

Example Long Term Computing Plan (Middle School)

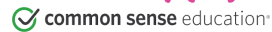
This is an **example** of how you could convert **some** of our planning units into a long term plan for a typical middle school. **IT IS NOT** a rigid scheme of work your school has to follow, just one example of how it could be set out. You can use this to create your own long term plan, but be aware that you may need to make adjustments based on the knowledge and experience of your students and, in some cases, the equipment you have access to in your school. Get in touch if you need any help and advice with tailoring things for your school.

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
5	Digital Literacy and online safety (Y5)  common sense education <i>Six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.</i>	Building Retro Games - Pick a project <i>Choose from 3 classic video game projects with this fantastic coding unit. Analyse the original games, build a simple version of them, then let the students get creative and independently extend their projects.</i>	Building Collaborative websites <i>Use Google apps for collaborative research as well as planning and creation of a group website, considering the design and consistency of the site.</i>	Manipulating Sound <i>Explore a range of web tools for sound and music creation and then learn about sound editing; creating radio adverts and audio books, complete with sound effects and atmospheric music.</i>	What is a computer? <i>Delve into what really makes a computer a computer. Can a TV, fridge or toilet be a computer? Also investigates just what is inside that metal box, how a computer works, memory, data and binary code. By the end you'll know your RAM from your ROM and your CPU from your GPU.</i>	Programming Robots <i>Introduce students to programming LEGO Robots. Control their movement with precise calculations and coding, then utilise the robot's sensors to interact with its environment and solve problems.</i> <i>LEGO Robot kits are available to loan</i>

					A resource box for this unit is available to loan	
6	Digital Literacy and online safety (Y6)  common sense education® Six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.	Spreadsheet Masters Hone your spreadsheet skills to become a spreadsheet master! Learn about the basics of spreadsheets with a range of fun tasks. Investigate sorting, using formulas and conditional formatting as you build towards making self-marking quiz games for your classmates.	Getting started with the BBC micro:bit Introduce students to physical computing with a BBC micro:bit. Control the LED matrix and find out how screens work, learn about inputs and outputs, turn your micro:bit into a scoring or game device while learning about variables, conditionals and iteration. <i>micro:bits are available to loan</i>	Creating Instructional Videos Plan, design and create instructional teaching videos. Perfect for reinforcing other areas of the curriculum. Students can create videos to support each other with revision and then share them online to give access to everyone in the class <i>iPads are available to loan</i>	Manipulating images Investigate a range of different artistic styles and how they can be recreated using digital art tools. Digital sculpture is also looked at and combined with photo editing.	Inside the internet Get under the skin of the Internet to investigate how the web works, how it's built and written with HTML code. Then learn how to create your own web pages written in HTML and CSS.

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Digital Literacy and online safety (Y7)



A unit of six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.

Quiz time with Scratch

A unit that takes the coding a bit further than previous game and animation projects. Investigate lists, variables, broadcasting, number operators and if/else statements to create maths and memory games.

Add in creating modular elements (defining blocks) - timers, scores.

Raspberry Pi Part 1: Scratch GPIO

Build circuits and control LEDs with code. Learn how screens work, what binary code is and how to create animated light shows that combine digital and physical systems.

Real life algorithms

A unit that explores how a number of machine systems in the real world work. How does a pedestrian crossing or car park barrier work? Students create flow diagrams that illustrate the algorithms for these systems, convert this into code and then consider the algorithms for completing everyday tasks like getting up in the morning.

Making the news - Project pt 1

To include a data collection research project: Ethics of data collection, Legislation and computer misuse act, GDPR, copyright, Forms Analysing and presenting - infographics

(to become part of the news show in pt 2)

Making the news - Project pt 2

Creating a news show

Looking at examples, sections of a show, links, anchor's job, interviews.

Planning, scripting, gathering images and resources, (copyright), green screening,

To include - research piece from pt 1, other school news, sports, entertainment, weather.

Filming

Editing the show together

8	Digital Literacy and online safety (Y8)  common sense education® A unit of six lessons taken from Common Sense Education's excellent digital citizenship curriculum, covering a wide range of topics including well-being, privacy and security, online identity, relationships, communication and the media.	Python Minecraft with a Raspberry Pi Learn Python by hacking Minecraft! Extend learning into a text based programming language, students learn how they can manipulate the Minecraft world by writing code.	Computers, Networks, security	Sonic Pi A unit to really get creative with code! Use a text based coding language (Ruby) to create your own beats and tunes. Play notes, chords, samples and loops and manipulate it all to your heart's content until you're rocking beats like a top DJ.... just with code!	Planning the Festival pt 1 Band list Tickets Promotion Planning the site layout	Planning the Festival pt 2 Spreadsheet, data analyse, presentation, online safety 'tweets' etc.
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Loan of equipment

If your school buys into our ICT SLA for teaching and learning for 4 days or more you are entitled to make use of our loan equipment.

Loans are typically for a maximum of two weeks at a time to allow fair access for all. Contact us at teachictnt@ntlp.org.uk to arrange a loan.