This template can be used to assist schools to conduct a technology audit, based on your school’s Digital Technology curriculum needs.

The curriculum focus is for Years 9-10 and organised under key concepts.

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| Curriculum focus:  | Technologies considerations  | Technology audit notes  |
| Digital systems |
| Relevant units in DT Hub scope and sequence: [Connected via a network](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/digital-systems/connected-via-a-network)[Data: controlled and secured](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/digital-systems/data-controlled-and-secured) Students explore main components of digital systems connected in a network that control the movement of data. They understand that an operating system manages the hardware and software. Students describe the use of wired, wireless and mobile networks. Students explain network performance and reliability.Students describe and explain ways data is sent and received between different digital systems. Students explain how cryptography is used in securing data for storage and transmission. Students describe ways to restrict access to digital systems to enable authorised use.  | Access to digital systems which may include: desktop computer, tablet devices, laptop, Chromebooks. Students need these systems to have:* internet connectivity
* connection to the school intranet to save and access files and access relevant software.

Provide access to digital systems with software that enable students to:* access online resources including video content that explain networks as curated by the teacher
* access to cyber security courses which may require class registration/subscription
* configure a simulated network to observe transmitted data
 | What we haveWhat we needFuture considerations |
| Data representation, collection and interpretation |
| Relevant units in DT Hub scope and sequence: [Data-driven innovation](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/collect-manage-and-analyse-data/data-driven-innovation)[Organise, visualise and analyse](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/collect-manage-and-analyse-data/organise-visualise-and-analyse) Students explore compression of data. Students represent documents by separating content and presentation such as on a webpage using HTLM and a Cascading Style Sheet (CSS)Students collect their own data using a relevant approach including survey tools. Students access data in digital format from a file or website such as an online database. Students use software to analyse, model and present the data. They look for relationships, draw conclusions and make predictions. Students use the data to create information.  | Access to digital systems, school intranet and connectivity. Provide access to digital systems with software that enable students to:* search for information and access online data sources such as databases of information
* present content as HTML and CSS
* collect and record data including using an online survey tool/form eg Google forms or Survey monkey.
* Organise, analyse and present data using a spreadsheet. Software will depend on your digital devices: MS Excel for windows, Numbers for iOS, Apache OpenOffice as an open source alternative or Google sheets for a browser-based solution
* access database software to create their own databases.
* access to software to create infographics
 | What we haveWhat we needFuture considerations |
| Define problems, Algorithms and Implementation  |
| Relevant units in DT Hub scope and sequence: [Creating a digital game](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/user-design-and-programming/creating-a-digital-game)[Robotics and embedded systems](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/user-design-and-programming/robotics-and-embedded-systems)Students describe problems and ways to solve them. They consider the requirements, constraints and stakeholders. They break the problem into smaller more manageable parts (decomposition). Students describe and follow and trace check algorithms. They represent an algorithm in written form or as a flow chart. A paper prototype can be developed particularly for app design to step through the sequence. Students define expected outputs and check their algorithm. Algorithms contain branching and iteration. Students implement digital solutions by writing a program using a general purpose programming language. They include branching for decision making, user input and loops for repetition. Students construct more complex computer programs organising the code into modules. These programs incorporate libraries and arrays to manage information. Students use Object Oriented Programming (OOP) where they define their own objects (classes).  | Access to digital systems, school intranet and connectivity. Provide access to a relevant general purpose programming language, for example:* Python
* JavaScript
* C/C++ or C#

Schools may choose to register/subscribe to a relevant programming course. Provide examples of paper prototyping using relevant online resources. Robotics provides an opportunity for students to build a device that can be programmed to carry out some form of automated task. Select a robotic system that uses a text based programming language. Many robotic devices use a block-based interface (visual programming language) to control the device. For students at this level to fully meet the requirements for implementation (programming), programming should be text based. Projects that incorporate a social aspect quite often provide a high level of engagement, particularly for female students.Designing and fabricating assistive devices for a person in need can include a social aspect and a focus on innovation. This can result in a more meaningful robotics project. These projects often incorporate the use of a 3D printer.When investigating embedded systems using a context such as robotics, students will use a development board and a range of electronic components connected in a circuit to complete a design challenge. An Arduino development board is a single circuit board that contains a built-in microcontroller. It can be connected to a range of electrical components and be programmed using a general purpose programming language. Like other development boards that contain a microcontroller, Arduino can sense the environment by receiving input from a variety of sensors and can affect its surroundings (output) by controlling lights, motors, and other actuators.Electronic development/programming boards such as the Arduino, BBC Micro:bit or Raspberry Pi provide another programing option. Requires a digital system (laptop, desktop or tablet device with internet connection) and physical hardware. Each of these programming boards has its own programming development environment. These programming boards can be connected to sensors and collect data which is stored and used in the program. These boards and sensors open up the opportunity for integrating other areas of the curriculum. Students can access tutorials relevant to the programming board for example Arduino has a vast range of tutorials. Sewable electronics such as the Arduino LilyPad are a form of wearable electronics that enable students to demonstrate their creativity incorporating the use of electronics with textiles.Provide access to software to support students to design and create their own app that solves a particular design challenge or problem. Some solutions can be tested on a smartphone or tablet device. | What we haveWhat we needFuture considerations |
| Information systems and their users |
| Relevant unit in DT Hub scope and sequence: [Managing a group project: Augmented reality](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/interactions-and-impacts/managing-a-group-project) Students describe different systems that people interact with to communicate information. They develop their own information system that solves a particular problem. Students analyse existing information systems focusing on how well they are designed. They use this information in the creation of their own solutions that incorporate an information system. Students can evaluate an information system looking at the impact the system has on people, any risks that are evident and the extent to which the solution is sustainable or opportunities for innovation and enterprise. Students consider user-interface design of digital systems thinking about the needs of the user. Students consider requirements to ensure a positive user experience. Students consider policies that influence the development of information systems.  | Access to digital systems, school intranet and connectivity. Provide access to:* Software that enables students to develop designs and prototypes
* online information system sources curated by the teacher
* app creation software such as MIT App inventor
* Augmented Reality software
* Virtual Reality (age appropriate technology)
* Artificial Intelligence tools and applications such as those in Google AI.
 | What we haveWhat we needFuture considerations |
| Plan, create and communicate ideas and information independently and with others |
| Relevant unit in DT Hub scope and sequence: [Collaborative project: What matters to you?](https://www.digitaltechnologieshub.edu.au/teachers/scope-and-sequence/9-10/interactions-and-impacts/collaborative-project)Students plan and manage an approach to develop a solution to a problem or task, taking into consideration group skills and experience. Students manage the project using relevant tools, strategies and approaches. They can use rapid prototyping in an iterative approach. Student incorporate risk management strategies. Students collaborate and share their work in a dedicated safe online environment. Students follow agreed protocols (social and ethical) when interacting with others and technical protocols when managing information. Students understand the legal responsibilities to control information.  | Access to digital systems, school intranet and connectivity. Provide access to:* online sources curated by the teacher
* software that enables students to create ideas and information
* software that enables students to manage a project
* collaboration tools that enable text, audio and video communication to interact with others working on a common project
* a dedicated safe online environment that enables online collaboration.
 | What we haveWhat we needFuture considerations |