

Leintwardine Endowed CE Primary School Learning Journey Itinerary

‘Letting Our Light Shine’

SUBJECT : Computing	YEAR : A	TERM : Spring 2	YEAR GROUPS : 5/6
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Key Question: Why is binary important when using technology?

Previous Knowledge – We would expect children to already be able to:

- Coding, testing, debugging on a system
- Working with number variables
- The use of efficient coding systems

END OF UNIT OBJECTIVES

Some children will not yet have met what is expected and will show that they are emerging because they can:	Most children will show that they have reached the expected level because they can:	Some children will have gone beyond the expected level and will show that they are exceeding because they can:
Recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems). Make use of a variable set to 0 or 1 to control game states.	Examine how whole numbers are used as the basis for representing all types of data in digital systems. Understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics Recognise that the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11 Explore how division by two can be used as a technique to determine the binary representation of any whole number by collecting remainder terms Examine how whole numbers are used as the basis for representing all types of data in digital systems. Represent the state of an object in a game as active or inactive using the respective binary values of 1 or 0	Examine how whole numbers are used as the basis for representing all types of data in digital systems. Represent whole numbers in binary, for example counting in binary from zero to 15, or writing a friend’s age in binary

ASSESSMENT OPPORTUNITIES

Create a poster from their research and present their ideas to the rest of the class.

ENRICHMENT OPPORTUNITIES Helping children to remember more Using the ipads to explore the internet	SUBJECT SPECIFIC VOCABULARY Base 2, Base 10 Transistor, Bit, Digit Integer, Switch Nibble, Byte, Kilobyte (KB) , Megabyte (MB) Gigabyte (GB)	CROSS-CURRICULAR LINKS Links that we can make to help children make sense of what we want
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	Tetrabyte (TB) Electric signals, Decimal Denary system Electronical signals Receiver, Activated Computer, Memory space	them to know and be able to do.
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