Denton Community College 2019/20

Departmental Curriculum Map Template

Subject: Computer Science **Year Group: Y10**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Problem Solving (Programming), CPU, Programming Languages	Data Representation, Programming, Hardware, Software	Software Continued, Networks, Programming,	Networks Continued, Bigger Picture, Programming	Binary Logic, Programming	Revision, Mock NEA and Programming
What will students during this unit?	Introduced to logical skills that solve problems, The role of the CPU and how it works with RAM and other hardware. Become aware that other programming languages exist and that there are different levels of languages.	Learn how images and sound are represented by binary. Know the impact of quality and file size. Recap and further develop understanding of binary and how it represents numbers and characters. Continued development of Python programming skills, knowledge and understanding. Further development of hardware understanding and its role within computer systems. Type of software e.g. utility, system and application.	Continued knowledge and understanding of software types. Categories of software e.g. proprietary, open source, off the shelf and custom. Network hardware, topologies, protocols and security. Continued development of Python programming skills, knowledge and understanding.	Continued knowledge and understanding of network hardware, topologies, protocols and security. Continued development of Python programming skills, knowledge and understanding. Gain a knowledge and understanding of "bigger picture" issues (ELEC), and how these impact on us/communities/societies.	Binary logic, truth tables, logic problems, Continued development of Python programming skills, knowledge and understanding.	Introduce subject revision strategies. Prepare and complete a Mock NEA assignment. Mock assignment provides students with an opportunity to showcase their learning of python and various programming techniques and understanding.
When will students be assessed?	Students will be assessed at the end of topics. In addition, mock exams have been planned.	Students will be assessed at the end of topics. In addition, mock exams have been planned.	Students will be assessed at the end of topics. In addition, mock exams have been planned.	Students will be assessed at the end of topics. In addition, mock exams have been planned.	Students will be assessed at the end of topics. In addition, mock exams have been planned.	Students will be assessed at the end of topics. In addition, mock exams have been planned.

How will students be assessed?	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"	Students will have topics assessed either via written answers or via online assessment tests. Quantifiable tests will be recorded via a "Student Progress Tracker"
Key Vocabulary	Programming constructs Sequence, Selection, Iteration, CPU, FDE, Architecture, Cache, CU, ALU, Memory, Abstraction, Decomposition, Algorithm, Pattern Recognition	Programming constructs Sequence, Selection, Iteration, Binary, Hexadecimal, Denary, Conversion, Abstraction, Decomposition, Algorithm, Pattern Recognition, Computer components, Application, utility and system software	Computer components, Application, utility and system software. Topologies, LAN, WAN, Client Server, P2P Server, Data, Information, Programming constructs Sequence, Selection, Iteration	Topologies, LAN, WAN, Client Server, P2P Server, Data, Information, WWW, Internet, Data Packets, Ethical, Legal, Environmental, Cultural impact, Users, Business and digital commerce, Programming constructs Sequence, Selection, Iteration	AND, OR, NOT, Logic Gates, Expression, Programming constructs Sequence, Selection, Iteration	Programming constructs Sequence, Selection, Iteration
Homework opportunities to broaden or deepen student knowledge	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via Snakify. Seneca Learning is tracked on the Student Progress Tracker.	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via Snakify. Seneca Learning is tracked on the Student Progress Tracker.	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via Snakify. Seneca Learning is tracked on	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via Snakify. Seneca Learning is tracked on	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via Snakify. Seneca	Seneca Learning is used for homework which encourages students to independently revise. Students also have opportunities to improve their problem solving skills via Cyber Discovery. Finally, students can perfect their python programming skills, knowledge and understanding via

			the Student Progress Tracker.	the Student Progress Tracker.	Learning is tracked on the Student Progress Tracker.	Snakify. Seneca Learning is tracked on the Student Progress Tracker.
Links to the National Curriculum	• develop and apply their analytic, problem-solving, design, and computational thinking skills • develop their capability, creativity and knowledge in computer science, digital media and information technology	• develop and apply their analytic, problem-solving, design, and computational thinking skills • develop their capability, creativity and knowledge in computer science, digital media and information technology	• develop and apply their analytic, problem-solving, design, and computational thinking skills • develop their capability, creativity and knowledge in computer science, digital media and information technology	• understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns	• develop and apply their analytic, problem-solving, design, and computational thinking skills • develop their capability, creativity and knowledge in computer science, digital media and information technology	• develop and apply their analytic, problem-solving, design, and computational thinking skills • develop their capability, creativity and knowledge in computer science, digital media and information technology