

Levels 7 & 8 Overview of units

** marks spotlighted unit for the school

We note that some curriculum content descriptors are not addressed in this overview at the time of publishing. School snapshots for the case studies project are classified on a spectrum from "starting out" to "consolidating practices".



	Unit A	Unit B	Unit C	Unit D
Title / theme	Digital Systems: Networks	Data and Information; Infographics	Sphero Robotics	Digital Solutions Design a Sound board
Summary / intention	<p>Learning Intention</p> <ul style="list-style-type: none"> • how data is transmitted and secured in wired and wireless • about computer networks and how they work • about components of networks in a local area network • about the development of communication technologies <p>Success Criteria</p> <ul style="list-style-type: none"> • display an understanding and demonstrate how various devices connect and communicate within a local area network 	<p>Learning Intention</p> <ul style="list-style-type: none"> • how digital systems represent text, image and sound data in binary. • acquiring data from a range of sources and evaluate their authenticity, accuracy and timeliness. • analysing and visualising data using a range of software to create information, and use structured data to model objects or events. <p>Success Criteria</p> <ul style="list-style-type: none"> • understand how to create data • completion of an infographic poster representing created data visually • completion of data and information booklet 	<p>Learning Intention</p> <ul style="list-style-type: none"> • introduction to programming skills • how to design programs • how to control Sphero robot <p>Success Criteria</p> <ul style="list-style-type: none"> • completion and navigation of coding projects • design and testing documentation • can aim, code, test and run Sphero programs • basic programming skills 	<p>Learning Intention</p> <ul style="list-style-type: none"> • create, develop programming of apps • design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify error • develop and modify programs with user interfaces involving branching, iteration and functions using a general-purpose programming language • design the user experience of a digital system, generating, evaluating and communicating alternative designs <p>Success Criteria</p> <ul style="list-style-type: none"> • create / design develop a Sound board app • develop algorithms
Approximate number of hours	4	6	6	9
Assessment piece or pieces	Design a home Network Creating a network. Glossary	Data collation Infographic poster Booklet	Project series of programming tasks Booklet	Thunkable
Hardware and software tools used	Microsoft Teams, PowerPoint Word Modems Routers Cable Read Write Think	Microsoft Teams PowerPoint Excel Pictochart	Sphero Microsoft Teams Word	Thunkable

Curriculum Content Descriptions addressed:

DIGITAL SYSTEMS

VCDTDS035: Investigate how data is transmitted and secured in wired, wireless and mobile networks.

DATA AND INFORMATION

VCDTDI036: Investigate how digital systems represent text, image and sound data in binary.

VCDTDI037: Acquire data from a range of sources and evaluate their authenticity, accuracy and timeliness.

VCDTDI038: Analyse and visualise data using a range of software to create information, and use structured data to model objects or events.

VCDTDI039: Manage, create and communicate interactive ideas, information and projects collaboratively online, taking safety and social contexts into account.

CREATING DIGITAL SOLUTIONS

VCDTCD040: Define and decompose real-world problems taking into account functional requirements and sustainability (economic, environmental, social), technical and usability constraints.

VCDTCD041: Design the user experience of a digital system, generating, evaluating and communicating alternative designs.

VCDTCD042: Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors.

VCDTCD043: Develop and modify programs with user interfaces involving branching, iteration and functions using a general-purpose programming language.

VCDTCD044: Evaluate how well student-developed solutions and existing information systems meet needs, are innovative and take account of future risks and sustainability.

DIGITAL SYSTEMS

VCDTDS035

DATA AND INFORMATION

VCDTDI036

VCDTDI037

VCDTDI038

VCDTDI039

CREATING DIGITAL SOLUTIONS

VCDTCD040

VCDTCD041

VCDTCD042

VCDTCD043

VCDTCD044

DIGITAL SYSTEMS

VCDTDS035

DATA AND INFORMATION

VCDTDI036

VCDTDI037

VCDTDI038

VCDTDI039

CREATING DIGITAL SOLUTIONS

VCDTCD040

VCDTCD041

VCDTCD042

VCDTCD043

VCDTCD044

DIGITAL SYSTEMS

VCDTDS035

DATA AND INFORMATION

VCDTDI036

VCDTDI037

VCDTDI038

VCDTDI039

CREATING DIGITAL SOLUTIONS

VCDTCD040

VCDTCD041

VCDTCD042

VCDTCD043

VCDTCD044

DIGITAL SYSTEMS

VCDTDS035

DATA AND INFORMATION

VCDTDI036

VCDTDI037

VCDTDI038

VCDTDI039

CREATING DIGITAL SOLUTIONS

VCDTCD040

VCDTCD041

VCDTCD042

VCDTCD043

VCDTCD044

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