

# ICT Innovators Turing and ciphers

# Australian Curriculum links

## **Digital Technologies Year 3-4**

Follow and describe algorithms involving sequencing, comparison operators (branching) and iteration (AC9TDI4P02)

## **Digital Technologies Year 7-8**

Investigate how data is transmitted and secured in wired and wireless networks including the internet (AC9TDI8K02)



# ICT Innovators RGB colouring

## Australian Curriculum links

## **Digital Technologies Year 3-4**

Recognise different types of data and explore how the same data can be represented differently depending on the purpose (AC9TDI4K03)

## **Digital Technologies Year 5-6**

Examine how digital systems form networks to transmit data (AC9TDI6K02)

### **Digital Technologies Year 7-8**

Generate, communicate and compare designs (AC9TDI4P03)



# ICT Innovators Broken difference engine

# Australian Curriculum links

#### **Digital Technologies Year 3-4**

Follow and describe algorithms involving sequencing, comparison operators (branching) and iteration (AC9TDI4P02)

#### **Digital Technologies Year 5-6**

Implement algorithms as visual programs involving control structures, variables and input (AC9TDI6P05)

### **Mathematics Year 5-6**

Find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations (AC9M6A02)

Create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns (AC9M6A03)

#### **Digital Technologies Year 7-8**

Evaluate existing and student solutions against the design criteria and user stories and their broader community impact (AC9TDI6P06)

#### **Mathematics Year 7-8**

Recognise and use variables to represent everyday formulas algebraically and substitute values into formulas to determine an unknown (AC9M7A01) Formulate algebraic expressions using constants, variables, operations and brackets (AC9M7A02)



# ICT Innovators Think like George Boole

# Australian Curriculum links

## **Digital Technologies Year 5-6**

Investigate the main internal components of common digital systems and their function (AC9TDI6K01)

Explore how data can be represented by off and on states (zeros and ones in binary) (AC9TDI6K04)

#### **Digital Technologies Year 7-8**

Explain how and why digital systems represent integers in binary (AC9TDI8K04)

#### **Digital Technologies Year 9-10**

Design algorithms involving logical operators and represent them as flowcharts and pseudocode (AC9TDI10P05)

#### Mathematics Year 9-10

Calculate relative frequencies from given or collected data to estimate probabilities of events involving "and", inclusive "or" and exclusive "or" (AC9M9P02)



# ICT Innovators Comparing search engines

# Australian Curriculum links

## **Digital Technologies Year 5-6**

Select and use appropriate digital tools effectively to create, locate and communicate content, applying common conventions (AC9TDI6P07)

#### **Digital Technologies Year 7-8**

Select and use a range of digital tools efficiently, including unfamiliar features, to create, locate and communicate content, consistently applying common conventions (AC9TDI8P11)

### **Design and Technologies Year 7-8**

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (AC9TDE8K01)



# ICT Innovators Algorithmic thinking

# Australian Curriculum links

### Digital Technologies Year 1-2

Follow and describe algorithms involving a sequence of steps, branching (decisions) and iteration (repetition) (AC9TDI2P02)

#### **Digital Technologies Year 3-4**

Follow and describe algorithms involving sequencing, comparison operators (branching) and iteration (AC9TDI4P02)

Implement simple algorithms as visual programs involving control structures and input (AC9TDI4P04)

#### **Digital Technologies Year 5-6**

Implement algorithms as visual programs involving control structures, variables and input (AC9TDI6P05)

### **Digital Technologies Year 7-8**

Design algorithms involving nested control structures and represent them using flowcharts and pseudocode (AC9TDI8P05)

Trace algorithms to predict output for a given input and to identify errors (AC9TDI8P06)



# ICT Innovators Your dream app and peripheral

# Australian Curriculum links

### **Design and Technologies Year 3-4**

Examine design and technologies occupations and factors including sustainability that impact on the design of products, services and environments to meet community needs (AC9TDE4K01)

#### **Digital Technologies Year 3-4**

Explore and describe a range of digital systems and their peripherals for a variety of purposes (AC9TDI4K01)

#### **Design and Technologies Year 5-6**

Explain how people in design and technologies occupations consider competing factors including sustainability in the design of products, services and environments (AC9TDE6K01)

#### **Design and Technologies Year 7-8**

Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (AC9TDE8K01)

Analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures (AC9TDE8K02)



# ICT Innovators Coding your name

# Australian Curriculum links

## **Digital Technologies Year 3-4**

Recognise different types of data and explore how the same data can be represented differently depending on the purpose (AC9TDI4K03)

#### **Digital Technologies Year 5-6**

Explain how digital systems represent all data using numbers (AC9TDI6K03)

### **Digital Technologies Year 7-8**

Investigate how digital systems represent text, image and audio data using integers (AC9TDI8K03) Explain how and why digital systems represent integers in binary (AC9TDI8K04)