services team primarily focused on providing excellent service and support to the staff and students of Parkland School Division. During this year, Technology Services initiated and completed a number of significant projects.

A FOCUS ON CYBERSECURITY

The threat environment on the internet is on the rise. Theft of information through phishing, malware and ransomware attacks can result in monetary and reputation loss as well as the ability to conduct business. Requirements laid out by our insurance provider put Cybersecurity at the center of attention for Technology Services.

The Alberta Risk Managed Insurance Consortium (ARMIC) developed A Cybersecurity Implementation Roadmap in conjunction with Alberta Technology Leaders in Education (ATLE) groups. In response to the increased security requirements, Technology Services implemented the following Cybersecurity items.

1. Multifactor Authentication for all user accounts on all compatible services. (Users provide two or more login verification factors to gain access (for example: password and SMS message code for Gmail Authentication);
2. Privileged Access Management (PAM) – Technology Services implemented additional security tools to secure our technology administrative accounts. We established network connectivity and organization improvements to limit access between internal networks.
3. Endpoint Detection and Response (EDR) – Technology Services enhanced Antivirus and Security application; these are installed on all PSD laptops, desktops and servers. This application provides continuous monitoring, analysis and automated remediation of threats.
4. Managed Vulnerabilities – Technology Services scheduled a thorough review and ongoing security monitoring of firewall and publicly available resources (For example: Powerschool and existing Websites)

NETWORK IMPROVEMENTS

Strong cybersecurity depends on a robust network. In addition to our cybersecurity work, Technology Services implemented a number of improvements to other components of the PSD network.

1. Wireless upgrade – Technology Services completed the deployment and subsequent upgrade to a newer Wi-Fi 6 (802.11ax) wireless network. These wireless access points have higher throughput, lower latency, higher capacity, and increased coverage for our increasing quantity of devices. In alignment with the wireless access point upgrade, all of the interconnected switches also needed

to be upgraded. Just under 500 wireless access points and 50 switches were replaced at 26 PSD buildings.
2. Supernet 2.0 upgrade - As part of Bell Canada's national *Supernet* upgrade project, all sites received upgraded network connectivity. The hardware upgrades of the *Supernet* devices will allow for higher capacity and more reliable connectivity.

DEVICES

Parkland School Division embarked on a large-scale device evergreen initiative this school year for many devices that were considered to be at end-of-life. This means that the device is no longer supported through its vendor services, and this may generate system vulnerabilities. Technology services received, provisioned and deployed hundreds of devices leading into the 21-22 school year; including:

1. Nine school servers,
2. 300 laptops, 300 monitors, and 1,200 Chromebooks, and
3. 130 iPads.

Current Device Counts:

Device	2021-2022	2020-2021	Change
Windows Computers	2,745	2,646	+ 99
Chrome Devices	6,336	6,159	+ 177
Apple Devices	2,191	1,802	+ 389

OUR STUDENT INFORMATION SYSTEM

Improving our student registration system existed as the main focus for our Student Information Team. After a successful pilot of the RSVP registration portal, the product was reviewed and analyzed by key stakeholders at PSD. The decision was made to move forward and use the RSVP system instead of the cumbersome PowerSchool Enrollment system.

PowerSchool Enrollment was the primary registration product for approximately 4 years. There were many ongoing data and technical challenges throughout this time period. PowerSchool Enrolment also came with a significant cost to PSD of over $50,000.00 per year.

Parkland School Division's unique transportation environment includes the necessity to register non-PSD students. The complexity of multiple school division registration, integrating billing, and PSD's diverse programming (CFL), created problematic data situations with the restrictive "one solution fits" all PowerSchool Enrollment.

With the RSVP solution we are able to fully customize the registration portal and the output data workflows for all of the systems at PSD. The bulk of the registration rush to date has been completed.

The Student Information System team has already engaged the schools to implement the requested enhancements to the administrative data tools and the 23-24 registration portal.

FORWARD CONSIDERATIONS: 2022-2023

Technology Services will continue to attend to the deployment of devices within the Asset Evergreen Project. Each year, our devices are monitored to determine which devices require replacement and, as provided for in the chart above, more new devices are added than are simply replaced.

Other initiatives include:

- Continued monitoring and improvement of the Cybersecurity program;
- Enhancement and continued development of the RSVP registration system; and
- Ongoing system support as required.