



Denton Community College
Departmental Curriculum Map
Subject: Computer Science



Year Group:10

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Topic 2 - Data	Topic 5 – Ethical, legal, cultural and environmental	Topic 6 - Programming	Topic 6 - Programming	Topic 3 - Networks	Topic 3 – Networks / Revision / Mock assessment
What will students during this unit?	Units of data, base 2 and 16 number systems. Audio, graphical and character data representation. Programming concepts are focuses on 1 lesson every 2 weeks.	Students look at the main issues surrounding the subject. Reference is made to recent news articles, with students discussions pros and cons of digital advancements. Programming concepts are focuses on 1 lesson every 2 weeks.	Students focus on programming within python. Students start with basic sequential programming before applying more concepts to solve more complex problems. The PRIMM process is followed throughout to support students in reading code. Trinket and/or Repl.IT will be used	Students should be able to apply their knowledge and understanding to work independently solving problems within python. Trinket and/or Repl.IT will be used	Students learn about how digital devices communicate with each other and how they obtain data. WAN, LAN's, Client and Peer-2-peer servers are included. Together with looking at topologies and protocols that digital devices must follow to receive data. Programming concepts are focuses on 1 lesson every 2 weeks.	Once the networks topic is completed, students will develop a range of strategies to help students revise. External partners will be asked to come in.
When will students be assessed?	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment 	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment 	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment 	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment 	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment 	<ul style="list-style-type: none"> • Low stakes quiz every lesson. • End of topic assessment
How will students be assessed?	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Written topic test paper 	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Written topic test paper 	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Rubric used to assess written code 	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Rubric used to assess written code 	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Written topic test paper 	<ul style="list-style-type: none"> • Low stakes lesson quiz, which implement a “retrieval practice” structure. • Mock assessment

Key Vocabulary	Binary, Hexadecimal, Denary, Conversion, Abstraction, Decomposition, Algorithm, Pattern Recognition, Computer components, Application, utility and system software, Units of data,	Primary, secondary key, relational database. Data Types, Ethical, Legal, Environmental, Cultural impact, Users, Business and digital commerce, AND, OR, NOT, Logic Gates, Expression	Abstraction, decomposition, algorithm, pattern recognition, Programming constructs selection, sequence and iteration. Test, valid, erroneous	Abstraction, decomposition, algorithm, pattern recognition, Programming constructs selection, sequence and iteration. Test, valid, erroneous	HTTPS, Protocols, Rules, Security, Malware, vulnerabilities	Network, Data Packets, WWW, HTTPS, Protocols, Rules, Security, Malware, vulnerabilities
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 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 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 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 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 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 Seneca Learning, is tracked on the Student Progress Tracker.
Links to the National Curriculum	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer science, digital media and 	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer science, digital media and 	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer science, digital media and 	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer science, digital media and 	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer science, digital media and 	<ul style="list-style-type: none"> develop and apply their analytic, problem-solving, design, and computational thinking skills develop their capability, creativity and knowledge in computer

	information technology	science, digital media and information technology				
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