



# Denton Community College 2019/20

## Departmental Curriculum Map Template

### Subject: Computer Science

### Year Group: Y11



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
<b>Topics</b>	Baseline Assessment, Mock NEA, NEA	NEA continued. Algorithms, Recap hardware & software. Mock paper 1	Revision for Paper 2 Mock, Data Storage & Compression, Encryption	Binary Logic, Big Picture, Databases, Revision,	Internet & WWW, Embedded Systems, Revision
<b>What will students during this unit?</b>	Students complete a baseline assessment. This compares the score from Y10 baseline assessment. Students complete the Mock NEA and start the official NEA.	Students complete their NEA assignment. Introduced to search and sort algorithms. Recap of hardware and software.	Revision strategies continued in preparation of 2nd whole school mock paper. Types of data storage and how these store data. Types of compression and its impact on data. Encryption types (ELEC)	Recap of binary logic. Introduction to SQL and databases. Characteristics of databases, structures the management of databases.	Revision strategies continued in preparation for their GCSE exams. How the internet and WWW differ.
<b>When will students be assessed?</b>	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.
<b>How will students be assessed?</b>	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"

<b>Key Vocabulary</b>	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, Search / sort algorithms, binary, Linear, Bubble, Merge. Application and system software. Hardware components, internal & external	Integer, float, string, character, boolean, lossless, lossy, compression, Optical, magnetic, solid state, encryption, security, privacy, ELEC “big picture”	Primary, secondary key, relational database. Data Types, Ethical, Legal, Environmental, Cultural impact, Users, Business and digital commerce, AND, OR, NOT, Logic Gates, Expression	Network, Data Packets, WWW, HTTPS, Protocols, Rules, Security, Malware, vulnerabilities
<b>Homework opportunities to broaden or deepen student knowledge</b>	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 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 the Student Progress Tracker.

<p><b>Links to the National Curriculum</b></p>	<ul style="list-style-type: none"> <li>● develop their capability, creativity and knowledge in computer science, digital media and information technology</li> <li>● develop and apply their analytic, problem-solving, design, and computational thinking skills</li> </ul>	<ul style="list-style-type: none"> <li>● develop their capability, creativity and knowledge in computer science, digital media and information technology</li> <li>● develop and apply their analytic, problem-solving, design, and computational thinking skills</li> </ul>	<ul style="list-style-type: none"> <li>● develop their capability, creativity and knowledge in computer science, digital media and information technology</li> <li>● develop and apply their analytic, problem-solving, design, and computational thinking skills</li> </ul>	<ul style="list-style-type: none"> <li>● develop their capability, creativity and knowledge in computer science, digital media and information technology</li> <li>● develop and apply their analytic, problem-solving, design, and computational thinking skills</li> <li>● 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</li> </ul>	<ul style="list-style-type: none"> <li>● develop their capability, creativity and knowledge in computer science, digital media and information technology</li> <li>● develop and apply their analytic, problem-solving, design, and computational thinking skills</li> </ul>
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