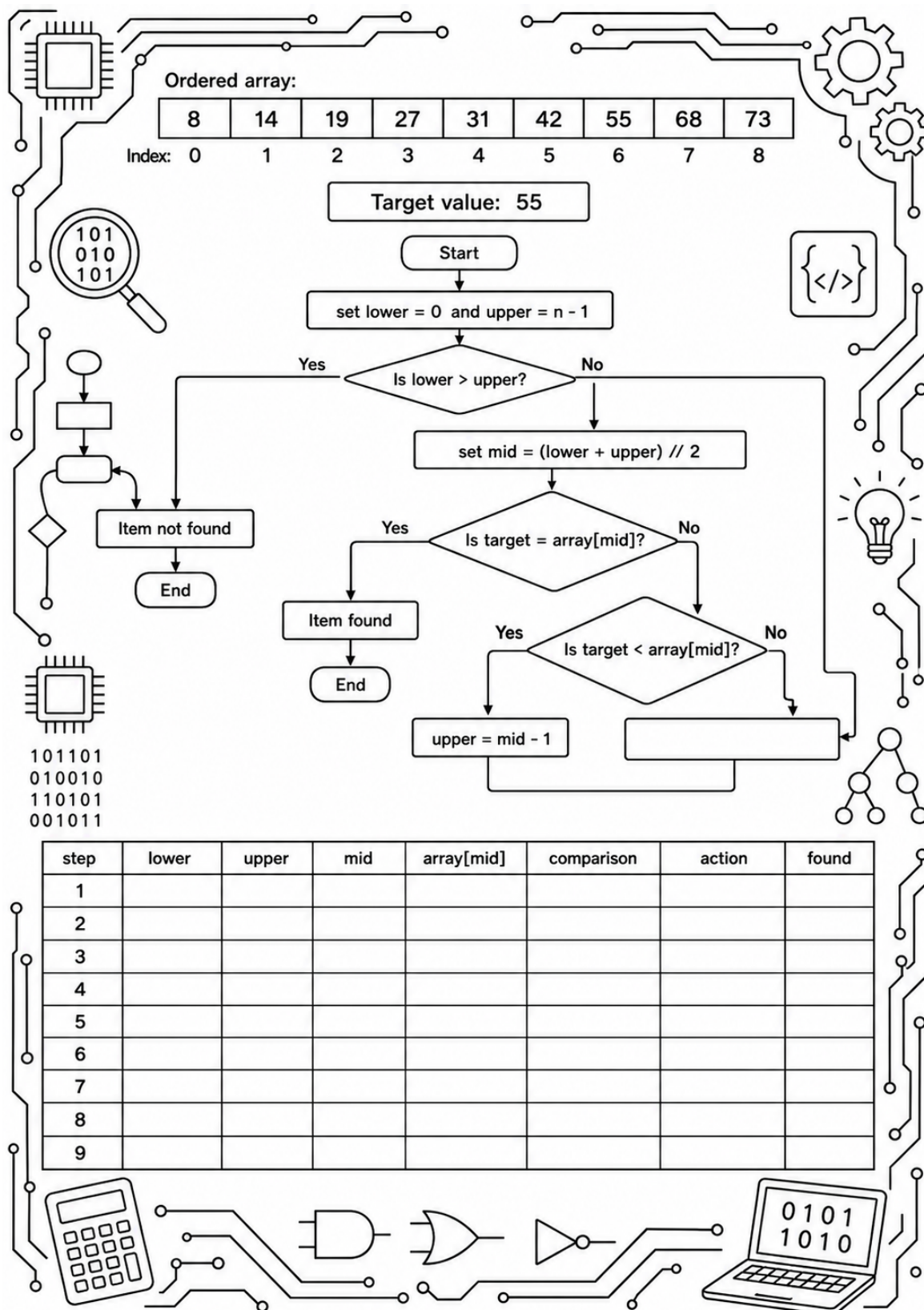


Algorithms Activity Challenge Colouring Page

KS4 / GCSE / Year 11 - Computer Science

Identify the missing or incomplete component in this algorithms study plate, then colour-code the system.



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Parent & Teacher Guidance

Curriculum focus

Topic: Algorithms. Develop accurate observation, subject vocabulary and evidence-based explanation. Mapped scope: DfE GCSE subject content and key stage 4 curriculum entitlement.

Before you begin

Review the picture together and ask the learner what they already notice about Algorithms. Read the activity aloud, explain unfamiliar vocabulary, and agree which details need special attention.

Solo activity

The learner can complete the colouring independently, then use the finished page to explain three details linked to Algorithms. Encourage accurate colour choices where they carry meaning, but allow creative choices elsewhere.

Group activity

Give pairs or small groups different areas to inspect. Ask them to agree on evidence before colouring, compare their findings, and present one curriculum fact to the class. Finish with a whole-group check against the guidance below.

Questions to guide discussion

What evidence can you see? Which feature is most important and why? How does one part connect to another? What new fact about Algorithms can you explain using the picture?

Answers and checking

The missing binary-search process is: $\text{lower} = \text{mid} + 1$. For target 55 in the shown array, mid values are 31, 55, so the item is found at index 6 on the second comparison.

Learning record and next steps

☐ Completed the colouring

☐ Explained key vocabulary

☐ Completed the activity

☐ Used visible evidence

Evidence noticed / vocabulary used

Next step:
