

# ICT Competences Framework

## Introduction

These competences are appropriate to ICT support assistants, technicians, network managers and others involved in this field. They reflect the most recent thinking on the deployment of support staff in schools, workforce reform and good practice in ICT.

The framework is divided into four main skill areas: Technology, Support, Development and Personal. Within each area are four levels A to D but it is not necessary, or in many cases desirable, for any school to have technicians at all these levels. However it is suggested that schools will need access to be able to access all these competences as and when required, possibly through LEA support services or a managed service provider.

Though we have used four levels these could be arranged in three or five levels if required to meet the local situation. Some of these functions, especially at level A, may be combined with other responsibilities.

## Technician A

**Typical title** Teaching Assistant

**Description** This person has ICT support as one aspect of a wider support/assistant role. A selection of the competences listed will be relevant, but may need to be developed through appropriate on-the-job training.

## Technician B

**Typical title** ICT Technician

**Description** An entry-level post or one involving basic day-to-day support of ICT systems. This is likely to be a dedicated ICT technician.

## Technician C

**Typical title** Senior ICT Technician

**Description** A senior post with general responsibility for the effective running of ICT systems.

## Technician D

**Typical title** ICT Systems Manager Senior

**Description** A strategic post with additional specific management responsibility for the development and deployment of ICT systems.

## ICT Competences Framework

Skill	Activities	Technician A	Technician B	Technician C	Technician D
<b>Technology Focus</b>					
<b>Desktop &amp; Application Support</b>	<p>Install, maintain and upgrade desktop hardware (including peripherals) and software</p> <p>Aware of the limitations and the appropriate use of hardware and OS (operating systems).</p>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Connect up and check hardware for normal operation.</li> <li>• Set up a suitable desktop environment for users of a standalone PC.</li> <li>• Install simple software applications.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Install and test new peripherals.</li> <li>• Follow manufacturer's instructions to support the use of hardware, such as installing drivers.</li> <li>• Perform basic PC hardware repairs and upgrades.</li> <li>• Diagnose and resolve basic PC, printer, peripheral and software faults.</li> <li>• Install complete applications and set software options, such as default directory.</li> <li>• Carry out any required maintenance of applications. (eg. install service packs.)</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Perform a wide range of hardware repairs and upgrades.</li> <li>• Detect, diagnose and resolve most PC, printer and peripheral device faults.</li> <li>• Follow instructions to install and upgrade client/server applications (such as the school's MIS).</li> <li>• Identify and install essential software patches.</li> <li>• Identify application compatibility issues.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Perform advanced diagnosis procedures on hardware, peripherals and applications.</li> <li>• Give appropriate advice on compatibility of hardware and OS.</li> <li>• Give appropriate level of advice on compatibility of applications with existing systems, based on user requirements.</li> </ul>
		<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Confident user of common hardware and OS.</li> <li>• Confident user of common desktop application software.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Confident user of a majority of hardware and OS.</li> <li>• Confident user of the majority of desktop applications, including educational software.</li> <li>• Awareness of client/server based applications. (eg. School's MIS system).</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Expert user of the majority of hardware and OS.</li> <li>• Expert user of desktop application software.</li> <li>• Confident user of client/server based applications.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Expert user of all major hardware and detailed knowledge of OS.</li> <li>• Expert user of desktop and client/server based application software, including awareness of version limitations.</li> </ul>

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		<b>Examples</b> <ul style="list-style-type: none"> <li>• Check floppy disk and CD-ROM drives are working.</li> <li>• Help a user save a file to shared area.</li> <li>• Arrange desktop icons and create class work areas on a classroom PC.</li> <li>• Set up a program for children to use on a class computer.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Install additional memory or replace a CD ROM drive.</li> <li>• Advise that the Flash plug-in is required to view a particular internet site, install if appropriate and check other PCs.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Replace a power supply or upgrade a motherboard.</li> <li>• Install a scanner with appropriate default settings for resolution of scans and file type saved.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Set up a Mac system in the Graphics Department of a school largely using Windows PCs</li> <li>• Extract key user files from the functioning hard drive of a broken PC and install these on a replacement computer.</li> <li>• Advise music department on compatibility of proposed new sound cards with existing hardware and OS.</li> </ul>
<b>Server &amp; Network support</b>	<p>Install, support and maintain the network infrastructure. (Including monitoring network performance.)</p> <p>Install, maintain and upgrade (hardware and software) of file, print and web servers, and caches.</p> <p>Create and maintain user accounts and user permissions.</p>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Perform basic set up and checking of networked PCs.</li> <li>• Perform basic maintenance tasks for user accounts.</li> <li>• Use simple utilities to change information on the intranet.</li> <li>• Follow instructions to run basic network monitoring reports or utilities; inform line manager of issues noted.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Install and maintain standard network cabling.</li> <li>• Perform basic diagnostic and recovery routines on network equipment.</li> <li>• Follow detailed instructions to configure network clients, including allocating required software and connecting to the correct server.</li> <li>• Maintain an intranet by uploading pages and files.</li> <li>• Implement disk space and printer quota policies.</li> <li>• Follow instructions to maintain user accounts and permissions.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Install and set basic configuration options for equipment such as switches and routers.</li> <li>• Install software and CDs on server, trouble-shooting installation.</li> <li>• Maintain hardware and software on the server.</li> <li>• Manage the structure of an intranet.</li> <li>• Set disk space and printer quotas.</li> <li>• Create network shares and manage access rights.</li> <li>• Monitor system logs.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Design and implement network infrastructure to meet the school's requirements.</li> <li>• Manage active network components including switches, routers and bridges.</li> <li>• Install additional servers and upgrade the network operating system.</li> <li>• Set up disk caches and firewalls, and maintain Internet filtering systems.</li> <li>• Manage remote access to the school's intranet.</li> </ul>

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		<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Know how to connect a pre-configured computer to an existing network.</li> <li>• Understand facilities for basic user account management.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Understand the basic principles of structured cabling and the practicalities of connecting network devices.</li> <li>• Recognise the function of basic network infrastructure such as routers and switches.</li> <li>• Aware of the function of network file systems and of file and user administration utilities.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Understand role and function of network services and protocols such as DNS, DHCP and IP.</li> <li>• Aware of the ways in which installed applications can conflict.</li> <li>• Understand disk space and print quota management utilities.</li> <li>• Understand access rights.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Specialist networking skills relating to managing active equipment, including wireless technology.</li> <li>• Understand firewalls, disk caches, filtering systems, access policies and usage reporting utilities present in the server operating system.</li> </ul>
		<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Switch on and check PCs in a computer suite.</li> <li>• Physically connect a PC to the network, check if it is working correctly and escalate issue if a problem is encountered.</li> <li>• Change a pupil's password.</li> <li>• Clear a disk cache.</li> <li>• Run a report on printer usage, noting high volume of colour printing, and talk to the class teacher.</li> <li>• Add a news item to the school's homepage by completing a web form.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Follow instructions to configure an IP address on a PC.</li> <li>• On request, increase the disk space allowance for pupils starting a project involving large graphics files.</li> <li>• Delete temporary files across user areas.</li> <li>• Lock user accounts of pupils accessing inappropriate material through the Internet.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Follow a network diagram to identify problem equipment and take appropriate action.</li> <li>• Create automated installation scripts for networked PCs.</li> <li>• Patch the server operating system after latest security alerts.</li> <li>• Help a department create an intranet area to support 'A' Level students.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Implement LANS to deliver secure admin and curriculum functions across the network.</li> <li>• Plan (with specialist support) the deployment of wireless access points.</li> <li>• Optimise disk space used by different departments and negotiate quotas.</li> </ul>

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<b>Health &amp; Safety</b>	Aware of specific health and safety issues relating to ICT; implement relevant precautions and routines.	<b>Activities</b> <ul style="list-style-type: none"> <li>Carry out basic safety checks and escalate problems as required.</li> <li>Follow relevant H&amp;S procedures and raise awareness among staff, pupils and other users.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Ensure basic safety checks are carried out and escalate problems as required.</li> <li>Follow relevant H&amp;S procedures and raise awareness among staff, pupils and other users.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Implement and make modifications to relevant H&amp;S procedures.</li> <li>Undertake a risk assessment for every activity.</li> <li>Advise other staff of H&amp;S aspects of proposed developments.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Actively monitor school, LEA/LA and legal responsibilities.</li> <li>Develop relevant H&amp;S procedures and ensure that all ICT users follow appropriate practice.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Know both general and specific ICT H&amp;S issues relating to work, both for self and all potential users.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Know both general and specific ICT H&amp;S issues relating to work, both for self and all potential users.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Detailed knowledge of both general and specific ICT H&amp;S issues relating to work, both for self and all potential users.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Detailed knowledge of both general and specific ICT H&amp;S issues relating to work, both for self and all potential users.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Check cables and equipment for signs of damage.</li> <li>Ensure that wrist rests are available for all computers.</li> <li>Close the blinds to reduce glare on computer screens on a sunny day.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Give a brief safety induction session for new teachers/users.</li> <li>Carry out annual portable equipment testing.</li> <li>Produce notices informing users of basics ergonomics - seat height, monitor position etc.</li> <li>Suggest to a member of staff that moving a monitor would reduce eyestrain.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Manage annual portable equipment testing schedule.</li> <li>Recommend suitable mountings and position for projectors to minimise glare.</li> <li>Determine safest route and trunking arrangements for new network and power cables.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Join an online discussion group where school H&amp;S issues are considered.</li> <li>Advise office manager on purchase of new seating for use at workstations.</li> <li>Advise senior managers on available evidence for safety of various wireless technologies.</li> </ul>

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<b>Support Focus</b>					
<b>Configuration &amp; Installation</b>	<p>Follow a defined process to manage configurations and changes to ICT equipment, designed to support service provision.</p> <p>Appropriately test changes to systems.</p> <p>The audit of software (including-licences), hardware, ICT usage and ICT infrastructure; the maintenance of accurate records in terms of identification and configuration.</p>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Follow an acceptance test procedure on new ICT equipment and report results appropriately.</li> <li>Update records of installed hardware and software.</li> <li>Maintain a software library and store original copies of installed applications.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Plan a change, record it and communicate it successfully.</li> <li>Collate and interpret results of testing and advise if goods are fit for use.</li> <li>Retrieve and record information in a Configuration Management database or log.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Design and apply a simple process to manage configuration and change within the school.</li> <li>Assist in creating and implementing a structured approach to rolling out new hardware or software, including procurement, testing and assessing the needs for user training.</li> <li>Manage collection of, appropriate access to, and storage of relevant data.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>Tailor processes to the specific school. Report on the effectiveness and impact of the processes.</li> <li>Design, implement and monitor the school procedure on receiving and testing ICT equipment.</li> <li>Design and implement the school policy on asset disposal.</li> </ul>
		<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand the importance of documenting system configuration information.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Able to identify and categorise relevant information about changes in configuration for recording purposes.</li> <li>Able to differentiate between standard and exception changes.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand the importance of a structured approach to configuration tracking.</li> <li>Aware of issues relating to equipment disposal.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand the nature of inventory design for the purposes of security and insurance.</li> </ul>
		<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>Unpack, check against inventory, assemble and test basic operation of a new computer.</li> <li>Record make and model of PC, OS version, service pack and serial number.</li> <li>Assist with an annual audit of ICT infrastructure.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>Move a printer to a new location, update printer drivers and record the change.</li> <li>Alert line manager when the number of software licences is insufficient for planned installations.</li> <li>Suggest where an existing record keeping format needs changing.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>Plan rollout for an upgrade to the word processor used for administration, in conjunction with the office manager.</li> <li>Receive results of acceptance testing on new computers and query failures with suppliers before reporting that payment is appropriate.</li> <li>Create a configuration management database and ensure junior staff use it.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>Ensure the school has a system for accurate asset reporting in the event of theft, flood or fire, and an effective way of managing software licences.</li> <li>Produce an accurate network diagram.</li> </ul>

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<b>Continuity, Maintenance &amp; Security</b>	Minimise the impact on the ICT service of a serious disaster by developing, communicating and implementing a plan for recovery and by completing maintenance tasks (including performing backups, implementing virus protection and securing ICT systems).	<b>Activities</b> <ul style="list-style-type: none"> <li>Follow processes and tasks described in school's disaster recovery and maintenance plans.</li> <li>Follow instructions to implement school backup and virus protection procedures.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Note risks to ICT systems and suggest precautions.</li> <li>Follow extended maintenance procedures according to a defined schedule.</li> <li>Implement and suggest improvements to school backup, virus protection and security policies.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Assess and differentiate risks to key systems and develop appropriate individual system recovery procedures.</li> <li>Develop a maintenance schedule.</li> <li>Identify failing systems and suggest solutions.</li> <li>Responsible for implementing backup and virus protection policies.</li> <li>Ensure school policy on staff and pupil access to data and files is implemented.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Maintain and regularly review whole-school system contingency plans.</li> <li>Design and implement the school's backup and virus protection policies.</li> <li>Implement appropriate security systems to protect hardware, data and confidential information.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand the role of a disaster recovery plan and of key systems to the school's business.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand how risk varies between systems, and key system roles in the wider ICT service context.</li> <li>Understand benefits and constraints of different backup methodologies.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand how service continuity means more than immediate 100% availability, and how alternatives to key systems can allow the school to continue to function at a basic level.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand the importance of contingency planning at different levels for elements of the school's business.</li> </ul>

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		<b>Examples</b> <ul style="list-style-type: none"> <li>• Run a scandisk utility and report the results.</li> <li>• Load backup tapes each evening according to a planned rotation schedule.</li> <li>• Run virus-scanning software and record results.</li> <li>• Ensure the server cabinet is locked after use.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Rotate data backup tapes appropriately and store off-site; test backup tapes by restoring files on a regular basis.</li> <li>• Update definitions for anti-virus software.</li> <li>• Withdraw access rights for a pupil who deletes another pupil's files, and report the issue to curriculum staff.</li> <li>• Change the administrator password on a regular basis.</li> <li>• Ensure staff sign a data confidentiality agreement; store these documents.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Recommend installation of UPS for the administration server.</li> <li>• Monitor logs to identify failing disk in a RAID system.</li> <li>• Develop backup and restoration regime for a pupil data server.</li> <li>• Recommend use of password protected screen savers on administration terminals.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>• Analyse the different ICT business tasks in the school and agree priorities and acceptable risks.</li> <li>• Ensure SLA (Service Level Agreement) with a managed service provider includes suitable arrangements for covering absent technical staff.</li> <li>• Recommend appropriate insurance arrangements, with regard to critical services and budget constraints.</li> <li>• Suggest appropriate levels of access to new module of the school's MIS.</li> </ul>
<b>Support Request Management</b>	<p>Deal with support requests; analyse and determine appropriate response to requests.</p> <p>Manage support resource while considering the wider service context.</p>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Record requests accurately in a support log. Retrieve details of previous requests if an enquiry is made.</li> <li>• Investigate a request for support, record diagnostic information and either resolve or escalate to the appropriate level.</li> <li>• Record the time spent on tasks and compare to expectation/allocation as appropriate.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Discriminate between incidents and problems.</li> <li>• Search a knowledgebase/logs of previous calls to inform diagnosis and resolution.</li> <li>• Record detailed diagnostic information.</li> <li>• Determine whether an immediate solution is required and alert line manager.</li> <li>• Understand when a quick fix is not sufficient to permanently resolve a problem.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Interpret detailed diagnostic information</li> <li>• Prioritise resolution and determine whether external support is required.</li> <li>• Monitor and manage server logs and use them to inform developments/support.</li> <li>• Produce reports from the support log to provide basic management information on the volume and nature of requests.</li> <li>• Allocate tasks between support staff, including recording requests, following up calls and implementing a maintenance schedule.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>• Produce and analyse separate incident and problem reports for management purposes.</li> <li>• Analyse the support logs to produce detailed management reports and help plan future support service developments.</li> <li>• Provide second level of in-school support for more complex requests.</li> <li>• Set support priorities given staff availability and wider ICT service demands.</li> <li>• Advise leadership team on areas of CPD required, based on support log analysis.</li> </ul>

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Skill	Activities	Technician A	Technician B	Technician C	Technician D
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand how to capture support information to school specifications.</li> <li>Understand the importance of recording time spent on tasks.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand the difference between an incident and a problem.</li> <li>Understand the role of a knowledgebase in recording and retrieving known solutions to problems.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Aware of the importance of structured record keeping and reporting.</li> <li>Understand which resources are available to support the ICT function, and how they might be allocated.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand the importance of balancing trouble-shooting against monitoring and scheduled maintenance.</li> <li>Aware of the role of support request analysis in providing management information and informing service development.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Investigate a reported CD-ROM drive problem and record the time taken until it is resolved.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Restart a print queue on a server, and then note from knowledgebase that this is happening regularly, requiring further investigation.</li> <li>Change the screen resolution to enable correct running of a program; advise on the need to upgrade the graphics card for wider program compatibility.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Personally follow up an intranet access problem with the managed service provider, while allocating a junior technician to recording and responding to support requests.</li> <li>Notice in the support log that there are many problems with the word processing application and then initiate appropriate action.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Advise a less experienced technician on how to trace a faulty network component.</li> <li>Produce a report classifying the type and frequency of ICT support call.</li> <li>On the basis of support requests, suggests that time is allocated to training science technicians in the use of data logging equipment.</li> </ul>
<b>Internal Support Arrangements &amp; External Contracts</b>	<p>Work within the context of a negotiated service level.</p> <p>Set out and manage clear expectations for service delivery.</p> <p>Monitor external support services and contracts.</p> <p>Aware of warranties,</p>	<b>Activities</b> <ul style="list-style-type: none"> <li>Work to a clearly defined service definition.</li> <li>Report on variations and escalate contract/warranty issues appropriately.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Work to a clearly defined service definition and note problems in maintaining service levels.</li> <li>Track external support calls and report performance of external contracts.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Assist school managers in defining an appropriate service level and support arrangements.</li> <li>Collate data to inform a review process of the standard achieved by internal support staff.</li> <li>Interpret and report external service response data and provisionally assess effectiveness.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Report on and monitor progress against agreed service levels (both internal and external).</li> <li>Assess needs, and recommend internal and external support arrangements and contracts required to deliver an effective ICT service in the school.</li> </ul>

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	support contracts and contact details. Ensure warranties are appropriately used.	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand what contracts and warranties are in place.</li> <li>Know where to get support for specific purposes.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand the importance of a service level definition.</li> <li>Understand the service level definition implemented in the school.</li> <li>Understand implications of contracts and warranties that are in place.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Understand different elements of ICT services and likely support requirements.</li> <li>Detailed knowledge of relevant external ICT support services and contracts.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Aware of the different support models.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Carry out regular tasks according to an agreed schedule.</li> <li>Check a warranty and phone customer support when a printer breaks down.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Advise line manager that basic checks and routine maintenance are behind schedule due to a large number of specific support requests.</li> <li>Record response times delivered as part of managed service contract with respect to SLA (Service Level Agreement).</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Write a report for senior managers explaining why another technician is required.</li> <li>Inform leadership team if school is not receiving services as contracted.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Review contractual arrangements and address strengths and weaknesses.</li> <li>Define standards of service which school staff might reasonably expect from the ICT support team.</li> </ul>

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Skill	Activities	Technician A	Technician B	Technician C	Technician D
<b>Development Focus</b>					
<b>Strategy &amp; Planning</b>	Ensure coherent ICT development, supporting the school's strategic vision of teaching and learning.	<b>Activities</b> <ul style="list-style-type: none"> <li>Identify a possible ICT requirement.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Identify a possible ICT requirement and an outline specification for a solution.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Identify software, hardware and working practices required to fulfil the functional specification as defined by school staff.</li> <li>Plan and implement changes to elements of the ICT service.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Have an overall view of the capabilities of the school's ICT service and contribute to continuous improvement to meet future needs.</li> <li>Plan for major developments of the ICT service and project manage their implementation.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Aware of the possibilities of ICT in providing a solution.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Basic technical knowledge of the possibilities of ICT in providing a solution.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Technical knowledge of a wide range of solutions.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Specialist technical knowledge of a wide range of solutions.</li> <li>Understand system integration risks and issues.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Identify the need for colour printing in a specific lesson.</li> <li>Suggest the use of a spreadsheet to record attainment.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Suggest the use of a wireless network to access central ICT resources from a non-wired classroom.</li> <li>Suggest changes to work routines to make a technician more available to a member of staff new to ICT.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Plan the physical layout and cabling requirements for proposed new ICT suite.</li> <li>Advise on the characteristics of a laptop suitable for use on a field trip.</li> <li>Identify the advantages of using OMR for recording assessments and suggest a routine for collecting data.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Take a functional specification for use of digital video and provide a technical solution in terms of equipment and implications for data storage, network traffic and specification of classroom hardware.</li> </ul>

## ICT Competences Framework

Skill	Activities	Technician A	Technician B	Technician C	Technician D
<b>Budget &amp; People Management</b>	<p>Work to ensure cost effectiveness of services, and that good practice is followed in spending and accounting.</p> <p>Ensure ICT in school is best value and fit for purpose.</p> <p>Exercise good practice in working with colleagues to deliver the ICT service.</p> <p>Suggest CPD opportunities and requirements.</p>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Understand the school process for purchasing and recording expenditure.</li> <li>• Purchase consumables following school procedures.</li> <li>• Work as part of a team.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Track expenditure against a budget and produce simple estimates for planned expenditure on consumables and similar.</li> <li>• Purchase lower value items (eg. one-off software or peripherals) following school procedures.</li> <li>• Adopt flexible working practices.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Support the full range of financial planning for ICT, including purchase of larger items, and help to estimate future budget requirements.</li> <li>• Have some supervisory responsibilities for junior staff.</li> </ul>	<p><b>Activities</b></p> <ul style="list-style-type: none"> <li>• Develop ICT financial management processes with reference to school and LEA/LA procedures.</li> <li>• Understand and interpret the appropriateness of national and local framework contracts.</li> <li>• Closely involved in writing school ICT procurement policy.</li> <li>• Management responsibilities for other ICT support staff.</li> </ul>
	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• School purchasing procedures.</li> <li>• Understand the benefits of teamwork.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Understand and follow school procedures.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Appreciation of the various stages in procurement, and different roles of staff.</li> <li>• Basic personnel management skills suited to responsibilities.</li> </ul>	<p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>• Aware of different forms of, and regulations on, tendering.</li> <li>• Appropriate level of personnel management skills for managing a team.</li> </ul>	
	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Store consumables and monitor their usage.</li> <li>• Report a warning from an online service that the subscription is due for renewal.</li> <li>• Request training in the use of the new digital camera.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Cross-reference invoices, packing notes, and order forms.</li> <li>• Create a spreadsheet showing past use and costs of printer paper, and predict future requirements.</li> <li>• Work beyond normal hours (against time <i>in lieu</i>) to resolve a specific problem.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Contact a range of suppliers to get quotes for new whiteboards and draw up a detailed list of comparisons to discuss with more senior staff.</li> <li>• Supervise a junior technician, including their development and training.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Contribute to tender specification for new computer suite, liaise with suppliers and help assess responses.</li> <li>• Manage the ICT support team's workload and priorities.</li> <li>• Carry out an annual performance review for other team members and negotiate specific personal development goals.</li> </ul>	

## ICT Competences Framework

Skill	Activities	Technician A	Technician B	Technician C	Technician D
<b>Personal Focus</b>					
<b>Personal ICT Competences</b>	Individual ICT skills required to perform the role.	<b>Activities</b> <ul style="list-style-type: none"> <li>Confident computer user.</li> <li>Attend relevant courses to improve ICT skills.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Advanced computer user.</li> <li>Attend relevant courses and use other means to improve ICT skills.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Expert computer user.</li> <li>Actively seek to broaden knowledge and skills.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Expert computer and network user.</li> <li>Actively seek to maintain and extend expertise in appropriate areas.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Able to use a word processing package.</li> <li>Able to use email and browse the web.</li> <li>Understand basic file management.</li> <li>Able to install basic software.</li> <li>Can use simple peripherals.</li> <li>Awareness of computer viruses.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Able to use spreadsheets, databases, presentation and desk top publishing software.</li> <li>Understand different types of email.</li> <li>Can produce a simple web page.</li> <li>Can perform simple image and graphic manipulation.</li> <li>Able to download and save files from the Internet.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Can create a database that utilises web forms for accessing data and updating.</li> <li>Understand function of, and can create, macros, scripts and other simple program code.</li> <li>Understand how to move data between different applications using appropriate file formats (eg. CSV).</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Develop expertise in specific user areas to provide advice and support.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Use a scanner or digital camera.</li> <li>Burn a CD.</li> <li>Change page set up from portrait to landscape before printing.</li> <li>Perform a simple web search.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Use web-based and local email.</li> <li>Resize and crop pictures; change images from colour to black and white.</li> <li>Use an online tutorial to improve spreadsheet skills.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Import a spreadsheet into a word processor and change the formatting.</li> <li>Export set list data from school MIS software and import into network's user database.</li> <li>Use a self-assessment tool to identify gaps in knowledge and then investigate suitable training opportunities.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Use CAD/CAM systems developed for textiles teaching.</li> <li>Attend a one-day seminar, run by a manufacturer of active network devices, on the implications of delivering high quality video to the desktop.</li> </ul>

## ICT Competences Framework

<b>Communication Skills</b>	Ability to effectively communicate (verbally and in writing) technical information at an appropriate level, and in a suitable style, having assessed the audience.	<b>Activities</b> <ul style="list-style-type: none"> <li>Support staff and pupils.</li> <li>Contact suppliers.</li> <li>Produce simple help sheets.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Advise and train individual staff and pupils.</li> <li>Contact suppliers.</li> <li>Produce detailed help sheets and other documentation.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Liaise with senior staff.</li> <li>Train groups of staff.</li> <li>Negotiate with suppliers.</li> <li>Document current policies and practice.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Advise senior staff and governors.</li> <li>Negotiate with suppliers.</li> <li>Document systems and procedures.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Good level of written and spoken English appropriate to the context and audience.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Good level of written and spoken English appropriate to the context and audience.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Good level of written and spoken English appropriate to the context and audience.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Good level of written and spoken English appropriate to the context and audience.</li> </ul>
		<b>Examples</b> <ul style="list-style-type: none"> <li>Show a user how to log in to their new PC.</li> <li>Help pupils load a file from the shared area.</li> <li>Produce notices.</li> <li>Maintain records.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Spend time with a staff member wanting to produce a table using a word processor.</li> <li>Write a memo to the finance department regarding items missing from a delivery.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Run a training session on uploading resources to the intranet.</li> <li>Agree a 10% discount for single purchase of five laser printers.</li> <li>Produce a report on the current state of the school's ICT hardware.</li> </ul>	<b>Examples</b> <ul style="list-style-type: none"> <li>Attend SMT meetings where the ICT service is discussed.</li> <li>Make a presentation to school governors on a proposed ICT development.</li> <li>Produce a staff handbook for ICT technician team.</li> </ul>
<b>Educational Awareness</b>	Understand the school environment and context in which ICT is used, and realise the unique characteristics of schools, pupils and the school workforce.	<b>Activities</b> <ul style="list-style-type: none"> <li>Attend and support staff training sessions, to increase understanding of how ICT is used in specific contexts.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Read school policy documents, schemes of work and curriculum plans.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Read published materials about the educational use of ICT.</li> </ul>	<b>Activities</b> <ul style="list-style-type: none"> <li>Regularly access key ICT education web sites to keep abreast of changes and developments.</li> </ul>
		<b>Knowledge</b> <ul style="list-style-type: none"> <li>Aware of basic school structure, year groups and staffing structure.</li> <li>Aware of different confidences of staff and pupils in using ICT.</li> <li>Aware of different uses of ICT in schools.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Appreciation of the curriculum, including a general understanding of the requirements for ICT in the National Curriculum.</li> <li>Aware of relevant school policies.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Detailed knowledge of school structure, including staffing roles and responsibilities.</li> <li>Understand how ICT can enhance the teaching and learning in, and management of schools.</li> </ul>	<b>Knowledge</b> <ul style="list-style-type: none"> <li>Aware of role of LEA/LA, DfES and National Strategies in relation to ICT.</li> <li>Aware of different levels of capability in each level of NC ICT and implications for infrastructure.</li> <li>Understand how the overall technical requirements of the school should support the use of ICT in the curriculum and management of the school.</li> </ul>

## ICT Competences Framework

	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Note different requirements of curriculum and administration users and offer appropriate <i>ad hoc</i> support.</li> <li>• Ensure booking sheets are updated for equipment and ICT suites, according to lesson requirements.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Ensure headphones &amp; keyboards are available for music lessons.</li> <li>• Monitor booking sheets for evidence of cross-curricular use of ICT.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Discuss with teachers advantages and problems of using mobile electronic whiteboards.</li> <li>• Attend a seminar with school's assessment coordinator on setting up the new assessment software.</li> <li>• Read TES <i>Online</i> supplement.</li> </ul>	<p><b>Examples</b></p> <ul style="list-style-type: none"> <li>• Aware of the National Primary Strategy use of data projectors and the implication of such requirements for resources in school.</li> <li>• Consider the implications on server load of 250 PCs logging in at the same time.</li> </ul>
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