

Bring your own Device (BYOD)

Guidance for Schools Document

1st Edition

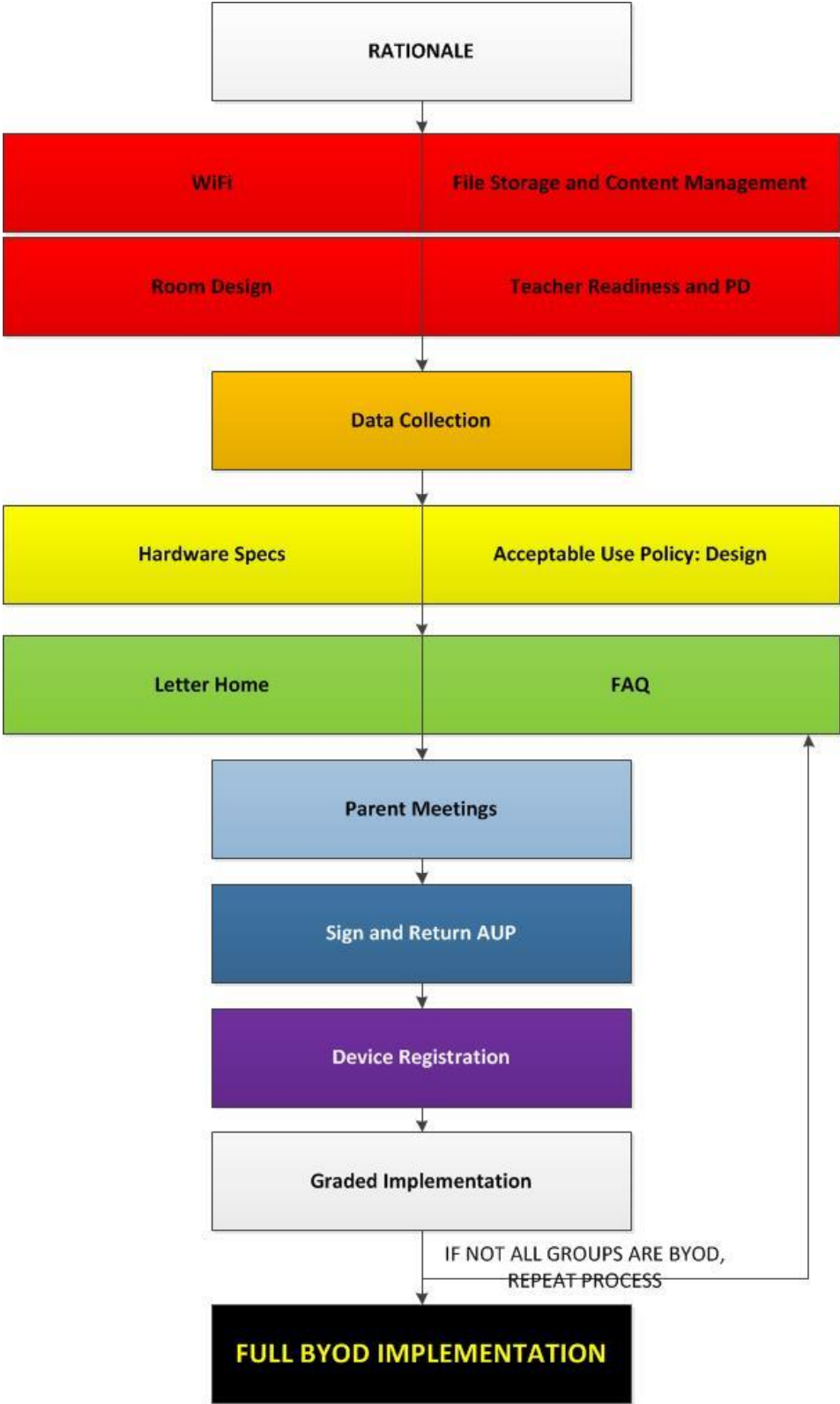
June 2013



GEMS
EDUCATION

Bring Your Own Device

Pathway Outline



1. Rationale

We have a responsibility to fully prepare our students for the realities of the university and professional worlds into which they will move after K-12 education. Technological fluency is as essential as literacy and numeracy, and will enhance creativity and inquiry-based learning, which are cornerstones of our educational philosophy.

As parents, administrators and teachers, we recognise the importance of technology, now and in the future. Indeed, the future is here, as forward-thinking schools around the world have embraced the inclusion of technology as a best- practice in teaching and learning.

Beyond the simple reality that technology has, and will continue to, change and drive the way all things get done, significant research demonstrates that meaningful use of technology in the learning process has the following beneficial results for students:

- Development of 21st century learning skills, including experience in consuming, filtering and producing multimodal content, skills which will be essential for success in university study and workplaces of the future
- Increased student engagement
- Flexibility for teachers in addressing different learning styles, including interventions for students with special educational needs and English Language Learners, as well as extensions for those who benefit from additional challenge
- Provision of a greater range and variety of assessment strategies for teachers
- Promotion of inquiry and critical thinking skills.

It is increasingly normal and desirable for students to utilize their own devices to enhance their learning, across the curriculum and to pursue their own interests outside of that sphere of learning. Extensive student surveys and meetings across GEMS schools indicate that, not only are the students ready for BYOD, they are expecting it. Furthermore, BYOD is gaining significant traction as an inexorable development in the workplace, lending further weight to the need for schools to embrace this way of working.

GEMS is committed to providing its students with the skills and attributes they will need to flourish in an ever-changing, technology-driven, global society. The opportunity for students to learn in a Bring Your Own Device environment is an essential element of the GEMS commitment to all our students and their families.

2. Core Preparations

It is recommended that all schools acquire a copy of this book, which is essential reading for Principals, Senior Leaders and Digital Leaders.



Bring Your Own Technology

Mal Lee & Martin Levins (2013)

Available at:

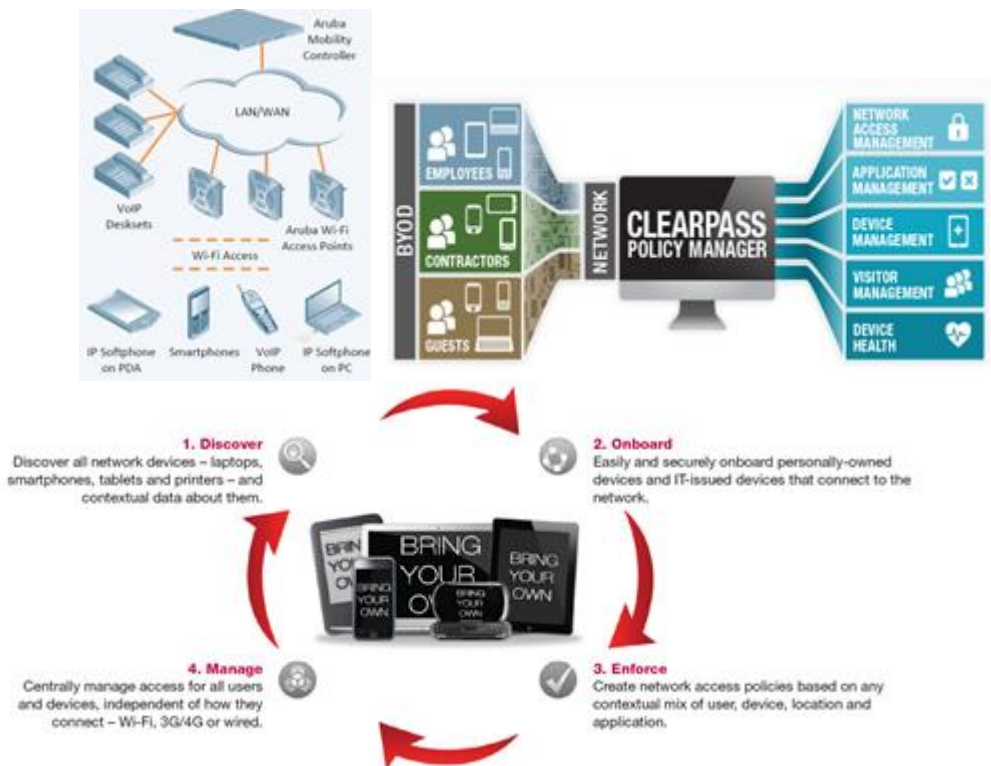
<https://shop.acer.edu.au/acer-shop/product/EP035>

Property of GEMS Education.
For Internal Use Only

2.1 Wi-Fi Infrastructure

Wireless Infrastructure solution

Wireless Infrastructure solution that is currently being deployed at schools comprises of the Aruba AP 105 or HP MSM460 Access Points installed in every classrooms and common areas, which provide users very robust wireless connectivity to the school network, and the Aruba Clearpass access management solution will securely on-board the user devices to the school network.



Timelines - The installations are scheduled for after-school hours to keep the disruption minimum. The entire project is scheduled to complete by end of June 2013. For the schools which have additional Wi-Fi coverage requirements, this will extend over the summer break.

Filtering - Schools will have adequate internet/content filtering in place

Wireless Network Access Points - The main focus of the solution design is the user density. There will be 1 WAP in each classroom in addition to the other common areas in the school.

2.2 Physical Learning Spaces

Schools will need to prepare for BYOD in terms of learning spaces and how learning is physically organized. Thought also needs to be given to storage and security of devices. In reality, for existing schools, these will be makeshift solutions but key points to address are as follows:

- All students bringing devices need **lockable storage**. This is the first thing schools must ensure, before the first devices arrive on campus.
- Location and specifications of power sockets. If schools have concerns that current provision is inadequate, then they should contact GEMS IT.
- Consider and eliminate potential for trailing wires when charging devices.
- Additional furniture may be required or schools may consider re-arranging or re-allocating existing provision.
- Soft furnishings, deployed correctly, can improve digital teaching and learning, e.g. in breakout / collaborative learning / quiet areas.

2.3 File Storage and Content Management

It is recommended that schools make a decision as to their preferred system for server and cloud storage. All schools have server based storage; however this is becoming increasingly inadequate in facilitating modern workflow for all stakeholders. Cloud solutions include but are not limited to:

- GEMS Learning Gateway
- SkyDrive
- Google Drive
- Dropbox

In managing student learning, it is recognised that individual schools have augmented the services available through the GEMS Learning Gateway with a number of additional solutions, such as:

- Edmodo
- Google Apps for Education
- Blogger, Wordpress, Weebly, etc.

All of these tools are effective in facilitating teaching and learning. The key aim in every school must be to ensure that, whichever combination of solutions is favoured, that overall solution is scaled across the school and teachers are trained in readiness. Without this consistent provision and competence level, workflow will be fragmented and confusing for students.

Schools should ensure that **assessment** and **data management systems** are in place to take account of new working practices. Similarly, schools should review the availability and use of **digital content** to ensure that it meets the needs of the curriculum and shift in pedagogy necessitated by BYOD. The digital learning leaders and IT departments in each school will be required to advise Principals and Senior Leadership Teams on these issues and they in turn will receive support from the Corporate Office Digital Learning Team.

2.4 Teacher Readiness, Professional Development and Parental Support

Thinking 'technology first' and proceeding too quickly on a large scale, whilst overlooking the human resource factors, are dangerous false starts which are sure to derail any BYOD initiative, or at least make it extremely painful and fraught with difficulty in the short and medium terms. Failing to equip teachers with the skills and mindsets to effectively support learning through this model is a pitfall which must be avoided. Organisations considering such an initiative should begin the work with teachers immediately, consulting with staff to ascertain the current levels of support and competency across the teaching body.

Steps which should be considered include:

1. The ISTE Standards for Administrators <http://www.iste.org/standards/nets-for-administrators> are recommended as a framework through which policy makers and school leaders are persuaded, supported and held accountable for the essential shift in working practices and expectations.
2. The ISTE Standards <http://www.iste.org/STANDARDS>, the EC Digital Competences <http://ftp.jrc.es/EURdoc/JRC73694.pdf>, the UNESCO Teacher Standards <http://unesdoc.unesco.org/images/0021/002134/213475e.pdf>, or similar frameworks should be introduced to teachers and be integrated at a suitable pace into the organisation's performance management policies. A professional development policy must be developed, which will form the basis of preparing teachers for the transition. Provision for external professional development and certification, such as <http://leadingedgecertification.org/page/online-teacher>, should be combined with a GEMS programme, internal school PD and networks for sharing best practice, to ensure a comprehensive approach.
3. It is recommended that Full time Digital Learning Coaches should be deployed in all schools using BYOD policies to ensure that teachers and parents are equipped to deliver the sea change in practice that is needed. These coaches need to meet the ISTE standards set out in <http://www.iste.org/docs/pdfs/nets-c.pdf?sfvrsn=2> if they are to successfully carry out their roles. Without these practitioners on the ground, it is very unlikely that any BYOD initiative will be successful, as a lack of just-in-time support for teachers will lead to disillusionment and a consequent reversion to safe, traditional practices. See http://www.itec-ia.org/documents/filelibrary/2009_conference/handouts/The_Digital_Curriculum_31F3935ECBABA.pdf, especially page 8, for a working example of why digital learning coaches are an essential part of embedding digital learning in schools and, in particular, a successful 1:1 initiative.

For a practising coach's perspective on the necessity of the role, see <http://k12blueprint.com/content/not-just-middle-schoolers-0>. Also see http://www.uwcsea.edu.sg/uploaded/files/Vacancies/2012_10/East_Campus/East_2013_Digital_Literacy_Coaches.pdf for an example role description. An equivalent role description has been produced for GEMS.

For a powerful overview of how a strategic commitment to coaching forms a fundamental part of a successful approach to technology integration, see <http://www.iste.org/learn/coaching-white-paper> (free registration necessary to download White Paper in full).

'The effectiveness of coaching for the classroom was demonstrated in a 2004 study by the University Of Kansas Center for Research on Learning. Outcomes of this research concluded that instructional coaching significantly increased the implementation rate of newly learned practices that showed promise for improving student performance. This study indicated that without support and follow-up, teacher implementation of new instructional methods is only about 15 percent (Joyce & Showers, 1983), but with the addition of coaching, implementation increased to 85 percent (Knight, 2007).'

'For coaching to yield the greatest opportunity for success, it must incorporate three essential components:

- Context. Coaching practices must be in context with what can be used immediately.

- Relevance. Coached information must be highly relevant to the lessons currently being taught.
- Ongoing. Coaching support must be provided on a day-to-day basis where teachers can practice newly learned skills and ensure the highest potential for success.'

(The eMINTS) 'Research emphasizes that labor intensive, long duration, ongoing coaching and support and a close connection to the teaching and learning practice are essential for PD to have an impact (Houtman, 2010).'

ISTE White Paper on Technology, Coaching and Community: <http://www.iste.org/learn/coaching-white-paper> .

4. A comprehensive programme of **parent education** should be instigated, forming part of a wider partnership, engagement and consultation initiative. Resources such as www.commonsemmedia.org can play an important part in reassuring parents that the shift can be managed safely and responsibly. The GEMS Parental Engagement Manager can play an important role, liaising with parent engagement champions in each school to facilitate the transition and widen the support base in schools. Integration of parents into digital education should form an integral part and purpose of the school's parent outreach programme.

5. A pilot, evaluate, reiterate, upscale model is recommended, utilizing the organisation's own hardware in the first instance. The journey should be shared openly with parents and exemplars of the positive impact on learning widely circulated in order to win hearts and minds, before seeking parental support to fund provision of a 1:1 BYOD scheme.

3. Data Collection

Before undertaking a BYOD program, all schools should survey the student body and collect data on:

- The types of devices the students already own.
- The age of the devices the students already own.
- The battery life of the devices the students already own.
- The type of cloud storage and email the students are using by choice.

In addition, the school needs to do a comprehensive analysis on wireless signal coverage and density. Coverage studies are not enough. The wireless has to be tested with large groups of people moving from section to section, continuously connected.

A map of the building should represent areas of concern, areas where wireless is unlikely to be used, areas where wireless coverage is significantly more expensive to implement, and areas where wireless can interfere with local/governmental regulations.

4. Hardware Specifications and AUP Design

4.1 Hardware Specifications

The table below covers the 3 main laptop platforms students are likely to bring:

Windows	Apple MacBook Pro	Apple MacBook Air	ChromeBook
<p>Processor: Intel Core TMi3 (2330M) or better Operating System: Genuine Windows 7 Professional or Student (NOT Starter, Basic or Home) or Windows 8 or Windows 8 Pro</p> <p>*Microsoft Surface Pro has capabilities of a PC, but portability of a tablet. Must have detachable keyboard cover if used as primary device</p> <p>Memory: Minimum 2GB DDR3 SDRAM at 1333MHz, preferably 4GB</p> <p>Hard Drive: Up to 320GB3 (5400RPM) (Note: This is not as important as it used to be, as it is anticipated that cloud storage will continue to be favoured in schools' workflow</p> <p>Connectivity: 10/100.1000 Gigabit Ethernet Wireless LAN Bluetooth optional</p> <p>Ports, slots &</p>	<p>13 inch, 2.4 GHz dual core Intel Core i5 with 4GB 1333MHz</p> <p>500GB 5400-rpm</p> <p>Intel HD Graphics 3000 Note: This laptop automatically meets power requirements</p> <p>VGA adaptor</p>	<p>11.6 Inch, 1.6 GHz dual core Intel Core i5 with 3MB shared L3 cache 2GB 1333MHz (additional 2GB RAM available = 4GB if desired) Intel HD Graphics 3000 processor with 256MB</p> <p>Note: This laptop automatically meets power requirements</p> <p>Ethernet</p> <p>VGA adaptor</p>	<p>11.6 (1366x768) display 0.7 inches thick – 2.42 lbs. / 1.1 kg 6.5 hours of battery Samsung Exynos 5 Dual Processor 100 GB Google Drive Cloud Storage with 16GB Solid State Drive Built-in dual band Wi-Fi 802.11 a/b/g/n VGA Camera 1x USB 3.0, 1x USB 2.0 HDMI Port Bluetooth 3.0™ Compatible</p> <p>Note: these are specs for the standard Samsung ChromeBook but if the school feels this platform meets its needs, then any make/model should be suitable</p>

<p>Chassis: 2 or more USB 2.0 / 3.0 slots; Memory Card Reader</p> <p>Dimensions: 11-15 inch screen (13.1 inch max up to Grade 5)</p> <p>Power: 6-Cell (60W) Lithium Ion Battery or 3-4 hours of battery life with Wi-Fi on.</p>			
---	--	--	--

Note: All students should also have an inexpensive set of personal headphones.

Tablets

The debate rages as to how prescriptive schools should be when laying down requirements for Bring Your Own Device (BYOD) schemes. Indeed, proponents of Bring Your Own **Technology** (BYOT) suggest that students have absolute autonomy and freedom of choice when selecting and managing the technology they use in and out of school. Nevertheless, a rule of thumb that has been observed in GEMS schools and elsewhere is that the tablet is currently inadequate as a primary device in any grade level above the age of 7. If schools are in a position where they feel it necessary to adopt a Bring Anything You've Got ('BAYG) approach, then this is preferable to doing nothing. Indeed, this is working relatively well in a growing number of our schools - but it is a stop-gap solution.

Ideally, it is recommended that **the device of choice for 3-7 year olds is a tablet and, above 7, a laptop**. Longer term (and this is being seen already in many schools), those older students are likely to be bringing a laptop AND a tablet. Nevertheless, **the laptop remains the primary device**. The tablet of course may be deployed primarily as an eBook Reader but, again, this still necessitates access to a laptop as well, if students are to work efficiently.

Smartphones

Of the 3 main types of device students are likely to bring to school, the smartphone is probably the most controversial. The issue can be simplified if we suggest that 3-7 year olds are unlikely to bring their smartphones and, for older students, it remains a supplementary device, behind the laptop but on par with the tablet.

4.2 Acceptable Use Policy Design

Each school will need to review its Acceptable Use Policies in light of BYOD. An example, together with an example Home School Agreement, both of which can be adapted, can be found in **Appendix A**

5. Letter Home / FAQs

5.1 Letter Home

A sample letter to parents can be found in **Appendix B**.

5.2 FAQs

These may be different in every school, but there are common questions that many parents will have, and these can be found in **Appendix C**.

6. Parent Meetings

These should be scheduled to take place within a week of the letter home.

7. Sign and Return AUP

Give out at parent meetings, send out to all parents not present, and discuss with students in school. This can be done by form / homeroom / class teachers.

8. Device Registration

School owned devices connection to the Wireless network - The devices owned by the school are automatically provisioned to the network without any user intervention.

Students/Staff - access to the school network and internet using the device that they have brought in - ClearPass access management solution features a device onboarding portal that requires users to adhere to known BYOD requirements.

A self-guided menu makes it easy for users to configure and provision secure network access for their own devices with no help desk assistance. In return, IT collects valuable information for policy, troubleshooting and planning purposes.

ClearPass lets IT define who can onboard devices, the type of devices they can onboard, and how many devices each person can onboard.



All Staff and students will use the same AD credentials used in the school to validate the Wi-Fi network

Parent/ visitor - access to the internet using the device that he/she has brought into the school - ClearPass visitor management capabilities make it easy and efficient for employees, receptionists, event coordinators and other non-IT staff to create temporary network access accounts for hundreds of thousands of guests

Parents can self-register for network access. Once registered, ClearPass delivers login credentials to users via print, or email (optional). These accounts can be set to expire automatically after a specific number of hours or days.

Subscription - The current subscription allows each school to use up to 1000 BYOD endpoint devices. However it is possible to add additional licenses if required. The solution is capable to handle 5000 endpoint devices.

The current policy allows one device per user. However this is a temporary measure taken to prevent the mismanagement of the licenses.

9. Graded Implementation

Each school needs to decide how it will stage the implementation process. Once the first phase is complete, it will be necessary to review, reiterate and scale as necessary.

10. Review and Full Implementation

Following a full review of the first phases, the school moves toward full implementation.

Further Assistance

If you have further queries or questions regarding BYOD and Digital Learning, please contact the digital team for assistance on the below email addresses

Andrew Nolan andrew.nolan@gemseducation.com
 Phil Redhead phil.redhead@gemseducation.com
 Sheryl Rogers sheryl.rogers@gemseducation.com

We also have a Facebook group to discuss Digital Learning:
<https://www.facebook.com/groups/gemsdigitallearning/>

Appendices

Appendix A: Acceptable Use Policy & the Home-School Agreement

GEMS (*Name of School*) Home-School Digital Device Acceptable Use Agreement (DDAUA)

The purpose of the GEMS (*Name of School*) Digital Device Acceptable Use Agreement is to ensure that all students use technology in school, at home and elsewhere, effectively, safely and responsibly, to facilitate learning on a 24/7 basis, and to help ensure that they develop the attributes of competent digital citizens.

The Digital Device Acceptable Use Agreement (DDAUA) provides guidelines for using digital hardware and software on individual computers/devices, on local area networks, wide area networks, wireless networks, the Internet and companion technological equipment (e.g. printers, servers, whiteboards, projectors, etc.) when students are at school. The Agreement also establishes rights and responsibilities for all users, in and out of school. All users of the school network and technological devices anytime, anywhere, are expected to follow the guidelines or risk loss of digital privileges. In cases of serious breaches, further action may be taken, in line with The School's standard disciplinary procedures.

The signatures on the Letter of Agreement (located at the end of this document) are binding and indicate that the parties who signed have read the terms and conditions and understand their meaning.

Users who knowingly access prohibited information or who disregard guidelines will be subject to disciplinary action.

Introduction

In order for students at (*Name of School*) to use the school's technology resources, they must follow the guidelines set forth in this Digital Device Acceptable Use Agreement (DDAUA). The rules written in this agreement are not all inclusive. (*Name of School*) reserves the right to change this agreement as when it deems it necessary to do so. It is a general agreement that all facilities (hardware, software, Internet, etc.) are to be used in a responsible, ethical, and legal manner, in and out of school. By using any digital resources, whether owned personally or by The School, users acknowledge their understanding of the Digital Acceptable Use Agreement as a condition of using such devices and the Internet.

The School provides some electronic devices and services are provided to promote educational excellence. The school has a responsibility to maintain the integrity, operation, and availability of its electronic systems for access and use. The school does not guarantee user privacy or system reliability.

Whilst on site, access to the school network and the Internet should be considered a privilege, not a right, and can be suspended immediately, without notice. Access on site is available only for educational and administrative purposes. Digital resources are to be used in accordance with this DDAUA and all users will be required to comply with its regulations. Non-compliance will result in disciplinary action.

The guidelines provided in this DDAUA are intended to help users understand appropriate use. The school may restrict, suspend, or terminate any user's access to the school's computer systems upon violation of the DDAUA. This policy applies to all digital resources, not only the computers, devices and equipment provided in The School's IT labs, but also the personal devices students bring to school in accordance with the school's Bring Your Own

Device initiative. It also applies to students' use of all such devices outside of school. Additionally, this agreement applies to all school facilities, including the Theater and the Gym.

User Rights & Responsibilities:

Students can expect a 21st century learning environment at *(Name of School)* where teachers work to integrate technology thoughtfully and purposefully in learning experiences and assignments. Students can also expect access to appropriate devices and network services that support the educational mission of the school. Finally, students have a right to feel safe while using the school's resources and network.

Users are expected to:

- show respect and courtesy for other users in *(Name of School)*'s community, which includes the strict prohibition of cyberbullying and harassment;
- recognize and honour the intellectual property of others;
- comply with legal restrictions regarding plagiarism, the use and citation of information resources and copyright law;
- limit the use of the school's technology resources to the educational mission of the school, except insofar as permitted below;
- use non-curriculum relevant materials only in their own time, outside of school and without detriment to their studies - *(Name of School)* recognises the benefits of students being permitted to personalize the content on their own devices, however, this is subject to a strict adherence to the expectation that the primary purpose of such devices is to facilitate learning;
- help maintain the integrity of the school network and equipment;
- avoid tampering or experimenting with the school network or equipment, including efforts to bypass the school's Internet filters or proxies;
- make personal devices available for inspection by an administrator or other staff member upon request;
- use appropriate language in all communications;
- never use or attempt to use another student's assigned hardware, subscriptions, logins, files, or personal information;
- avoid giving out personal information, such as name, address, photo, or other identifying information online, including username and password;
- avoid using their personal devices or equipment to record (audio/visual) others without their permission;
- to avoid modifying or copying any protected system files, system folders, or control panel files without prior approval of the School's IT Department; and
- obey the laws and restrictions of our host nation, the United Arab Emirates.

Educational Use:

Users are expected to comply with the following rules regarding their school network accounts:

- school-related files are the only files to be saved in a student's personal folder
- students should not store commercial software, music, and/or games or hidden files to their folders;
- saving to a school computer's hard disk drive is granted only by permission of instructor (for students) or IT Coordinator (staff);
- playing commercial/online games is not permitted; and

Respect for Others:

Users should respect the rights of others using the technology resources.

- Use assigned workstations, if required by teacher.
- Always log off your workstation.
- Avoid deliberately attempting to disrupt network performance or interfering with the work of another user.
- Leave equipment and room in good condition for next user/class.

Respect for Security:

Accounts on the systems at *(Name of School)* are considered secure, although absolute security of any data cannot be guaranteed. Teachers can be provided access to student files for instructional or evaluative purposes.

- Use only your account/password. It is a violation to give access to your password to any other user.
- Reading, modifying or removing files and/or mail owned by other users is not allowed without prior approval by the instructor or IT Department.
- Any attempts to transmit software designed to compromise the operation or security of the network is prohibited.

Respect for Property:

Software Installation:

Software may only be installed on the school information systems (including all individual workstations) with prior approval from the IT Department.

Software Copyright:

- The only software, other than students' projects, to be used on the school's computers are those for which the school owns a valid license or has approved from an open-source solution.
- Licensed/copyrighted software is not available for borrowing and may only be used at other sites with approval of IT Coordinator.
- Copyrighted software shall not be downloaded from the Internet or further transmitted in any form without compliance with all terms of a preauthorized licensing agreement. Infringement or violation of U.A.E or international copyright laws or restrictions will not be tolerated.
- Any attempts to circumvent the licensing control or the copying of software from the network without the IT Department's permission is prohibited.
- Installation of software and applications on students' own devices is permitted insofar as it does not conflict with the security requirements outlined above or the primary purpose of such devices as learning tools.

Hardware:

- Report equipment problems immediately to a teacher or the IT Department.
- Leave workstations and peripherals in their designated places.
- Keep work areas neat and clean and free from food and drink.
- Any attempts to move, repair, reconfigure, modify or attach external devices to existing information and network systems without the Network administration and/or IT Department's permission is prohibited.
- Borrowing of School hardware is not permitted unless email authorization has been given from the IT department, or the hardware is part of an established loan scheme.

Audio Visual Hardware:

- If a person checks-out or borrows a piece of audio visual equipment, they are responsible for replacing it or repairing it if it is lost or damaged. All equipment must be properly signed-out and documented.

Internet/World Wide Web Usage:

The Internet is a global network of digital devices linking users to schools, businesses, universities, and other sites. The school recognizes many sites have educational uses, while others do not. *(Name of School)* wishes to respond to this by encouraging use of sites for educational reasons only.

Internet access is available to all students and teachers at *(Name of School)*. We believe these communication links offer vast, diverse and unique resources to both students and staff and their availability outweighs any possible access to information that is not consistent with the educational goals of *(Name of School)*. Expected standards of conduct include:

1. The acknowledgement that access to the Internet is a privilege and not a right.
2. Respect the use of copyrighted materials.
3. Respect the rights and privacy of others.
4. E-mail and social networking is allowed during school hours only in connection with a classroom assignment.
5. Downloading of unauthorized programs is not allowed.
6. Compromising the security of the school in any manner is unacceptable.
7. Respect the values and ethics of the local host culture.

A violation of the above standards and any others included in the Digital Acceptable Use Policy will result in a denial of access and possible further disciplinary action.

The school will use available monitoring and blocking software to filter objectionable materials on the Internet in order to help ensure the safety of all students.

Responsibilities:

- All users are prohibited from accessing portions of the Internet that do not promote the instructional mission of *(Name of School)*.
- All school web pages are subject to initial approval of the administration. All school web pages should reflect the mission of the school and adhere to *(Name of School)* and GEMS Guidelines.

Personal Equipment:

All users must follow all policies even while using their own personal equipment.

- Watching DVDs, Movies, TV Shows, etc. while at school is prohibited unless the media has been checked-out from the school library or has been provided by The School's streaming server.
- Private networks are prohibited within the school network unless users get permission from the IT Department.

Cyber-Bullying:

This involves the use of information and communication technologies to support deliberate, repeated, and hostile behavior by an individual or group, that is intended to harm others.

Students will be held accountable for Cyber-Bullying, even if it occurs off-campus during the school year and negatively impacts the academic environment at *(Name of School)*.

Consequences for Violating the Rules:

Non-adherence to the provisions of this DDAUA will result in disciplinary action in accordance with The School's standard procedures.

The Agreement

I acknowledge that I am responsible for my actions on my device, in school, at home and elsewhere, and for following the specific rules established for the use of the hardware, software, labs, and networks throughout the school and beyond. I understand that failure to do so could result in a loss of technological privileges.

I agree I will not share my passwords or account details with anyone and will have full responsibility for the use of my account. I will not use another's account or represent myself as someone else.

I agree I will not engage in illegal activities on the school network or any other digital environment (e.g. plagiarism, bullying, harassment, tampering with hardware, software or documents, vandalism, unauthorized entry or destruction of files or deliberate introduction of computer viruses).

I agree I will obey procedural safeguards to maintain the performance of the school's network and digital devices.

I agree I will respect the rights of others, use appropriate language and avoid offensive or inflammatory material. I will bring incidents of offensive or inflammatory material directed to myself or others to the attention of a GEMS Education staff member.

I agree I will not share, make, or post online personally identifying information about any members of the *(Name of School)* community without permission (addresses, phone numbers, email addresses, photos, videos, etc.).

I agree I will access only those resources that are appropriate for school and those resources for which I have specific authorization.

I agree I will obey copyright laws and licence agreements. Text material, music, software, and other media are protected by law.

I agree I will not install software on the school's network or digital devices without permission of the system administrators.

I agree I understand that system administrators and teachers may access my files during system maintenance or as a directed action.

I agree that students who are issued school devices are responsible for their care. Charges related to repair and replacement caused by abuse, misuse, negligence or loss as determined by school administration will be the responsibility of the student and his or her parents.

I agree I accept full responsibility for supervision when my child is using any digital device, whether provided by the school or by the parents at home or in other non-school settings. I understand that there may be fees or costs incurred which are not covered by the warranty due to abuse, negligence, loss or multiple incidences of misuse of the device by my child. In the case of a personal device purchased under a Bring Your Own Device initiative, I understand that I, as the parent, am responsible for insuring the device and for its maintenance and security settings. I can expect The School to provide appropriate guidance and support in this area.

I agree violation of this Acceptable Use Agreement may result in:

- Loss of school provided technology and network privileges
- Sanctions as prescribed by The School's student handbook
- Monetary reimbursement to GEMS / The School or other appropriate sources

As a student at *(Name of School)*, I acknowledge that I have read through and agree to the *(Name of School)* Digital Acceptable Use Agreement.

Signature

Date

I acknowledge that my son/daughter and I have read through and agree to the *(Name of School)* Digital Acceptable Use Agreement. I will instruct my child regarding the importance of following all the guidelines included in this agreement.

Signature

Date

Appendix B: Sample Letter to Parents:

Date:

Dear [SCHOOL] Families,

[SCHOOL] is finalizing our school improvement plans for [Year] and beyond. Self-evaluation and improvement planning are on-going processes which culminate each spring in the production of an annually updated plan for the following year.

The annual plan is shared with all stakeholders, including parents, by June of each year. One of the key objectives of our improvement plan is to launch a multi-year initiative to develop [SCHOOL] as a 21st century learning environment.

The Rationale

We have a responsibility to fully prepare our students for the realities of the university and professional worlds into which they will move after [SCHOOL]. Technological fluency is as essential as literacy and numeracy, and will support creativity and inquiry-based learning, which are cornerstones of our educational philosophy.

As parents and teachers, we all recognize the importance of technology, now and in the future. Indeed, the future is here, as forward-thinking schools around the world have embraced the inclusion of technology as a best-practice in teaching.

As you will be aware, technology is already infused in our curriculum across the school, but we are now ready to implement a more fully integrated approach in all divisions.

Why is the inclusion of technology important in schools? Beyond the simple reality that technology has, and will continue, to change and drive the way all things get done, significant research demonstrates that meaningful use of technology in the classroom has the following beneficial results for students:

- The development of 21st century learning skills, including experience consuming and producing multimodal content which will be mandatory for success in university study and workplaces of the future;
- increased student engagement;
- flexibility for teachers in addressing different learning styles, including interventions for students with special educational needs and English Language Learners, and extensions for those who benefit from additional challenge;
- provision of a greater range and variety of assessment strategies for teachers;
- promotion of inquiry and critical thinking skills.

The Planning Process

As anyone who initiates a major change effort knows, the ultimate result is only as good as the planning. And so, over the past [timeframe], and with the support of GEMS Education, the Leadership Team and IT Department have been engaged in a joint effort to research and identify for [SCHOOL] the best "next steps" in our incorporation of technology.

What have we done to prepare? We have surveyed students and teachers, consulted with and visited leading IT-integrated international schools around the world, attended international conferences on IT integration, studied published research, and performed an audit of our campus IT facilities to determine our capacity for provision. Our network

capacity, including wireless access, has been upgraded, and a reasonable budget for change and maintenance carefully developed.

We researched best-practices in the classroom, considered the advantages and disadvantages offered by various technology platforms, and piloted various new products. We have revised our Acceptable Use Policy for the student handbooks, and begun the development of a professional learning program for staff.

The Plan

Our planning effort has resulted in a new plan for IT provision at [SCHOOL], to begin in [start date], which includes the following action plans:

- The requirement for all students in [Grade / Year levels] to “Bring Your Own Device” to school on a daily basis;

- The development of IT-based teaching and learning objectives in [Grade / Year levels] to support the meaningful integration of technology into the curriculum;

[State here what BYOD will achieve in freeing up existing resources for non-participating year groups]

- The development of an on-going professional development program for teachers to support innovative use of technology in the classroom;

- The creation of parent engagement activities to promote the use of learning technology at home.

The Details: Bring Your Own Device

At present, [SCHOOL] provides access to technology to students in these grades via visits to computer labs, use of in-classroom computers, or the use of rolling laptop carts. These teaching methodologies are now increasingly out of date, as research demonstrates that students optimize educational technologies when using their own devices which can be used both at school and at home. The portability of technology is essential to the successful development of digital fluency and promotes the transition between home and school learning.

Beginning in September 2012, all students in [Grade / Year levels] will be required to bring a laptop [state stipulations on devices] to school daily. We will not require a specific laptop, nor will [SCHOOL] sell or distribute laptops.

The required equipment can be either Mac or PC; the option is entirely up to each family. Equipment will be registered for internet access on our system.

Students will be expected to follow a clearly articulated Acceptable Use Policy, which will be printed in our student handbooks and sent home in September for both parents' and students' signatures.

Any brand of laptop is acceptable, as long as the machine meets the specifications outlined in the Bring Your Own Device Specifications **attached to this letter**.

How Can You Learn More?

We know that you will have questions and concerns about this initiative, and so we have created a number of opportunities to facilitate the flow of information and answer specific questions.

-For specific questions regarding the Bring Your Own Device Program, you can go to [http://www.\[SCHOOL\].org](http://www.[SCHOOL].org) and click the BYOD Link. You will receive a response directly from our IT Staff.

Across the school, we are excited about the teaching and learning opportunities made possible by this initiative. We are confident that [SCHOOL] is ready for this step, and that our students will benefit from this initiative designed to prepare them for success in the 21st century.

Sincerely,

[name] Principal

Appendix C: BYOD Frequently Asked Questions For Parents

[Bring Your Own Device : Frequently Asked Questions for Parents](#)

[What is a BYOD Program?](#)

The first phase of the BYOD program, permitting students to bring their own Internet connected devices to school, will begin _____ **for grades** _____. The length of this phase will be _____ and the school will report to parents by _____. Following this phase, the program will be introduced in Grades_____.

[Why change?](#)

We have a responsibility to fully prepare our students for the realities of the university and professional worlds into which they will move after K-12 education. Technological fluency is as essential as literacy and numeracy, and will enhance creativity and inquiry-based learning, which are cornerstones of our educational philosophy.

As parents, administrators and teachers, we recognize the importance of technology, now and in the future. Indeed, the future is here, as forward-thinking schools around the world have embraced the inclusion of technology as a best- practice in teaching and learning. Beyond the simple reality that technology has, and will continue to, change and drive the way all things get done, significant research demonstrates that meaningful use of technology in the learning process has the following beneficial results for students:

- the development of 21st century learning skills, including experience in consuming, filtering and producing multimodal content, skills which will be essential for success in university study and workplaces of the future
- increased student engagement
- flexibility for teachers in addressing different learning styles, including interventions for students with special educational needs and English Language Learners, as well as extensions for those who benefit from additional challenge
- provision of a greater range and variety of assessment strategies for teachers
- promotion of inquiry and critical thinking skills.

It is increasingly normal and desirable for students to utilize their own devices to enhance their learning, across the curriculum and to pursue their own interests outside of that sphere of learning. Extensive student surveys and meetings across GEMS schools indicate that, not only are the students ready for BYOD, they are expecting it. Furthermore, BYOD is gaining significant traction as an inexorable development in the workplace, lending further weight to the need for schools to embrace this way of working.

GEMS is committed to providing its students with the skills and attributes they will need to flourish in an ever-changing, technology-driven, global society. The opportunity for students to learn in a Bring Your Own Device environment is an essential element of the GEMS commitment to all our students and their families.

[What are the Hardware and Software Considerations?](#)

1. *What types of computing devices may my child bring to school?*

Students may use devices that fall into the following categories: (1) laptops, (2) netbooks, (3) tablets, and (4) e-Readers. In some instances, teachers may allow cell phones/smartphones to be used.

The specifications for laptops are set out here and it is recommended that **all students in Grades 2 (Year 3 in NCFE) and above have a laptop as their primary device if possible.** Tablets, smartphones, e-readers, etc., are considered to be supplementary devices above Grade 1.

Windows	Apple MacBook Pro	Apple MacBook Air	ChromeBook
<p>Processor: Intel Core TMI3 (2330M) or better</p> <p>Operating System: Genuine Windows 7 Professional or Student (NOT Starter, Basic or Home) or Windows 8 or Windows 8 Pro</p> <p>*Microsoft Surface Pro has capabilities of a PC, but portability of a tablet. Must have detachable keyboard cover if used as primary device</p> <p>Memory: Minimum 2GB DDR3 SDRAM at 1333MHz, preferably 4GB</p> <p>Hard Drive: Up to 320GB3 (5400RPM) (Note: This is not as important as it used to be, as it is anticipated that cloud storage will continue to be favoured in schools' workflow</p>	<p>13 inch, 2.4 GHz dual core Intel Core i5 with 4GB 1333MHz</p> <p>500GB 5400-rpm</p> <p>Intel HD Graphics 3000</p> <p>Note: This laptop automatically meets power requirements</p> <p>VGA adaptor</p>	<p>11.6 Inch, 1.6 GHz dual core Intel Core i5 with 3MB shared L3 cache</p> <p>2GB 1333MHz (additional 2GB RAM available = 4GB if desired)</p> <p>Intel HD Graphics 3000 processor with 256MB</p> <p>Note: This laptop automatically meets power requirements</p> <p>Ethernet</p> <p>VGA adaptor</p>	<p>11.6 (1366x768) display 0.7 inches thick – 2.42 lbs. / 1.1 kg</p> <p>6.5 hours of battery</p> <p>Samsung Exynos 5 Dual Processor</p> <p>100 GB Google Drive</p> <p>Cloud Storage with 16GB Solid State Drive</p> <p>Built-in dual band Wi-Fi 802.11 a/b/g/n</p> <p>VGA Camera</p> <p>1x USB 3.0, 1x USB 2.0 HDMI Port</p> <p>Bluetooth 3.0™ Compatible</p> <p>Note: these are specs for the standard Samsung ChromeB ook but if the school feels this platform meets its needs, then any make/model should be suitable</p>

<p>Connectivity: 10/100.1000 Gigabit Ethernet Wireless LAN Bluetooth optional</p> <p>Ports, slots & Chassis: 2 or more USB 2.0 / 3.0 slots; Memory Card Reader</p> <p>Dimensions: 11-15 inch screen (13.1 inch max up to Grade 5)</p> <p>Power: 6-Cell (60W) Lithium Ion Battery or 3-4 hours of battery life with Wi-Fi on.</p>			
--	--	--	--

2. Are there suggested accessories?

All students should also have an inexpensive set of personal headphones, with a microphone. A padded case / carry bag is necessary to protect your child's device in transit.

3. How can my child's device connect to the Internet?

All GEMS schools provide a robust wireless network which students may connect to while using their devices in the building. All devices need to be registered on the network and details of this process will be sent separately nearer the time.

Additionally, students may use an Internet connection from an outside provider. In this case, the family will be responsible for any expense incurred using this type of Internet connection.

4. Will there be "charging stations" so my child's electronic device can be recharged?

Limited power is available in classrooms, although we anticipate that not every class will be using an electronic device in every lesson, every day. Considering today's electronic device battery technology, the device's battery charge should be sufficient for lessons requiring use of the device throughout the day. "Charging stations" will not be provided. As a general rule, 4 hours' battery life on Wi-Fi should be seen as a minimum.

5. Can my child use an iPad or Android / Windows tablet?

Any type of tablet, netbook or laptop can be used. Whichever you choose, the device must be able to connect wirelessly to the school's wireless network. Please note though, that for Grades 2 and above, a laptop is the preferred device.

6. Can my child bring more than one device?

Yes. All students may bring up to TWO devices.

7. What software will be needed on my child's computer?

You do not need to purchase or install any software on your child's computer. All GEMS students have free online access to Microsoft Office 365 and the school makes use of Google Apps for Education, also available free of charge. For tablets and other mobile devices, you may be asked to purchase a small number of recommended applications throughout the year; however this will not be mandatory.

Because purchasing a computing device is a personal choice, anyone may purchase and use other productivity tools that best suit one's personal needs. Students can install their own programs and applications, subject to the provisions of the Acceptable Use Policy and Home School Agreement, which will ensure that learning is optimised through the use of technology.

Whose Responsibility Is It?

1. Who pays for the technology brought to school?

These devices will be purchased by and remain the property of the family.

2. Who is responsible for any repairs or updating to personal computing devices?

Students and/or their families are responsible for their personal computing devices at all times. The school does not have the technology support staff to repair or update personal computing devices.

3. Who is responsible for damage, loss, or theft of devices my child brings to school?

Families must stress the responsibilities their children have when bringing their own computing devices to school. Any devices students bring to school are their sole responsibility.

Whilst the school will take due care to ensure the safety of the devices on campus, the school and GEMS Education accept no responsibility for loss or damage to devices, however caused. We recommend that you add any devices to your home insurance policy and check that this covers loss, theft and damage outside of the home.

The school will provide lockable storage for devices and take all reasonable steps to ensure that procedures for the use and storage of devices are followed.

Will the family need to have Internet access at home?

It would be very helpful to have some form of Internet access available to your child outside school in order for them to make full use of school resources outside of the school day, as well the multitude of resources available on the Internet. More and more preparation for learning in school will start to take place online outside of school hours and, accordingly, it is becoming increasingly important for students to have access to the Internet beyond the confines of the school building and day.

Miscellaneous Information

1. *When can my child use the electronic device at school?*

Students may use their electronic devices in class and shared study areas when it is deemed to enhance their learning. The circumstances in which this will be the case will become clearer as time passes, but there will always be agreement between the student and teacher. We expect and encourage students to make their own choices as to effective and appropriate use of technology, supported by their teachers.

Students should bring their devices every day, unless instructed to the contrary, e.g. for special events such as sports days.

2. *Will students be able to print documents from their personal computing devices?*

Students will not be able to access printers at the School from their personal computing devices. We will provide alternatives, where necessary: (1) printing capabilities from school computers, and/or (2) electronic delivery of documents through email or other online methods. The school is aiming to reduce the need for printing to a minimum, as this procedure is no longer considered to be necessary to support modern methods of effective teaching and learning.

3. *Where will my child's work be stored?*

Students will be encouraged to store their work in the cloud, using Google Drive, GEMS Learning Gateway, SkyDrive [*SELECT option(s)*]. In so doing, the student will have access to their work wherever they have Internet access.

4. *Will my child be safe online?*

The school has a comprehensive Digital Citizenship program, which is delivered and embedded across the curriculum. In conjunction with the Acceptable Use Policy and Home School Agreement, this is the primary approach to ensuring that our students learn to act safely and responsibly in the online environment. The school does have the capability to monitor sites visited on all registered devices whilst they are connected to the school's Wi-Fi network. It is recognized that such an approach, on its own, is inadequate to ensure students' safety, as it is not possible to continue such monitoring outside of school, or where students are using 3G/4G networks. Accordingly, the school believes that digital citizenship education and a strong partnership with parents is the most effective approach to protecting our children online. Partnership, Acceptable Use Education, Collective Responsibility and Trust are the cornerstones of the school's philosophy and these pillars will be reinforced and embedded in the daily life of the school, through the PACT rules, displayed in every classroom and in common areas:

Partnership
Acceptable Use
Collective Responsibility
Trust

So, whilst the school has the technical capability to monitor and log student activity on campus, the approach is in fact twofold:

- a) Monitoring software will detect any clearly inappropriate use of technology on campus, for example, bad language; and
- b) Investigations into individuals' inappropriate online behaviour are to be undertaken retrospectively and only where such behaviour has come to light.

This ensures an appropriate balance between child protection and privacy. There will be no blanket monitoring or 'snooping.'

Mobile phones in the classroom:

Isn't it dangerous for my child to be using a Smartphone at school?

Smartphones, like any other internet-ready device, are very much a part of everyday life and provide us all with an important tool for learning, communication and collaboration. It is essential that students do not see these devices as being 'forbidden.' Rather, they should be integrated into the learning process and teachers, students and parents should work together to ensure the appropriate and responsible use of these tools. Students will be required to justify their use of Smartphones, as with any other tool, and such use will be subject to the Acceptable Use Policy and Home School Agreement.