

Grade 10

Social Implications – Lesson 2

How computers affect the way we live and communicate



GAUTENG
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Kuyasheshwa - "Gauteng working better"

How computer usage can affect us:

- It can have a huge impact on our environment
- It affects the way we communicate, making our lives easier and more complicated at the same time

How do computers affect the environment?

- Causes pollution - Manufacturing them uses a lot of non-renewable resources, and contaminates other resources such as water and air
- Produces waste – Some computers are made with non-biodegradable materials
- Produces greenhouse gasses – This causes breathing difficulty in humans and leads to global warming

What is green computing?

- The practice of environmentally sustainable computing
- Four areas : Usage, disposal, design and manufacture

Green computing clarified

- Usage : Minimal electricity consumption
- Disposal : Recycling unwanted electronics
- Design : Energy efficient digital devices
- Manufacture : Minimal waste to reduce environmental impacts

More efficient energy usage

- Design hardware in such a way that it consumes less energy. For example: Use LCD or LED monitors instead of CRT monitors
- Make use of 'Energy-star' products that are manufactured according to international standards and have been proven to use less electricity
- Switch off devices rather than keeping them on standby

What is e-waste?

- E-waste refers to all the hardware that we don't want anymore, mainly because it is either outdated or broken beyond repair.
- Most e-waste ends up on rubbish heaps or in landfills.
- E-waste contain heavy metals (such as cadmium, lead and mercury) which is toxic if leaked into our soil.

How do we reduce e-waste?

- By using less harmful chemicals and metals in the design and manufacture of hardware
- By re-using and recycling e-waste in the correct manner, rather than it ending up on landfills.

Less paper = greener future

- Paperless office refers to a situation where documents are transmitted and processed electronically, rather than making printouts
- In certain cases hard copies are necessary, but we can still reduce unnecessary printing by:
 - Proofreading documents **BEFORE** we print them
 - Printing on both sides of the paper

Activity: Group discussion

- Discuss how we can practice green computing in our day-to-day lives. Be sure to refer to the issues discussed in class, such as energy consumption, e-waste and paper usage.
- Watch ['5 Tips for Green computing'](#) video clip to summarise discussion

Impact of global e-communication

- Computers have definitely changed the way we communicate. It has made communication faster, cheaper and more reliable

Faster communication

- Snail-mail (normal letter sent via the post office) vs e-mail
- Video conferences with people all over the world – Without having to waste time and money on travelling
- Message millions of people instantly via social media
- Transfer huge files safely and quickly

Cheaper communication

- Phone calls overseas can be made using technology such as VoIP (for example Skype), instead of normal telephone lines
- Sending documents or accounts via e-mail is much cheaper than making use of the normal postal service

More effective communication

- The sender has a record / evidence that the document has been sent via e-mail
- Can track whether the receiver has read the document
- Quality of document remains the same as when created
- Communication not dependant on time barriers
- Business transactions can happen any time / place

Conclusion – Negative impacts of ICT

- Health issues such as RSI etc.
- Environmental issues such as e-waste etc.
- Impact on social behaviour and the way we communicate

Conclusion – Positive impact

- Green computing can help reduce the negative impact on the environment
- E-communication has made communication faster, cheaper and more effective

Activity 1

- Briefly compare the positive and negative impacts that using computers has on our lives. Refer to the concepts discussed in the past two lessons.

Activity 2 – Something to think about

- Write a short paragraph to explain how new methods of communication can have an impact on our social lives, and more specifically our relationships.

