



Lesson Plan: ICT

Time required for this lesson

60 minutes

Aim of the lesson

To introduce students to the ICT occupational sector.

Learning outcomes

By the end of this lesson students should:

- have a greater understanding of the range of jobs in the ICT occupational area and the skills required for these jobs
- have thought about the impact of ICT on our everyday lives and how this has changed the way we live
- have a greater awareness of what is happening nationally and locally in the area of ICT

Resources required for this lesson

- 'Working in 'Essex, Southend and Thurrock – ICT' leaflet obtained from www.stepon.org
- Technology Timeline Worksheet and Answer Sheet
- Match the Job Title to the Job Description Worksheet and Answer Sheet
- ICT Quiz and Answer Sheet

Introduction

Explain to the students that this collection of labour market leaflets has been produced by Connexions and the Learning and Skills Council. It is intended to be used as an information, advice and guidance resource to help them understand more about the trends in the labour market in Essex and to support the introduction of the new 14-19 Diplomas. Its ultimate aim is to help students with their decision-making regarding their future career plans. This lesson is all about the occupational area of ICT and can support students who are thinking about doing the Diploma in Information Technology.



Activity 1

Technology Timeline (10 minutes) Worksheet: Technology Timeline and Answer Sheet

Have a discussion with the class about how technology affects their everyday lives. Ask them what technology they use and what they use it for. Get them to think about what the impact would be on them if they did not have this technology.

Ask for 12 volunteers from the class to come to the front. Give each of the volunteers one of the cards from the 'Technology Timeline Worksheet'. Each card has a technological fact on. Ask each person to read out the fact on their card and then with the help of the rest of the class they have to stand in a line in the order that the fact on their card happened in history to show a timeline of events.

When the class have completed the timeline you can use the 'Technology Timeline Answer sheet' to see if they are standing in the correct order.

You can end this exercise by discussing with the class the impact that the technology in the timeline has had on their lives and what they think will be the technological developments of the future.

Activity 2

Match the Job Title to the Job Description (15 minutes) Worksheet: Match the Job Title to the Job Description and Answer Sheet

Ask the students to work in pairs. Hand out the 'Match the Job Title to the Job Description Worksheet'. Ask the students to look at the Job Descriptions on the worksheet and match them to the Job Titles in the table. Once they have done this ask the students to discuss any skills and qualities that are required to carry out each of the jobs and make a note of them on the worksheet.

After 10 minutes get the students to feed back their answers. You can use the 'Match the Job Title to the Job Description Answer Sheet' to give out the correct answers.

Have a discussion with the class about the diverse range of jobs in the ICT sector and explain that this is just a handful of the different jobs available. Ask the class if they know anybody who works in ICT and what that work involves.

Discuss with the students if any of them are considering a career in ICT and the skills and qualities that they have that will help them in this area of work.

Activity 3

Technology in our lives (15 minutes)

Divide the class into six groups. Give each group one of the categories listed below and ask them to discuss all the technology that is used in that area (e.g. scanners at supermarkets, life support equipment in hospitals). After they have done this, ask each group to discuss for the category that they have been given:

- the impact that ICT has had
- the changes brought about by the use of ICT

Plenary (5 minutes)

Each group then needs to choose 3 pieces of technology in the category that they have been discussing that they think has the most impact on that area. After 5 to 10 minutes get feedback from each group on the area that they have been discussing and have a class discussion about the impact of technology on our everyday lives and how it has changed the way we live. Ask the class what they think future developments in technology are likely to be and the impact that they will have on our lives?

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Categories

- | | | |
|-------------|------------------|-------------------|
| 1. School | 2. Home | 3. Police Station |
| 4. Hospital | 5. Sports Centre | 6. Supermarket |

Activity 4

ICT Quiz (15 minutes) Worksheet: ICT Quiz and Answer Sheet

Pupils will need a copy of the 'Working in Essex, Southend and Thurrock - ICT' leaflet to be able to find the answers to the quiz.

The pupils can work on their own or in pairs to complete the quiz.

Give the pupils 10 minutes to complete the quiz and then spend the last five minutes going through the answers.

Activity 1

Technology Timeline - Worksheet

Cut out the following cards and ask for 12 volunteers from the class to come to the front of the classroom. Give each child a card and ask them to read out what it says on the card to the rest of the class. With the help of the class the children then need to stand in the order that the technological development happened in history to form a timeline.

Bill Gates and Paul Allen found Microsoft

PlayStation is launched

IBM launches the first Personal Computer

Digital TV switchover is completed for the whole of the UK

The first email is sent

John Logie Baird introduces the first commercial television set

The microchip was invented by Robert Noyce

Apple launches Macintosh computers

Microsoft launches its first version of Windows

iPod is launched

The video recorder is introduced

The first Internet search engines are developed

Activity 1

Technology Timeline - Answer Sheet

1930 John Logie Baird introduces the first commercial television set

1959 The microchip was invented by Robert Noyce

1971 The first email is sent

1975 Bill Gates and Paul Allen found Microsoft

1976 The video recorder is introduced

1981 IBM launches the first Personal Computer

1983 Microsoft launches its first version of Windows

1984 Apple launches Macintosh computers

1995 The first Internet search engines are developed

1995 PlayStation is launched

2001 iPod is launched

2012 Digital TV switchover is completed for the whole of the UK

Activity 2

Match the Job Title to the Job Description – Worksheet

Read the Job Descriptions below and match them to the Job Titles in the table. The first one is completed for you as an example.

Discuss with the person sitting next to you any skills and qualities that are required to carry out each of the jobs and make a note of them below.

Job Title	Job Description	Skills and Qualities
Computer Games Designer	G	teamwork, communication, enthusiasm, solve problems, work to deadlines, some understanding of design, flexible and adaptable, keep up to date with developments in technology.
Computer Hardware Engineer		
Computer Helpdesk Operator		
Web Designer		
Database Administrator		
Computer Software Engineer		
Computer Sales Assistant		
Computer Assembly Technician		

Job Descriptions

- A.** Makes sure the information their organisation keeps on computer is accurate and secure and complies with the Data Protection Act.
- B.** Builds new computers from individual parts such as circuit boards, modems, disk drives, cables and switches and tests the finished computer to check everything is working.
- C.** Designs and develops new computers or computerised parts of other machines.
- D.** Works on all stages of creating computer programs (or software).
- E.** Designs web pages, using text, graphics, interactive buttons and animations.
- F.** Provides advice on computer software and hardware to customers at computer/software retailers.
- G.** Comes up with ideas for computer games, using storyboards, flowcharts and index cards to work out the different ways games can end.
- H.** Answers telephone calls from computer users who are having technical problems and tries to work out what is causing the problem.

Activity 2

Match the Job Title to the Job Description – Answer Sheet

Job Title	Job Description	Skills and Qualities
Computer Games Designer	G	teamwork, communication, enthusiasm, solve problems, work to deadlines, some understanding of design, flexible and adaptable, keep up to date with developments in technology.
Computer Hardware Engineer	C	to be able to think logically about abstract problems, patience, good communication and teamwork skills, decision-making skills.
Computer Helpdesk Operator	H	enjoy solving other people's problems, have a logical mind, be able to keep calm when dealing with worried, confused or angry people, be able to communicate with a wide range of people, keep updating their knowledge, be prepared to travel (for some jobs).
Web Designer	E	creativity, imagination and presentation skills, an eye for composition, colour and layout, to be able to analyse design problems and come up with solutions, programming skills and software knowledge, to be able to work to deadlines, communication and team working skills.
Database Administrator	A	a high level of technical knowledge, a keen business sense, good communication skills, problem-solving skills, excellent management ability, team working skills.
Computer Software Engineer	D	excellent at problem solving, organised and creative, able to work methodically, logically and to pay attention to detail, happy to work as part of a team, good at communicating your ideas to others.
Computer Sales Assistant	F	enjoy solving other people's problems, have a logical mind, be able to keep calm when dealing with worried, confused or angry people, be able to communicate with a wide range of people, keep updating their knowledge.
Computer Assembly Technician	B	to be able to think logically about abstract problems, patience, good communication and teamwork skills, decision-making skills.

Activity 4

ICT Quiz - Worksheet

Using the 'Working in Essex, Southend and Thurrock - ICT' leaflet have a go at answering the questions below.

1. How many employees does the East of England have in the IT industry?

2. What is the most common IT job role in the South East?

3. How many people use IT in their work?

4. What is the annual average salary for an ICT Manager in the UK?

5. How many people are employed in the ICT sector in Thurrock Unitary Authority?

6. What network technologies are creating new markets for ICT?

7. How many new jobs are predicted in this sector in the UK between 2004 and 2014?

8. List three skills and qualities that would be useful to have for a career in the ICT industry?

Activity 4

ICT Quiz - Worksheet

Using the 'Working in Essex, Southend and Thurrock - ICT' leaflet have a go at answering the questions below.

1. How many employees does the East of England have in the IT industry?

52,872

2. What is the most common IT job role in the South East?

ICT Manager

3. How many people use IT in their work?

20 million

4. What is the annual average salary for an ICT Manager in the UK?

£48,423

5. How many people are employed in the ICT sector in Thurrock Unitary Authority?

300

6. What network technologies are creating new markets for ICT?

Broadband internet, digital interactive television, mobile communications

7. How many new jobs are predicted in this sector in the UK between 2004 and 2014?

200,000

8. List three skills and qualities that would be useful to have for a career in the ICT industry?

IT skills, communications skills, team worker, problem solver, enjoy training and keeping knowledge up to date