Setting directions for our future technological needs.

Technology Plan – Year 3
School District No. 46
June 2015

School District No.46 continues to develop a 'living' district-wide Technology Plan. Knowing when and how to use technology requires the same thoughtfulness, care and professional decision making that must be used for all other aspects of district operations and instructional practices.

The Technology Planning Committee continues to play a pivotal role in setting this direction to improve learning opportunities for all students in SD46.

INVESTING IN NEW TECHNOLOGY TO IMPROVE STUDENT LEARNING ONLY WORKS IF WE ALSO INVEST IN TRAINING AND SUPPORT OF OUR STAFF

INTRODUCTION

This is the 4th year (referred to as YEAR '3') of our District Technology Plan with the first year being the *Implementation, Planning and Development* stage (YEAR '0'). This document is a reflection of the initial YEAR '0' document and the review by the District Technology and Planning Committee of the 'living' document during 2014/2015 meetings. Changes have been made to the plan, as indicated throughout this document, based on the input from the committee. Our primary focus for 2015 / 2016 will be towards improving our training / support model for our staff.

REFLECTING ON OUR TECHNOLOGY PLAN…….
…….what we have done and what we need to continue to look at

This technology plan continues to address six areas: infrastructure, computer hardware, other technology hardware, security, software and training/support. The plan encompasses ideas and suggestions gathered from many groups within the school community: teaching staff, CUPE, administration and support groups including: office assistants from both elementary and secondary, teaching assistants and technicians.

Network Infrastructure

Every year the district reviews the infrastructure in terms of connectivity and bandwidth utilization. As our demands change so must our infrastructure. We continue to look at our 'network' infrastructure with the next commitment our switch to NGN (Next Generation Network). By switching to a complete fibre optic network managed within the district and managing our own firewalls at each site we will see significant improvement in speed and bandwidth.

The "network" infrastructure changes that have occurred in the past 4 years include:
- The wireless system; the Wi-Fi continues to be adjusted as needed to suit the demands and usage of students. These weak areas are in locations of programs where there have been changes in locations such as Halfmoon Bay, West Sechelt, Chatelech and Elphinstone and Davis Bay.
- BYOD is implemented with students and staff having access to the wireless network.
- Bandwidth upgrades at Elphinstone and Chatelech.
- Replacement of some switches to gigabit through put and wiring adjustments to improve efficiencies.

> ACTION:
> - School District 46 needs to continue to review its Wireless Network to look for areas of weak signal strength and make adjustments where necessary. We need to continue with our infrastructure upgrades to change all our switches to Gbit managed switches to aid in speed improvements.
> - School District 46 will continue to improve our infrastructure by switching to NGN with implementation in the Fall of 2015.

Computer Hardware:

Our computer carts at each school continues to be of concern. Currently we have more than 1700 computers / iPads in our system. This does not include printers, servers, network devices and other technology related equipment. A computer replacement plan was established and presented to the secretary treasurer. It continues to be a recommendation to replace three to five carts per year on a four-year cycle replacement plan (This is a cost of $40,000 per cart). Some of the changes this past year included:

- The planned replacement of carts for 2014/2015 was put on hold due to district funding concerns.
- School initiatives included adding an iPad carts (20 unit) at Chatelech and an iPad (15 unit) cart at Chatelech / Sechelt Education Centre (AbEd).

ACTION: (same as this past year)
  - The school district will embark on a 4-year replacement plan to replace 3 to 5 mobile carts per year. It is recognized that the technology may change over the next 4 years with the potential to replace laptops with other devices. This decision should be addressed through the Technology Planning Committee in future years.
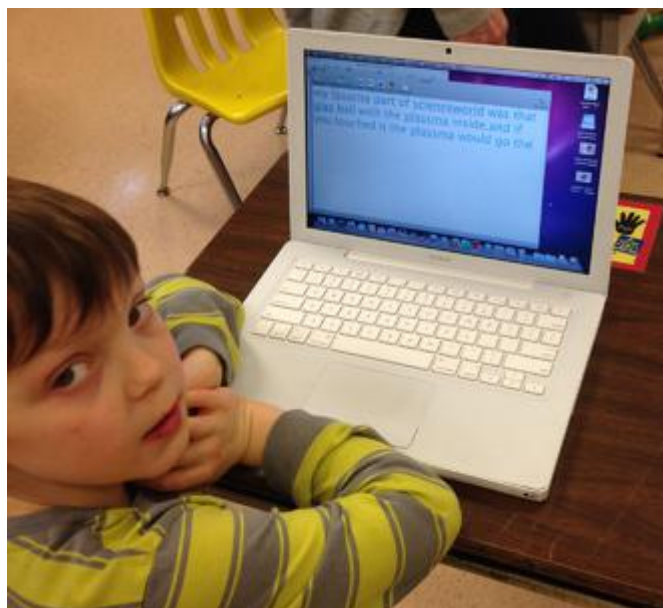
Other Technology Hardware:

Smart boards, document cameras and sound enhancement systems are in use to various levels at all of our schools.   It continues to be recognized that budgetary constraints at the school level are a factor for purchase and replacement.   We must also be conscious of the fact that the purchase of the hardware is only one aspect of successful use of technology. Software installation, updates, training and regular technician support are all additional costs often not considered at the outset. It is also recognized that there needs to be support for teachers who show initiative in terms of technological uses to enhance student engagement in the learning process. We continue to look at doing a trial on eBooks using our Destiny library system. This trial has been put on hold for the last 2 years but it is hoped we will get to it this coming year.

This past year there were additions purchased at the school level at all schools plus:

- The Gibsons rebuild allowed for the purchase of Phonak sound enhancement systems which link directly in with new student units supplied by the ministry. Training and support as part of the purchase.
- Juno sound enhancement systems were purchased by Cedar Grove, Halfmoon Bay and Kinnikinnick.
- Cedar Grove invested in projectors / document cameras for all classrooms.

ACTION:
- Schools will continue to purchase other technological solutions to aide in the enhancement of student engagement. Standardization on purchases will aid in the capability to provide training and support, and will continue to be encouraged.

- We will embark in an eBook loan system pilot using our Destiny library using multi-user licensing at the district level.

Security:

Security of our data continues to be frequently scrutinized within the Technology Education Plan. Budgetary considerations need to ensure that our servers, switches and security software are up to date at all times. In addition, consideration needs to be given to appropriateness of materials found on the internet by our students and staff. Inappropriate use can lead to breaches in the infrastructure including bandwidth loss as well as virus attacks on our systems. Regulation 1600 has been revised and this year we developed 'guiding principles' for electronic and social media communications. This year:

- Refinements to our Aerohive wireless system and Guest network
- iPad deployment was restructured with Jamff control improvements which will allow for quick deployment of apps in the future. Half the ipad carts have been converted with the remainder to be done this summer.
- As we switch to NGN we will be implementing our own firewalls in September/October/November, 2015. This will include centralized control so that changes can be made by SD46 staff.

ACTION:
- The district technology department continues to ensure our data is protected and will make recommendations when needed.

- The district will look at ways to promote internet safety to our students via posters, presentations and supervision.

- Schools will review yearly the 'guiding principles' for electronic and social media communications for students.

- NGN will create increased security through the implementation of our own firewalls.

Software:

The choice of software is quickly changing especially for new technologies like iPads. Selection of the software for student use changes as software becomes available. Much of the software is free and it reminds us that it is not the use of individual software that is important but instead the demonstration of intended Learning Outcomes. Decisions made this past year include:

- Changing to a district web based license for Kurzweil to be available for all students within the district.
- Opting to purchase an ERAC 'Digital Classroom' to give teachers and students access to videos and other resources to enhance their learning. This will be done via the Learn Now BC portal.

ACTION:
- Software for iPads is constantly changing and the most appropriate Apps will be selected as needed. We will continue to utilize volume purchasing to help reduce the costs.
- A recommended list of apps for both elementary and secondary were developed.
- An app vetting form will be deployed for September, 2015.
- We will work on better ways to promote / educate staff on the Learn Now BC portal for our subscription to ERAC's 'Digital Classroom'.
- The district will continue to use mostly proprietary software at this time, especially for our clerical staff. It is recognized that students may not have the software that the schools are using, but Open Source software options allow for translations and conversions of software, in most cases.

Training and Support:

The district recognizes that all our staff and students will benefit from ongoing professional development and in-service. Teachers have received new laptops. EAs are using iPads with students in the classroom. Administration and support staff will require training to make the most effective and successful use of the resources that will be available to them. Therefore, a critical component of our plan continues to be effective training, in service and developing a professional development structure on technology. We have surveyed the staff within the district and have found individuals would like a variety of different delivery models. Some of these include:

- Opportunities for staff to apply for half-day release days to 'see technology in action'.
- Workshop series to learn from teachers in technology.
- District training events planned for implementation of new technology /software (Kurzweil, Digital Classroom, sound enhancement systems).
- Collaboration with the SCTA to provide for more Technology training opportunities during Pro-D days.
- Show casing of various technologies available throughout the district as well as bringing in new technologies.
- Creating short how-to videos.
- Technology resource teacher giving direct support in the classroom.
- Posting and creating a central repository of resources on the Technology Web Page.

ACTION:
- The district continues to develop a training / professional development / support model to ensure that an investment in technology will support student learning. The district will work on showcasing the many resources that are presently available within the district to administrators, teachers and support staff.

If you have any questions regarding the Technology Education Plan please contact Phil Luporini, District Principal, at pluporini@sd46.bc.ca.

THIS PLAN IS DESIGNED TO BE REVIEWED YEARLY