Year 7 Term 2a:
Topics covered:
How it links to what has been studied before:
How it links to what will be studied:
Key words:
Assessment focus
Revision tips
Key skills:
Why we study it:
Mastery in this subject

Year 7 Term 2b:
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Data Representation
The concepts are linked to practical applications and problems that the learners are familiar with.
Data representation is crucial in computer science, influencing storage efficiency, algorithm performance, system communication, data analysis, machine learning models, database optimization, security,
Representations Character Coding Schemes Binary Digits (Bits) Length of Representation Physical Media Decimal to Binary Conversion Binary to Decimal Conversion Units and Multiples Binary Representation in Digital Devices Natural Numbers in Binary Information Processing Binary Sequence Size Digital Devices
Lessons 1-5 have an a exit ticket (formative assessment). Lesson 6 is a summative assessment.
Revise the content from the lesson slides and the exit tickets. BBC Bitesize Revision
Familiarity with character coding schemes. Proficiency in binary operations and representation. Measuring data size and length. Handling symbols on physical media. Decimal to binary conversion skills. Unit conversion in data representation. Understanding binary representation in devices. Representing natural numbers in binary. Application of skills in practical scenarios.
technological adaptability.
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

Mobile app developmemt
Learners will have an opportunity to build on the programming concepts they used in previous units before un
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

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

This unit focuses on the development of the following key techniques:●   Event handling●   Sequencing●

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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,

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

Variables●   Selection●   Operators