Kit’s Code: Mastering the Language of Binary

Learning objective: I can understand how computers use binary to represent data and perform calculations.

About 15 minutes. Grown-up tip: Encourage your child to think of binary as a light switch that can only be either fully on or fully off.

Key Vocabulary

Computers do not understand letters or numbers like we do. They use 'Binary', a base-2 number system made only of 0s and 1s. Each 0 or 1 is called a 'bit'. A group of 8 bits is called a 'byte'.

Worked Example: To represent the number 3 in binary, we use two place value columns: 2 and 1.
- 1 'two' + 1 'one' = 3. Binary: 11.
- To represent 4: 1 'four' + 0 'twos' + 0 'ones'. Binary: 100.

If a computer swi…	**Explain the differ…**	**How many bits ar…**
Using the place v…	**If the binary sequ…**	