



## MAGHULL HIGH SCHOOL – CURRICULUM MAP

HALF TERM 1.2 Nov - Dec	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6
TOPIC (S)	How do we represent data	How do computers represent text using binary	Why binary digits are used in computing systems	How numbers can be represented using binary	How do we measure size of files in computer systems	Review of lessons taught
<b>Knowledge &amp; Skills development</b>	Describe examples of representations Representations are used to store, communicate, and process information Provide examples of how different representations are appropriate for different tasks	Measure the length of a representation as the number of symbols that it contains Provide examples of how symbols are carried on physical media	Explain what binary digits (bits) are, in terms of familiar symbols such as digits or letters Measure the size or length of a sequence of bits as the number of binary digits that it contains	Describe how natural numbers are represented as sequences of binary digits Convert a decimal number to binary and vice versa	Convert between different units and multiples of representation size Provide examples of the different ways that binary digits are physically represented in digital devices, including electricity, magnetism, light, and even holes in paper	Demonstration of skills learnt in the unit of study
<b>Assessment / Feedback Opportunities</b>	Classroom activity Class Discussion Questioning pupils Verbal Feedback					Written assessment
<b>Cultural Capital</b>	Written representation through time How technology can represent data					
<b>SMSC / Promoting British Values</b> (Democracy, Liberty, Rule of Law, Tolerance & Respect)	<ul style="list-style-type: none"> <li>Listening to others</li> <li>Understanding of technology to support additional needs</li> <li>Responding suitable in discussions</li> </ul>					
<b>Reading opportunities</b>	<ul style="list-style-type: none"> <li>Instructional reading</li> <li>Key word identification</li> </ul>					
<b>Key Vocabulary</b>	Representations, symbols, storage, communication, processing, characters, coding (encoding/decoding), coding scheme, representation size or length, physical medium, binary digits, digital systems, representation size, units, multiples, prefixes					
<b>Digital Literacy</b>	Use of technology Digital research methods Use of range of software					
<b>Careers</b>	Data scientist; Software engineer, Data engineer, Software architect					

