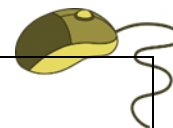
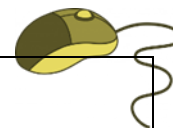




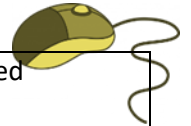
<b>SUBJECT AND GRADE</b>	<b>Computer Applications Technology Grade 12</b>	
<b>TERM AND WEEK</b>	<b>Term 2 Week 2</b>	
<b>TOPIC</b>	<b>Social implications</b>	
<b>AIMS OF LESSON</b>	The lesson seeks to promote the awareness of security issues surrounding the use of ICTs and build on the understanding of how to use ICTs responsibly.	
<b>RESOURCES</b>	<b>Paper-based resources</b>	<b>Digital resources</b>
	See digital resources	<p>DBE. (2019). <i>Computer Applications Technology Grade 12 Theory Book</i>. Pretoria: DBE. Retrieved from <a href="https://bit.ly/catgr12theory">https://bit.ly/catgr12theory</a></p> <p>QP Feb-Mar. (2016). DBE.            QP Feb-Mar. (2017). DBE.            QP Feb-Mar. (2018). DBE.            QP Jun. (2016). DBE.            QP Jun. (2017). DBE.            QP Jun. (2018). DBE.            QP Nov. (2016). DBE.            QP Nov. (2017). DBE.            QP Nov. (2018). DBE.</p> <p>VRAESTELBOEKIES. (2020). Retrieved from <a href="https://bit.ly/cat2020t2w2">https://bit.ly/cat2020t2w2</a></p>
<b>INTRODUCTION</b>	<p>The time is long gone when ICTs were so rare and novel that the mere fact that they worked was a miracle in itself. The world we live in has seen an exponential growth of the use of technology enabled by the internet to a large extent. Whereas this rapid growth has brought a lot of benefits to society, in the environment where security is often an afterthought, it has presented criminals with multiple opportunities for exploitation of unwitting citizens that need to be equipped with basic skills to mitigate potential risks that come with their use of ICTs.</p> <p>The lesson will build on the following concepts from grade 11:</p> <ul style="list-style-type: none"> <li>• Unauthorised access;</li> <li>• Ethical use of networks;</li> <li>• Network safety and security issues;</li> </ul>	



	<ul style="list-style-type: none"><li>• Privacy issues</li><li>• How ICTs impact on the workplace and employment practices</li><li>• Social engineering tricks;</li><li>• Data protection;</li><li>• Computer misuse;</li><li>• Malware and security software;</li><li>• E-commerce and e-banking</li></ul>	
<b>CONCEPTS AND SKILLS</b>	<ul style="list-style-type: none"><li>• Computer crimes in relation to hardware, software, information, identity, bandwidth theft, theft of time and services (DBE, 2019, pp. 118-120);</li><li>• Internet-related fraud scams (DBE, 2019, p. 120);</li><li>• Security issues (DBE, 2019, pp. 123-125);</li><li>• Avoiding security threats (DBE, 2019, p. 126);</li><li>• Safeguards against criminals, viruses and threats (DBE, 2019, pp. 126-128);</li><li>• The impact of distributed computing power (DBE, 2019, p. 129).</li></ul>	<i>CAN YOU...</i> <ul style="list-style-type: none"><li>• give examples of unauthorised access?</li><li>• explain how ISPs protect the ethical use of networks by their customers?</li><li>• identify network security issues and list strategies to prevent them?</li><li>• explain how user privacy can be compromised through their use of networks?</li><li>• give examples of how ICTs can be abused in the workplace?</li><li>• explain social engineering and give specific examples?</li><li>• remember how computer users and companies can protect their data?</li><li>• explain why malware and security software are necessary and how they work?</li><li>• describe a safe way to use e-commerce and e-banking services?</li></ul>



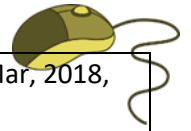
<b>ACTIVITIES/ASSESSMENT</b>	Computer crimes, fraud scams - Activity 5.1 (DBE, 2019, p. 122) Security issues - Activity 5.2 (DBE, 2019, p. 125) Avoiding and safeguards against security threats - Activity 5.3 (DBE, 2019, p. 128) The impact of Distributed computing power – see consolidation activities.
<b>CONSOLIDATION</b>	<p>In this lesson we learned about the disadvantages of ICTs such as computer crimes and fraud scams, various ICT security issues and threats and ways to avoid them. We have also learned about ways to harness the power of ICTs in the form of distributed computing.</p> <p><b>Consolidation activities:</b></p> <p>Revision activity (DBE, 2019, pp. 130-132)</p> <p>Questions from recent DBE question papers:</p> <ul style="list-style-type: none"><li>• State ONE potential negative effect or consequence of using pirated software. (1) (QP Feb-Mar, 2016, p. 7.4)</li><li>• State TWO indications that might suggest that an e-mail is a phishing e-mail. (2) (QP Feb-Mar, 2016, p. 7.5)</li><li>• You need to send a small program (.exe) file as an e-mail attachment but the e-mail program reports that it cannot accept .exe files. (QP Feb-Mar, 2016, pp. 7.6.1-7.6.2) What is the most likely reason why e-mail programs are set up to reject or block program or executable (.exe) files? (1) Suggest a way to trick the e-mail program into accepting this file as an attachment. (1)</li><li>• State ONE possible way of preventing other users from tagging you in photographs on Facebook. (1) (QP Jun, 2016, p. 7.4)</li><li>• Computers can be controlled remotely by criminals. (QP Nov, 2016, p. 7.4)</li></ul>



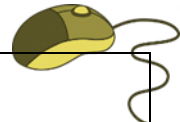
What is the general name for a group of computers that have been taken over and are being controlled remotely by criminals? (1)

Give ONE example of a criminal or malicious task these groups of computers may perform. (1)

- Why would keylogger software not have any harmful effects if it is installed on a computer that is never networked or connected to the Internet? (1) (QP Feb-Mar, 2017, p. 7.1)
- Explain what phishing is AND why updating your antivirus program will not prevent you from becoming a victim of phishing. (2) (QP Feb-Mar, 2017, p. 7.4)
- State TWO ethical considerations to keep in mind when connecting to someone else's Internet connection. (2) (QP Feb-Mar, 2017, p. 7.5)
- Define online identity theft. (1) (QP Jun, 2017, p. 7.1)
- Give TWO examples of a situation when the right to access information may be more important than the right to privacy. (2) (QP Jun, 2017, p. 7.2)
- Name the computer crime that has to do with posting false information/accusations about another person online. (1) (QP Nov, 2017, p. 7.1)
- Suggest TWO rules for an acceptable use policy (AUP) in a school computer centre that has Internet access. (2) (QP Nov, 2017, p. 7.2)
- A company stores the personal information of its clients.  
Suggest TWO guidelines for the company to ethically manage client data. (2) (QP Nov, 2017, p. 7.4)
- Give ONE indication that a message you have received is a hoax. (1) (QP Feb-Mar, 2018, p. 7.1)
- State TWO ways in which ICTs may negatively impact the workplace. (2) (QP Feb-Mar, 2018, p. 7.2)
- Why are governments concerned about the widespread use of Bitcoin? (2) (QP Feb-Mar, 2018, p. 7.3)



- Besides cheating, discuss TWO reasons why some schools ban the use of smartphones. (2) (QP Feb-Mar, 2018, p. 7.6)
- Give TWO examples of how social engineering is done. (2) (QP Jun, 2018, p. 7.2)
- A virtual private network (VPN) allows a user to remain anonymous while on the internet.  
Give TWO reasons why some governments are blocking VPN access for their citizens. (2) (QP Jun, 2018, p. 7.4)
- Give TWO tips for the responsible use of social media in order to prevent offending other people. (2) (QP Jun, 2018, p. 7.5)
- A user sometimes shares his/her personal details when using social media, e.g. a cellphone number or an e-mail address. (QP Nov, 2018, p. 7.1)  
Why should a user think carefully before sharing this information on social media websites? (1)
- State TWO ways in which a system administrator can protect a network from hackers. (2) (QP Nov, 2018, p. 7.2)
- Explain why you want your friend to use a private browsing mode, such as incognito mode, when he uses your computer to log onto his web-based e-mail service. (2) (QP Nov, 2018, p. 7.4)
- Which ONE of the following is NOT a benefit of grid computing? (QP Nov, 2018, p. 1.5)
  - A It allows processing of high volumes of data.
  - B It saves on electricity costs and data usage costs.
  - C The number of computers used in a grid can differ.
  - D It combines the processing power of many computers. (1)
  
- Study the picture below and answer the questions that follow. (QP Nov, 2017, p. 7.5)



**NOTE:** Assume that BANKZA is the name of a legitimate South African bank.



Identify the type of scam represented in the picture above. (1)

State TWO ways in which a user can identify this as a scam. (2)

**VALUES**

*Digital citizenship: safe and responsible use of technology by anyone who uses computers, the Internet, and digital devices to engage with society on any level.*