

Social implications and trends

3A The impact of ICT on individuals, communities, and environments

- Discuss the negative impacts of long-term use of virtual world sites such as Second Life
- Discuss the environmental impact of disposing the old technology
- Give 3 positive and 3 negative impacts of GPS
- How is e-Commerce affecting society? Give 2 advantages and 2 disadvantages

3B The impact of ICT on individuals, communities, and environments

- A salesman is often on the road in his work role. Discuss how IT can help him stay in touch with his employer and make him more efficient in his processes
- Telecommuting is becoming more and more popular. Give 2 advantages and disadvantages to the employee and 2 advantages and disadvantages to the employer.

3A Values, ethics and inclusivity

- What is social networking? Give advantages and disadvantages.
- Identity theft is a major threat in today's society. Make a list of preventatives; giving reasons how each will assist in the reduction can be adapted to be more inclusive of a wider segment of the population?
- What is the 'Digital Divide'? Explain the effects this can have on sections of the population.
- Most work places have a user policy in place. What is this and why is there a need for it? Give some examples of the elements that could be included in a user policy.
- The Copyright Act has some exclusions. Explain some of these, providing reasons and examples.

3B Values, ethics and inclusivity

- Censorship is often discussed in relation to the Internet and the information available online. What is meant by censorship and how can this be controlled?
- There is often a range of end user expectations in differing cultures e.g. interpretation and use of language and images in websites. Compare some of these differences and alternatives for the presentation of websites.
- With the increasing popularity of the Internet, it is becoming more difficult to protect our intellectual property. Define 'Intellectual Property' and discuss methods of protecting it.

3A Past and emerging trends in ICT

- A trend in IT is for newspapers and magazines to become fully digital ie. to have no printed publications. Discuss the implications – positive and negative – of this trend.
- Discuss convergence in terms of the devices available and the features of these devices.

3B Past and emerging trends in ICT

- Discuss international communications in the workplace. This would include video conferencing and skypeing. In your discussion, consider the impacts to employees, employers and the environment.
- A common trend in industry is to develop a shop 'face' for their business ie. having an online presentation via web sites and cross web site advertising. List 3 situations that this 'shop face' could benefit the business.

Hardware and software

3A Hardware components and functions

- Compare MS Windows and MacOS or Linux in terms of usability, support, transferability etc.
- Describe the current hardware specifications for a typical small-scale multimedia production business. Your discussion should include information regarding the CPU, primary and secondary memory, graphics output, sound input/output and visual output.
- What is an interactive whiteboard and explain its function.
- Andrea is having problems with hardware and software on her computer and she requires some support. Describe 3 different procedures and/or facilities that she could use to solve her problems.

3B Hardware components and functions

- Explain and differentiate between a LAN and WAN
- The following are network devices: network interface card, switch, router, modem. Explain the purpose of each device.
- The following are all protocols associated with networks. Expand each and explain its purpose: TCP/IP, HTTP, HTTPS, SMTP and WAP.
- What would be the best transmission media for the following instances:
 - A mine worker requiring remote access to files stored on a server
 - An international company requiring details from their regional offices
 - A school with a laptop program where students require access to a variety of software and files
- Describe the major factors affecting bandwidth limitations in a networked environment.
- A sports coach would like to analyse the movements of his athletes. Discuss how this could be achieved, supplying examples in your answer.

3A/B Applications and systems software

- List some of the tasks/monitoring methods for ensuring the efficient operation and maintenance of a computer system.
- Differentiate between utility software and a driver.
- Suggest the types of software, and give examples of a suitable software program to perform the following tasks:
 - Production of a business card
 - Remove the background from a photo
 - Combine a collection of short clips and photos into a video
 - Edit a song

3A Design and acquisition of hardware and software

- Explain the role and purpose of benchmarking in a computing context.
- List some of the considerations that need to be made when selecting hardware and software for a specified purpose.
- James recently purchased the newly released version of his favourite game. However, when he tried to install and play his game, it wouldn't work. Suggest reasons for this, justifying your answer.

3B Design and acquisition of hardware and software

- James discovered that he needed an upgraded video card for his computer. Give reasons why this would be the case. The salesman wanted to sell him the latest video card available. Explain the elements that James should consider.
- Discuss outsourcing. Why would a business outsource their tasks?
- The images below are from the Hoyts homepage. Identify and justify four design features that promote usability and interactivity.

















The screenshot displays the Hoyts website homepage. At the top, there's a navigation bar with links to Home, News, Sports, Money, Lifestyle, Entertainment, Video, Travel, and More. A Bing search bar is also present. The main header features the Hoyts logo and a large banner for the movie "Despicable Me" with the text "IN CINEMAS NOW". Below this, a horizontal menu lists categories: SESSION TIMES, MOVIES, CINEMAS, MY HOYTS, OFFERS & EVENTS, HOYTS STORE, and CORPORATE SALES. The main content area is divided into sections: "NOW SHOWING" with movie posters for "Easy A", "The Last Airbender", "Cats & Dogs 2: Revenge of Kittypoo", and "Despicable Me"; "COMING SOON"; "NEW THIS WEEK"; and "ADVANCE SALES". To the right of the movie listings is a "Hoyts movie club & rewards" section with a login form (Username, Password, Remember me, forgot password?) and a "NOT A MEMBER?" link. Below this is a "QUICK TICKETS" section with dropdown menus for "CHOOSE A CINEMA" and "OR CHOOSE A MOVIE", and "FIND SESSION" buttons. A "CINEMA EXPERIENCES" section lists "DIRECTORS SUITE", "La Premiere", "IMAX", "Bean bag cinema", "3D", and "Xtremescreen". A large central banner promotes the "Hoyts Rewards" program, stating "Want more from your movies? Join Hoyts Rewards! Get your \$10 Welcome Pack in cinema today!" and "JUST \$10 TO JOIN - FREE TICKET ON SIGN UP". To the right of this banner is a "REPLAY VIDEO" section for "Despicable Me" with "PLAY GAMES" and "BUY TICKETS" buttons. At the bottom, there's a footer with "ABOUT US", "CONTACT US", "CAREERS", "PRIVACY POLICY", "TERMS & CONDITIONS", and "COPYRIGHT © 2010 HOYTS, ALL RIGHTS RESERVED." A secondary navigation bar at the very bottom includes links to "About ninemsn", "Careers at ninemsn", "Advertise", "Contact Us", "Help", "Terms of Use", "Privacy Policy", and social media links for Hotmail, Messenger, and Mobile.

Digital data and information

3A The nature, forms and transfer of digital data

- Discuss the impact and use of different file formats on the transfer or distribution of data.
- What are the implications for communication connections (wireless, cable, satellite) on file types and the transfer of data?
- Mr Jones is considering purchasing his son some internet access for his birthday present and has used www.broadbandguide.com.au to compare different types of access. He does not want to move his home phone service as it is connected to the home alarm system and is willing to pay \$40-60 per month, yet is confused about which choice to make.
His son, Tim, goes to a private school in the metropolitan area and he has his own tablet pc which he uses for his school work. Tim has to catch a bus to school which takes him 45 minutes each way, enjoys sharing files with his friends, online gaming and using social networking technologies.

Which of the following supplier's plans would be the best for his son's present which also meets his requirements?

 vodafone	Heavy use 5GB		Broadband/month: \$39.95 Bundle/month: N/A
Broadband Type:	Specifications: Speed: up to 3,600/384kbps Data: 5 GB	Contract Length: <input checked="" type="radio"/> 24 months	Call Vodafone Now: 1800 008 632
 Mobile Broadband			
 iiNet connect better	Naked DSL Home 2		Broadband/month: N/A Bundle/month: \$59.95
Broadband Type:	Specifications: Speed: up to 24,000/1,000kbps Data: 8 GB 8GB offpeak data limit	Contract Length: <input type="radio"/> Not Fixed <input checked="" type="radio"/> 24 months	Bundle Details:  Zero Phone Line Rental  VOIP Broadband Phone  Free Local & National Calls
 Naked DSL			Call iiNet Now: 1300 550 269
 AAPT	AAPT LiveNet™ 5		Broadband/month: \$49.95 Bundle/month: N/A
Broadband Type:	Specifications: Speed: up to 20,000/1,000kbps Data: 5 GB	Contract Length: <input checked="" type="radio"/> 24 months	Bundle Options: <input type="checkbox"/> Phone <input type="checkbox"/> Mobile
 ADSL 2+			Call AAPT Now: 1300 722 757

With reference to Tim's circumstances, provide 3 reasons why you would you would advise Mr Jones to make this choice.

3B The nature, forms and transfer of digital data

- You are part of a global ceramics company and are expanding operations into a remote island in the Pacific where an extremely high grade clay has been located. A group of people have been employed to photograph flora and fauna as part of an environmental impact study being conducted to determine if it is a suitable location for extracting the clay. You have been asked to provide an ICT solution to enable the employees to transfer their photographs to a laboratory where they can be quickly analysed to establish if any of the flora or fauna are endangered species. There is no mobile phone coverage at this location.
 - Identify the technologies required to organise, process, download, upload (transfer) and store the data.
 - What would be a suitable file format to use **and** explain why?
 - The data collected by the laboratory will be stored in a database. Discuss **three** possible threats that could compromise the integrity and security of the data.
 - What are **three** measures that could be implemented to minimise these threats.

3A Processing and managing data

- Jane is starting a new video editing and production company that will employ approximately 10 editors and graphic artists and is situated in an old house. Jane has obtained two approximately equivalent-priced quotations for supplying computers for her company which will need to run the Adobe Creative Suite. These are detailed below. You should assume both quotations contain all other necessary peripherals and that there are no significant differences between the two quotations on any non-listed item.

Category	Quotation A	Quotation B
1. Processor	2.1 GHz quad-core processor	2.4GHz dual-core processor
2. Memory	2GB SDRAM memory	4GB SDRAM memory
3. Monitor	24" widescreen LCD montior	20" widescreen CRT monitor
4. Disk-drive	250GB hard drive	750GB hard drive
5. Graphics card	512MB NVidia(R) graphics card	Integrated graphics card
6. Anti-virus software	Freeware anti-virus software	1 year free trial of a subscription based anti-virus software
7. Application software	Open office 2008	Microsoft(R) Office 2007 Professional

- Identify which quotation components from each quote Jane should choose so that she may be clearer in the minimum/desired specification to the supplier, rather than choosing the best quote. Justify your answer by contrasting the individual specification of the quotations for each of the 7 categories listed above in terms of the applicability for use in video and graphic design work.
- Jane realises she needs her employees to share files among each other. A consultant has suggested one of two solutions; a wired, or a wireless solution. What type of network is most appropriate for her company? Explain your choice.
- Jane needs her employees to print documents. As she needs to produce high-quality print-outs, Jane can only afford one printer. How could Jane provide printing facilities for her employees?
- Jane wants her company to produce short video advertisements using captured digital video. Other than the transfer rate to a computer, list three technical factors Jane should consider when purchasing digital video cameras for use in her company.
- List two mechanisms for transferring captured video from a digital video camera to a computer.

3B Processing and managing data

- There are some security concerns regarding biometrics, backup of data, and storage of data Discuss some methods that should be employed to ensure privacy and security.
- What is encryption? Why do so many businesses use this process? Explain the encryption process.

3A Creative application of information design principles

- Critically evaluate the image below considering: the specified target audience, design principles and elements.



- **Scenario Overview**

Mobile technologies can play a role in the education of children. The Department of Education in Western Australia has recognised an opportunity to introduce mobile technologies into the classroom to enhance student learning and attendance.

In particular the goal of the project is to improve the learning outcomes of students in disadvantaged low socio-economic areas and schools mostly in the eastern suburbs of the Perth Metropolitan area.

Nokia has come on board, recognising the need for large corporations to be socially responsible and play a role in improving the community. They will supply 10,000 E75 Smart Phones for free to students within the target group of schools,

The smart phone firmware has been specially developed for the role that they will play. During the school day they will be locked in 'Schools In' mode allowing students to use them as a mini computer, accessing the internet, sending and receiving emails to and from teachers and have the ability to recording class lecture notes. Attendance at school and producing work will be rewarded with credits to the phones for music downloads, free movie tickets, ringtones and online gaming. After school the smart phone will convert back to 'Schools Out' mode and be a fully functioning mobile phone with all of the usual features for ringing and SMSing parents and friends. During this time teachers will also be able to communicate with students, providing information for homework help and reminders for the next day.

Stimulus material for www.nokia.com.au has been provided, along with information and specifications for the E75 Smart Phone.