Information and communication technology

What you need to know

In developing a strategy, you need to know how to:

- establish opportunities for using IT skills over an extended period of time (eg in a programme of study, project or work to be carried out over three months or so);

- identify the outcomes you hope to achieve (eg improved access to information, faster communication, more efficient design or problem solving capability);

- identify relevant sources of information, including people and reference material (eg line manager, specialists…colleagues; manuals, CD-ROMs, databases, the internet, on-line help) and research the information needed for planning purposes;

- plan your use of IT skills (eg options, sequence of work, resources, level of expertise needed), taking into account factors that may affect your plans (eg patterns of work, health and safety, social, economic, ethical and moral issues raised by the use of IT);

- make a reasoned selection of methods for achieving the quality of outcomes required (eg internet search engines, e-conferencing, CAD/ CAM techniques).

In monitoring progress, you need to know how to:

- prepare IT (eg create macros, link spreadsheets, define styles, create database structures, customised query routines, set up control equipment to monitor experiment results and generate readings for a report, organise e-conferencing) and use IT to aid:

  - efficient searching, evaluation and selection of information (eg to assist in finding, organising and comparing information, consulting others on its reliability and quality);

  - exploration of alternative lines of enquiry (eg varying rules within models to make predictions and test hypotheses);

- develop and exchange relevant information to meet your purpose (eg use e-mail, shared access to documents, video conferences);

- derive new information (eg make calculations, synthesise information from a variety of sources to reach own conclusions, predict trends, create a new design);

- monitor and critically reflect on your use of IT skills, including:

  - obtaining feedback from others (eg colleagues, tutor, project supervisor, line manager);

  - noting choices made and judging their effectiveness (eg impact on the quality of work);

- adapt your strategy to overcome difficulties and produce the quality of outcomes required.

In evaluating strategy and presenting outcomes, you need to know how to:

- develop the structure for presenting your work, integrating different types of information to ensure consistency in changes to the display of text, numbers and images;

- use the views of others to guide refinements to content and design;

- present information effectively, using a format and style (eg a single form or multi-media) to suit your purpose, subject and audience, and ensure that:

  - it is accurate in terms of content and conventions (eg spelling, punctuation and grammar, labelling of charts, diagrams and graphs, house style for design features);

  - it makes sense (eg proof-read and amend where necessary);

- assess the effectiveness of your strategy, identifying factors that had an impact on the outcomes (eg availability and quality of resources, features of the working environment, level of own expertise);

- identify ways of further developing your IT skills.

What you must do

You must:

Provide at least **one** example of meeting the standard for ICT4.1, ICT4.2 and ICT4.3 (your example must show you can use ICT to handle text, images and numbers).

Evidence must show you can:

ICT4.1	
Develop a strategy for using ICT skills over an extended period of time.	4.1.1 establish opportunities for using ICT skills and clearly identify the outcomes you hope to achieve; 4.1.2 identify relevant sources and research the information needed for planning purposes; 4.1.3 plan your use of ICT skills, making a reasoned selection of methods for achieving the quality of outcomes required.
ICT4.2	
Monitor progress and adapt your strategy, as necessary, to achieve the quality of outcomes required in work involving the use of ICT for **two** different, complex purposes.	4.2.1 prepare, and use, ICT to aid efficient searching, evaluation and selection of information, exploring alternative lines of enquiry where appropriate; 4.2.2 develop and exchange relevant information, and derive new information, to meet your purpose; 4.2.3 monitor and critically reflect on your use of ICT skills, adapting your strategy as necessary to produce the quality of outcomes required.
ICT4.3	
Evaluate your overall strategy and present the outcomes from your work using at least **one** presentation, showing integration of text, images and number.	4.3.1 develop the structure for presenting your work, integrating different types of information and using the views of others, where appropriate, to guide refinements; 4.3.2 present information effectively, using a format and style to suit your purpose, subject and audience, and ensure it is accurate and makes sense; 4.3.3 assess the effectiveness of our strategy, including factors that had an impact on the outcomes, and identify ways of further developing your ICT skills.