Digital Technologies Curriculum – Foundation to Level 2

Content descriptions

Digital Systems

Identify and explore digital systems

Tablet

Keyboard

Software

Robotic toy

Data and Information

Recognise and explore patterns in data

Patterns

Sorting

Sound data

Picture

Collect, explore and sort data

Collecting data

Column chart

Mind map

Presentation software

Create and organise ideas and information

Create ideas

Collaborate on ideas

Copyright

Safe online

Creating Digital Solutions

Represent a sequence of steps and decisions

Recipe

Robotic toy

Steps

Decisions

Explore common information systems

Information systems

Cyber safety

Ergonomics

Games

Ways of thinking at Foundation to Level 2

Computational thinking

Decomposition

Pattern recognition

Abstraction

Algorithms

Systems thinking

Interactions and interrelationships between components, devices and people

Digital Technologies Curriculum – Levels 3 and 4

Content descriptions

Digital Systems

Explore a range of digital systems

Headset

Laptop

Printer

USB cable

Data and Information

Recognise different types of data

Image data

Text data

Sound data

Video data

Collect, access and present different types of data

Collected data

Calculations

Files

Line chart

Plan, create and communicate ideas and information

Collaborate

Plan

Privacy

Protocols

Creating Digital Solutions

Define simple problems

Decision

Define problem

Steps

User input

Develop simple solutions as visual programs

Decision

Solutions

User input

Visual program

Explain how solutions and information systems meet needs

Evaluate classmate’s solution

Evaluate own solution

Present data

Survey

Ways of thinking at Levels 3 and 4

Computational thinking

Decomposition

Pattern recognition

Abstraction

Algorithms

Systems thinking

Interactions and interrelationships between components, devices and people

Digital Technologies Curriculum – Levels 5 and 6

Content descriptions

Digital Systems

Examine the components of common digital systems

CPU

Monitor

Wi-fi

Wired network

Data and Information

Examine how whole numbers are used

Binary

Counting in binary

On/Off

On/Off

Acquire, store and validate different types of data

Acquire data

Store data

Validate data

Visualise data

Plan, create and communicate ideas and information

Collaborate

Plan

Protocols

Safe practices

Creating Digital Solutions

Define problems

Data

Define problems

Functional requirements

Solutions

Design a user interface for a digital system

Alternative designs

Design principles

Storyboard

User interface (UI) design

Design, modify and follow simple algorithms

Branching

Flowchart

Iterations

Sequence

Develop digital solutions as simple visual programs

If… Then… Else

Repeat

Solutions

Visual program

Explain how solutions and information systems meet needs

Community needs

Current needs

Evaluate solution

Sustainability

Ways of thinking at Levels 5 and 6

Computational thinking

Decomposition

Pattern recognition

Abstraction

Algorithms

Design thinking

Generating and considering alternative design ideas

Systems thinking

Interactions and interrelationships between components, devices and people

Digital Technologies Curriculum – Levels 7 and 8

Content descriptions

Digital Systems

Investigate how data is transmitted and secured

Network security

Router

Tablet

Web server

Data and Information

Investigate how digital systems represent text, image and sound data

ASCII

Colours

On/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

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

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

Digital Technologies Curriculum – Levels 9 and 10

Content descriptions

Digital Systems

Investigate the role of hardware and software

Managing operating systems

Router

Firewall

Encryption

Data and Information

Analyse simple compression of data

JPG

PNG

MP4

CSS

Develop techniques for acquiring, storing and validating data

Search

Survey

Storing

Security

Analyse and visualise data to create information

Analyse

Create information

Spreadsheet

Database

Manage and collaboratively create solutions

Manage project

Collaborate

Copyright

Privacy

Creating Digital Solutions

Define and decompose problems precisely

Decompose problems

Functional requirements

Non-functional requirements

Interview

Design the user experience of a digital system

User experience (UX)

Mock-up

Alternative designs

Criteria

Design algorithms

Flowchart

Structured English

Tracing

Testing

Develop modular programs using an object-oriented programming language

Modular programs

Algorithms

Data structures

Object-oriented programming

Evaluate how student-developed solutions and information systems provide for innovation

Evaluate solution

Policies

Future risks

Innovation

Ways of thinking at Levels 9 and 10

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

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