

Computers & I.T., Part 1 – Course Syllabus

Course Description:

This course is the first semester of Computers & I.T. This course introduces students to today's modern technology concepts on computers, devices, and the Internet. It covers the concepts of digital citizenship, productivity tools, communication and collaboration tools, and cyberspace and cybersecurity.

Credits - One Semester (0.5 Carnegie unit/ CA - 5 credits)

Course Outline	Standards - CA, NV
<p>Unit 1 - The Computer Evolution</p> <ul style="list-style-type: none"> 1.1 Information Technology (I.T.) 1.2 The History of Computers 1.3 The Rise of the Personal Computer 1.4 An Introduction to the Internet 1.5 Operating Systems 	<p>In this unit, students will learn about:</p> <p>The importance of Information Technology (I.T.) in our lives.</p> <p>The evolution and history of computers, the Internet, and I.T.</p> <p>How computers work and the various software required to enable computers to function, as well as how computers communicate with other computers and to the network.</p> <p>CA: 9-12S.CS.2; 9-12.CS.2; 9-12S.CS.1; 9-12.NI.5; 9-12S.NI.4</p> <p>NV: 9-12.IC.C.1; 9-12.CS.HS.1; A9-12.CS.T.1; A9-12.CS.HS.1; 9-12.NI.NCO.1</p>
<p>Unit 2 - Digital Citizenship</p> <ul style="list-style-type: none"> 2.1 Social Media 2.2 Digital Footprint 2.3 Online Intellectual Property 2.4 Cyberbullying & Online Hate Speech 2.5 General Data Protection Regulations (GDPR) 	<p>In this unit, students learn about digital citizenship. Dictionary.com defines it as "the skills and knowledge to safely, effectively, and responsibly use the internet and other digital technology, as media literacy skills to evaluate the accuracy of information found online, anti-cyberbullying strategies, or online privacy practices."</p> <p>The meaning of social media and media literacy.</p> <p>The importance of protecting your online privacy, digital footprint, and security over the Internet.</p> <p>The reasons for respecting online intellectual property.</p> <p>The General Data Protection Regulations (GDPR) and its effects.</p> <p>Think and rethink before typing a post online.</p> <p>CA: 9-12.IC.23; 9-12.IC.29; 9-12S.IC.30; 9-12.NI.6; 9-12.AP.19</p> <p>NV: 9-12.IC.C.1; 9-12.IC.SLE.2; A9-12.IC.SLE.1; 9-12.NI.C.2; 9-12.AP.19</p>

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<p>Unit 3 - Productivity Tools</p> <ul style="list-style-type: none"> 3.1 Searching the Web 3.2 Reliable Sources 3.3 Spreadsheets 3.4 Word Processing 3.5 Presentation Software 3.6 Extending Productivity 	<p>In this unit, students will learn:</p> <p>How search engines work.</p> <p>How to use productivity tools such as spreadsheets, word processors, and presentation software.</p> <p>How to access and identify credible sources.</p> <p>How to increase productivity by utilizing various browser extensions and online tools.</p> <p>How to provide digital access to all types of users.</p> <p>CA: 9-12S.IC.27; 9-12.AP.21; 9-12S.DA.7; 9-12S.AP.23</p> <p>NV: A9-12.IC.C.1; 9-12.AP.M.2; A9-12.DA.CVT.2; A9-12.AP.PD.6</p>
<p>Unit 4 - Communication & Collaboration</p> <ul style="list-style-type: none"> 4.1 Email 4.2 Collaboration 4.3 Web Conferencing 4.4 Cloud Storage 	<p>In this unit, students will learn:</p> <p>The various ways to communicate and collaborate on the web, as well as the tools you can use.</p> <p>What an email is, its parts, and how to write one.</p> <p>The various communication and collaboration tools for chatting, video conferencing, and etiquette you should be familiar with.</p> <p>What the Cloud is and the various cloud services and storage options.</p> <p>CA: 9-12.IC.27</p> <p>NV: 9-12.IC.SI.1</p>
<p>Unit 5 - Cybersecurity</p> <ul style="list-style-type: none"> 5.1 Cyberspace & Cybersecurity 5.2 Hacking 5.3 Distributed Denial of Service Attack 5.4 Social Engineering 5.5 Cryptography & Security Protocols 5.6 Cybersecurity Tools 	<p>In this unit, students will learn about:</p> <p>The personal, ethical, and economic significance of cybersecurity.</p> <p>The distinction between white, gray, and black hackers</p> <p>The difference between a Denial-of-Service (DoS) attack and a Distributed Denial-of-Service (DDoS) attack.</p> <p>The forms of social engineering techniques used to trick people into revealing confidential information.</p> <p>The cybersecurity tools you must employ to avoid being hacked.</p> <p>CA: 9-12.NI.6; 9-12.NI.7; 9-12.IC.23</p> <p>NV: 9-12.NI.C.1; 9-12.NI.C.4; 9-12.NI.C.2; 9-12.IC.C.1</p>

