Semester 1		Semester 2	
Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
Technical Standards: 1.0, 5.1-5.2, 9.0 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0 Unit 1 **The Internet** • Personal Innovations • Sending Binary Messages • Number Systems • Binary Numbers • Sending Numbers • Sending Texts • The Internet is for Everyone • The Need for Addressing • Routers and Redundancy • Packets and Making a Reliable Internet • The Need for DNS • HTTP and Abstraction on the Internet Technical Standards: 5.1 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0 Unit 2 **Digital Information** • Bytes and File Sizes • Text Compression • Encoding B&W Images • Encoding Color Images • Lossy vs. Lossless Compression	Technical Standards: 1.0, 5.0, 4.6, 6.0, 7.0, Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, Unit 3 **Intro to Programming** • The Need for Programming Languages • The Need for Algorithms • Creativity in Algorithms • Using Simple Commands • Creating Functions • Functions & Top-Down Design • APIs and Using Functions with Parameters • Creating Functions with Parameters • Looping and Random Numbers Technical Standards: 2.0, 9.0, 3.0 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0, 8.0 Unit 4 **Big Data and Privacy** • What is Big Data? • Finding Trends with Visualizations • Check Your Assumptions • Rapid Research: Data Innovations • Identifying People with Data • The Cost of Free	Technical Standards: 1.0, 4.0, 5.0, 6.0, 7.0, 8.0, 12.0, 13.0 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0 Unit 5 **Building Apps** • Intro to Event-Driven Programming • Multi-Screen Apps • Building an App: Multi-Screen App • Controlling Memory with Variables • Building an App: Clicker Game • User Input and Strings • If-statements Unplugged • Boolean Expressions and "if" Statements • "if-else-if" and Conditional Logic • Building an App: Color Sleuth • While Loops • Loops and Simulations • Introduction to Arrays • Building an App: Image Scroller • Processing Arrays • Functions with Return Values • Building an App: Canvas Painter *Technical Skills Assessment Industry Certification Testing*	Technical Standards: 1.0, 4.0, 5.0, 6.0, 7.0, 8.0, 12.0, 13.0 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0 **AP Performance Task Prep CREATE** Students will practice and then complete the Create Performance Task (PT). • Explore PT- Review the Task • Explore PT – Make a Plan • Explore PT – Complete the Task Technical Standards: 8.0, 12.0, 13.0 Professional Standards: 1.0, 2.0, 3.0, 4.0, 5.0 Unit 6 (optional) **Post AP: Manipulating and Visualizing Data** • Intro to Data • Good and Bad Data Visualizations • Making Data Visualizations • Discover a Data Story • Cleaning Data • Creating Summary Tables • Tell a Data Story

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51% of the entire program will be conducted in a lab setting. The lab consists of hand-on learning projects and experiences where student will practice the necessary skills to complete the current unit study.

Semester 1		Semester 2	
Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
	• Simple Encryption • Encryption with Keys and Passwords • Public Key and Cryptography • Rapid Research: Cybercrime		

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