

WJEC Level 1/2 Vocational Technical Award in ICT

Unit 1 - ICT in Society

1.1 How IT can be used to fulfil the needs of organisations and individuals

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
1.1.1 Functionality of different hardware devices	• Identify common computing devices and describe their functions. • Identify input devices and explain how they are used. • Identify output devices and explain their purpose. • Identify primary and secondary storage and describe their uses. • Identify internal ports and explain their functions.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organiser 1</u>
1.1.2 Functionality of different software	• Explain the purpose of system software. • Describe how application software is used. • Explain what utility software does. • Describe how specialist software is used. • Explain the role of information-handling software. • Describe the main features of open-source software. • Explain how communication software works.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organiser 1</u>
1.1.3 Services provided by IT	• Explain how digital services and devices such as smart TVs, mobile phones, webcams, music and sound services, gaming, and image capture and editing save time, support work, improve communication, and provide leisure opportunities. • Describe how online services, including social networking, online banking, e-commerce, online shopping, searching, and booking systems, help users by making everyday tasks quicker and easier. • Explain how business and organisational systems such as payroll systems, modern mail systems, registration systems, and control processes manage information efficiently and improve productivity. • Describe how advanced technologies, including robotics, bionics, artificial intelligence, and expert systems, help complete tasks and support users effectively.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organiser 1</u>

1.2 How data and information are used and transferred

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
1.2.1 Why data must be fit for purpose	• Explain that data consists of raw facts and figures. • Describe how a computer turns data into information. • Explain how knowledge is created by applying rules to information. • Describe why good-quality data is important. • Explain the benefits of encoding data and why it is done. • Describe how data access can be faster, and storage improved. • Explain the advantages and disadvantages of using ICT to store data. • Describe common file types and their uses. • Explain how data compression works and why it is useful. • Describe file properties and how they are used.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organiser 2
1.2.2 How input data is checked for errors	• Describe how data can be captured using different methods. • Explain methods for validation and verification, and when to use them. • Describe possible sources of errors in data. • Explain techniques to reduce or prevent these errors.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organiser 2
1.2.3 How data is transferred over different types of networks	• Describe the differences between local (LAN) and wide area (WAN) networks. • Explain the purpose of network protocols. • Describe how computer networks work. • Explain network topologies, including bus, star, and ring. • Describe internet, intranet, and extranet systems. • Explain the roles of devices in a network. • Describe how data is transferred over a network. • Explain potential threats to data transfer, such as packet sniffing. • Describe the differences between cloud computing and in-house servers. • Explain emerging technologies in networking.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organiser 2

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
1.2.4 Different types of connectivity	• Describe different connection methods. • Explain short-range wireless connections, including Wi-Fi (802.11), Bluetooth, NFC, and RFID. • Describe medium-range wireless connections, such as 3G, 4G, and 5G. • Explain long-range wireless connections, including microwave and satellite. • Describe wired connections, including Ethernet, USB, Micro USB, and USB-C. • Explain emerging connection technologies.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organiser 2
1.3 Legal, moral, ethical, cultural and environmental impacts of IT and the need for cybersecurity			
Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.1.1 Risks to information held on computers	• Describe accidental damage and how it can affect systems. • Explain unintended disclosure caused by incorrect access levels. • Describe malicious software, including viruses, worms, Trojan horses, spyware, ransomware, DDoS, and keylogging. • Explain hacking. • Describe social engineering and how it can compromise security. • Explain emerging threats in cybersecurity.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organizer 3
2.1.2 The impact of data loss, theft, or manipulation on individuals and businesses	• Explain the financial impact of security breaches. • Describe the moral and legal effects, including competitor advantage, GDPR/DPA breaches, and risk of blackmail. • Explain how data manipulation can affect organisations. • Describe the impact of losing services. • Explain the consequences of losing intellectual property. • Describe how security issues can harm reputation.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	Knowledge Organizer 3

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.1.3 Methods to protect information	• Describe logical protections, including access levels, authentication, firewalls, anti-malware, passwords, and encryption. • Explain physical protections, including locks, biometrics, hardware location, backup systems, and security staff. • Describe security policies, including disaster recovery, staff responsibilities, acceptable use, and staff training. • Explain emerging security technologies.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organizer 3</u>
2.1.4 How moral and ethical issues affect computer users	• Explain privacy and security, and why they are important. • Describe cookies and how multinational companies collect data. • Explain how individuals can be monitored. • Describe the impact of data loss or damage.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organizer 3</u>
2.1.5 How legal issues protect computer users	• Describe the purpose of the General Data Protection Regulation (GDPR) 2018. • Explain the Data Protection Act (DPA) 1998 and why it is important. • Describe the Computer Misuse Act 1990 and what it covers. • Explain the Communications Act 2003 and why it matters. • Describe the Regulation of Investigatory Powers Act 2016 and its purpose. • Explain the Copyright, Designs and Patents Act 1988 and how it protects work. • Describe key points of Health and Safety laws.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organizer 3</u>

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.1.6 The cultural, personal, and environmental impact of ICT	• Describe employment patterns and how they are changing. • Explain the need for retraining at work. • Describe changes in working practices, such as collaboration and hot desking. • Explain teleworking and its benefits. • Describe homeworking and how it affects work. • Explain how videoconferencing is used for communication. • Describe the effects of technology on transport. • Explain the impact of technology on traditional media. • Describe the uses of drones. • Explain the difference between green IT and non-green IT. • Describe e-waste and its impact. • Explain rare earth element mining and why it matters. • Describe global production lines and their role in manufacturing. • Explain the digital divide locally and globally. • Describe social media and issues like cyberbullying and fake news. • Explain net neutrality and why it is important. • Describe technology-related addiction. • Explain the effects of technology on mental health. • Describe emerging technologies and their impact.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organizer 3</u>
2.1.7 How a digital footprint can impact computer users	• Describe what a digital footprint is, including passive and active footprints. • Explain how social media posts add to a digital footprint. • Describe online identity and how it is created. • Explain the risks of identity theft. • Describe the dangers of posting inappropriate images online.	This section is part of Unit 1: ICT in Society and covers the theoretical knowledge needed for the WJEC ICT Technical Award exam. No practical or controlled assessment is required. Learners will instead create presentations, complete questionnaires, and engage in class discussions to reinforce their understanding.	<u>Knowledge Organizer 3</u>

Unit 2 - ICT in Context

2.1 Planning, creating, modifying and using databases

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.1.2 Planning and designing a Database	• Identify the success criteria. • Identify the different entities in a client brief. • Design a database structure, including tables, relationships, forms, queries, reports, fields, keys, data types, field properties, and validation rules, while reducing data repetition. • Justify the choice of field types used.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 1 - Planning, creating, modifying and using databases.	<u>Unit 2 Course Companion</u>
2.1.3 Creating and modifying a database	• Create tables. • Add fields. • Create a primary key. • Assign the correct data types. • Apply validation rules and error messages. • Link tables using key fields and relationships. • Import data from a CSV file. • Add, edit, and delete records. • Check data to make sure it is correct. • Test the database to ensure it works properly.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 1 - Planning, creating, modifying and using databases.	<u>Unit 2 Course Companion</u>
2.1.4 Interrogating a database	• Create select queries using a query builder, including single table / single criteria, multiple tables / multiple criteria, wildcard, parameter, and calculations • Produce reports from queries, including at least one customised report for its purpose.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 1 - Planning, creating, modifying and using databases.	<u>Unit 2 Course Companion</u>
2.1.5 Creating user interfaces	• Create data entry forms with relevant fields, validation, and easy navigation. • Enhance the form layout, including an image for business use. • Add features and controls to make the system user-friendly, allowing easy navigation of records, forms, queries, and reports using VB and/or macros.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 1 - Planning, creating, modifying and using databases.	<u>Unit 2 Course Companion</u>

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.1.6 Testing and evaluating a database	• Provide a test plan and select test data, including valid, extreme, and wrong data. • Explain the reasons for all testing methods. • Show evidence of testing carried out, including pass/fail results. • Evaluate successes and failures and suggest improvements.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 1 - Planning, creating, modifying and using databases.	Unit 2 Course Companion
2.2 Planning, creating, modifying and using spreadsheets			
Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.2.1 Planning and designing a spreadsheet	• Analyse the client brief requirements. • Identify the success criteria. • Design a spreadsheet structure, including worksheets, navigation, formulas, tools, and techniques.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	Unit 2 Course Companion
2.2.2 Creating and formatting a spreadsheet	• Import data from a CSV file. • Format the spreadsheet with fonts, borders, colours, titles, alignment, headers/footers, forms, and worksheet tabs. • Add form controls for easier data entry. • Set a print area for a customer-friendly output. • Create a navigation menu to make the workbook easy to use.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	Unit 2 Course Companion
2.2.3 Use of appropriate data formatting and adding suitable validation rules	• Apply data formatting (currency, %, decimals). • Use conditional formatting. • Use date and time functions. • Add validation controls for data entry (dropdowns, combo boxes, spinners, scroll bars). • Apply validation checks with messages.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	Unit 2 Course Companion

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.2.4 Use of appropriate formulae and functions to meet set outcomes	• Use formulae with single operators (+, -, ×, ÷). • Use brackets to set calculation order. • Use simple functions: SUM, AVERAGE, MAX, MIN, RAND, COUNT, COUNTA, INT, MOD. • Apply relative and absolute cell references. • Create complex functions: IF, nested IF, IF(OR), IF(AND), SUMIF, AVERAGEIF, VLOOKUP, COUNTIF, Goal Seek, pivot tables. • Create and use macros to link functions.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	<u>Unit 2 Course Companion</u>
2.2.5 Arranging, reducing, and outputting data to help make decisions	• Sort data by single items. • Sort data by multiple items. • Use filters to show specific data. • Create charts or graphs with titles, legends, axis labels, and formatting.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	<u>Unit 2 Course Companion</u>
2.2.6 Modifying data and formulae to model 'what if' scenarios	• Use 'what if' investigations to change data. • Use 'what if' investigations to change formulae.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	<u>Unit 2 Course Companion</u>
2.2.7 Testing and evaluating spreadsheets	• Develop a test plan and choose test data (valid, extreme, wrong). • Use a test table based on success criteria. • Explain why each test method is used. • Show evidence of the tests carried out. • Evaluate results to identify successes, failures, and improvements. • Identify improvements and explain how to make them.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 2 - Planning, creating, modifying and using spreadsheets.	<u>Unit 2 Course Companion</u>

2.3 Planning, creating and modifying an automated document

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.3.1 Planning and designing an automated document	• Analyse the client brief to identify key deliverables. • Define and justify success criteria based on client objectives. • Design and create a document template with placeholders, formatting, and features suitable for the client.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 3 - Planning, creating and modifying an automated document.	<u>Unit 2 Course Companion</u>
2.3.2 Creating an effectively structured data source and linking this to a standard document	• Create a document that meets formatting and layout requirements. • Develop a source document with relevant data. • Design fields to organise data clearly. • Enter accurate data into the fields. • Link and test the source data with the document for integration.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 3 - Planning, creating and modifying an automated document.	<u>Unit 2 Course Companion</u>
2.3.3 Appropriately structuring the content of the standard document and inserting fields as required	• Insert fields like address, subject, salutation, and personalised content. • Check spelling, grammar, and overall accuracy. • Apply formatting and features (letterhead, watermark, date, alignment, spacing, bullets, layout).	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 3 - Planning, creating and modifying an automated document.	<u>Unit 2 Course Companion</u>
2.3.4 Merging and outputting final documents	• Complete the mail merge and check the merged data. • Adjust formatting after merging. • Output and present the final documents. • Evaluate the document and suggest improvements.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 3 - Planning, creating and modifying an automated document.	<u>Unit 2 Course Companion</u>

2.4 Planning, creating, manipulating and storing images

Spec Ref	Learning Outcome (I can...)	Required Practical	Revision Links
2.4.1 Planning and designing an image	• Analyse the brief to find project goals and limits. • Define success criteria based on the brief. • Plan and create design ideas (sketches and drafts). • Choose image sources (own photos/scans / online/secondary sources). • Check image size, format, resolution, and editing limits. • Reference copyright or intellectual property for sourced images.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 4 - Planning, creating, manipulating and storing images.	<u>Unit 2 Course Companion</u>
2.4.2 Creating and modifying an image using appropriate tools and techniques	• Compare image file types (PNG, TIFF, JPEG) for size, resolution, scalability, and purpose. • Select software based on image type and editing needs. • Set image properties (RGB/CMYK) and canvas size. • Import or create images, including combining multiple sources. • Use standard editing tools to create images (cut, crop, move, resize, layers, brushes, text, shapes, etc.). • Use advanced tools to enhance and refine images (blur, blend, sharpen, colour, brightness, contrast, masking, cloning, gradients ...)	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 4 - Planning, creating, manipulating and storing images.	<u>Unit 2 Course Companion</u>
2.4.3 Storing the image appropriately and outputting the final image in a format that is fit for purpose	• Store images with version control to track edits. • Save images in suitable file types. • Output the final image in the right format for sharing or publication. • Test different file types to check function and suitability. • Evaluate the final image against the success criteria and suggest improvements.	This is a controlled assessment unit, worth 60% of the qualification (120 marks), which is completed over approximately 40 hours. It is a practical, skills-based unit where learners apply their knowledge to complete 4 tasks set within a given scenario. Task 4 - Planning, creating, manipulating and storing images.	<u>Unit 2 Course Companion</u>