EDUCATION AND EMPLOYMENT DIRECTORATE

POLICY TITLE:	**INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) POLICY**
LEAD OFFICER:	**Director of Education & Employment**
DATE PRODUCED:	**November 2020**
DATE FOR NEXT REVIEW:	**November 2021**
APPROVED BY:	**Education and Employment Committee**
ADDITIONAL GUIDANCE:	
TEAMS AFFECTED:	**Primary and Secondary Schools** **Lifelong Learning Sector** **Management and Administration of Education and Employment Directorate** **IT Department of SHG**
THIS POLICY REPLACES WITH IMMEDIATE EFFECT:	**Not applicable**

Mission Statement

To provide the community of St. Helena with the opportunity to learn how to use and apply 'information communication technology' (ICT) safely and for positive benefit.

Introduction

ICT has become more prominent in society and is continuously developing at a rapid pace. It is crucial that our community is prepared for this new age of ICT and be able to participate in a rapidly changing world in which work and other activities are increasingly transformed by access to varied and developing technology.

It is important that our people are using ICT tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination. They must learn how to employ ICT to enable rapid access to ideas and experiences from a wide range of people, communities and cultures. Increased capability in the use of ICT promotes initiative and independent learning; with people being able to make informed judgements about when and where to use ICT to best effect, and consider its implications for home and work both now and in the future.

This Information and Communication Technology (ICT) policy sets out the aims, principles and strategies of the Education and Employment Directorate for the use and delivery of ICT ensuring that all staff, clients and stakeholders understand and agree on the approach to ICT and assist in planning for and promoting ICT development.

This policy will form the basis for the development of ICT across the Education and Employment Directorate over the next five years and is designed to inform and/or assist new members of staff, parents, the local community and external agencies and organisations.

In this policy the term 'information communication technology' includes the use of any equipment which allows users to communicate or manipulate information (in the broadest sense of the word) electronically.

All Directorate staff are required to adhere to St Helena Government's policies and procedures in relation to the use of ICT in the workplace. They are the facilitators of this policy. This policy is for all persons who use ICT within the Education and Employment Directorate. Categories of persons include:

- All staff employed with the Education and Employment Directorate
- Members of the school community including students, parents/guardians, volunteers
- Members of the St. Helena Community College (SHCC)
- Clients of the Lifelong Learning Sector including apprentices, work experience students, vocational candidates, researchers etc.
- Any person hiring or using ICT through SHCC

- Any external agency or organisation working with or in the Education and Employment Directorate

Aims

This policy aims to:

- Ensure all staff and other users understand and agree on the approach to ICT
- Assist in planning, developing and promoting ICT
- Explain the expectations in regards use of ICT
- Ensure there is consistency in the application of ICT
- Ensure ICT is used safely

This policy will set out the expectations for ICT in relation to Schools, Lifelong Learning, the St. Helena Community College (SHCC) and all working for and in the Education and Employment Directorate.

Limitations

This policy is impacted by the current Internet bandwidth availability on St. Helena resulting from the limitations that come with satellite data transfer. Therefore there will be instances where service provision has to be adjusted to cater for the more urgent/prioritised needs or specific on-line sites or services cannot be accessed due to the bandwidth demands which are outside of our capability.

Schools

The overall aim for the use of ICT is to enrich learning for all students and to ensure that teachers develop confidence and competence to use ICT in the effective teaching of their subject.

ICT offers opportunities for students to

- Develop their ICT capability and understand the importance of information and how to select and prepare it.
- Develop their skills in using hardware and software so as to enable them to manipulate information.
- Develop their ability to apply ICT capability and ICT to support their use of language and communication.
- Explore their attitudes towards ICT, its value for themselves, others and society, and their awareness of its advantages and limitations.
- Develop good Health and Safety attitudes and practice.

St. Helena Community College (SHCC) –

The overall aim of SHCC is to give opportunity to the adult community of St. Helena to:

- Develop their ICT capability and understand the importance of information and how to select and prepare it.
- Develop their skills in using hardware and software so as to enable them to manipulate information.
- Develop their ability to apply ICT capability and ICT to support their use of language and communication.
- Explore their attitudes towards ICT, its value for themselves, others and society, and their awareness of its advantages and limitations.
- Develop good Health and Safety attitudes and practice.
- Access higher level educational opportunities through online and distance learning
- Participate in and view virtual conferences, summits etc
- Use tele networking
- Undertake online examinations through affiliated overseas providers
- Access relevant ICT courses
- Undertake research as required.

Provision

The Directorate is proactive in expanding the opportunity for access to ICT. Current provision is as follows:

- All staff have unlimited access to ICT throughout their working day.
- All schools have a designated ICT suite which provides opportunity for teachers and students to access ICT for their learning.
- All teachers have a designated lap-top which they use to support teaching and learning in the classroom.
- All staff have a corporate email address which aids electronic communication.
- All schools have access to a shared drive where all school related documents and information is stored and is easily retrieved by staff.
- All schools use a School Information Management System also known as SIMS. This is an exceptionally powerful resource allowing for record management of pupils, staff and curriculum resources. It enables schools to effectively track the performance of individual students, teaching groups and year groups. It is possible to produce reports against various criteria including target grades, progress and attainment and attendance. It has a behaviour management system embedded into it that allows real time tracking and behaviour reports.
- The Public Library uses an electronic management system (Resource Mate) which enables electronic cataloguing and processing and research. There is less reliance on paper based systems.
- The Public Library gives opportunity for access to ICT through as designated computer.
- In our secondary school students have access to a wider curriculum through the use of Distance Learning opportunities.

- In our secondary school the Adobe suite software is available which encompasses creative design tools supporting a broad curriculum.
- Interactive Whiteboards are used primarily in secondary education to support teaching and learning in the classroom.
- All primary schools have access to tablet devices with appropriate apps to support students in their learning and ICT development.
- In secondary all students have access to netbooks allowing for independent study or support to lessons which require ICT access outside of the ICT suite.
- The SHCC has an ICT Suite and ICT facilities available for all adults to access as required. A nominal fee is charged per hourly use.
- ICT provides opportunity for support to Vocational Education such as remote monitoring through e-portfolios and online examinations.
- The St Helena Research Institute uses ICT to support management and storage of research data

ICT in the school curriculum

ICT has become one of the core subjects in our school curriculum. We ensure that all students are exposed to ICT throughout their schooling from primary through to secondary and ICT is given a permanent place on all school timetables.

All pupils, regardless of race or gender, shall have the opportunity to develop ICT capability. Schools will promote equal opportunities for computer usage and fairness of distribution of ICT resources. Children with a computer at home are encouraged to use it for educational benefit and parents are offered advice about what is appropriate. Schools recognise the advantages of the use of ICT by children with special educational needs.
Teaching and Learning of ICT is as follows:

<u>Primary</u>

In primary ICT is taught both as a focussed lesson and incidentally in different subject areas.

Focussed Teaching – ICT has a designated place on the school curriculum. All students from Reception to Year 6 are taught ICT through a designated session of at least 30 minutes per week. See appendix 1 for an overview of the content of the IT curriculum for primary schools.

Incidental Teaching - Opportunities for exposing to children to elements of ICT arise in different subject areas. These include but are not limited to:

- Personal Social Health and Citizenship Education - On-line Safety
- Literacy – Read, Write Inc. Literacy programme, researching, publishing stories, PowerPoint presentations, literacy games,
- Maths – Maths games, Times Tables Rock Stars, creating graphs, statistics, PowerPoints, exce; Mathsgenie video's + worksheets, use of mathsbox.org.uk for use of resources + other materials for teaching of maths, Use of exampro from AQA to aid the teaching of maths at KS4

- Humanities – Researching, Google Maps,
- Science – Rising Stars science scheme of work, video, PowerPoint, research, You-Tube
- Extra-Curricular Activities – All schools provide students with the opportunity to access ICT throughout their lunch breaks in extra-curricular activities.
- Monitoring and assessment – This is currently monitored through the achievement of specific skills and competencies.

Secondary

In secondary ICT is taught both as a focussed lesson and incidentally in different subject areas.

Focussed teaching – ICT has a designated place on the school curriculum and is taught as follows:
Year 7 are taught ICT through designated session of at least 1 hour per week.
Year 8 and 9 are taught ICT through designated sessions of at least 2 hours per week.
Year 10 – 11 are taught ICT to GCSE level through designated sessions of at least 3 hours per week
Year 12 and 13 are given an option to study ICT at A level and are allocated 5 hours per week.
See appendix 2 for an overview of the content of the ICT curriculum for secondary schools.

Incidental Teaching - opportunities for exposing to children to elements of ICT arise in different subject areas. These include but are not limited to:

- Personal Social Health and Citizenship Education - On-line Safety and Microsoft applications
- Literacy – Comparison of literature through both book and video formats, Accelerated Reader Programme, typing up and presenting coursework, speaking and listening presentations,
- Maths – Maths watch Programmes, using graphs and statistics etc
- Humanities – Researching
- Science – Videos, presentation and coursework,
- French – Films and speaking and listening, recording tests.
- Technology – Coursework, VRQ examinations and e-portfolios
- Extra-Curricular Activities – Students are provided with the opportunity to access ICT throughout their lunch breaks in extra-curricular activities

Monitoring and Assessment – This is assessed against levels as set out in the Schemes of Work and are reported home to parents three times per year.

Formal Assessments – Formal testing is carried out through on-line Progress Tests in English, Maths and Science in key stages 1, 2 and 3.

ICT in Continuing Professional Development and Teacher Training

The Teacher Training programme relies on ICT to support the academic learning and development of our teacher trainees.

In Year 1 trainees access Level 6 studies through the Open University.

In Year 2 and 3 trainees study the Certificate and Diploma in Teaching and Learning at Level 4 and Level 5 through affiliation with Cambridge University. The Programme Leaser has to undertake an on-line course to qualify to deliver the training and then all assignments are submitted for assessment through an e-portfolio.

Teacher Trainees and serving teachers have the opportunity to study towards gaining and International Post Graduate Certificate in Education through affiliation with TES.

Teaching Assistants and Higher Level Teaching Assistants have the opportunity to access distance learning courses through overseas providers.

In addition other opportunities for CPD are made available through the use of ICT.

Roles and responsibilities

The Senior Management Team of the Directorate which comprises the Director, Assistant Director Schools, Assistant Director Lifelong Learning and Finance Officer will ensure that ICT is at the forefront of all strategic planning and that ICT is given priority in the budgeting process.

The School Leadership Team which comprises the Assistant Director of Schools and all Head Teachers will facilitate the use of ICT in the following ways:

- By reviewing and updating the schemes of work as necessary
- By ordering/updating resources
- By providing INSET so that all staff are confident in how to teach the subject and have sufficient subject knowledge
- To keep staff abreast of new developments
- By taking an overview of whole school planning to ensure that opportunities occur for pupils to develop an information and communication technology capability and that progression is taking place
- By supporting staff in developing students' capability
- By attending appropriate courses to update knowledge of current developments
- By including ICT development in the School Improvement Plan on an annual basis
- By ensuring proactive communication of problems
- Making sure all staff understand the SHG IT usage policy and practice safe use of the Internet/email
- Monitoring the curriculum

All staff have the responsibility of ensuring the safe and responsible use of both the hard and software components of ICT.

Parents and Guardians have the responsibility for ensuring that their child/ren is appropriately supervised in the use of ICT and that it is used safely and responsibility. They have the responsibility for being proactive in learning about ICT and for attending

any relevant Parent Workshops on this topic to support their knowledge, understanding and use of ICT.

All students have the responsibility to ensure that they use ICT in a safe and responsible manner for positive benefit to their learning and holistic development.

All members of SHCC and users of the SHCC facilities have to agree to the SHCC IT guidelines and use ICT in a safe and responsible manner for the promotion of their learning and development.

The Education Data Manager has the responsibility to oversee the use of ICT within the Directorate and to support the promotion and management of its use.

Health and Safety/Security

The Education and Employment Directorate is supported by the St. Helena Government IT Department who has responsibility for all hard and software used in the Directorate and ensures the safety and security of the system. The Directorate abides by the Information Security Policy as stated in the Code of Management Chapter 7. Health and safety practices include but are not limited to:

- All staff have to read and agree to the IT Policy and sign the IT User Agreement before they are given access.
- All staff are given their own workspace which is password protected
- ESET Anti-Virus is installed on every networked computer in the school and also on teacher's personal laptops that access the school network. The software updates itself daily, and constantly scans for viruses to keep the network secure.
- All systems are protected with relevant filters and firewalls
- All hardware is catalogued on inventory
- All hardware is supported with relevant software
- All purchases are subject to approval of the IT department to ensure value for money and reliable purchasing
- The network is maintained and developed by the IT Technicians.
- Facilitating a nightly backup of user data, meaning that it can be recovered if accidentally deleted.
- All areas can be monitored remotely by the IT Department

In addition, the Directorate undertakes the following to ensure good health and safety practices in relation to use of ICT:

- In the first term of every school year all children are taught about health and safety in use of ICT and are reminded of these through all ICT lessons.
- Staff are trained in the safe use of ICT as required
- Parents are made aware of safe use of ICT as required.
- All schools ensure that all ICT equipment is kept safe and secure on the school premises
- All staff must ensure the safety of their ICT allocated resource/s at all times
- All staff and student users have access through the school's network to their personal data areas and shared data which is password protected

- In secondary computers in the Computer Room can be monitored by either teachers within the classroom or remotely by the IT Technician.
- Procedures can be put in place for staff to be able to block pupil's internet access at school for a period of time as a sanction for inappropriate use of the internet. In the event of this occurring, parents/carers are informed through a letter sent home.
- Upon entering the school pupils and their parents/guardians are required to sign an, "Acceptable Use Agreement" for computer use and internet access at school.
- Pupils' network access can also be blocked at the discretion of the IT Technician in the event of more serious network abuse. In the event of pupils hacking into the network or attempting to disrupt the smooth running of the network, they can be suspended at the discretion of the Head Teacher
- All software purchases have to be approved by the IT Department
- All users of the SHCC are required to sign an Acceptable Use Agreement before they are allowed access to the ICT facilities of the College. Sanctions will be applied to any user found to be abusing the facilities and network. Users will be charged for any equipment that is lost, stolen or damaged due to their negligence.
- All users are given an induction to the safe use of ICT if required.

Appendix 1 – Primary ICT Curriculum Overview

	Y1	Y2	Y3	Y4	Y5	Y6
C1 Generic Skills To be embedded within strands **NOT TO BE TAUGHT ALONE** **Red = Possible PROGRESSION**	***Recognise common uses of information technology beyond school** **use technology purposefully to retrieve digital content from the school public drive and the Internet.** *Typing Skills – two hands, multiple fingers *Switching on *Shutting down *Logging on/off *Opening/closing programs *How to hold the mouse *Mouse control: left click, single click=select, click and drag, double click=execute a command (e.g. open) *Right click *(my best friend)* Can this help you solve your problem? *Mouse roller to scroll (3rd command on mouse. Can also be used to single click) *Pointer (on screen arrow)/cursor (flashing line in text documents) *Keyboard layout: letters, numbers, backspace, delete *Tab Key *Shift-key/caps lock, special characters *Arrow keys(navigating games/moving cursor in text), return/enter key(starting a new line/executing a command e.g. opening a program) *Highlighting and formatting *Cut/copy and paste *(Understanding the network system) Saving (SAVE) and work My Documents (X:Drive) and opening work in the shared drive (P:Drive) * Difference between SAVE and SAVE AS. WE'SAVE' *Opening saved work via program / My Documents – trouble shooting when opening via My Doc's is unsuccessful *Viewing open windows: minimise, maximise, close, dual screen view *Printing Documents to most cost effective and eco-friendly printer (Library Richo) *Upload files from external device		***Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration** ***Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content** *Typing Skills - two hands, multiple fingers, use of both shift keys *Switching on *Shutting down *Logging on/off *Opening/closing programs *How to hold the mouse *Mouse control: left click, single click=select, click and drag, double click=execute a command (e.g. open) *Right click (my best friend) Can this help you solve your problem? *Mouse roller to scroll (3rd command on mouse. Can also be used to single click) *Pointer (on screen arrow)/cursor (flashing line in text documents) *Keyboard layout: letters, numbers, backspace, delete *Tab Key *Shift-key/caps lock, special characters *Arrow keys(navigating games/moving cursor in text), return/enter key(starting a new line/executing a command e.g. opening a program) *Highlighting copy/cut and paste, alignment, *Keyboard short cuts (Office Programs - hover over icon to view shortcut), view open windows via Tab & Windows key *Saving (SAVE) and work My Documents (X:Drive) and opening work in the shared drive (P:Drive) *Understanding the network system: Server location, passwords and permissions, viewing X:drive(using Teacher Permissions) S:drive TeacherCentre, also Staff$ but this is locked down as contains Staff Personal Folders * Difference between SAVE and SAVE AS. WE'SAVE' *Opening saved work via program / My Documents – trouble shooting when opening via My Doc's is unsuccessful *Creating Folders and renaming Files and Folders *Copying Files between Folders *Viewing open windows: minimise, maximise, close, dual screen view *Printing Documents to most cost effective and eco-friendly printer (Library Richo) *Upload files from external device *Function Print screen *Use of Paint to edit a print screen and cut/copy into desired application		

C2 Programming	***Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions *Create and debug simple programs *Use logical reasoning to predict the behaviour of simple programs**		***Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts *Use sequence, selection, and repetition in programs; work with variables and various forms of input and output *Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs**			
	*Children play with remote control cars and other 'push button' toys. *Provide opportunities for children to give and follow instructions to move about the playground or hall *Introduce code through http://www.tynker.com/hour-of-code/ starting ay grades 1-3.	*Continue with, http://www.tynker.com/hour-of-code/ , from where Y1 finished. *Develop understanding of algorithms through class based activities e.g. humancraneplan humancranecards humancranechallenges	* Secure understanding of an algorithm through: How to make a jam sandwich YouTubeClip jamsandwichcards jamsandwichcardssen *Introduce pupils to code via http://learn.code.org/ Up to stage 4.	*Introduce Scratch focusing on sequence and repetition. Start by providing a very basic script e.g. to draw a square. How could you change or add to it? Explore: background colour, sprite, pen up, pen down, pen colour, Pallets: Motion, Pen, Events, Control (forever, repeat, when) (If is more advanced) Ex: hide sprite, more than one shape, different times http://scratch.mit.edu/projects/2947396/#editor Using the Scratch resources have students create their own shark games	*Scratch *I can use sequence and repetition in programs. -1 sprite, motion, looks and sound blocks http://scratch.mit.edu/help/cards/ *I can explain how a simple algorithm works -Tell a Joke *Maze Game in Scratch	* http://learn.code.org – stage 4 (or appropriate up) *Scratch Plan a Game Planning ideas *I can explain how a simple algorithm works. I can use sequence and repetition in programs. *I can design and write programs that accomplish specific goals. *I can detect and correct errors in algorithms and programs. *I can explain how a simple algorithm works. *I can use sequence, selection and repetition in programs. *I can detect and correct errors in algorithms and programs.

C3 E-safety	*Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.		*Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.			
http://www.digital-literacy.org.uk/	**Foundation/Y1** **Going Places Safely** Pupils learn that they can go to exciting places online, but they need to follow certain rules to remain safe. **ABC Searching** Pupils search for pictures online by clicking on letters of the alphabet. They learn that directory sites with alphabetical listings offer one way to find things on the Internet **Keep it Private** Pupils learn that many websites ask for information that is private and discuss how to responsibly handle such requests **My Creative Work** Pupils are introduced to the concept of having ownership over creative work. They practice putting their name and date on something they produce	**Y2** **Staying Safe Online** Pupils understand that they should stay safe online by choosing websites that are good for them to visit, and avoid sites that are not appropriate for them **Follow the Digital Trail** Pupils learn that the information they put online leaves a digital footprint or "trail." This trail can be big or small, helpful or hurtful, depending on how they manage it. **Screen out the Mean** Pupils learn that children sometimes can act like bullies when they are online. They explore what cyberbullying means and what they can do when they encounter it. **Using Keywords** Pupils understand that keyword searching is an effective way to locate information on the Internet. They learn how to select keywords to produce the best search results. **Sites I Like** Pupils discuss criteria for rating informational	**Y3** **Powerful Passwords** Pupils explore reasons why people use passwords, learn the benefits of using passwords, and discover strategies for creating and keeping strong, secure passwords. **My Online Community** Pupils explore the concept that people can connect with one another through the Internet. They understand how the ability for people to communicate online can unite a community. **Things for Sale** Pupils examine product websites and understand that the purpose of the site is to encourage buying the product. Pupils learn methods used to promote products on these sites. **Show Respect Online** Pupils explore the similarities and differences between in-person and online communications, and then learn how to write clear and respectful messages. **Writing Good Emails** Pupils learn how to communicate effectively by	**Y4** **Rings of Responsibility** Pupils explore what it means to be responsible to and respectful of their offline and online communities as a way to learn how to be good digital citizens. **Private and Personal Information** How can you protect yourself from online identity theft? Pupils think critically about the information they share online. **The Power of Words** Pupils consider that they may get online messages from other kids that can make them feel angry, hurt, sad, or fearful. Pupils identify actions that will make them Up standers in the face of cyberbullying. **The Key to Keywords** Pupils learn strategies to increase the accuracy of their keyword searches and make inferences about the effectiveness of the strategies. **Whose is it. Anyway?** Pupils learn that copying	**Y5** **Strong Passwords** Pupils learn how to create secure passwords in order to protect their private information and accounts online. **Digital Citizenship Pledge** Pupils work together to outline common expectations in order to build a strong digital citizenship community. Each member of the class signs a We the Digital Citizens Pledge. **You've Won a Prize** Pupils learn what spam is, the forms it takes, and then identify strategies for dealing with it. **How to Cite a Site** Pupils reflect on the importance of citing all sources when they do research. They then learn how to write bibliographical citations for online sources. **Picture Perfect** Pupils learn how photos can be altered digitally. They will consider the creative upsides of photo alteration, as well as its power to distort our	**Y6** **Talking Safely Online** Pupils learn that the Internet is a great place to develop rewarding relationships. But they also learn not to reveal private information to a person they know only online. **Super Digital Citizen** Pupils explore Spider-Man's motto, "with great power comes great responsibility" through the lens of digital citizenship. They create comic strips show a digital superhero who witnesses an act of poor digital citizenship, and then helps resolve it. **Privacy Rules** Pupils learn that children's websites must protect their private information. They learn to identify these secure sites by looking for their privacy policies and privacy seals of approval. **What's Cyberbullying?** Pupils explore how it feels to be cyberbullied, how cyberbullying is similar to or different than in-person bullying, and learn strategies for handling cyberbullying when it

		websites and apply them to an assigned site. Pupils learn that all websites are not equally good sources of information.	email, taking into account the purpose and audience of their message, and the tone they want to convey.	the work of others and presenting it as one's own is called plagiarism. They also learn about when and how it's ok to use the work of others.	perceptions of beauty and health.	arises. **Selling Stereotypes** Pupils explore how the media can play a powerful role in shaping our ideas about girls and boys. They practice identifying messages about gender roles in two online activity zones for children.
C4 & C5 Multimedia & Data	*Use technology purposefully to create, organise, store, manipulate and retrieve digital content		*Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information			
C4 Multimedia	*Word Creating various types of documents using Word Processing Software. Teacher_Presentation		*Cartoon Creators Using Word or Publisher to create Comic Books Development: (Using School Tablet devices) *Stop Motion Animation e.g. Taking a character from a story and creating a cartoon.		*Personal Presentation Multimedia presentation, opportunity to upload digital images and embed video. e.g. Biographies (PowerPoint/and or other) Could be covered with e-safety using Resources as a guide to creating a presentation *Choose your own Adventure book Idea reference Students could create a story using PowerPoint that the reader can choose which way the story goes, using hyperlinks	
C5 Data	*Pictograms *Use branching databases for classification. Make own branching databases e.g. Plants	*Data Bases Build a paper based data bases e.g. Animal Classification *Explore an online database e.g. http://www.kidsbiology.com/animals-for-children.php *Build an electronic data base in junior view point *Branching databases e.g. classification in science, maths shape and space	*Pictograms and Bar Charts Provide experience of Pictograms and Bar charts through relevant links e.g. data handing, Forces and Magnets in science	*Common themes in Data Create a Top Trumps set of playing cards. Template	*Understanding Spreadsheet Work through the lesson resources for a range of Spreadsheet operations. PGOnline_Files	*Spreadsheets Introduce Excel Spreadsheets 1 Wizards Challenge 2 Gold mine 3 Times tables 4 Sweet shop problem 5 Race Points 6 Shopping bills 6 Shopping bills 2 7 Game Points 8 Conditional Formatting Support Document

Appendix 2 – Secondary ICT Curriculum Overview

Key Stage 3

<table>
<tr><th>Year 7</th><th>Year 8</th><th>Year 9</th></tr>
<tr><td>E-Safety
How to stay safe online, students will learn about viruses, Trojans, spam, phishing etc.</td><td rowspan="2">Round the World Trip/Hyperlinks & Animation
Covers all strands to ensure consistent coverage of each area in year 7. Students use online tools combined with a variety of office applications to plan a round-world trip. Student will have to research different destinations and variety of activities at these locations. Presentation will also include itinerary and interactive map of trip, and break down of costing for entire travel.</td><td>Web Building
HTML & CSS Introduction
Students will learn about website creation and they will use Adobe Dreamweaver to create a website from a selection of topics. This project will encourage students to use a wide range of tools from pervious topics.</td></tr>
<tr><td>Networks
Students will be introduced to the fundamentals of networking, identifying the benefits and risks associated with the internet.</td><td rowspan="2">Grand Designs
Students will use 3D design software to design their dream home.
All design will be plan and drawn to scale and in 3D environment, they will have a budget where they will have to create and design costing models for different range of budgets.</td></tr>
<tr><td>Spreadsheets
Students will reinforce their knowledge of spreadsheets. This will include a recap of formatting a spreadsheet, writing basic formula and creating charts</td><td>Video Games “Kudo”
Students research into the history of video games & look at how advances in computing have enabled the huge complexity of modern games before designing their own.</td></tr>
<tr><td>Graphics
Introduction to bitmap/Vector graphics creation using Adobe Photoshop. Students will manipulate images using a wide range of tools.</td><td>Python
Students will develop coding techniques using Python to solve complex algorithmic problems.</td><td>Building their own PC
Students will learn about the Computer component that makes up a PC, they will be given the chance to take apart and rebuild a PC, plus design and plan the building of their dream PC</td></tr>
</table>

Intro to Data (Databases) Create and analyse arrange of significant data sets to understand its importance and how data can be manipulated.	**Magazine Cover** Students will design a magazine cover using Photoshop	**Video editing Project** This will be a project that could be a cross curriculum with another subject, Students will work on the creating a Video that link in with a topic. This will require a field trip to collect video footage.
Scratch Students will be introduced basic coding concepts focused on developing the create skills for programming.	**Adobe Animate** Students will learn how to make basic animations in Adobe Flash; they will apply these animations to a PowerPoint /Website in form of a Game/Advert.	**Start KS4 Courses** IGCSE - ICT IGCSE - Computer Science BCS - ECDL

Key Stage 4

Computer Science Topics Covered
1: Introduction to computer systems
2: Numbers, processors and operating systems
3: Data communications and networking
4: Data integrity and security
5: Binary logic
6: Practical problem solving – structure diagrams, algorithms and flowcharts
7: Practical problem solving – pseudocode
8: Programming concepts
9: Databases

Information & Communication Technology Topics Covered
1: Types and components of computer systems
2: Input and output devices
3: Storage devices and media
4: Networks and the effect of using them
5: The effects of using IT
6: ICT applications
7: The systems life cycle
8: Safety and security
9: Audience
10: Communication
11: File management
12: Images
13: Layout
14: Styles
15: Proofing
16: Graphs and charts
17: Document production
18: Data manipulation
19: Presentations
20: Data analysis

Key Stage 5

IT Topics Covered
1: Data, information, knowledge and processing
2: Hardware and software
3: Monitoring and control
4: E-Safety and health and safety
5: The digital divide
6: Using networks
7: Expert systems and other types of processing
8: Spreadsheets
9: Database and file concepts
10: Sound and video editing
11: Emerging technologies
12: Role and impact of IT in society
13: Networks
14: Project management
15: System life cycle