

Arbutus Global Middle School

Technology Plan

Background:

The use of computer and Internet technology is a core part of today's learning experience and plays a role in engaging the broader world. Currently our school's use of computers is largely limited to a single lab with 30 stations. This creates challenges both in terms of capacity as well as the flexibility to integrate technology into the day-to-day teaching activities.

This "Technology Plan" summarizes the key challenges and proposes an exciting plan that will not only significantly advance our school's technology infrastructure but aims to leverage special district funding that has been made available for improving the school's network.

The plan is intended to support a dialogue with the parent community that commenced at the November 2nd PAC meeting and will continue over the coming two weeks, culminating in another extra-ordinary PAC meeting on November 22nd. Parent input is a key part of moving forward in this important area.

Current technological challenges at Arbutus:

- *We need increased computer access for all of our students.* Currently, one lab of 30 stations is not meeting the needs of 434 students.
- *Students need to be able to access computers in a variety of settings.* Learning occurs not only in classrooms but throughout the school in exploratory classes, the cafeteria, the band room, the library courtyard, the science lab, and other settings.
- *Students need computer access in a variety of configurations* (whole class, small groups working on projects, individual students). To learn in a 21st century way, we need to allow students the flexibility to work in a variety of settings and group configurations.
- *Students need to access innovative software programs in a collaborative environment.* The ideal environment for learning includes settings where all classmates work simultaneously to learn the skills necessary to use the latest

graphic design tools, typical office productivity systems such as word processing, spreadsheet and presentation tools; as well as creative programs, such as *Garage Band*. This shared learning experience can significantly enrich the learning process and promote collaboration among peers.

- *Access to the Internet is an indispensable research tool.* Internet research is an important part of the learning experience and a way to reach a wide array of developmentally-appropriate learning resources beyond the school. It allows direct and almost immediate access to information and/or allows students to determine steps or strategies required to obtain information. Broad access (appropriately filtered) would significantly change the focus from managing the physically-constrained resources currently available to support the learning process and instead shift the focus to supporting the learning process.

Curricular Plan:

To address these challenges, we have developed a curricular plan as follows:

1. Increase computer lab access for all students by upgrading the existing lab and creating a second lab space of 15 computers in Room 120. This would give us three areas for computer access: Computer Lab, Room 120, and a bank of computers in the library.
2. Purchase a portable lab of laptop computers to allow the class to research, write, and create individually and in small groups.
 - Word processing, spread sheets, power point
 - Graphic design
 - *Garage band* - if we choose to purchase Mac operating systems
3. Increase the 'multilayer security' WiFi access in the building from the two existing hubs (library and music room) so that the internet can be accessed from any room in the school. Note that this WiFi network would be managed and controlled in the same manner as the current network system, and provide **filtered** Internet access to authorized computers.

Arbutus Technology Proposal for 2010-2011:

School's Request for PAC Funds: The following funding proposal is currently before the Parent Advisory Council (PAC) to approve a contribution to the Technology Plan:

- Install Wireless access throughout school \$10,000 (est)
(This is based on a 50/50 cost share agreement w/ district)

School Contribution: Arbutus School intends to pay for the following with school funds:

- Upgrade existing computer lab in existing lab space \$1500
- Move current lab into Room 120 to make a 2nd 15 station lab \$0
- Purchase a portable lab of 30 PC laptop computers \$15,000
 - Word processing, spread sheets, power point (estimate would be more for Mac)
 - Graphic design
 - Garage band - (for Mac Operating Systems only)
 - Internet access

Things to consider:

1. How does this support student learning?
 - Who does this benefit?
 - All students - research (on-line resources, streaming, databases), writing (word processing, wikis, blogs), data analysis, graphic design and presentations
 - Students requiring additional learning support - novels, online textbooks and support, applications ("apps")
 - Music exploratory classes for all students
 - Art exploratory classes for all students
 - Would provide wireless access to all students, even those using their own laptops, iPads, etc., so that their online access is governed by the applicable firewalls and filters;
 - Timing
 - Wireless changes and computer acquisitions will be completed in 2010-2011
 - Why laptops rather than iPads or other, potentially more cost effective, tools?
 - Provide access to more sophisticated word process tools, such as those available through Microsoft Office on full computer platforms;

- There is currently a need to be able to print as well as to integrate with other laptop-based software; although the iPad platform is moving in this direction, it may be more appropriate to consider these in the next round of upgrades / purchases.

2. Wireless Safety issues

- a. The district has conducted substantial research into this area and assembled a document (see attachment "Addressing Safety Concerns with Wireless Networks") which summarizes findings from Health Canada and the World Health Organization.
- b. There are alternate viewpoints in recent news, which parents should consider. Here are recent news links:
 - i. <http://www.timescolonist.com/technology/Wireless+Internet+making+schoolchildren+sick+father+tells/3742801/story.html>
 - ii. <http://www.cbc.ca/news/pointofview/2010/10/wi-fi-do-you-think-it-poses-health-risks-1.html>

Long-term Plan:

1. Increase internet projection carts from one per two classrooms to one in every classroom in order to provide internet projection access in every classroom.
(Approximately \$8,000 for the entire school)
2. More iPads/iPods, etc., to increase student access to apps such as book reading, etc.
3. Additional software purchases

Parents who have questions or would like be part of the conversation about this plan are encouraged to attend the special PAC meeting organized for November 22nd. It is hoped that we can establish a consensus at that time to allow this plan to be put into action.

If you have any questions about the plan or would like to share your initial thoughts please contact Janine Roy, Principal (arbutus@sd61.bc.ca) or Wendy Joyce, PAC president (arbutus.pac@vcpac.ca).