

21 Steps to 21st Century Learning[®]

Laptop Policy Handbook



21 Steps to 21st Century Learning Institute

Anytime Anywhere Learning Foundation

www.AALF.org

Laptop Program Policy Handbook

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This booklet contains a sample of important issues and ideas that should be discussed with parents, students, technical and teaching staff, together with a sample of possible questions that can be addressed to assist in the development of effective policies that will ensure clear expectations around the use of notebooks within and to a lesser extent outside the school.

These questions should be considered as part of the Strategic Planning phase to permit the development of an effective Implementation Framework.

Outline

School Vision

How does your ICT Strategic Planning Vision statement align with the expansion to a 1-to-1 program? How is that aligned with your pedagogical framework? What will be the impact of an immersive technology learning environment on your vision?

Example:

Central to the core values of SCHOOL is the challenge we set to be innovative and inspiring in our search for excellence in curriculum, teaching, learning, performance and relationships that produces engaged, robust citizens and lifelong learners capable of shaping our future.

The SCHOOL 1-to-1 program affords the opportunity for our students to enter a new world of curriculum possibilities, allowing authentic engagement and involvement in their learning. Learning experiences across the school are purposefully designed to develop the attributes of a life-long learner. In this way, each student learns to develop and demonstrate the knowledge, skills, practices and attitudes necessary to be an engaged, robust 21st century citizen capable of shaping our future.

Rationale

- Prepare a detailed outline of the research/process you considered in recommending a 1-to-1 program.
- Why do you believe 1-to-1 will greatly improve student-learning opportunities in your school?
- Ensure this section aligns tightly with your school vision.

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Preferred Ownership Model

Will you be up-front about offering an option for parents who believe public education should be 100% free? Many schools openly address this by providing a stay-at-school option for parents who do not wish to contribute. Develop a policy that ensures equity of access, freedom of choice and maximum opportunities for learning.

- Q: How will any payment be articulated to parents...a technology usage fee, laptop rental, home access fee?
- Q: How will your policy address both parents who can afford to contribute, but choose not, and those who cannot afford to contribute the full amount requested?
- Q: How will payments be collected? By term, by semester, monthly or annually?
- Q: What will happen to the laptops at the end of their life?
- Q: Will parents be able to purchase the laptops after 2, 2.5, 3 or 4 years?
- Q: Will the purchase be direct or by closed auction?
- Q: What will be the procedure for students who leave the school, or commence after the program is launched?

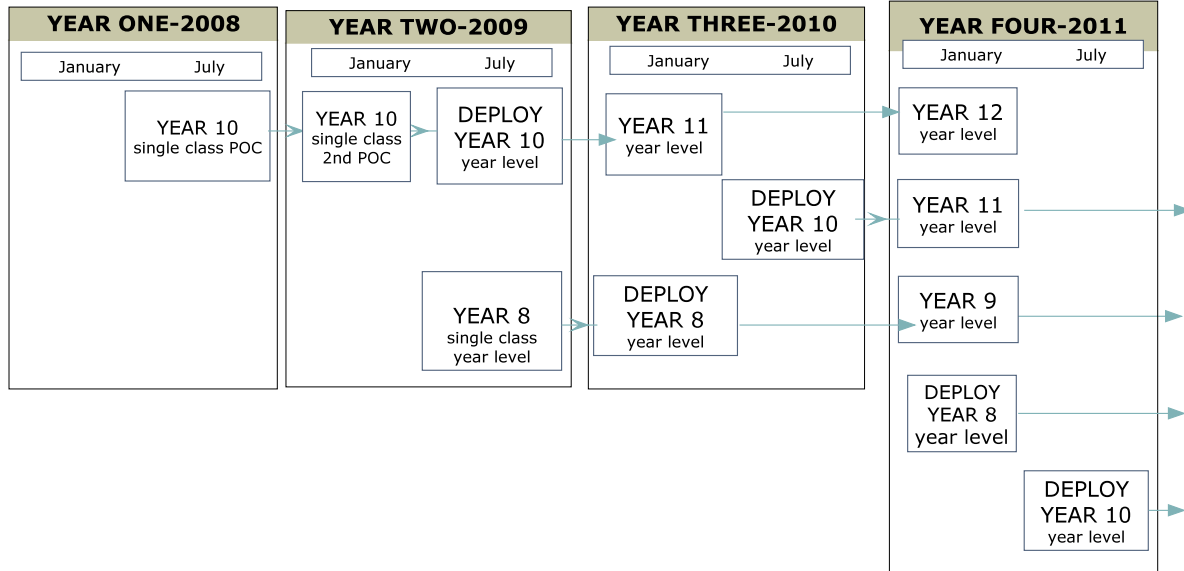
Ownership Cycles

In establishing cost of ownership, and model of ownership, it is first necessary to establish the refresh cycles around the laptop lifecycles. Depending on whether that is to be for 2, 2.5, 3 or 4 years, a variety of options are available.

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A 2.5 year cycle might look something like this....

Scoping a Model for 1 to 1 Implementation



Q: What are the implications for parents and the school using this model as compared to a 3 or 4 year ownership cycle? Policy guidelines should clearly articulate the benefits and rationale behind any ownership model.

For example: If the laptop is to be owned by the school, and parents make a contribution to its cost in exchange for 24/7 access, the following is important to note...

1. A school owned machine has access to lower software licensing costs, as retail or even student retail licensing is higher than school-based costs.
2. A school owned machine gives a perception, real or otherwise, depending on school culture, that the school can have more control over what is actually on the students laptop, what it is used for, and other areas for which policy guidelines may be developed. Most schools that do allow parent owned machines do, however, enforce usage policies across these areas in any case.
3. Management of the ownership cycle, servicing and insurance can be easier with school owned laptops.

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Cost of Participation: Total Cost of Ownership

What will be the total family contribution per term/year? Many schools promote cost of ownership on a per-day basis.

In calculating this cost, be sure to consider:

- contributions from all parties (federal, state governments, industry partners, school, school governing council)
- additional technical support costs
- insurance
- upgrade costs etc.
- school bags / hard cases
- replacement batteries (batteries typically last 600 re-charges, so will need to be replaced after two years).
- increased bandwidth, power and infrastructure costs

Private Devices

What is your official position on privately owned devices?

Notebook model flexibility. While often not considered early enough by many schools, it is useful for school staff to develop a policy around the models of notebooks that the school will allow student's to bring to school, and their support. Once in place, such a policy takes away many a source of controversy and unnecessary complexity, and should be very publicly shared with the parent community very early in the development of any 1 to 1 initiative.

Q: How many different models of notebook will be proposed for student use each year? It is assumed only one manufacturer will be selected, however as an example, some schools suggest different models for younger grades as opposed to senior grades.

Q: Will the school allow for different form factors?.. eg notebooks and tablets?

Q: If a student already owns a different model notebook, will he/she be permitted to bring it to school?

Q: If the school does allow any "feral" machines that are not the standard model, how will the school support them? Will the school charge to do so, or not support them at all?

Example:

As part of a policy implemented in 2009, private devices should not be connected to the school network unless authorized to do so. The policy has been enacted to ensure quality of service to all students and to support district policy.

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Other factors influencing this decision include:

- *Continuity of service (repairing devices on-site within agreed time-frames);*
- *Continuity of service (provision of loan devices as part of the repair process);*
- *Single operating platform which is upgraded on a whole school basis;*
- *Nominated software loads which vary for each level of student;*
- *Dynamic upgrades with additional software titles as part of the program;*
- *Availability of spare parts and in-school service and advice.*

Optional Items

What optional peripherals (if any) will you be recommending?

Example:

For students to receive full educational benefit from the use of the 1-to-1 program, there is no requirement to purchase additional hardware or software. However, a range of peripherals and options are available including:

- *USB Backup*
- *Additional batteries or power adaptors*
- *Other –(you make a list)*

Guidelines for Participation

What are your mandatory requirements prior to students being issued with devices?

For example:

Prior to devices being issued to students

- *Each device must be imaged with the permitted school image for each Grade level and registered in the school laptop database with a unique identifier against the student's ID.*
- *Parents must attend an information event and agree in writing to the terms and conditions of the program.*
- *Parents must ensure adequate insurance to protect the device at home.*

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Role of Parents

Will you mandate parent training prior to students receiving devices? Many schools do.

Example:

A series of parent education programs will be offered, running for 60-90 minutes each. These will be mandatory if a child is to participate in this program.

Education programs will cover:

- *care / maintenance of the devices*
- *roles and responsibilities*
- *restrictions*
- *policies / procedures for participating in the school's 1 to 1 program*
- *liabilities*
- *other*

Students will be given the devices on a Monday morning, and will be given a full day training to ensure they are familiar with their roles / responsibilities.

Insurance

Include an outline of the key clauses of any insurance policy here.

Q: Does the school provide full comprehensive insurance for the devices while they are on the school grounds? Once the device leaves the school grounds, will they be covered under insurance or will it be the responsibility of the student/parents?

What solution will your school offer for out of school usage?

Example:

****Option for insurance. School insures them for students to take home and charges a levy to parents. This is the easiest option, and also the safest. You could then set conditions, for example:*

SCHOOL has purchased full comprehensive insurance to ensure you are protected from theft and accidental damage, the cost of which is included in the fee you are paying.

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Conditions of this policy are as follows:

- *Every insurance claim, whether for loss or accidental damage, will incur an insurance deductible charge of up to \$?? (depending on repair costs) payable by the assigned user;*
- *The school must be notified immediately if a school owned laptop is lost or missing.*
- *Insurance does not cover the loss of an unattended laptop from an unsecured location, for example, loss from an unlocked car parked on the street. Parents may be liable to pay the full insurance excess in such instances;*
- *Insurance does not cover vandalism or willful damage to the laptops;*
- *It is the user's responsibility to report any lost or stolen laptops to the nearest police station and provide the school with a crime report number. The insurance claim cannot be forwarded to the insurance company for processing until this has been provided.*

Lost and Found Policy

What is the policy? (for example, report to front office / return to front office).

In the, one hopes, unlikely circumstances that a notebook is lost or stolen, it is essential that there is a clear policy and procedure that is followed.

- Q: What are the necessary “forms” that have to be completed for the school, the insurance company and police to ensure the provision of a replacement machine can be expedited?
- Q: What is the policy in regard to both providing a “loaner” notebook for complete loss, and also the procedure for ordering a new notebook and delivering it to the student imaged?
- Q: What systems should the school have in place to monitor total loss, to minimize repetition?
- Q: What conditions should be considered as part of the insurance policy to encourage students to be responsible and above all to minimize any cases of total loss (for example, double deductible for total loss; only two total loss claims possible per policy or per student)?

Note: Total loss is by far the most significant factor in setting insurance premiums.

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Loan / Replacement Computers

Who is responsible for managing this?

Under what circumstances will loan devices be provided to students?

Under what circumstances will loan devices be denied a student?

Where are they stored?

Carry Cases / School Bags

Will you mandate a specific hard case for the device?

Will it fit in the existing schools bags or will you mandate a new school bag with a padded section built in?

Remember to include this cost in the total cost of ownership.

- **Carrying of notebooks, and school bags.** Given the level of investment required by a parent to provide a notebook for a child, it is important that clear expectations are set for students in regard to the carrying of the computers both around the school and outside.

Q: Will the school be recommending a specific bag, or insert to a bag that must be used by students at all times, when carrying notebooks?

Q: Has the bag or insert been approved by the notebook insurance company?

Q: Have students been advised in regard to the most appropriate care and attention they should give their notebooks when traveling? Examples: never leave them exposed unattended in a car, don't pack books tightly against them in a backpack as it might crack a screen.

Appearance / Personalization

Are students allowed to change the look / feel of the computer? To what extent?

Many schools allow stickers, personalized covers / protectors. Remember, over the life of the program this device may not be with the same student the whole time.

Avoid irreversible personalization, such as engraving. If the laptops are the property of the school/district, they should not to be altered or personalized in any way that is not completely irreversible.

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Software, Copyright and Intellectual Property

Software Licensing

While there have been great advances made in securing appropriate pricing for much of the software that is used within notebook programs, this is still a matter that needs attention. Many of the titles that teachers will want to use are industry standard software packages, such as PhotoShop (Graphics) from Adobe, and Sibelius (Music) from Avid Technology, Interactive Physics and 3D modeling Rhino software, that require not only educational pricing, but more specifically, notebook pricing. This has several implications...

1. Pricing of these products makes their use on notebooks prohibitive. The alternative is to either have students within classes revert to using school lab machines, or seek out an alternative, and often inferior, product. This is in fact what is done in many schools in music, where Finale Notepad is used on the notebooks, and then where possible Sibelius used within the school.
2. Such limitations also focus unnecessary resources on the continuation of labs of school computers, purely because of the cost of the software.
3. There is a perception that schools should maintain such labs because of the demands of such specialist software, but in discussion with music and graphics teachers it was felt that if the pricing issue could be overcome, the only need would be for occasional student access to larger screens, rather than banks of computers. With the move now to Bluetooth external monitor links, this will be an easy option in the future...once the pricing issue can be addressed.

Example:

Each device will be loaded with a SCHOOL approved software image configured for use on the school network. A copy of that image will be stored in a partition on the hard drive to enable the device to be rebuilt at any time by a system administrator.

The image will contain the software requested by the teachers. Throughout a school semester, a minimum of two image updates may be scheduled to allow for the inclusion of new applications on the devices.

The school as part of the DISTRICT has been able to negotiate very competitive and reasonable license fees that are not available to private individuals outside the educational environment.

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Each year the school also pays licensing fees on some of the software that is installed on the devices which needs to be covered annually.

The school 1-to-1 laptops comprise a variety of software packages as part of our Standard Operating Environment (SOE). These include operating system software, anti-virus software, standard Microsoft software and curriculum specific software licensed to our school.

A minimum list of software is listed below:

Please complete	

Software installed by the school is copyright and must not be distributed or deleted without written permission from the school.

Internet Usage

The school may or may not choose to make use of internationally implemented products to filter access to web pages while at the school.

Although this type of software cannot block 100% of undesirable sites due to the frequency of new site publishing and time taken for detection, it does reduce the likelihood of students accidentally stumbling across such sites and, in fact, makes it quite hard to find sites that are not blocked. You may choose to require that all students sign a responsible Internet and network usage agreement, which clearly outlines unacceptable and inappropriate usage.

Users and Security

The school's password policy may require users to change their password after a certain number of days. You may want to establish criteria that should be followed when choosing a password.

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Example:

Your password should:

- *be at least 8 characters*
- *not been used in the previous 10 passwords*
- *not have been changed within the last 1 day*
- *not contain your account or full name*
- *contain at least three of the following four character groups*
 - *English uppercase characters (A through Z)*
 - *English lowercase (a through z)*
 - *Numerals (0 through 9)*
 - *Non-alphabetic characters (such as !, \$, #, %)*

Your network audit logs should contain information on the user logging in, the computer, which is attempting to log in, and various other parameters. This information can then be used to track user access and usage.

Virus Protection

A significant escalation of the number of computers on the school campus dramatically increases the importance of comprehensive virus protection, and associated security issues. In light of the need for student machines to connect frequently to the school's network, the responsibility for managing virus and associated security matters must be held by the school.

Q: Who will be responsible for developing and maintaining a comprehensive set of security policies and procedures across the school?

Q: How or will that differ between student and school computers?

Q: How will virus definitions and monitoring software such as spyware software be kept current on student machines?

Q: What procedures will the school have to manage individual student connections to the school network? For example, if a student machine connects and is found to have a virus, will it automatically re-image the offending machine, and if so what will happen to any critical data that is lost?

Example:

Viruses have the potential to severely damage and disrupt operations within the school and the district's computer networks. As students have the right to personally use their laptops, and connect to the Internet from home, they should take all steps to protect the school and the district's computer network from virus attacks.

Viruses can enter laptops through:

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- *Removable media such as CDs, DVDs, floppy disks and USB memory sticks*
- *Emails*
- *The internet (including web browsing, FTP programs and chat rooms)*
- *File download\Network file shares, such as servers and shared folders*

TIPS

- *Protect your laptop from virus attacks by scanning your computer for viruses at least weekly. Virus definition updates may be managed automatically by the school network.*
- *Consider carrying out a virus scan of your laptop after you have accessed the Internet or personal mail or opened a file from a removable media source. You should carry out the scan before returning to the school and connecting to our network.*
- *Do not open any files attached to suspicious or unknown emails.*
- *Exercise caution when downloading files from the internet. Save the files to the laptop's hard disk and run the virus scanner on the file before opening them.*
- *Delete chain and junk emails. Do not forward or reply to any of these.*
- *Never reply to spam. Spam email messages can contain viruses that notify a third party of the legitimacy of an email address and then add the recipients to the spammer's database they can also consume a large amount of disk space on the server, which slows computer networks.*
- *Forward all spam to XXX. In some states, filters for schools currently block over 1.5 million spam emails per month.*
- *Hundreds of viruses are discovered each month. Run your virus scan regularly.*

Non-school Applications and Files

Again, a school may be commended for the vigor in which the policy regarding non-authorized software is enforced. While this can best be done if there is widespread knowledge of the policy across the student body, there will continue to be issues that do require clarification...

Games

Despite the best of intentions, there are several ways students can get around the ban on games on student notebooks, not least by running a game directly off a larger capacity memory stick or MP3 player.

What is your policy on games? Be sure to take into account:

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- Educational value of games
- Potential for distraction / disruption
- Potential software piracy issues-ethical and moral issues re intellectual property
- Storage / bandwidth requirements of games
- Social aspects – for example, many schools allow games to be played at lunch times, while others ban this to encourage socialization

In establishing policy around non-school applications such as games, there needs to be clear setting of expectations, and an attitude that promotes responsible use, rather than the more punitive deficit model.

Where there is contravention of such policy the school should have a restore procedure that re-images or restores the image on the disk drive back to an agreed Restore point. This again assumes students have maintained effective back-up, and lose all non-school files in this process.

Example:

There are significant educational benefits for some games. However, many games can be unproductive and distracting to student learning.

SCHOOL staff will include educational games on the list of installed software to be provided with the devices.

For additional games, including games installed for use at home, the policy at SCHOOL is.. . .

Web 2.0 Applications

For all the apparent dangers associated with applications such as social networks widely publicized in the popular press, many programs clearly advise that banning them does not do anything to educate young people about their effective use.

It is also important for staff to understand the various categories of programs that Web 2.0 now embraces, ranging from simple chat through to social networking technologies such as Ning, FaceBook, Bebo, My Space and most significantly Wiki's and RSS (Really Simple Syndication).

The first issue is to assist staff to be more aware of the range of Web 2.0 applications that are being developed, and look for ways in which they may offer unique teaching and learning opportunities. The second is to allow specialist support staff time to develop learning experiences that leverage Web 2.0; and the third is to

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be vigilant in ensuring all students are at all times kept abreast of the best knowledge in regard to safe web practice.

Applications such as blogs and wikis are readily available through the Moodle application, which provides a useful vehicle for students and teachers to engage in extended dialogue and development of ideas beyond the traditional forums.

Music

What is your policy on music? Be sure to take into account:

- Music / MP3s can be used for many subject areas to support learning
- Potential for distraction / disruption
- Potential piracy issues
- Storage / bandwidth requirements of music

Example:

Students are not permitted to listen to digital music on their laptops while at school unless given express permission by a teacher for an educational purpose. Personal MP3 and other music files are not to be stored on the device. For students who wish to listen to music on their laptops at home, the licensed music should be stored on a USB storage device and left at home.

Technical Support

What is your technical support process? Can you provide a flowchart for this?

Schools that are planning to move to 1-to-1 should, as pre-requisite, implement a Helpdesk process that records all technical support queries, whether or not they require actual machine service. It is important that the school maintains an effective log of all problems and issues regarding the use of laptops at all times, and also reports on those on a regular basis.

Example:

Students experiencing technical faults should ..

Students experiencing software faults should ..

Typically, we would expect each child to be without their device for up to six days per year for servicing or repairs.

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Security / Storage / Loan & Replacements

During the school day when devices are not being used (lunch, physical education, etc), where will the devices be securely stored?

Power Issues

Until notebook batteries last for the equivalent of a school day, there will be issues associated with battery life. While there are issues of battery life for students in the later years, which are addressed below, few students or their teachers will see this as a major issue. It would seem if the school sets a firm policy that sets out an expectation that students will come to school with their notebooks fully charged, then for the most part, it will be adhered to.

Certainly my observations in classrooms has shown that few required power during morning classes, however naturally as the days progressed this increased. While expected there will be cases of students who repeatedly were delinquent in charging their notebooks prior to school, but this did not appear to be widespread. Simple development and reinforcement of the importance of the charging policy will ensure it does not become the classroom management issue it has in some other schools.

- **Charging** There will be obvious advantages to students in lower grades who spend a large part of their school day in the one area. As such they are able to use facilities within their rooms to charge their notebooks over lunchtime etc, if required. While some schools have gone to the trouble of installing power access in lockers so that notebooks can be charged conveniently during the day, it would not appear to be cost-effective for some students, given the observed patterns around charging. The long-overdue extension of battery life is expected from manufacturers over the next 12-18 months. For example, Intel has announced their new 2 Watt Atom chip and is expected to deliver 4.5 to 5 hours of battery life from fully charged notebooks.
- **Power Cords** While not a major issue, there is sometimes reference made to the weight of the notebooks, and also the occasional problems when a student leaves his or her power cord at home. Consider looking at the cost-benefit of asking parents to buy an additional power pack at the time of notebook purchase. This has been adopted by a number of schools as a way to lower the carrying weight of a schoolbag, while also ensuring students always have a power pack at school. Depending on the model, a power pack can weigh up to 500g, and cost around \$90.
- **Battery Life.** With existing battery technology, 2+ year old notebooks, will have significant problems with battery life. As lithium-ion batteries have a predicted life

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of between 300-500 charge cycles, *it is strongly recommended that the school introduces a policy for students to purchase to a second battery before they enter their third year of notebook use.*

- Q: For ease of administration, should consideration be given to including this in the total cost of the original notebook purchase package?
- Q: Should the school consider providing additional batteries that can be used as backup in case of exceptional circumstances?

Backup / Recovery

Who will be responsible for backing up data? Some schools mandate full responsibility to students on external hard drives/USB sticks/ DVDs etc. Other schools provide server space. Remember to consider:

- Likely storage requirements for different grades
- ITS students may require significant storage for multimedia files
- Assessment policy if work is not backed up
- Network / bandwidth / access issues with backing up large files on servers

Backup and Data Storage

The issue of students' backup and data storage, and whose responsibility it is, should be considered by both technical staff and teachers, as it has ramifications for both technology and classroom management.

- Q: Is it the school's responsibility to provide all students within the school (and/or at least those in the 1-to-1 program) with enough server (or otherwise) space for backup of their critical data? What might be the impact on the school's technology budget if this is the case?
- Q: Will there be a quota on the amount of backup that the school might provide for students, and, as with download quotas, how might they be allocated and varied?
- Q: Is the backup of a student's critical data, the sole responsibility of a student? If so should the school provide some options, suggested procedures and training to ensure all students are aware of the best practices?
- Q: If backup is a personal responsibility, should the school include items such as memory sticks as part of the original notebook purchase bundle?

Example:

Student work will be regularly backed up on the SCHOOL server. Students may wish to purchase a USB key or external hard drive to provide additional backup.

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Caring for a Laptop

What advice will you provide parents in caring for a laptop device?

Example:

Packing away your Laptop

- *Always store your Laptop bottom down and with the LCD facing away from the front of the backpack.*
- *Do not wrap the cord too tightly around the power adapter or the cord will become damaged.*

Handling your Laptop

- *Try to avoid moving your laptop around when it is on. Before switching on, gently place your laptop on a stable surface and then switch on.*
- *You still need to be careful with your laptop while it is in the bag. Do not drop the bag from your shoulder. Always place the laptop bag gently down.*
- *Be careful when putting the laptop in the car that no other items are on top of it and nothing will roll onto the laptop bag.*
- *Laptops should be switched off before being placed into the bag.*

Operating conditions

Please don't place objects on top of your laptop and never carry it around while it is turned on.

Avoid exposing your laptop to:

- *Direct sunlight or sources of heat such as desk lamps.*
- *Dust, dirt, rain, liquids or moisture*
- *Heavy shock or vibration*

LCD screen

LCD screens are delicate - they don't like being poked, prodded, pushed or slammed. Never pick up your laptop by its screen. Don't slam the screen closed and always be gentle when putting your Laptop down.

To clean your LCD screen:

- *Switch off your laptop.*
- *Lightly dampen a non-abrasive cloth with water and gently wipe screen in a circular motion.*

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- *Do not directly apply water or cleaner to the screen.*
- *Avoid applying pressure to the screen.*

AC adapter

- *Connect your adapter only to your laptop.*
- *Do not step on your power cord or place heavy objects on top of it. Keep your cord away from heavy traffic areas.*
- *When unplugging the power cord, pull on the plug itself, rather than the cord.*
- *Do not wrap your cord tightly around the adapter box.*
- *Be aware of the power savings that come from running your laptop effectively from battery after being fully charged. This can amount to a significant amount per year.*

Keyboard

- *Gently brush your keyboard with a clean soft bristled paintbrush or similar to remove dirt.*
- *If any key tops are missing or keys are in a damaged state, take your laptop to the technicians to be repaired immediately. A single key top can easily be replaced but continuing to use the keyboard with a missing key top can result in having to replace the entire keyboard.*

Case Cleaning

- *Take a non-abrasive cloth*
- *Spray Windex or a similar cleaner on to cloth to moisten, do not spray the laptop directly*
- *Gently rub your laptop casing with the moistened cloth to remove any dirty marks.*

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Download Data Quotas

As more students gain more access to the Internet, web traffic will become both a financial and management issue.

- Q: Should students be allocated a monthly quota for downloads, which can be effectively monitored, and if exceeded, what processes might they follow to increase that quota?
- Q: How will this quota be managed in a way that does not inhibit either students' or staff members' learning or teaching needs? For example, what if a specific subject (such as Media Studies) requires exceptional download volumes?
- Q: Should download quotas be allocated according to grade levels or the subjects they are studying? Or are there other criteria that should be considered?

Provision and monitoring of printing facilities

As with the provision of download and storage quota, it is recommended that the school consider tracking printer use by students, if the cost of providing such peripherals and associated consumables is seen as financially significant.

- Q: Will there be a quota on the amount of paper/printing that the school might provide for students, and as with download quotas, how might they be allocated and varied?
- Q: How might the extent and type of printing facilities that will be provided for students be best determined, for example a printer in every room, or every floor or block of rooms?

Given the need for constant software updating, version control, and the complexity of current operating systems, the school's technical staff should also *consider a policy of re-imaging any student's notebooks annually... and if not each year, certainly every second year*. There are issues to consider in deciding either way, but schools that have moved towards that option, report significant improvement in the performance of student machines.