Hillfield Strathallan College
Learn with Joy. Live with Purpose.

STUDENT-CENTRED LEARNING AND EDUCATIONAL TECHNOLOGY

BYOD @ HSC

September, 2015

1. **Introduction**

WHY BYOD@ HSC?

In support of our mission – Learn with Joy and Live with Purpose, Student-Centred Learning (SCL) is our academic priority. We have identified four key areas for SCL that will enable students to develop necessary skills for effective communications, collaboration, and creation in their work.

Choice   Applications   Problem-Solving   Metacognition

To have the greatest impact on ensuring our students reach their potential and to support this priority, we have determined that regular, reliable, and easy access to technology is necessary. While the technology does not drive the learning or replace face-to-face interactions, it supports our vision for transforming teaching and learning. It is also very important to leverage the home and school connection for using technology effectively.

Senior School: compulsory BYOD
Students are expected to bring their devices to school every day, and use their resources extensively. That said, there are times and situations where it is not necessary or most effective to use the technology. Teachers provide guidance during their classes and students make choices to determine the need and appropriateness in using the tools.

Middle School students: compulsory Grades 5 to 8
The same general expectations for the Senior School also apply for the Middle School, as noted above.

Junior School: compulsory grade 4 Learning Services – specific software requirements

What is the value of BYOD and what does it support for learning?
- Individual student choice for resources
- Personal organization
- Communication efficiencies
- Access to different levels of expertise
- Addressing learning preferences and customization of resources
- Broadening the audience and sources for learning
- Interactivity
- Real world connections for students
- Gaining global perspective
- Just-in–time access to resources
- Cloud access
- Home and school learning connections

General Practical Benefits of BYOD – as defined by students
- students are more efficient and organized – executive functioning
- students value on-line postings provided by teachers for each course
- students have quick and easy access to personal files – all in one place

- students are more comfortable with and responsible for personal equipment

2. HOW IT WORKS

This handbook is intended to assist students and parents in knowing and understanding how BYOD is integrated into the program and addresses practical considerations. The handbook is available for all users on the HSC website www.hsc.on.ca/byodhandbook students may also access the document in First Class. HSC will update the document regularly and provide on-going support for BYOD program.

SECTION 1: SELECTING AND PURCHASING DEVICES

1. WHAT DEVICE(S) DOES HSC RECOMMEND?

HSC supports individual choice and does not recommend specific devices or brands.
That said, we offer the guidelines in this handbook to help you determine the appropriate tool for effective student use in daily school life. Based on three years of research, we have found that a laptop device is most suitable to meet the diverse needs of the students at all grade levels. Tablet devices, such as an ipad, support many of the academic requirements and complement the use of a laptop, but at this point, they do not seem to have the full spectrum of features that enable them to be the single device of choice for BYOD at any grade level. This may vary depending on the course of study Senior School students have selected and the extent of use for Middle School access. We continue to research the use of tablet devices as the single tool of choice and will provide updates, as appropriate.

2. PLATFORM

HSC supports both Mac and PC platforms.
Please note these potential limitations:
- While some software supports both platforms, some applications are platform specific e.g. MS Word is available in both Mac and PC versions; MS publisher is PC specific; Garageband is Mac specific
- Not all tablets support flash file access; this limitation may have an impact for research needs and expectations or there may be an effective work-around
- Mac users will need special adapters for connecting to SMARTboards

3. USER NEEDS

For selecting a device, it is essential to take into account the academic needs of the user, the level of technology literacy and comfort of the user.

ALL STUDENTS:	MATHS AND SCIENCE	ENGLISH, GLOBAL

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	USERS	LANGUAGES,
- need personal productivity resources and anti-virus software e.g. word processing, spreadsheets, presentations, organizers, calendar, etc. - must have a portable universal charging system for either Mac or PC	-HSC provides licensing and web access for specific software such as mathletics, fathom and geometer's sketchpad	**HUMANITIES AND SOCIAL SCIENCES, ARTS STUDENTS**: - need word processing, research and publishing software
COMMUNICATION AND DESIGN TECHNOLOGY STUDENTS: - may choose to have, but are not required to have, their own licences for specialized software; HSC will provide specialized software in computer labs for technology courses - in HSC labs., HSC will not duplicate licensing for software that is not platform specific	**LEARNING SERVICES STUDENTS:** - some students have professional recommendations for using Dragon or Kurzweil software - these students will be required to purchase and install personal licences for their devices	**MAC USERS:** - need VGA adapters for connecting with presentation devices at school

- Typical school uses include document processing, multi-media creation, personal productivity and internet access.
- HSC will increase expectations and opportunities for students to submit assignments electronically and will decrease the use of hard copy and paper versions/submissions, as appropriate
- Large storage and memory capacities required for computer gaming <u>are not required</u> for daily school work.
- Research indicates that over 30% of students typically use more than one device to serve their needs at school; most students use a smartphone for personal organization and productivity and a laptop for academic work.

4. PURCHASING DEVICES – GUIDELINES AND ADVICE

When you speak with vendors, we advise that you identify the features below as essential elements in determining which device to purchase. Getting past the "cool' and glitz factors to real functionality is important.

Useful features and skills for school work applications:
- where to save things and general file management
- how to use movie making software
- how to use software that is loaded on their computer
- be able to create folders for each subject

After you have met with a vendor, if you have additional technical questions about device options, please contact our IT Manager, Brad d'Hondt, via e-mail dhondtbr@hsc.on.ca

FEATURES TO ADDRESS WHEN PURCHASING DEVICES

BATTERY LIFE - minimum 5 hours needed for full school-day operation - HSC will provide charging capability in classrooms and open student spaces - students must bring their own charging device or they may want to consider purchasing an extra battery	**WEIGHT AND PORTABILITY** - needs to be appropriate for the age and stage of the user as students carry the device(s) in their backpack as well as other textbook resources and binders. - extra batteries may increase the weight of the device
STORAGE AND MEMORY CAPACITY - this depends on the courses the student is taking and the types of files they keep over the year e.g. communications technology files are large and extensive storage will be needed - an external drive may be an option for these files	**SCREEN SIZE** - it is essential to consider the impact of eye fatigue and strain if using small-screen devices for extended periods - minimum 7" ; **10 -15" preferred**; 17" is too big and heavy for mobility and can greatly reduce the battery runtime of the unit
PROCESSOR SPEED - affects the general performance of the device	**AVAILABILITY OF EXTERNAL PORTS** - support for USB devices is useful for file management
DEVICE LIFE SPAN AND REPLACEMENT CYCLE - should last for at least three years	**PRODUCTIVITY SUITE** - Must have a word processor, spreadsheet developer and publication software - E.g. Microsoft Suite or iWorks

ACTUAL COSTS OF THE DEVICE
Be clear about what is included in the basic unit costs

EXTRA COSTS MAY INCLUDE:
- licenses for basic productivity software e.g. MS Office Suite
- fees for system set-up, activation and software installation
- licenses for special software e.g. anti –virus, Dragon or Kurzweil
- extended warranty
- home insurance
- accessories and peripherals e.g. remote mouse, stylus, keyboard, headphones, VGA adapter
- charging devices, carrying case or sleeve, USB key or external hard drive
- extra battery

Students need to have access to a printer at home since there is limited provision for printing at HSC from BYOD. We are also trying to reduce paper consumption within our "green" practices.

DEVICE	DAILY SCHOOL USES	GENERAL CONSIDERATIONS
Laptop	• taking notes	• weight and battery life are

		important for mobile use all day
	• internet research • creating multi-media presentations	
Smartphone	• personal organizer – calendar, homework, etc. • quick on-line searching in class • surveys for understanding	• easy to carry • good for time management • personal data plans may apply • students should download the app for FirstClass e-mail
Tablet – touch screen e.g. ipad, Samsung, Android, MS Surface	• internet searching • visual presentations • creating documents • multi-app interactivity • similar to laptop	• need to use a Flash work-around for the ipad • ipad complements but does not replace a laptop • stylus device is very helpful for touch screen interface
Convertible tablet	• completing daily work in maths and science	• use of stylus is helpful for writing maths formulae, equations, diagrams • adding document corrections, etc. on the device can replace paper documents

5. VENDOR OPTIONS

There are multiple retailers in our area for purchasing laptop, netbook and tablet devices. While HSC is not directly affiliated with a specific vendor, families may want to consider sources who participate in the HSC partnership program http://www.hsc.on.ca/partnerships/partnerships.html

Please note that quality refurbished laptops can be suitable as well to meet the daily needs of the students.

6. SOFTWARE AND RETAIL SOURCES

- Productivity software is usually sold or made available with the purchase of the hardware e.g. MS office or home suite, Mac iWorks
- OneNote and Evernote software have been recommended by students as very helpful organizational tools for notes, calendar and assignments and they work for both Mac and PC– students can download free versions or licensed versions at a cost
- Dragon Naturally software is available through several sources such as Staples, Walmart, Best Buy, among others. (approximate costs are $100.00)
- Kurzweil software is specialized and HSC IT services can provide a source for this resource (approximate costs are $1400.00 per license)
- HSC will provide sources for any software that is specifically required to support the BYOD program and student needs within Learning Services

- HSC will retail some accessories for the BYOD program such as portable charging systems, VGA adapters, and HSC- branded carrying cases or sleeves. Other items may be added, as appropriate, during the year.
- HSC Campus store will provide information to students about specific course software required, within the annual textbook purchase program
- If students are required to purchase specific course related software on-, HSC will provide the website information to support this. The HSC campus store will not retail software.

6a. **Software – required downloads**
- Students are expected to download the following resources to ensure ease of use for their daily academic program. Instructions for this process are posted in First Class in the Tech Tips folder. If students experience problems with the downloads, they should connect with their teachers or IT services staff for assistance.
  - First Class – used for email and class/grade/course folders
  - SMARTnotes – used to capture academic materials posted by teachers and other students
  - SMARTdisplay – used to enable BYOD connectivity with the SMARTboards

SECTION 2: ACTIVATION OF ACCESS - STUDENTS

1. Registration for BYOD accounts is not required. Users must login through password protected **HSC-Connect.**

2. HSC is able to track the data it requires for users through the user connection to the HSC network.

3. The Acceptable User Agreement (AUA) includes provisions and expectations that apply to both HSC owned devices and personal devices.

4. Access is automatic once the user logs on to the network
- Connect your wireless device daily to the wireless network - **HSC-Connect**
- Open up a web-browser (Internet Explorer, Mozilla Firefox, Safari, Google Chrome, etc.) and navigate to any page
- A login dialog box will come up onto the screen
- Log into the login dialog box using your **Windows Account** ID and password
- You can now access the HSC network for the rest of the day

  NOTES:
- You will have to repeat the login procedure each day before you will be allowed to use the network.
- You must log in using a web browser before using other programs such as FirstClass

SECTION 3: HSC EXPECTATIONS FOR STUDENTS USING THE DEVICES

STUDENTS - GETTING YOUR DEVICES READY FOR SCHOOL

1. CHARGING AND ANTI-VIRUS
- You are expected to charge your devices each night so that the devices are fully operational for the start of each school day
- You will have limited access to charging stations and power sources at school
- Bring your own power cords and adapters for all of your devices
- You are expected to have virus- protection software that automatically downloads the latest anti-virus updates on your device(s)

2. LABELLING
- Label your devices and power cords with your first and last name
- Personalize your devices in ways that are consistent with the HSC Code of Conduct for students - this includes screensavers, backgrounds, skins, etc.
- Protect your devices by using storage cases, backpacks or sleeves. Apply something unique like a luggage tag to easily identify your backpack to prevent another student from taking it by mistake.

3. USING YOUR DEVICES AT SCHOOL

a. Protecting/Storage
- Keep your devices with you or locked in your locker at all times
- Keep your passwords private
- Take your devices home every day (for use at home and for charging)
- Carry your devices properly to reduce the potential for damage (e.g. close the lid as you move from class to class or walk in the hallways).

b. General Use at School
- You are required to bring your device each day in good operating order
- Troubleshooting, maintenance and repairs of personal devices are your responsibility; you need to ensure that your devices are in working order to allow you to complete school work as required
- You are responsible for saving your files and backing these up
- You are expected to abide by the AUA as it applies to the use of personal devices through HSC wireless access
- You will need to sign into HSC- Connect daily to access the wireless network

c. Personal Wellness - Ergonomics
- To reduce eye strain from frequent use of your devices, it is highly recommended that you blink frequently or look away from the screen regularly
- Regularly stretch your neck slowly from side to side to address neck strain

- Give your upper back a break and pay attention to your posture by rolling your shoulders frequently or stretching your arms behind your back
- Manage the amount of screen-time you spend with time for physical activity and being out-of-doors – take a break from screen time at recess

SECTION 4: FREQUENTLY ASKED QUESTIONS

1. MY DEVICE IS NOT WORKING. WHAT SHOULD I DO?
- Check that the device is properly charged and turned on
- If it is a software issue, ask a friend for help or go to the "help" feature of the website for this software
- If it is a hardware issue, you will need to find a computer help-desk service off campus or where you bought the device
- HSC IT staff cannot repair personal devices since this will make your warranty invalid
- HSC will post a "tips list" in First Class to assist with general troubleshooting
- If your device is temporarily non-functional, you may register in the Learning Commons to borrow an HSC loaner laptop for a day or portion of a day while your device is being repaired

2. CAN I PRINT AT SCHOOL?
- Generally, you cannot print from your personal device at school
- You are expected to print hard copies of your work at home
- Please do not ask the Learning Commons staff to print your work; address printing needs with your subject teacher.
- There is limited provision in Middle School for printing from your personal device; this is monitored by faculty
- HSC is working to reduce the need for and quantity of hard copies of documents as part of our greening initiative

3. DO I HAVE TO PRINT MY ASSIGNMENTS TO HAND THEM IN?
- Generally you may submit assignments to your teachers in electronic format
- Teachers will inform you specifically if a printed copy is required
- HSC is reviewing current policies for work submission in relation to the BYOD program

4. HSC CLOUD – HOW DO I ACCESS AND SAVE FILES?
The HSC Cloud provides you access to your personal files stored on HSC's servers and supports home and school access of files. HSC's Cloud is accessible at: http://cloud.hsc.on.ca
You will need to use your Windows Username/Password to gain access to your K drive.

Downloading Files (HSC Cloud -> Local Computer) Options:
1. **To open** a temporary copy of a file stored on HSC's Cloud that will be erased along with any changes you make to the file, click on the filename and choose "Open" (Indicated as "1" on the diagram below). This option is good if you just wish to view or print an existing file, but not make changes to it.

2. **To save** a copy of a file from HSC's Cloud onto your local workstation so that you can edit it and save changes to this local file, click on the filename and choose "Save" (indicated as "2" on the diagram below) and choose a location on your local computer to save the file.
Note that if you wish any changes that you make to be updated and saved on the copy on HSC's Cloud, you will have to "Upload" the file back onto HSC's Cloud, which is explained below.
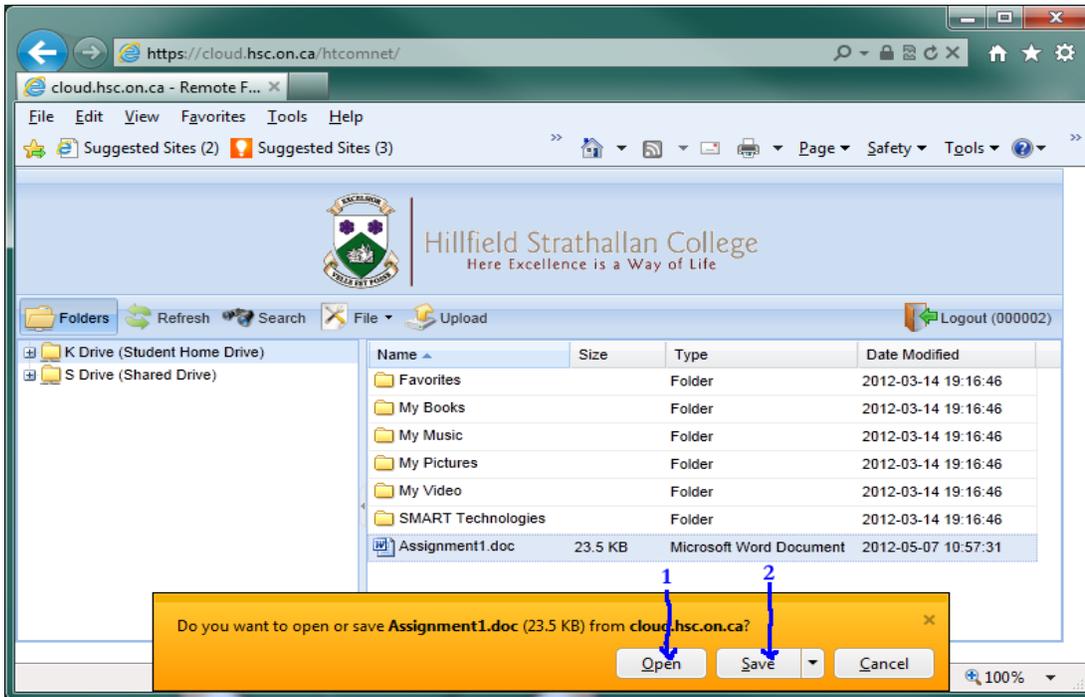
Uploading Files (Local Computer -> HSC Cloud):
1. To send a file to HSC's Cloud, log into the system and then click the "Upload" button.
2. A dialog box will come up, press "Browse" to find the file on your computer that you wish to send to HSC's Cloud.
3. Press the "Upload" button to send the file from your local computer onto HSC's Cloud.
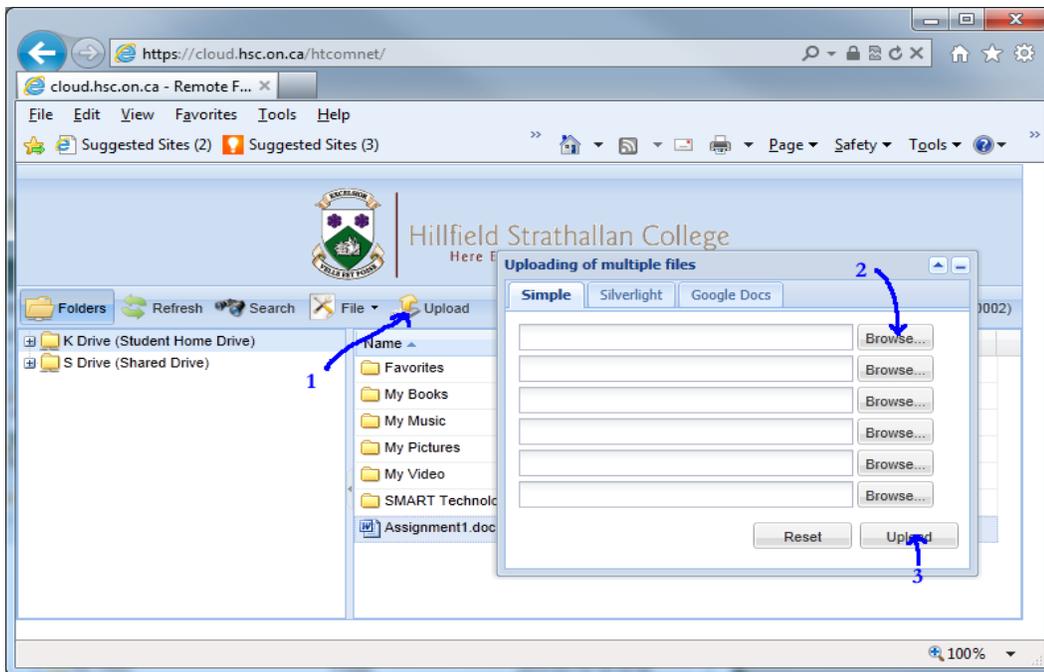
5. WHAT HAPPENS IF MY DEVICE IS LOST OR DAMAGED?

- You are personally responsible for all of your devices – label them for easy identification.
- While HSC is not responsible for personal devices, the school will post notices on your behalf, as appropriate, to assist in relocating missing devices.
- Your parents should include your devices on your home insurance for loss, theft or damage. Check your warranty.
- When you realize the device is missing, you should retrace your steps to check where it may be located and ask classmates and friends if they have seen the device.
- If you do not find the device, contact the School administrative assistant to report a loss for posting on First Class.
- Check with the maintenance staff or Learning Commons staff, to see if lost devices have been turned in.
- If you see a "stray" device left somewhere, be sure to hand it in to the School administrative assistant.

6. WHERE DO I STORE MY DEVICE WHEN I AM IN A CO-CURRICULAR ACTIVITY?

- Your locked locker or your back packs are the best places to keep your devices during activities on campus. When off campus, keep your back pack within view.
- **Remember- YOU are responsible for your devices at all times**.

7. AM I EXPECTED TO HAVE HEADPHONES?

- Yes – these are important for individual work requiring audio communication so that you do not disturb the work of other students.
- Headsets with microphone can also be useful when using certain software such as Dragon, Kurzweil or for language classes.

8. WILL I BE ABLE TO CHARGE MY LAPTOP/TABLET AT SCHOOL?
- You are expected to have your devices already charged when you arrive for the school day.
- You may want to consider the purchase of a portable universal charging system or an additional battery for your device(s)
- If you need to charge your devices during the day, you will have access to outlets in classrooms or other workspaces – you must bring your own charger(s) and power cords.

9. HOW DO I CONNECT MY PERSONAL DEVICE TO HSC PROJECTORS FOR PRESENTATIONS?
- You will need to download software which allows you to connect your own device to the display unit – go to the Tech Tips folder in First Class for instructions.
- If you are using Mac devices, you will need an Apple VGA adapter.
- The HSC campus store will retail adapters for your convenience.

10. WHAT IS THE AUA AND HOW DOES IT AFFECT MY PERSONAL DEVICES?
- AUA = Acceptable User Agreement
- The AUA is a signed annual contract between the user and the school that applies to the use of HSC technology equipment/resources and all personal devices.
- The AUA is aligned with the expectations, parameters and provisions of the HSC Code of Conduct to ensure respectful, safe and responsible use of resources, including personal cell phones.
- Annual authorization of the AUA by parents and students is required. There are separate processes for completing these approvals.
- The AUA is posted in FirstClass for easy student reference;
- Within the AUA you agree to use your devices for educational purposes while involved in school related activities; the terms of the AUA apply to student use while on the HSC buses.

11. CAN ADMINISTRATORS LOOK AT MY DEVICE?
- HSC has the right to withdraw or limit your BYOD privileges if you have not abided by the terms of the AUA.
- HSC can monitor accesses of personal devices and will take disciplinary action if there is reason to believe that a violation of the HSC Code of Conduct has occurred. If there is a serious infraction, HSC may have access to personal device(s) for investigation purposes. This access will be authorized by the parent or guardian, as appropriate.
- While BYOD is compulsory for students in grades 5 to 12, access to BYOD may be withdrawn for defined periods of time as a result of certain infractions to the HSC Code of Conduct. Alternate work flow processes and strategies will apply so that the student may continue to participate in the academic program. Infractions may have serious implications for the student's effective participation in the academic program.
- HSC's Firewall provisions for website blocking/filtering on HSC owned devices apply to access and use of personal devices as well.

SECTION 5: GENERAL CARE OF YOUR DEVICE(S)

1. TRANSPORTING YOUR DEVICE
- For laptops, close the lid before moving the device
- Avoid dropping and bumping the device, as this can affect the hard drive
- Shut down the laptop/tablet before packing up for the day
- Do not store other heavy items on your laptop/tablet
- In a vehicle, store the devices in a locked trunk, out of sight
- Be aware that extreme temperatures (heat or cold) may damage electronic devices

2. CARE OF THE SCREEN
- Use appropriate touch strength when using a touch screen
- Treat the laptop/tablet screen with care to avoid scratches and breakage
- Use appropriate stylus devices for units offering this tool; do not use sharp pencils or pens on the screen
- Clean the screen with a lint-free cloth regularly
- Apply appropriate settings to ensure extended screen life and power savings

3. POWER CORD
- Remove the power cords from the device and the outlets with care. Yanking out the power cord may cause unnecessary damage.
- Store cords carefully to avoid twisting.

4. MANAGING BATTERY LIFE
- Ensure that you have your device set for "sleep or hibernate" settings when you are not using it for an extended amount of time such as lunch or breaks or shut it down completely.
- Choose to blank your screen rather than using a "screen saver" as screen savers consume significant power.

5. FOOD AND DRINK DAMAGE
- Keep food and drink away from the device; spills can cause serious damage to any device.
- Warranty coverage varies for this type of damage – check your warranty carefully so you know what is covered.

6. ROUTINE MAINTENANCE
- You are expected to have legally licensed anti-virus software with automatic updates installed on your devices.
- Set your device to download new operating system updates automatically.
- Be aware of the capacity of your device for downloads – excessive downloads can slow your device and be a problem for file access and management.
- Defrag your computer on a regular basis to support efficient use of your device.
- Run disk cleanup – get rid of unnecessary files by performing a disk clean up monthly.

7. MANAGING FILES

- While files can be saved to your device hard drive, it is essential to ALWAYS back up all files – crashes do happen and managing files is your personal responsibility.
- Clean up your hard drive monthly to ensure smoother operation.
- Decide which files need to be saved and where; delete software and temporary files, as appropriate.
- Students have recommended ONE NOTE and EVERNOTE software tools to enhance personal organization. ONENOTE is part of the MS suite for some editions and EVERNOTE has free or fee-based downloads.

8. SOFTWARE

- You are expected to use legally-licensed software.
- You are required to have anti-virus software with automatic updates installed on your device(s) as appropriate.
- Keep your software programs updated – updates address security issues which will keep your device protected.
- Beware of Spyware that may collect personal data and cause computer crashes; do not install software from unknown sources.

9. LIABILITY

- Device repairs are the responsibility of the student and parent. HSC staff are not authorized to repair student-owned devices.
- IT Services staff and teachers may provide trouble shooting suggestions or solutions for the student to try on campus but they may not complete the solution on the student device. Students must accept the risk of these suggestions or solutions. HSC will not be held accountable for any issues with the device resulting from the activation of the suggestions or solutions.

SECTION 6: TECH SPECS

WIRELESS NETWORK FAQ

1. What is the name of the HSC BYOD wireless network?

The network is called "HSC-Connect". HSC has made every effort to provide the infrastructure to enable indoor wireless access anywhere on campus as well as outdoor access in the main HSC courtyard. While your device should be able to find this network at most locations on campus, coverage of the entire campus is not guaranteed.

2. What type of wireless network is it?

Standard 802.11a/g/n network operating on the 2.4 GHz and 5.0 GHz bands. Most devices including laptops, tablets, etc. that have been manufactured in the last several years support this type of network.

3. What type of encryption is used on this network?

The wireless network is an open access network and does not utilize encryption. This is similar to other open access networks found in coffee shops, hotels, etc. As such, please be aware that all

communications will be unencrypted unless you are visiting a secured website utilizing SSL (Secure Socket Layer).

4. How do I authenticate to this network?

You will be able to authenticate by opening your browser and then using your Windows username and password.

5. How often will I have to authenticate to this network?

Daily – using your Windows username and password. This authentication is required before using resources such as FirstClass.

6. What will be accessible from this network?

You will have access to the Internet as well as some HSC servers including FirstClass after you have connected and authenticated. Your HSC AUA also applies to this connection; the same items that are currently blocked on the regular HSC network will be blocked on this network as well. HSC will continue to assess its policies on blocked sites in support of student learning needs and will provide information about any changes, as appropriate.

7. How do I access my network drive (K Drive) or the shared drive (S Drive) from this network?

Direct network drive access is not possible from HSC-Connect. Please use http://cloud.hsc.on.ca to access these files when connected to this network.

8. How do I print from this network?

Printing is currently not available from the HSC-Connect network.