



Curriculum Sequencing - Year 9

Year 9 Term 2a:	
Topics covered:	Data Representation
How it links to what has been studied before:	The concepts are linked to practical applications and problems that the learners are familiar with.
How it links to what will be studied:	Data representation is crucial in computer science, influencing storage efficiency, algorithm performance, system communication, data analysis, machine learning models, database optimization, security, interoperability, scalability, and overall comprehension and maintenance of software systems.
Key words:	<p>Representations</p> <p>Character Coding Schemes</p> <p>Binary Digits (Bits)</p> <p>Length of Representation</p> <p>Physical Media</p> <p>Decimal to Binary Conversion</p> <p>Binary to Decimal Conversion</p> <p>Units and Multiples</p> <p>Binary Representation in Digital Devices</p> <p>Natural Numbers in Binary</p> <p>Information Processing</p> <p>Binary Sequence Size</p> <p>Digital Devices</p> <p>Skills Application</p>
Assessment focus	Lessons 1-5 have an a exit ticket (formative assessment). Lesson 6 is a summative assessment.
Revision tips	Revise the content from the lesson slides and the exit tickets. BBC Bitesize Revision
Key skills:	<p>Understanding diverse data representations.</p> <p>Familiarity with character coding schemes.</p> <p>Proficiency in binary operations and representation.</p> <p>Measuring data size and length.</p> <p>Handling symbols on physical media.</p> <p>Decimal to binary conversion skills.</p> <p>Unit conversion in data representation.</p> <p>Understanding binary representation in devices.</p> <p>Representing natural numbers in binary.</p> <p>Application of skills in practical scenarios.</p>
Why we study it:	Acquiring these skills is crucial in the digital age for effective communication, problem-solving, and technological adaptability.
Mastery in this subject	By deeply understanding data representations, practicing hands-on exercises, and applying concepts to real-world scenarios. Gain programming experience, stay updated, and collaborate with peers. Challenge yourself with diverse problem-solving tasks, seek feedback, and continuously improve.
Year 9 Term 2b:	
Topics covered:	Mobile app development
How it links to what has been studied before:	Learners will have an opportunity to build on the programming concepts they used in previous units before undertaking their project.

How it links to what will be studied:	Learners will work in pairs to consider the needs of the user; decompose the project into smaller, more manageable parts; use the pair programming approach to develop their app together; and finish off by evaluating the success of the project against the needs of the user.
Key words:	Problem decomposition GUI customization Event-driven programming User input Variables Application development Coding errors Variable values in objects User needs assessment Creative project Block-based programming Sequencing Selection Reflect and react Project evaluation
Key skills:	This unit focuses on the development of the following key techniques: <ul style="list-style-type: none"> ● Event handling ● Sequencing ● Variables ● Selection ● Operators
Assessment focus	Lessons 1-5 have an a exit ticket (formative assessment). Lesson 6 is a summative assessment.
Revision tips	Revise the content from the lesson slides and exit tickets.
Why we study it:	In a world where there’s an app for every possible need, this unit aims to take the learners from designer to project manager to developer in order to create their own mobile app. Using App Lab from code.org, learners will familiarise themselves with the coding environment
Mastery in this subject	Mastering App Lab from code.org involves completing tutorials, hands-on practice, collaborating with peers, exploring sample projects, understanding code blocks and JavaScript, honing debugging skills, experimenting with design, staying updated, seeking feedback, and participating in challenges for a comprehensive learning experience.



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