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UNIT 9: IMPACT OF ICT ON SOCIETY. Name: Jai Mehta 12N. Teacher: Mr Otobor Centre Number: 12302. Centre Name: Alperton Community School.

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Task 1:

> Teleworking.

Teleworking is defined as:

"The practice of working on a computer in one place (normally from home) that is linked via communication technology to the company's central office where messages and data can be transferred"

<u>Advantages</u>

<u>Travel costs</u> - As there will be little need for the teleworker to commute to and from the office, this will thankfully reduce the expenditure on travelling arrangements, whether it is via car, train, bus or another means of transportation, and especially for those with children.

<u>Avoiding the rush hour</u> - When Teleworking it is common that the person Teleworkers from home, although this may often not be the case. This means that the need to commute to and from work is non-existent, and sitting at home instead of being in the traffic will be a very big relief. Occasionally there may be times when you are called into the office for some specific reason, although not every teleworker stays at home 5 working days a week.

<u>Childcare problems</u> - The problem of who takes care of your children whilst you are at work will also no longer be a problem. As the Teleworker will spend most of the time at home, they are able to work and take care of their children. Again this minimalists expenditure, and helps the teleworker with other unnecessary arrangements.

Not only are there advantages for the employee but also if the employer decides that they are going to implement Teleworking they have the following advantage:

<u>Saves money</u> - With all of the employees Teleworking the company has no need for an office, with this in mind there is little need for the company to own and rent an office space. Not only does it saves costs on rent bills but also on provisions, such aspects as desks, chairs, space, heating, car parking space. As well as canteen food, and beverages, which are consumed on a daily basis.

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Disadvantages

Well although there may be many advantages to both the employee and the employer when Teleworking, there are also many disadvantages. The disadvantages for the employee include:

The lack of socialisation - With so many of the employees working away from the office, and in a confined area, there is little chance to meet new people through their line of work. This is why the people who Telework often do not have the chance to socialise. One of the best places for socialisation is in fact the office, here you will meet new people and will manage to make many friends, so when working at home the process of socialisation is smaller, and the less people you will get to know.

<u>Finding the correct atmosphere to work in</u> - When working at home one of the most essential aspects is to establish an area where you can work efficiently, an area that is quiet and can be set up for your Teleworking needs, i.e. desk and other relevant furniture. A lot of Teleworkers surprisingly have extensions built to their homes so that they can Telework in their own little environment away from all the hassles at home.

<u>Distractions</u> - Although it is correct to find the correct environment in which to work there will still always be distractions. Whether it is people outside your house digging whilst laying new phone lines or your own young children when they return from school. Here it is important to adjust to the environment and make sure that any little distraction does not distract you. There will always be time to see your children; this is why many Teleworkers take a couple of hours off of work when their children return from school.

For the employer there are also draw backs, this includes:

<u>Productivity</u> - Although now a day's computers are capable of monitoring how much progress is made whilst Teleworking, it still gives a small indication of the actual progress. Employers are concerned with how much progress the employees are actually making. The only way they can keep an eye on them is in the office, as they are not in the office the only way that the employer can monitor employees is by the progress of their work. They can also use this with the indication from the computers to determine who is the most successful of the Teleworking employees.

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	Advantages	Disadvantages
Individual	 Fewer distractions from coworkers. More flexibility with organisation of daily tasks (better personal time management). Savings in time and commuting costs. Higher job satisfaction. 	 Isolation. Lack of separation between home and work. More distractions from family. Potential for excessive working hours. Less awareness of changes in company. Fear of being under managed.
Company	 Improved employee retention. Often higher productivity. Less lost hours due to traffic problems. Fewer people report as absent i.e. ill. Savings in energy, office space, maintenance and housekeeping. Increased number o potential candidates for a job. 	 Contacting employee. Maintaining adequate communication between other employees or with customers. Possible delay in customer service.

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Task 2:

> Innovations in technology.

Advantages and Disadvantages of E-mail:

Electronic Mail has good and bad features. If we compare E-Mail with the telephone and postal mail, we will find similarities.

	Telep hone	E-Mail	Post Services
Speed	High	Moderate	Low
Synchronous	Yes	No	No
Formality	V aries	Moderate	V aries
Cost	High	Low	Moderate
Conferencing	Small Groups	None	One Way Only
Security/Privacy	Moderate	Low	High

Advantages

- E-mail is relatively fast. With electronic mail, the delivery of a message can take a few seconds to a day or so depending on the network transmission and the delay in the recipient's reading.
- E-mail is asynchronous communication, which means communication that
 does not occur at the same time. In e-mail, the sender sends a message
 and the recipient reads it at his/her own convenience. This is very useful
 for communicating between long distances and different world time
 zones.
- E-mail is not formal but some "Netiquette/Intern etiquette" rules apply.
 On the phone or in a letter, the formality you use depends on your
 correspondent. Be careful when you send message to people you do not
 know! They will know you only by what you send them. Be sure that what
 you send is correct and readable.
- E-mail is inexpensive. E-mail allows you to have a large number of correspondents, over a wide geographical area with the cost of a single local call. E-mail at Vanderbilt is 'free' for you. Other On-Line services charge a relatively small amount.

Disadvantages

Security and privacy are quite low with e-mail. The majority of the e-mails are delivered to the correct addressee without intervention.
 Sometimes, however, individuals other than the sender or recipient may intercept messages. This could occur because of an incorrect address, system administrator intervention, or transmission error.

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Advantages and Disadvantages of Laptops and Desktops

DECKTODE	LADTORE
DESKTOPS	LAPTOPS
High end users requiring lots of memory for video or multimedia projects	Can do multimedia projects but has limited space
Upgrade ability is much easier	Upgrade ability is not the same as Desktop
Anchored to one place-very limited portability	Portability is its main advantage
Less practice with instructional technology	Improved faculty confidence in using advanced instructional technology with more practice with the portability aspect of the laptop • Facilitates effective lecture hall use of portable computing focusing on PowerPoint and Internet access • Lesley faculty can become leaders in integrating technology and learning
Screen and mouse are separated	Screen and mouse are not separated
Screen size is bigger	Screen size is smaller

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Advantages and Disadvantages of Portable Printers.

What Are Portable Printers?

Portable printers are small, battery-powered devices designed for computer users on the go. Barely wider than the paper on which they print, portable printers can easily fit in a briefcase alongside a notebook computer. These units can weigh as little as one pound and are capable of printing documents, envelopes or acetates.

How Do They Work?

Portable printers use one of several basic technologies: ink-jet, thermal transfer, and dye sublimation.

Ink-jet portable printers produce good images in both colour and black & white. They propel tiny drops of ink directly onto the page. The portable versions are slower and not as well equipped as desktop printers, but the quality of their output should be acceptable for most uses.

Thermal transfer portable printers use heat to transfer images from a ribbon to the page.

Dye sublimation is a specialized print technology used for photo lab-quality pictures. Because these are photo printers, expect slow print speeds offset by high resolutions.

Prospects & Potential Uses

Portable printers are a boon for busy executives and those in sales professions. Presentations, contracts, newsletters, and anything else you need away from the office - all can be printed from anywhere.

Draw backs

One drawback to portable printing is replacement ink cartridges. Because the cartridges are smaller, they will need to be replaced often and that can be expensive. Another drawback is compatibility issues. Make sure that the portable printer you purchase is compatible with the operating system of your laptop or PC. Also, keep in mind that with some models, a USB cable is not included with the printer and must be purchased separately.

The advertised weight of the printer usually doesn't include the power adapter, batteries, cables or paper that you'll have to lug around with the printer.

Costs

Portable printers and their accessories can be pricey, ranging from a low of £175 for non-colour thermal transfer printers to a high of £280 for a colour ink-jet model.

Since portable printers tend to use very small cartridges or ribbons, they ultimately cost more per page to print. Expect to pay more per page for thermal transfer printers and as much more per page for some ink-jet printers. Colour printer costs are even higher.

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TASK 3:

> J.I.T. and A.G.V.

J.I.T. (Just In Time).

Just-in-Time (JIT) manufacturing

- High level of information flow and real-time control needed
- Reduce inventory levels

Just-in-time manufacturing is a major innovation created and cited by the automotive industry for its ability to cut warehousing costs at the same time it improves quality.

Manufacturers have found it isn't necessary to maintain warehouses full of parts or even keep many parts bins on the factory floor. Instead, a stream of suppliers' trucks drive up to the auto makers' loading docks, delivering everything necessary to manufacture vehicles on the line that day. In many cases, the auto factory ordered the parts in specific colours and sizes or with special options less than three hours before delivery.

Such precision can happen - and is expected - when the supplier factory is located right next door to the automotive manufacturer.

The just-in-time (JIT) delivery that auto manufacturers require is one reason many suppliers are adopting right-next-door, right-up-the-road, or just-a-few-hours-away strategies when deciding where to locate their own new manufacturing plants. And, conversely, when automotive manufacturers start poring over maps to figure out where to site their own new factories, they usually pushpin the locations of their existing suppliers as a factor in their own decision-making process.

Certainly, the supplier strategy of building factories and distribution centres near primary customers is not new. It is the reason the domestic auto supply industry grew strongest in Michigan. That was where the entrepreneurs who first developed Ford, Chrysler and General Motors lived, where they built their companies, and why "Detroit" became a synonym for the Big Three.

These site selection rules, developed more than a hundred years ago, still seem to apply today. Be close to the primary customer so deliveries can be made on time. Be on a major road network so customer shipments can leave regularly. Find a trainable work force with both a strong work ethic and a sense of manufacturing, though not necessarily any knowledge or background in

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automotive products. Today, most automotive manufacturers add another factor: Locate where a national distribution system can deliver the vehicles to every car lot in the country.

A.G.V. (Automated Guided Vehicles).

Reasons for Automating

- Increase production rate eliminate portions of process that directly increase production time: machine processing time, handling time, setup times (SMED)
- Remove humans from hazardous environments
 exposure to chemicals, fumes, temperature or radiation
 robotic applications: L/UL furnaces, spray painting, welding
- Remove humans from processes that require extremely clean environments semiconductors, drugs reduce number of defective products
- Reduce direct labour one worker monitors a larger number of machines
- Reduce work-in-process
 parts being processed, part waiting to be processed
 large WIP: longer time to fill orders, more storage space, value of
 unfinished goods that could be invested elsewhere
 reduced WIP: better control and scheduling, minimize batch size
- Reduce manufacturing lead time
 processing time, setup time, waiting time
 setup time: flexible automation, common fixtures and tooling
 processing time: combining or eliminating operations, increase speed
 (work measurement principles)
- Increase quality
 repeatable operations through every cycle tighter control limits, easier
 detection when process is out of control
 status of manufacturing operations
- Increase productivity not the primary reason for automation

Types of Automation

Fixed automation

- Hard automation, automation for mass production
- Produces large numbers of nearly identical parts
- Cost is greater than programmable or flexible high production volumes

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- Product design be stable over its life
- Advantages: equipment fine tuned to application decreased cycle time, infrequent setups, automated material handling - fast and efficient movement of parts, very little WIP

Programmable automation

- Smaller volumes of many different parts
- More flexible than hard automation
- Major disadvantage: setup prior to each new part
- Large batch size (due to setups)
- · Speed sacrificed for flexibility

Flexible automation

- Compromise between fixed and programmable automation in speed and flexibility
- Advantage: programming and setup performed off-line
- · More expensive size and tool change capabilities
- Small batch sizes are justified reduced WIP and lead time
- High volume to justify
- Typical parts are expensive, large and require some complex machining
- Production costs lower than fixed or programmable automation for some parts

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TASK 4:

> Smart Cards.

The Pros and Cons of Smart Cards

Smart cards, which contain a microprocessor rather than a magnetic strip, are both a good and bad. They can make your life easier, and possibly safer, by putting an incredible amount of important information atyour fingertips. At the same time, however, the compromise of that information can be devastating to you. So, are they worth the risk?

Let's take a look at the paranoia that's going around. In the first place, you might fear that someone can use these cards to track you. You may also worry that unscrupulous merchants can see a record of everything you've purchased, and then sell the information to someone else. The truth is, while it's possible that these fears will come true, they probably won't in the near term. Regardless of whether you use a credit card or a smart card, somebody knows where you've been

one reason for this is that smart cards, as "money cards," are only slightly more advanced than credit cards. A smart card may temporarily store your transaction record, possibly making it available to other merchants. So, regardless of whether you use a credit card or a smart card, somebody knows where you've been. On the plus side, merchants are probably going to get their smart-card readers from banks, and it's unlikely that banks will provide merchants with the capability of reading the details of previous transactions off the cards.

Information Theft

However, it's possible that a merchant could acquire a box that enables him to steal the information. So, you have to ask yourself, "Is the risk of that action worth the benefit?" The reality of the situation is that even if financial information is compromised—more than it currently can be with credit cards—how does that really affect you? In most cases, the benefits seriously outweigh the potential negative effects.

In most cases, the benefits seriously outweigh the potential negative effects, if you have a smart card that contains medical information, you should protect it with your life. I would hope that if smart cards contain medical information, they're used only for transactions related to medicine. Giving people a single, all-inclusive card would be very stupid. I would also hope that people are smart enough not to give out their cards freely. They should use common sense, which all too many people seem to lack.

Whether the smart card is for monetary or medical purposes, the biggest risk that people face from the card arises from loss or theft. No matter what sort of protections are built into the system, if you don't physically protect your card, laws and security measures aren't going to do you any good.

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TASK 5:

> Health and Safety.



Seating - Chairs with adjustable height and backrest are recommended. When seated correctly, the lower arms and thighs should be in a roughly horizontal position while working at the keyboard.



Worktops - A fixed height between 660-730mm is required (720mm is recommended). A worktop depth of 760-840 mm is required to give the user sufficient distance from the screen while working. Matt worktops in a cream or beige colour are recommended in order to reduce glare.



Lighting - Windows should be fitted with non-reflective blinds, preferably beige in colour. Consideration should be given to positioning of the screen away from light reflection and glare. The optimum position is at right angles to the source of natural light.



Screens - All new screens must be fitted with tilt and swivel stands. Sufficient room is needed for the screen to be moved back and forward. Ideally, the top of the screen should be at eye level.



Power supply - Leads should preferably be in trucking above the height of the worktops or be safely tied. An adequate number of supply sockets should be provided to eliminate the need for trailing wires. It is safer to switch the equipment off at the wall socket or room master switch rather than 'find' the switches at the rear of the machines. Mains plugs and leads must be checked for safety once a year.



Fire precautions - A fire extinguisher suitable for electrical fires (such as carbon dioxide) must be provided in all computer rooms. The location of the nearest fire exit must be notified near the door in each room.



Repetitive Strain Injury - repetitive finger movements over very long periods of time may cause this. It can become quite serious for people employed solely as keyboard operators. In order to reduce muscle .fatigue

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and strain, users should be encouraged to get up and move around at reasonably frequent intervals, for example to collect equipment, and to do other forms of work.



Eye Strain - In order to reduce eyestrain, users should be encouraged to look away from the screen and focus on a distant object from time to time - this will relax their eye muscles. The wearing of spectacles also helps prevent possible soreness caused by the bombardment of ionised dust particles from the screen.

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TASK 6:

> Copyright, Designs and Patients Act.

Copyright, Designs and Patent Act 1988

- The act gives the creators of literary, dramatic, musical and artistic works the right to control the ways in which their material may be used. The rights cover; broadcast and public performance, copying, adapting, issuing, renting and lending copies to the public. In many cases, the creator will also have the right to be identified as the author and to object to distortions and mutilations of his work.
- Copyright arises when an individual or organisation creates a work, and a work is subject to it if it is regarded as original, and must an exhibit a degree of labour, skill or judgement.
 - Interpretation is related to the independent creation rather than the idea behind the creation. For example names, titles, colours etc. are not covered, however a creation combining these elements can be. It may protect a work that expresses an idea but not the idea behind it.
- Normally the individual or collective who authored the work will exclusively own the copyright. However, if a work is produced as part of employment then normally the copyright belongs to the person/company who hired the individual. For freelance or commissioned work, copyright will usually belong to the author of the work, unless there is an agreement to the contrary, (i.e. in a contract for service).
- Only the owner or his exclusive licensee can bring proceedings in the courts against an infringement.

Duration of copyright

- For literary, dramatic, musical or artistic works; 70 years from the end of the calendar year in which the last remaining author of the work dies, or the work is made available to the public, (by authorised performance, broadcast, exhibition, etc.)
- Sound Recordings and broadcasts; 50 years from the end of the calendar year in which the last remaining author of the work dies, or the work is made available to the public, (by authorised release, performance, broadcast, etc.)
- Films; 70 years from the end of the calendar year in which the last principal director, author or composer dies, or the work is made available to the public, (by authorised performance, broadcast, exhibition, etc.)
- Typographical arrangement of published editions; 25 years from the end of the calendar year in which the work was first published

The computer programs regulations in 1992 extended the rules covering literary works to include computer programs.

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Types of work covered

Literary:

Song lyrics, manuscripts, manuals, computer programs, commercial documents, leaflets, newsletters & articles etc.

Dramatic:

Plays, dance, etc.

Musical:

Recordings and score.

Artistic:

Photography, painting, architecture, technical drawings/ diagrams, maps, logos, etc

Typographical arrangement of published editions:

Magazines, periodicals, etc.

Sound recordings:

May be recordings of works, e.g. musical and literary

Films:

Broadcasts and cable programs.

Rights do not subsist in any part of a work which is a copy taken from a previous work.

Betty and Daniel should find out if the images they are using are copyrighted and if they are they should ask if they are allowed to use it on their products. If the image is a copy of a copied image then there if no copyright protecting it.

'A Paperless Office' - fact or fiction.

Many businesses feel that they are drowning in a sea of paper. Studies show that offices increase their paper demands by 25 per cent per year; retention periods are becoming longer and access to the documents is becoming greater. The answer lies in Electronic Document Management (EMD) systems, writes. Document management systems have been around since the time of stone tablets.

The use of filing cabinets, file folders, and index cards comprise some of the components of a document management system. The ability to efficiently store documents and easily search and retrieve their contents has been a constant struggle for records managers.

While microfilm is a good solution for permanent storage, its search and retrieval mechanisms are cumbersome. Enter the use of computers to manage document storage and increase search and retrieval capabilities. EDM systems offer secure archive capabilities, elimination of lost or decaying documents, and instantaneous access to all of the documents in the repository.

Today, a document can be scanned into a computer and the user can search a template profile or search the entire text of the document.

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CD ROM's had over a 30-year shelf life and can store over 20,000 documents. A document that is stored on a computer can be easily located, and once it is found it can be printed, faxed or e-mailed. Another advantage of an EDM system is its archival abilities.

Imagine storing 10 file cabinets worth of paper documents in your desk drawer, and being able to retrieve any document within 30 seconds! What is the cost to all of this paper? Consider that an average company spends £25,000 to fill one file cabinet and £2,100 a year to maintain the cabinet.

While vast improvements have been made over the past few years, an EDM system may not completely abolish a company's paper requirements, but it will exponentially allow for better management of those documents. An EDM system may be the solution your company is seeking, so that you can concentrate on managing your business, not on managing your paper.

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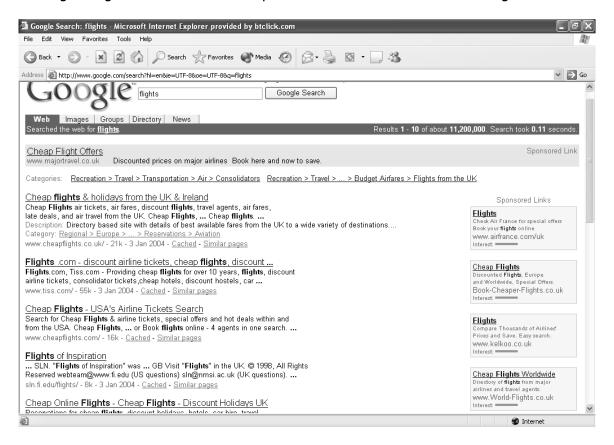
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TASK 7:

Uses Of The Internet

E-Booking.

The facilities offered for e-booking on the internet are very vast; there are many companies that offer online booking. By going to any major search engine such as 'Google', you will find many companies offering there service for online booking of flights, such as airline companies them selves and online travel agents



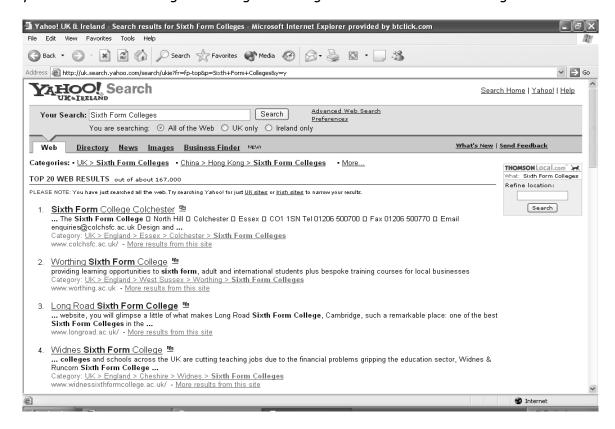
As you can see there are many options for online booking on the internet.

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Sixth Form Colleges.

The facilities offered for researching Sixth Form Colleges on the internet depend on whether or not the college has a website there are many companies that offer online booking. By going to any major search engine such as 'Yahoo', you will find some Colleges offering an online guild to the Sixth Form College.



As you can see there are many options for finding a college on the internet.

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Advantages And Disadvantages Of Using The Internet For The Family And Environment.

	Advantages	Disadvantages
Family	 Wide amount of information available. You can find anything on the internet. 	 My not be specific to there needs e.g. sixth form colleges from different parts of the world are on the internet not from there area.
Environment	 Less Paper Used, there fore saving trees. 	 Uses more electricity, therefore more fuels are burnt to provide energy

Compare Booking A Flight Online Or Through A Travel Agent.

- Easier to do online, you don't have to leave your home.
- Might be able to get better offers online.
- When you go to a travel agent, it is easier to find exactly what you want because you are talking to a human and not a computer.
- The internet site might not be secure and someone may get your details.

Compare Researching Sixth Form Colleges Online Or Manually.

- Manually is better because you can see the college you want to go to and you can talk to people at the college.
- The internet is good to find out statistics about a college.
- When searching for a college on the internet you can end up with some which are nowhere near you and are irrelevant.

Employment Due To Internet Growth.

There has been a growth in employment due to the internet as staff are needed to maintain the site, work in warehouse and deliver goods. This has also created new jobs such as website designers and internet technician.