Computational thinking

International Baccalaureate · IB Diploma · Computer Science · HL · Vocabulary in context

Word	Example
decomposition /ˌdiːkɒmpəˈzɪʃn/	**Decomposition** breaks a big problem into small parts.
pattern recognition /ˈpætn ˌrekəgˈnɪʃn/	**Pattern recognition** finds things that repeat in data.
abstraction /əbˈstrækʃn/	A map uses **abstraction**: it leaves out small details.
algorithmic design	**Algorithmic design** means planning the steps before coding.
model /ˈmɒdl/	A **model** is a simpler version of a real system.
algorithm /ˈælgərɪθəm/	An **algorithm** is a list of steps to solve a problem.
input /ˈɪnpʊt/	input() reads **input** that the user types. input()
output /ˈaʊtpʊt/	The **output** of print(2 + 3) is 5. print(2 + 3) 5
sequence /ˈsiːkwəns/	In a **sequence**, the steps run one after another.
selection /sɪˈlekʃn/	An IF statement is a kind of **selection**. IF
iteration /ˌɪtəˈreɪʃn/	A loop is a kind of **iteration**.
flowchart /ˈfləʊtʃɑːt/	A **flowchart** shows the steps as boxes and arrows.
trace table /treɪs ˈteɪbl/	A **trace table** shows the value of each variable at each step.

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pseudocode /ˈsuːdəʊkəʊd/	Write the algorithm in **pseudocode** first.
specification /ˌspesɪfɪˈkeɪʃn/	The **specification** lists what the program must do.
normal data /ˈnɔːml ˈdeɪtə/	For ages 0 to 120, 15 is **normal data**. 0 120 15
boundary data /ˈbaʊndəri ˈdeɪtə/	For ages 0 to 120, the **boundary data** are 0 and 120. 0 120 0 120
invalid data	Typing letters where a number is needed is **invalid data**.

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