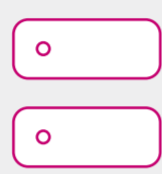# Digital Technologies Curriculum – Levels 7 and 8

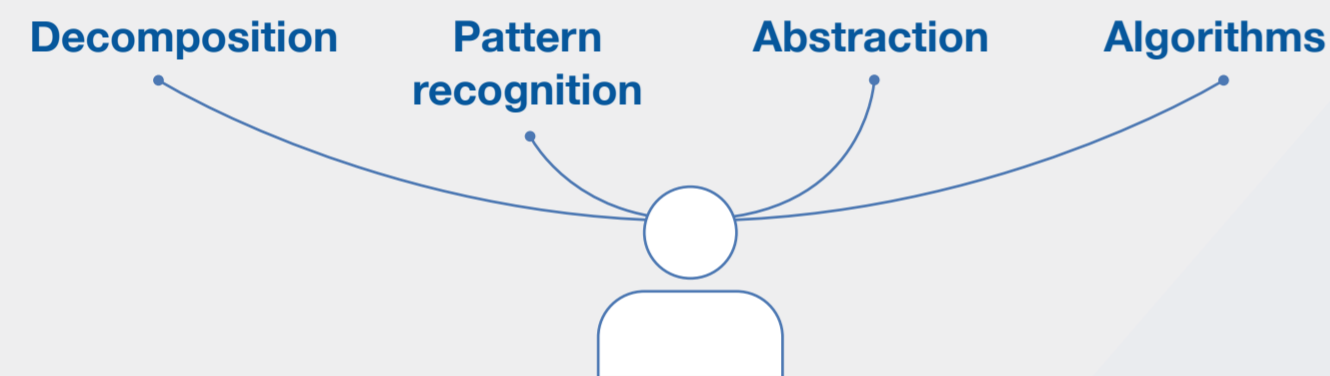## Content descriptions

Digital Systems

Investigate how data is transmitted and secured

- Network security
- Router
- Tablet
- Web server

Ways of thinking at Levels 7 and 8

Computational thinking

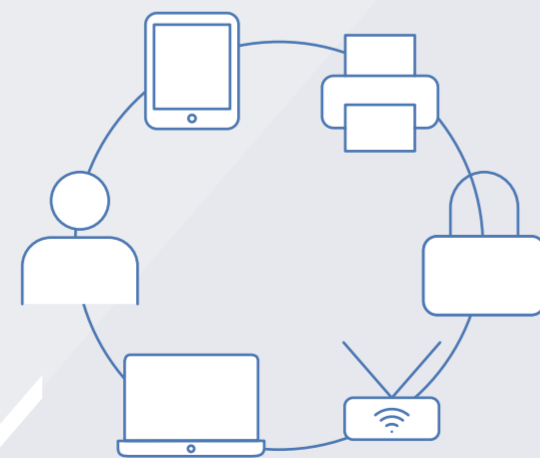**Decomposition** **Pattern recognition** **Abstraction** **Algorithms**

Design thinking

- Generating designs
- Analysing and evaluating designs against criteria

Systems thinking

Interactions and interrelationships between components, devices and people

Data and Information

Investigate how digital systems represent text, image and sound data

- ASCII
- Colours
- On/Off — OFF
- Sound

Acquire data from a range of sources

- Datasets
- Evaluate
- Search
- Sources

Analyse and visualise data

- Analyse data
- Filter data
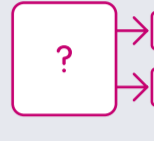- Structured Query Language (SQL)
- Visualise data

Manage, create and communicate interactive ideas and information

- Collaborate
- Files
- Manage project
- Protocols

Creating Digital Solutions

Define and decompose problems

- Constraints
- Decompose problems
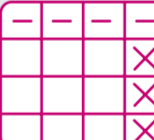- Functional requirements — FR
- Sustainability

Design the user experience of a digital system
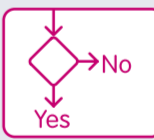
- Alternative designs
- Design tools
- Evaluation
- User experience (UX)

Design algorithms

- Desk checking
- Flowchart
- Identify errors
- Structured English

Develop and modify programs using a general-purpose programming language

- Branching
- Develop programs
- General-purpose programming
- Iterations

Evaluate how student-developed solutions and information systems meet needs

- Evaluate solution
- Future risks
- Innovation
- Meeting needs

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