



# **BTPS Technology Plan 2019-2023**

*Buffalo Trail Public Schools is committed to maximizing student learning, in a safe and caring environment, supported by a highly effective team.*

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## BTPS Technology Department plan 2019-2023

Team mantra "Effective technology services, empowering learning."

*"Ultimately, the power of technology should be harnessed to support innovation and discovery, not simply to aid teaching. We need to engage learners to use new technologies as designers and creators of knowledge."*<sup>1</sup>

Technology in BTPS has continuously evolved from the inception of the department in 1998. At that time, the department focused on bringing widespread standardized networking to each of the schools and computer technology into each classroom. Having completed the aforementioned task, new influences such as the personalization of technology, the impact of new presentation hardware, reliance on Interactive SIS software, the ubiquitous development of internet, personalized portable technology, video, audio and picture technologies, video conferencing, wireless technologies, cloud based services, everything as a service, and internet of everything, have all become the norm. These ever evolving technologies are impacting the planning and delivery of instruction and fundamentally the way we operate.

A secondary role of the department that is constantly growing, is the interconnectivity of other departments leveraging the WAN and internet to work with their controls. In the last few years, BTPS has expanded its connections to the network by installing interconnected VoIP phone systems, Servair HVAC controls, CCTV security systems, keyless entry, bus CCTV, integrated bus planner software, Sage inventory management software, PASI real time connections to name a few. This role is taking an increasing larger part of the staff's time to properly manage the vendors and keep the equipment connected to the WAN.

The BTPS technology department focuses on delivering a **service**. The priorities are connectivity, collaboration, accessibility to and for all stakeholders. Our team organizes its structure around being as flexible and agile as we can in order to respond to the ever increasing needs and requirements of all stakeholders.

The department's goal throughout this plan is to help our division bring into practice, the Ministerial order (#001/2013) and the 5 policy directions from the Learning and Technology Policy Framework (2013) and the BTPS education plan 2018 -2021. In order to ensure alignment, this plan's headings match those used in the LTPF and BTPS plan. Sections from the BTPS three year education plan appear in blue in this document.

LTPF - Policy direction 1: Student Centred Learning

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<sup>1</sup> "INSPIRING EDUCATION - Inspiring Education." 2014. 5 Sep. 2014  
<<https://inspiring.education.alberta.ca/>>

## LTPF - Policy direction 1: Student Centered Learning

***Technology is used to support student-centred, personalized, authentic learning for all students***

### **Guiding Principles and Beliefs for BTPS Technology:**

- Digital citizenship will be a focus of instruction in using technology within our lives.
- Software as a service(SaaS) will remain the main method of delivering applications to students
- Students and staff will have equitable access to technological tools and processes that impact their lives and workplaces.
- Technology knowledge, skills and aptitudes are critical requirements for social, political and economic citizenship in Canada.
- Technology supports project-based collaborative learning opportunities for students in the classroom and beyond.
- Technology personalizes learning and provides an alternative and enriched educational opportunity.
- Technology processes support the development of higher-order thinking and can provide customized learning, anytime and anywhere.
- Technology is integral to the student's learning environment above and beyond the school environment and school day.

### *Defining Digital citizenship*

Activation of the Nine Elements of Digital Citizenship (ISTE 2009)

Stakeholders, as users of division-based network services, will have the knowledge, skills and abilities that allow users to:

1. Be able to responsibly participate in a digital society provided to them when they access division network resources.
2. Provide the self-protection required to buy and sell in a digital world.
3. Digitally communicate safely and appropriately through multiple methods.
4. Use digital technology collaboratively and demonstrate critical thinking in its use.
5. Consider others when using digital technologies.
6. Protect the rights of others and be able to defend their own digital rights.
7. Consider the risks (both physical and psychological) when using digital technologies.
8. Abide by the laws, rules, and division policies that govern the use of digital technologies.
9. Be custodians of their own information while creating precautions to protect others' data as well.

In utilizing these elements our students will;

- Learn to collaborate and connect with others through technology
- Learn new ways of thinking; using creativity, critical thinking, problem-solving, decision-making and learning;
- Learn new ways of working, communicating and collaborating
- Develop new skills for living in the world- citizenship, life and career, and personal and social responsibility;
- Develop collaborative problem-solving- working together to solve a common challenge, which involves the contribution and exchange of ideas, knowledge or resources to achieve the goal;
- Develop ICT literacy — learning in digital networks. Learning through digital means, such as social networking, ICT literacy, technological awareness and simulation;

Each of these elements enables individuals to function in social networks and contribute to the development of social and intellectual capital.

### **Assurance Element (Desired State) #9**

Learning environments are agile and flexible enough to meet the diverse needs of students by providing the appropriate technology, learning supports and structures that all students find success.

Technology department will target the above by:

- Providing software through Google to help students organize their personal calendars to integrate with school calendars.
- Having students use cloud based software to help plan and coordinate project work individually with classmates both physically and virtually.
- By providing training and demonstrating the full functional use of the Hapara teacher dashboard and workspace.
- Building the capacity of all staff in the use of technologies to support learning for all students.
- Working with IL teachers to help them use the various assistive technologies that are supplied for students.
- Providing software to students to help scaffold their learning to stay matched with peers as much as possible.
- Coordinating with staff to help make sure technological solutions are made available and supported when suggested by other professionals.
- Working with IL department in helping with recommended assistive technologies as recommended by experts.

## Assurance Element (Desired State) #10

Infrastructure (technology, transportation, buildings) supports learning and meets the needs of BTPS students, families, staff and our communities.

Technology department will target the above by:

- Providing, modelling and supporting a digital Learning management systems: Teacher Google Sites, Hapara, Google classroom.
- Providing onsite coaching.
- Enabling collaboration and peer assessment using Google apps for education to help facilitate collaboration and peer assessment
- Providing staff with access to specialized help in understanding and using assistive technologies for all students.
- Maximizing the use of technology in the classroom by providing easy to use functional technology.
- Supporting staff with implementing initiatives in respect to using digital resources.
- Helping staff see that using the assistive technologies available, can be a benefit to all students.

## LTPF - Policy direction 2: Research and innovation

***Teachers, administrators and other educational professionals read, review, participate in, share and apply research and evidence-based practices to sustain and advance innovation in education***

### **Guiding Principles and Beliefs for BTPS Technology:**

- Pilots will be supported and funded as long as they fit the criterion for cross curricular, inquiry based learning

Technology department will target the above by:

- Supporting action research in innovative ways to bring technology into student work
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### LTPF- Policy direction 3: Professional Learning

***Teachers, administrators and other professionals develop, maintain and apply knowledge, skills and attributes that enable them to use technology effectively, efficiently and innovatively in support of learning and teaching***

#### **Guiding Principles and Beliefs for BTPS Technology:**

- All staff will have equitable access to technological tools and processes that impact their lives and workplaces.
- Knowledge, skills and attitudes for the effective use of technology are critical requirements for teaching in classrooms in our division
- Technology directly supports project-based collaborative learning opportunities for students in the classroom and beyond.
- Technology personalizes learning and provides an alternative and enriched educational opportunity.
- Working with digital resources is critical to all work in BTPS.
- Having a digital classroom experience allows for all aspects of digital work to be accomplished by students and benefits from the same.

#### *BTPS Professional Practice Scenario:*

The guide to knowledge, skills and attitudes that are required to operate in a digital classroom are documented in the BTPS document “Teacher Effectiveness Framework” These KSA’s for use and operation of technology, are located in Section #4, “ Use of technology”. This document will be the guide to help staff develop their skills. Technology will take an active role in facilitating and supporting staff in this development by providing specific Educational Technology staff, dedicated to helping and facilitating training in order to help each staff member develop their capacity. The overall objective is to continually increase the capacity of each staff member in every building.

Teachers who work with Video conferencing will require modified skill sets to incorporate this technology into their instruction. It will be necessary to provide on-going professional development in this area. Teachers will look for opportunities to connect their students to other classrooms and educational leaders in other parts of the world. Teachers will take advantages of VC interactive programming provided by the educational service departments of organizations such as national museums, the Canadian Space Agency and 2learn.ca. The educational technology staff will also assist the SOL principal to coordinate and implement this outcome.



## Defining Skills

Activation of the Nine Elements of Digital Citizenship (ISTE 2009)

Stakeholders as users of division-based network services will have the knowledge, skills and abilities that allow users to:

1. Be able to responsibly participate in a digital society provided to them when they access division network resources.
2. Provide the self-protection required to buy and sell in a digital world.
3. Digitally communicate safely and appropriately through multiple methods.
4. Use digital technology collaboratively and demonstrate critical thinking in its use.
5. Consider others when using digital technologies.
6. Protect the rights of others and be able to defend their own digital rights.
7. Consider the risks (both physical and psychological) when using digital technologies.
8. Abide by the laws, rules, and division policies that govern the use of digital technologies.
9. Be custodians of their own information while creating precautions to protect others' data as well.

In utilizing these elements BTPS staff will;

- Learn to collaborate and connect with others through technology.
- Learn new ways of thinking; using creativity, critical thinking, problem-solving, decision-making and learning.
- Learn new ways of working, communicating and collaborating.
- Develop collaborative problem-solving- working together to solve a common challenge, which involves the contribution and exchange of ideas, knowledge or resources to achieve the goal.
- Develop ICT literacy — learning in digital networks. Learning through digital means, such as social networking, ICT literacy, technological awareness and simulation.

Each of these elements enables individuals to function in social networks and contribute to the development of social and intellectual capital.

## Assurance Element (Desired State) #5

Teachers and leaders respond with skill and competence to the unique learning needs, interests and cultural, societal and economic circumstances of all.

Technology department will target the above by:

- Working with learning services to aid in the creation of video of exemplary practice.
- Record and capture new and existing practices that are going on throughout the year.
- Provide a web place for videos to be housed and accessed.

### **Assurance Element (Desired State) #10**

Infrastructure (technology, transportation, buildings) supports learning and meets the needs of BTPS students, families, staff and our communities.

Technology department will target the above by:

- Providing an industry standard wireless infrastructure to handle at least 30 devices per classroom.
- Supplying and managing a cloud infrastructure for users.
- Providing GAFE for students and staff to collaborate and share productively.
- Supporting staff in migrating to a digital classroom.
- Providing funded pilots to schools, allowing staff to experiment and work with students with individual devices.
- Providing technical and pedagogical support for one to one classroom computing.
- Providing site based technological support for network and BTPS equipment.
- Working with learning services, to provide and maintain equipment to allow the inquiry pilots to have 1 to 1 computing in their classrooms.
- Providing wireless infrastructure to support digital classrooms.
- Supporting professional learning experiences that build staff understanding of Section #4 of the BTPS Teacher Effectiveness Framework(KS).
- Building and maintaining Multimedia classrooms which will include a computer, interactive whiteboard, wireless connectivity, distributed sound, video connectivity, DVD player and recorder.
- Maintaining network connectivity to allow central file storage and centralized printing.
- Providing secure encrypted password protected network accounts with enough storage to adequately keep all digital assets.
- Providing software that will allow exploration and deep learning of all aspects of K-12 curriculum.
- Providing opportunity and connectivity to allow beyond classroom connections and communications.
- Providing coaching to help staff teach and model Digital Citizenship.

### **Assurance Element (Desired State) #1**

Students apply knowledge, understanding and skills in a variety of real-life contexts and situations based on student learning outcomes and competencies as outlined in the Alberta Program of Studies.

Technology department will target the above by:

- Providing video conferencing equipment and training to college staff offering dual credit programs.
- Providing ongoing technical support for the dual credit program.

### **Assurance Element (Desired State) #9**

Learning environments are agile and flexible enough to meet the diverse needs of students by providing the appropriate technology, learning supports and structures that all students find success.

Technology department will target the above by:

- Building the capacity of all staff in the use of technologies to support learning for all students.
- Working with IL teachers to help them use the various assistive technologies that are supplied for students.
- Providing software to students to help scaffold their learning to stay matched with peers as much as possible.
- Coordinating with staff to help make sure technological solutions are made available and supported when suggested by other professionals - i.e., Learning Support teams.
- Working with the IL department in helping with recommended assistive technologies as recommended by support professionals and outside agencies.
- Providing staff with access to specialized help in understanding and using assistive technologies for all students.
- Maximizing the use of technology in the classroom by providing easy to use functional technology.
- Supporting staff with implementing initiatives in respect to using digital resources.

## LTPF - Policy direction 4: Leadership

***Educational leaders establish policy and governance structures ,cultivate innovation and build capacity within the system to leverage technology in support of student centred learning and system efficiencies.***

### **Guiding Principles and Beliefs for BTPS Technology:**

#### **Assurance Element (Desired State) #7**

Teachers and Leaders use a range of data arising from their practice to inform cycles of evidence-based continuous learning

Technology department will target the above by

- Providing a fast reliable network, so data can be collected and retrieved in a secure manner.
- Providing software for analysing individual data.
- Supporting staff in acquiring the KSA to use data informed instruction.
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## LTPF - Policy Direction 5

***Access, Infrastructure and digital learning environments. All students, teachers, administrators and other education professionals have access to appropriate devices, reliable infrastructure, high speed networks and digital learning environments.<sup>2</sup>***

### **BTPS Technology Guiding Principles for the next 4 years:**

- Internet is everything for connectivity, speeds and capacity will need to grow.
- Wireless networking and technology is the major way students access our network.
- Virtualized services evolve to replace physical devices.
- BTPS leveraging Cloud-based technology will become the standard, thus replacing site based physical equipment.
- BTPS technical staff will be challenged to provide a larger range of services with the same number of staff.
- Traditional funding of evergreen refresh will be challenged without access to more funds.
- Libraries will continue evolve into Learning Commons Spaces.
- BTPS will transition into a division in which students will routinely bring their own technology.
- Electronic filing will become a replacement for the paper-based filing system.
- All buildings will develop digital signage.
- Network Security will need to take a greater role in the business operations of BTPS
- Department integration has to occur between communications, voice, security, data, and building services.

## Technological Department

### *Staffing*

Director of Technology- Provide liaison between all staffs, departments and technology. Coordinate and plan all department responsibilities. Oversee budget.

IT Manager- in charge of all aspects of the network ,operate as the lead of technical staff.

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<sup>2</sup> "Learning and Technology Policy Framework - Alberta ..." 2013. 9 Jan. 2015  
<<http://www.education.alberta.ca/media/7792669/ltpf-quick-guide-web.pdf>>

Software Integration Analyst - backend programming software integration and scripts, Powerschool server, Busplanner server ,Helpdesk server, SQL server and Bellamy support.

Educational Technologist ( 2) - Coordinate and help teaching staff utilize and work with technology to realize the Alberta Education's, " Learning and Technology Policy Framework" and the BTPS learning plan.

School based technicians (3) - Coordinate and repair building-based hardware and software support, coordinate Video conferencing, Apple, CTS applications, Imaging. Help site based staff with integration of technologies into their everyday practice.

Helpdesk(.75) - operate the ticketing system, assign work tickets, give over the phone help on divisional programs, control inventory and reporting.

Administration assistant (.25) - purchasing agent, controller of mobility phone contracts, vendor support.

### *Service Orientation and Quality Assurance*

The Director of Technology and the department provides a "service orientation." This means that whenever possible, the department personnel will try to provide schools with cost effective, problem-free solutions that will meet their needs. Service will be provided in a friendly and respectful manner with consideration for interruptions that might be caused to the learning process in the school. Work tickets will be processed in a timely manner, and completed work will be reported back to the end user. Schools will have the opportunity to comment on the quality of the products and services provided by the Technology department through the helpdesk ticket.

### *Limitations to Consider:*

It is the responsibility of the Director of Technology to provide a reliable computer network for the entire system. In order to fulfill this commitment, the Director of Technology must establish operating norms which provide equitable services to all schools, ensure smooth operations, set high security standards and seamlessly integrate multiple platforms. Requests by schools for additional hardware and software must not undermine systemic operations and, therefore, it is imperative that the acquisition of new technology be done in consultation with the Director of Technology and the department.

## *Hardware Standards*

Each computer that is supplied for a staff member will be a Microsoft Windows based machine. The machine will have sufficient processing power to operate Windows 10 or newer operating system, 8GB min RAM, the drive will be SSD min 128GB to hold image and supplied software. The physical form size will be small enough to not take up much room on the teacher's desk (small form factor or smaller) and have at minimum 4 USB ports, 1 displayport, and or 1 HDMI port, VGA port, 3.5mm sound jacks and a DVD +/-RW drive. This computer will be replaced every 4 years using the evergreen budget cycle.

Staff monitors will be minimum of 22" diagonal LED. Staff requiring more screen real estate will have 2 monitors.

Classroom multimedia configuration will be set up having the projector as a second monitor.

Printers and copiers will be purchased with cloud enabled printing to accommodate cloud based services.

Student devices will be decided upon every 4 years and funded through the evergreen budget cycle. Student devices must maintain the minimum standards determined by Alberta Education for the writing of the SLA or diploma exams. Approved devices at time of writing are:

Chromebook with or without touch screen

Windows 10 laptop min 11" with or without touch screen

Macbook or Macbook Air running MacOS sierra or later

Ultrabook running windows 10

iPad Air for SLA only

## *Evergreen Cycle*

The budget of the department will set aside funds to allow the technology implementation refresh cycle. The funds in this evergreen are to be used to replace staff computers, keyboards, monitors and laptops. It will also be used to replace or install student equipment supplied by the school. This plan starts in year 2 of the four year cycle. The Director of Technology along with the Sr. Administration team will review the evergreen funding at the end of the 4 year cycle and publish a new model that will start with the 2020/21 school year.

### **2016/17 school year \***

*Delnorte Innsfree*

*Clandonald*

*Hughenden*

*Kitscoty High*

*Kitscoty Elementary*

*Dr. Folkins*

*Wainwright Elementary*

*\* Completed on previous technology plan*

**2017/18 school year**

Irma  
 E H walter  
 Edgerton  
 Vermilion Elementary  
 J R Robson  
 Dewberry  
 Amisk  
 Vermilion outreach  
 Students Online

**2018/19 school year**

Mannville School  
 Marwayne Jubilee  
 Provost Public School  
 Wainwright High School

**2019/20 school year**

Central Office  
 Secondary services  
 Board members  
 Network and infrastructure refresh including switches wireless access points,

**2020/21 school year**

TBD

*Multimedia*

Each classroom should have a multimedia suite consisting of the installation of a ceiling mounted or wall mounted long throw, short throw or ultra short throw LCD/LED projector, speakers and amplifier, interactive whiteboard or whiteboard, DVD player, and all necessary wiring and cabling to hook up the equipment into a regular classroom. Each classroom with have a windows-based PC with the configuration to operate all of the above.

Multimedia suites allow the teacher to display and project digital material through the LCD/LED projector. Any presentation, static, video or audio content will be displayed in the classroom with the appropriate level of sound to make the learning experience enriching for students. Each classroom will have a wireless access point mounted in the ceiling to allow wireless access for up to 30 devices simultaneously. Provision will be made to allow for the including of internet cameras to allow classrooms in different buildings to connect visually.



### *Installation of Multimedia suites*

Installation occurs in conjunction with the Facilities Department. If learning spaces do not have a multimedia installation, and the decision to install one is made by the school's Principal, it is funded from that school's budget. If Sr Admin identifies a new learning space to support enrollment growth, funding will be provided from outside that school's budget.

The BTPS Facilities Department is instrumental in the co-ordination and installation of multimedia suites within our schools. Together with the Director of Facilities, we will prepare the cost estimate, order the equipment and schedule the installation. Once installed, these systems must not be tampered with, or altered in any way. If an installation has to be moved, the Principal will work with the Technology and Facilities departments to ensure a successful move and the school will be billed for the cost of the rearrangement.

### *Interactive projectors, whiteboards or SMART boards*

BTPS has standardized their interactive whiteboard to the SMART Technologies SmartBoard up to 2015 installs. Since that time the solution has changed to interactive projectors with more rigid 24 gauge whiteboard. Listed below are the BTPS standards for classroom display:

- SMART Notebook v14 software.
- Epson BrightLinks projector 97H or new model to replace long throw installations with a 600 series SMART board.
- Epson Powerlite 680 XGA to replace SMART UF45 or UF55 projectors.
- Epson BrightLinks 695wi interactive projector with SMART licences for all new installs or installs without an existing SMART board or where it is desired to replace a SMART 500 series board.
- In the few physical locations that a long throw projector is the only way to mount a project and there isn't a SMART board, a BrightLinks 536wi long throw is used with an updated 24 gauge whiteboard.

Schools are to contact the Director of Technology or the Helpdesk for prices for these technologies. These products are all available under the Alberta Education Standing Offer, which offers reduced prices for school jurisdictions. Once installed, these systems must not be tampered with or altered in any way without the assistance of the IT and Maintenance departments.

### *Acquisition of New Technology Hardware*

All purchases are to be completed through the Director of Technology and the BTPS Purchasing Agent. Past planning has addressed system-wide purchasing of core hardware and software across the division.

Any technology equipment purchased outside the evergreen refresh cycle (not assistive technologies) must be vetted through these guidelines:

Step 1 How does the purchase support the school education plan, programming and/or staff professional growth plan? This also requires the approval of Assistant Superintendent of learning services

Step 2

1. Does the equipment specifications fit or exceed the standard as determined by the Technology Department?
2. How will acquired equipment affect the integrity of the LAN/WAN?
3. Does the acquisition of this equipment meet the technology plan and its outcomes?
4. What plans are there to support this equipment cost(s)?
5. What provisions have been made for the disposal of outdated equipment?
6. Does the school technology plan have a process for recycling or the disposal of equipment and the costs that are associated with it?
7. Does this purchase have the Technology Department's approval?
8. Has the purchase plan been presented to the Facilities Department for approval and assessment of requirements to be made to the room where these computers will be located?
9. Does this purchase have the approval of the Finance department?
10. Does the purchase have the approval of the Superintendent?

In addition to this, the Facilities Department will assess the proposed location of your acquisition or purchase, using the following assessment guidelines:

- 1) Is there sufficient wiring (plugs, breakers) to accommodate the computers or is wiring required?
- 2) Is the room sufficiently ventilated to accommodate the added heat from the equipment?
- 3) Does the school building have sufficient power to accommodate the extra load from your acquisition?
- 4) Are proper desks and chairs available to accommodate this acquisition or does furniture need to be built or purchased?
- 5) Is there a timeline in advance of when work is required or has to be completed (wiring, furniture building, etc)? (Summer work requisitions are to be submitted by end of May to ensure inclusion in summer work schedule).
- 6) Are there any safety issues involved?

### *Inventory of Technology equipment*

The Director of Technology will direct the technology team to maintain an inventory of all technology equipment in BTPS purchased through the department. The responsibility for recording the inventory will be shared between the department purchasing agent, and the

school based technicians. All equipment will be identified by a barcode tag and the following information will be kept on all equipment

- Asset number
- Name
- Asset type
- Asset status
- Asset description
- Asset location
- Owner (if assigned to a staff member in their primary classroom)
- Vendor
- Building location
- Model Number
- Serial Number
- Manufacturer
- Acquisition date
- Warranty Date
- PO number
- Service record

On demand each location will be able to receive a report on what equipment is in the building and where it is located. If the principal of the school moves a piece of equipment to a new location, he or she will be responsible to create a helpdesk ticket to inform the department of its new location. This ticket must include the asset number and asset type.

In the case of theft or missing equipment, the Principal can make a request of the helpdesk to provide the model and serial number of missing equipment.

Staff will use the asset number, when appropriate, when submitting a helpdesk ticket.

### *Disaster Recovery*

The Director of Technology will ensure a continuity of core operations, by commissioning and practicing a Technological Disaster Recovery Plan. This plan, called the *BTPS Disaster Recovery Document*, is located in the google drive of BTTech and includes the system configurations, switch and firewall configurations, minutes of the annual meeting(s) and the planning document dedicated to restoring normal services in case of catastrophic loss of service at Central services.

### *Data Security Backups*

The Director of Technology will designate one senior technician to be in control of the backups of BTPS data. A full backup of all data stored in the Central Services Network operations centre, and each school's DNS server, will be kept. Schedule of full and incremental backups will be

kept by the BTPS technology staff and tests of the integrity of backups will be done monthly and reported to the Director of Technology. The backup devices are in a locked network cabinet located by the South technology office. The main NOC is located in the Central services building and all school's DNS servers are located in central closets in each school, locked with their own limited distribution keys. Keys are held by all technology staff, Director of Facilities or his designate, and the Principal of each school.

### *Content filtering*

As required by the Policies of BTPS, all material through the BTPS network is content filtered. Content filtering rules are designed and produced to protect the security and stability of the network, as well as the type of content allowed to pass through the network as interpreted by BP303/4 and AP303/4. Firewalls and content filtering should not be thought of as absolute solutions to the protection of data and content. Digital citizenship and informed use is the only real way to protect our network.

### *End of support designation*

Equipment that is up to date under warranty and within the 5 year life cycle is supported and repaired. However once equipment 3 warranty ends, it is not cost effective to repair everything that may break on a piece of equipment. When a piece of equipment enters into this area, but still has useful life left in it, the department will designate it as "end of support". This means the equipment can be left in the school to be used, but the department will only give best effort to support it. This equipment has the lowest priority, and if something fails on it, it will be removed without replacement. Equipment with this designation should not be relied upon for major important programming or for digital exams.

### *End of life designation*

Once computers, printers or any network attached device reaches end of life designation the equipment will no longer be repaired or looked at by the technology department and it must be removed from the network. This equipment is probably too old to update or drivers are not available for a modern network. A second, but more crucial reason, is security. It is imperative that any device on our network maintain up to date patches. Once a manufacturer stops creating patches for a device, it has reached its end of life. These devices need to be removed from our network and taken to Edgerton for E disposal.

### *Disposal of Electronic Equipment (E-Waste)*

Dumping electronic equipment in the landfill is considered E-Waste. Electronics contain toxic metals such as lead and mercury, along with other dangerous compounds. These compounds do not decompose and thus, present a contamination risk for groundwater and soil. The E-Waste problem is worsened by the ever-decreasing lifespan of electronic

equipment.

The only way to effectively deal with the E-Waste problem is recycling the excess material, so as to ensure it does not end up in landfill sites. BTPS technology department will recycle all waste material produced by technology. The recycling facilities in Wainwright, Mannville and Vermillion will handle all of our electronic recycling on an “as needed” basis whenever recycling is required throughout the year. Post consumables, cardboard, etc., are flattened and hauled to the Wainwright recycling facilities. The process to coordinate electronic recycling is as follows:

Schools are to gather up monitors, CPUs, keyboards, printers, etc., and place them in a single location. A helpdesk ticket must be created, and the site-based technician will arrange to have the devices moved to Edgerton. Any equipment that can be reused will be redesignated, sold or donated. The Technology Department will go through the electronic equipment and ensure that any useable parts are harvested and retained at the school/division and that data is removed from hard drives. Equipment not sent to them, or to another school, will be taken to the Wainwright Electronic Recycle Depot. All inventory tags will be removed and the devices will be labeled for disposal in the helpdesk system.

Once every two years, when sufficient desktop computers are designated end of life and have moved into storage, the department will donate the equipment to a computer recycling firm who will provide a report on equipment taken, and will guarantee that hard drives have had all data removed and zero filled.

Radios, overhead projectors, sound machines, copiers, tape recorders and any other electronic items that is considered unusable and in need of discarding should be placed in one location. Facilities should then be informed to pick them up, and take them to the recycling facilities.

Should you have any questions regarding this recycling plan, feel free to contact the Director of Technology (780-806-2053).

## Appendix

### List of Common Acronyms

Digital Citizenship - Education for the appropriate and responsible use of technology.

Digital literacy- The ability to locate, organize, understand, evaluate, and create information using digital technology.

Digital Immigrant - An individual who grew up without digital technology and adopted it later.

Digital Native - A person for whom digital technologies already existed when they were born.

Digital presence - any method of placing data into the networks internet cloud etc.

ET- Educational Technology.

IL - Inclusive learning

IT - Informational Technologies

GAFE - Google Apps for Education: a cloud based platform of applications Google.

LTPF - Learning and Technology Policy Framework 2013 Alberta Education.

PD - Professional Development.

PLC - Professional Learning Communities.

Google hangout - A software application that allows users to make voice or video calls over the internet.

VC -Video Conferencing: a method of using IT to communicate in real time with voice,picture and text. BTPS uses the Polycom platform

Web 2.0 - Is commonly associated with web applications that facilitate interactive information sharing, interoperability, user centered design, and collaboration on the World Wide Web.

## Reference Documents

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