

Week	Date	Topic	Topic detail	Revised Y/N?
Week 1	04/03/2019	<b>Unit 1</b>	<b>1.Data, Quality of Data and Information Handling</b>	
			<b>Data, Information and Knowledge</b> Recognise that:- <ul style="list-style-type: none"> <li>• data consists of raw facts and figures e.g. readings from sensors, survey facts, etc.</li> <li>• information is data which has been processed by the computer</li> <li>• knowledge is derived from information by applying rules to it</li> </ul> <b>Data Validation</b> <ul style="list-style-type: none"> <li>• The need for good quality data – GIGO (Garbage In Garbage Out)</li> <li>• Validation techniques- list check, range check, drop down menu, input masks, format checks, presence checks and check digits.</li> <li>• Potential data errors and methods for minimising the risk of error</li> </ul> <b>Information Handling (Databases)</b> <ul style="list-style-type: none"> <li>• Data types – number, text, date, time, currency, Boolean, lists, picture, sound , video</li> <li>• Calculated fields and why they are used</li> <li>• Key fields –know the definition and be able to spot a suitable key field</li> <li>• Database operations – update, append, delete records</li> <li>• Sorting – ascending and descending order or text, number and dates</li> <li>• Queries(interrogating data) – single and multiple queries, use of operators such as &lt; &gt; =, AND, OR, use of wildcards * (like)</li> <li>• Data input (forms) and output (reports)</li> <li>• Data security – sensible use of passwords, user access rights, backup and recovery of data</li> <li>• Must know advantages and disadvantages of databases</li> </ul>	
Week 2	11/03/19		<b>2.Home and Personal Communication Systems</b>	
			<b>Email</b> <ul style="list-style-type: none"> <li>• Definition of email</li> <li>• Inbox, outbox, sent items, attachments, group emails, CC, BCC, forward, reply, address book, contacts</li> </ul> <b>Instant messaging</b> Use of mobile phones to send SMS and MMS, reliance on phone signal, data usage and cost.	
			<b>Internet and other connections</b> Broadband, satellite, fibre optic, mobile communication (4G), WiFi (802.11), Bluetooth. GIS – Uses, advantages and disadvantages	

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Week 2	25/03/19	<b>Unit 1</b>	<b>4. Home Entertainment</b>	<p><b>Home Entertainment</b></p> <p>Understand the services, input and output devices used with the following:</p> <p><u>Smart TVs</u>                      Pause and rewind live TV, electronic TV guide, pay-to-view services, interactive services, e.g. shopping, betting, gaming, voting, dating.</p> <p><u>Gaming</u>                              PC gaming and games consoles, online gaming, technology in devices for gaming e.g. accelerometers, touch screens, rumble feedback.</p> <p><u>Basic digital photography</u>      Cameras, megapixels, flash, memory, technology of capturing, storing and simple manipulation of images (red eye removal, contrast, brightness, cropping etc.) display devices and photo editing software.</p> <p><u>Webcam services</u>                      Definition of a webcam, uses in home, advantages and disadvantages.</p> <p><u>Social networking</u>                      Information needed to create accounts, services available.</p> <p><u>Music and sound</u>                      Downloading from the Internet and related issues.</p> <p><u>Mobile phones</u>                      Features of mobile phones, methods for connectivity, memory capacity, Bluetooth, modern advancements.</p> <p><u>AR and VR</u>                              Augmented Reality and Virtual reality systems.</p> <p style="text-align: center;">Must know advantages and disadvantages of all of the above.</p>	

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Week 1	01/04/2019	<b>Unit 1</b>	<b>5.Home Business</b> <b>Online Shopping and Banking</b> <u>Online shopping</u> Methods for finding products, ability to recognise key parts of a shopping webpage e.g. shopping cart and hotspots, advantages and disadvantages. <u>Online booking</u> Data required to make an online booking, verification of booking data, payment methods <u>Banking</u> Services offered by online banking systems, advantages and disadvantages.	
Week 2	08/04/2019		<b>6.ICT and Learning</b> <b>Desktop environment</b> <u>Adjusting</u> Window size, mouse settings, icon size, screen resolution, desktop fonts, colour/contrast, volume. <u>Tools</u> Move, copy, delete, rename, files, folders, on-screen help, <u>Advanced</u> Features of a control panel, print settings, password protection, shortcuts. <u>People</u> Understand the reasons for changing the desktop environment to suit specific groups of people e.g. those with disabilities. <b>Accessibility for people with disabilities</b> <u>Hardware</u> Braille keyboards, concept keyboards, microphones, touch sensitive devices. <u>Software</u> Voice recognition software, text to voice software, customised desktop environments. <b>Online Tutorials</b> <u>Features</u> Videos, animations, podcasts, blogs, advantages and disadvantages.	

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		<b>Unit 1</b>	<b>VLEs and MOOCs</b> Virtual Learning Environments      Online tutorials, uploading of resources by teachers, feedback and assessment, online quizzes, advantages/disadvantages Massive Open Online Courses      Free, open online course for an unlimited number of learners, large learning community.	
Easter	15/04/2019		<b>7. Spreadsheets</b> <b>Formulas, Functions and Formatting</b> <ul style="list-style-type: none"> <li>• Creation of basic formulas using + - * / ( )</li> <li>• Creation of functions such as SUM, MIN, MAX, AVERAGE, COUNT, IF.</li> <li>• Use and understanding of relative and absolute cell references</li> <li>• Formatting techniques such as borders, currency, merge and centre</li> <li>• Ability to identify data, data types and labels</li> </ul> <b>Further uses of spreadsheets</b> <ul style="list-style-type: none"> <li>• Ability to create a What If scenario and predict the outcomes</li> <li>• Understand advantages and disadvantages of spreadsheets               <ul style="list-style-type: none"> <li>- Creation of graphs</li> <li>- Auto recalculation</li> <li>- Accurate calculations etc.</li> </ul> </li> </ul>	
Easter	22/04/19		<b>8. Data Logging and Control</b> <b>Data Logging</b> Understand and knowledge: <ul style="list-style-type: none"> <li>• the process of data logging</li> <li>• real world examples of where data logging is used</li> <li>• advantages and disadvantages of data logging (mainly compared to using humans to collect data)</li> <li>• different types of sensor and suitable uses for them</li> </ul>	

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		<b>Unit 1</b>	<p><b>Control</b></p> <p>Must understand that sensors can be used in conjunction with output devices to control environmental conditions or movement.</p> <ul style="list-style-type: none"> <li>• Need to know real world control examples e.g. burglar alarms, central heating systems, learning thermostats, smart meters, computer control, games, electronic toys</li> <li>• Be able to write a sequence of instructions to control a screen image or external device appropriately (basic programming)</li> </ul>	
Week 1	29/04/19		<p><b>9. Organisations</b></p> <p><b>Schools</b></p> <p>Understand and describe the advantages and disadvantages of:</p> <ul style="list-style-type: none"> <li>• School registration systems Also need to know alternative methods of data collection for registers and their advantages/disadvantages e.g. OMR, biometric scanning, RFID tags</li> <li>• Management information systems in schools and their wider uses other than registration e.g. holding personal data, reports, behaviour points, timetables etc.</li> <li>• Data-logging in school activities e.g. science experiments in a greenhouse.</li> </ul> <p><b>Weather Forecasting Systems</b></p> <ul style="list-style-type: none"> <li>• Describe advantages and disadvantages of computer-based weather forecasting systems</li> <li>• Be able to give alternative ways for presenting weather data e.g. tables, graphs, animations, satellite views, icons etc.</li> </ul>	
Week 2	06/05/19		<p><b>10. Laws, Safety Online, Data Protection, Health Issues</b></p> <p><b>Data Protection</b></p> <p><u>Data Protection Act</u></p> <ul style="list-style-type: none"> <li>• Need to remember the 8 basic principles</li> <li>• Exemptions from the Data Protection Act</li> <li>• Data subjects, data users, Information Commissioner</li> </ul>	

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		<b>Unit 1</b>	<b>10. Laws, Safety Online, Data Protection, Health Issues (Contd.)</b>	<p><u>Data Protection Issues</u> Know how :-</p> <ul style="list-style-type: none"> <li>• to protect data from accidental destruction</li> <li>• to protect data from deliberate damage caused by viruses and other types of malicious damage</li> <li>• to protect stored or transmitted data from unauthorised access.</li> </ul> <p><u>Methods for Data Protection</u></p> <ul style="list-style-type: none"> <li>• Password protection and password protocols</li> <li>• Access rights to data</li> <li>• Backup and recovery procedures.</li> </ul> <p><b>Copyright</b></p> <p>Understand issues concerning copyright misuse.</p> <ul style="list-style-type: none"> <li>• File-sharing</li> <li>• Ripping and burning of optical media</li> <li>• Copying of streams</li> <li>• Infringements of copyright owner's rights</li> </ul> <p><b>Staying Safe Online</b></p> <ul style="list-style-type: none"> <li>• Understand codes of conduct for personal protection</li> <li>• Prevent unauthorised access to hardware and software (e.g. firewalls)</li> <li>• Discuss appropriate steps to avoid inappropriate disclosure of personal information.</li> </ul> <p>Understand the dangers associated with:</p> <ul style="list-style-type: none"> <li>• the disclosure of personal data</li> <li>• misuse of images</li> <li>• using inappropriate language</li> <li>• Webcams.</li> </ul> <p><b>Health Issues</b></p> <p>Need to be able to state Health issues associated with the ICT workplace and methods for prevention.</p> <p><u>Health hazards</u>      RSI, neck ache, back ache, eye strain, headaches (not obesity)</p> <p><u>Prevention methods</u>      Gel pads to support wrists, take regular breaks, adjustable chair, chair with good back support</p>	

