

SIS: Set up an IT system

This is the ability to safely set up the components of an IT system (eg personal computer - PC, keyboard, mouse and printer), removable storage media (eg data stick or external DVD drive), communication service to access the Internet and associated software and check that they are working properly.

A. The foundation user can connect up the basic components of an IT system, removable storage media and a communication service safely using default setup routines and run simple tests to check it is working successfully.

Examples of context: Following supplier instructions to assemble the component parts of a new computer; add new peripheral or storage 'plug and play' devices; recycle used computer equipment

B. The intermediate user can select and connect up an IT system with a range of hardware, removable storage media and a communication service safely and run more advanced tests to check it is working successfully.

Examples of context: Re-assemble personal computer after moving house/office; transferring personal files to a new PC; setting up and testing a home wireless network

C. The advanced user can select and connect up an IT system with a range of hardware, removable storage media and a communication service safely and successfully and is able to help others to do so.

Examples of context: Re-configuring a PC after a new hard disk has been installed

Using IT Systems

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Element	Performance Criteria	Knowledge	Examples of Content
The competent person will...	To demonstrate this competence they can...	To demonstrate this competence they will also ...	The examples given are indicative of the learning content at each level and are not intended to form a prescriptive list for the purpose of assessment
SIS:A1 Connect up a personal computer, printer and peripheral devices safely	A1.3 Connect up the components of an IT system safely, including a printer and other peripheral devices A1.4 Connect removable storage media to a PC safely	A1.1 Identify what IT system components, storage and peripheral devices are needed and how to connect them A1.2 Identify any health and safety issues associated with setting up an IT system	Health and safety issues: Health and safety issues, risks from hardware, electrical connection risks and guidelines, use and disposal of cleaning materials, handling equipment. Risks to self and others from using hardware; health and safety point of contact IT system components: Will vary according to the set up, for example: Personal computer, monitor, keyboard, mouse (or other pointing device) Peripheral devices: Speakers, scanner, games console, joystick; Plug and play devices; default setup routines, printer and other device drivers Removable storage media: Disk, CD/DVD, data/memory stick, media card, mobile device, removable hard drive; default setup routines
SIS:A2 Connect to an IT communication service	A2.1 Connect communication hardware safely to a PC A2.3 Connect to a communication service from a PC	A2.2 Identify the details needed to connect to an Internet Service Provider (ISP)	Communication hardware: Router, modem, mobile data device, wireless router Communication service: Broadband, dial up, wireless, network connections, mobile device
SIS:A3 Set up software for use	A3.1 Configure the user interface to meet needs A3.3 Set up and configure virus protection software A3.4 Set up files and software to meet needs	A3.2 Identify what security precautions need to be addressed when connecting to the internet	User interface: Operating system, date, time, language settings; Set up user account; desktop shortcuts Set up files and software applications: Software licence; installation disks; manuals; default settings; autosave settings; secure removal/transfer of data
SIS:A4 Check that the IT system and communication service are working successfully	A4.3 Run tests to check that the system and communication service are working successfully A4.5 Respond to error messages and report faults as appropriate	A4.1 Identify simple tests that can be used to check the system A4.2 Identify simple communication tests that can be used to check the internet connection A4.4 Identify how to report faults and seek expert help	System tests: Hardware and software; Print test pages, check files are saved on storage media, open and close applications; open and close files; access network files and applications; certificates and labelling Communication tests: Send and receive test email, navigate to ISP website Report faults: Helpdesk; information needed by experts; manufacturer's faults

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SIS:B1 Select and connect up a personal computer safely with associated hardware and storage media to meet needs	B1.4 Select and connect up the components of an IT system safely, including any peripheral devices and storage media	B1.1 Describe what IT system components, storage and peripheral devices are needed B1.2 Describe any health and safety issues associated with setting up an IT system B1.3 Describe the characteristics of IT systems that affect performance	Health and safety issues: Health and safety issues, risks from hardware, electrical connection risks and guidelines, use and disposal of cleaning materials, handling equipment. Risks to self and others from using hardware; health and safety point of contact IT system performance: Processor speed, memory size, storage capacity, network capability IT system components: Will vary according to the set up, for example: Personal computer, monitor, keyboard, mouse (or other pointing device) Peripheral devices: Speakers, modem, scanner, games console, joystick; TV, data projector, white board; Plug and play devices; customised setup routines, printer and other device drivers Storage media: Disk, CD/DVD, data/memory stick, media card, mobile device, removable hard drive; customised setup routines
SIS:B2 Select and connect an IT system to a communication service to meet needs	B2.1 Select and connect communication hardware safely to an IT system B2.3 Select and connect to a communication service from an IT system	B2.2 Describe the factors that affect data transfer B2.4 Identify the login and password details needed to connect to an Internet Service Provider (ISP)	Communication hardware: Router, modem, mobile data device, wireless router Data transfer: Which combinations of hardware and software offer different data transmission speeds; download capacity Communication service: Broadband, dial up, wireless, network connections, mobile device, ISP
SIS:B3 Install and configure software for use	B3.1 Configure the user interface to meet needs B3.3 Set up and configure virus protection software B3.4 Install and set up application software to meet needs B3.5 Backup and restore system and data files	B3.2 Describe what security precautions need to be addressed	User interface: Operating system, date, time, language settings; Set up user account; desktop shortcuts; customise start-up Set up applications: Software licence; installation disks; manuals; customised settings; download software; map network drive; register software

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SIS:B4 Check that the IT system and communication service are working successfully	<p>B4.2 Select and run suitable tests to make sure that the system and communication service are working successfully</p> <p>B4.4 Respond to faults and error messages and use help and troubleshooting facilities to determine and take appropriate action</p>	<p>B4.1 Identify what tests can be used to check the IT system and communications</p> <p>B4.3 Identify the help and troubleshooting facilities available to solve problems</p>	<p>System tests: Hardware and software; Print test pages, check files are saved on storage media, open and close applications; open and close files; access network files and applications; Certificates and labelling; check printer and other drivers</p> <p>Communication tests: Send and receive test email, navigate to ISP website; ping IP address</p>
SIS:C1 Select and connect up a personal computer safely with associated hardware and storage media to meet needs	C1.4 Select and connect up the components of an IT system safely, including any peripheral devices and storage media	<p>C1.1 Explain the reasons for choosing different system components and how to avoid any compatibility issues between hardware and software</p> <p>C1.2 Explain any health and safety issues associated with setting up an IT system</p> <p>C1.3 Explain the characteristics of IT systems that affect performance</p>	<p>Compatibility issues: What problems can occur when hardware, software and operating systems are not compatible; why compatibility standards are needed</p> <p>Health and safety issues: Health and safety issues, risks from hardware, electrical connection risks and guidelines, use and disposal of cleaning materials, handling equipment. Risks to self and others from using hardware; health and safety point of contact</p> <p>IT system performance: Processor speed, memory size, storage capacity, network capability; graphics; display adapter</p> <p>IT system components: Will vary according to the set up, for example: Personal computer, monitor, keyboard, mouse (or other pointing device)</p> <p>Peripheral devices: Speakers, modem, scanner, games console, joystick; TV, data projector, white board; Plug and play devices; customised setup routines, printer and other device drivers</p> <p>Storage media: Disk, CD/DVD, data/memory stick, media card, mobile device, removable hard drive; customised setup routines; backup media</p> <p>Reasons for choosing storage media: Performance, capacity, accessibility, portability, security</p>

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SIS:C2 Select and connect IT system to a communication service successfully to meet needs	<p>C2.3 Select and connect communication hardware safely to an IT system</p> <p>C2.4 Select and connect to a communication service from an IT system</p>	<p>C2.1 Explain the reasons for choosing a communication service</p> <p>C2.2 Explain what effect variations in data transmission speed may have</p> <p>C2.5 Explain the factors which influence choice of Internet Service Providers</p>	<p>Communication hardware: Router, modem, mobile data device, wireless router; cables, power supply; USB, parallel, serial connections</p> <p>Communication service: Broadband, dial up, wireless, network, mobile device, ISP, IP configuration</p> <p>Data transmission speed: Which combinations of hardware and software offer very fast or slower data transmission speeds; download capacity; how much speeds in transmitting, receiving and sending data may vary</p>
SIS:C3 Install and configure operating system and application software for use	<p>C3.1 Configure the user interface to meet needs</p> <p>C3.3 Install, set up and configure virus protection and other security systems and software</p> <p>C3.5 Establish a backup routine for data and system</p> <p>C3.6 Install, set up and configure application software to meet needs</p>	<p>C3.2 Explain what security precautions need to be addressed for the system to be used securely online by several users</p> <p>C3.4 Explain the benefits and risks of using disk partitions or other backup locations</p>	<p>User interface: Operating system, date, time, language settings; Set up administrator and user accounts; desktop shortcuts; customise start-up; memory usage; power management</p> <p>Security systems: Firewall, spyware, anti-spam software</p> <p>System backup: Disk partition, removable storage, disk or tape rotation, system restore points, physical location of backup</p> <p>Set up files and software applications: Software licence; installation disks; manuals; download, customised settings; download software; map network drive; register software; custom installations</p>
SIS:C4 Check that the IT system and communication service are working successfully	<p>C4.2 Select and run suitable tests to make sure that the system and communication service are working successfully</p> <p>C4.4 Establish procedures for recovery in the event of system faults or failure</p> <p>C4.5 Respond to faults and error messages and use help and troubleshooting facilities to determine and take appropriate action</p>	<p>C4.1 Explain what system tests and communication tests are needed and why</p> <p>C4.3 Explain the range of help and troubleshooting facilities available to solve problems</p>	<p>System tests: Hardware and software; Print test pages, check files are saved on storage media, open and close applications; open and close files; access network files and applications; Certificates and labelling; check printer drivers; de-frag, delete unwanted system files, check backup strategy, restore system files, restore data files</p> <p>Communication tests: Send and receive test email, navigate to ISP website; ping IP address; check transmission speed</p> <p>Recovery procedures: Logs and records of system components and licensed software; Boot disk; system restore and backup</p>