

Digital Technologies – 5 and 6_ Collaboration



STRAND		Knowledge and understanding				Processes and production skills														
		Digital Systems		Representation of data		Collecting, managing and analysing data		Creating Digital Solutions by:												
								Investigating and defining		Generating and designing			Producing and implementing		Evaluating		Collaborating and managing			
Content Description		Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)		Examine how whole numbers are used to represent all data in digital systems (ACTDIK015)		Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)		Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)		Design a user interface for a digital system (ACTDIP018)			Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)		Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)		Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)		Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022)	
Sequence of Lessons / Unit	Approx. time req'd (hrs)	Year 5 or 6	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #
Digital citizenship	3	5	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	6

Years 3 and 4 Achievement Standard	Years 5 and 6 Achievement Standard	Years 7 and 8 Achievement Standard
<p>By the end of Year 4:</p> <ul style="list-style-type: none"> Students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. They explain how the same data sets can be represented in different ways. (2) Students define simple problems, design and implement digital solutions using algorithms that involve decision-making and user input. (3) They explain how the solutions meet their purposes. (4) They collect and manipulate different data when creating information and digital solutions. (5) They safely use and manage information systems for identified needs using agreed protocols and describe how information systems are used. (6) 	<p>By the end of Year 6:</p> <ul style="list-style-type: none"> Students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. (1) They explain how digital systems use whole numbers as a basis for representing a variety of data types. (2) Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. (3) They incorporate decision-making, repetition and user interface design into their designs and implement their digital solutions, including a visual program. (4) They explain how information systems and their solutions meet needs and consider sustainability. (5) Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols. (6) 	<p>By the end of Year 8</p> <ul style="list-style-type: none"> Students distinguish between different types of networks and defined purposes. They explain how text, image and audio data can be represented, secured and presented in digital systems. (2) Students plan and manage digital projects to create interactive information. (3) They define and decompose problems in terms of functional requirements and constraints. (4) Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. (5) They evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability. (6) They analyse and evaluate data from a range of sources to model and create solutions. (7) They use appropriate protocols when communicating and collaborating online. (8)

Digital citizenship

Year Level 5

TOPIC Collaboration

Time: 5 HOURS

Digital citizenship is about positive and confident engagement with digital technology. A good digital citizen knows how to effectively use digital technologies to communicate with others, participate in society, and create and consume digital content in a safe and responsible manner. Digital citizens are aware that their behaviour online contributes to their own digital footprint. This includes engaging positively, respectfully and ethically when interacting online and making conscious choices and informed decisions about what information is shared, appropriate conduct and use of language. Digital citizens apply these protocols in situations such as interacting in a collaborative learning space, or creating a blog or website where their public profile is displayed.

Flow of activities				
Short text	A digital citizen Define a good digital citizen using a collaborative tool.	Online communication Examine why we should behave appropriately online and agree on a set of protocols.	Collaborate online Apply agreed ethical, social and technical protocols while communicating online.	Create a digital solution Create a blog, website or contribute to an online learning space.
Questions to guide exploration	<i>What makes a good digital citizen?</i>	<i>Why should people behave appropriately in an online world?</i>	<i>What protocols/guidelines help when collaborating online?</i>	<i>How can I share ideas safely with others?</i>
AC Alignment	<i>Collaborating and managing (ACTDIP022)</i>	<i>Collaborating and managing (ACTDIP022)</i>	<i>Collaborating and managing (ACTDIP022)</i>	<i>Collaborating and managing (ACTDIP022)</i>
What's this about?	A digital citizen is a person who has the knowledge and skills to effectively use digital technologies to communicate with others, participate in society, and create and consume digital content.	At this level it is important that students understand why they should behave appropriately. This includes respecting and protecting identities, not bullying, and taking steps to ensure their digital footprint is appropriate.	At this level it is important that students understand and apply agreed ethical, social and technical protocols.	Online communication tools enable students to share ideas within and beyond the classroom – eg to collaborate and communicate with experts in other locations; to create and publish work for a global audience; and to share ideas with peers from other schools. Students benefit from being able to communicate and collaborate with their peers.
The focus of the learning (in simple terms)	Conduct an initial brainstorm of the question, 'What makes a good digital citizen?' This can be used to assess students' prior knowledge. Use an online collaboration tool such as Padlet, OneNote, iBrainstorm or Poll Everywhere to share ideas in real time. Use an affinity map or concept map to sort ideas according to common themes. Broad categories could include: <ul style="list-style-type: none"> digital footprint online safety respectful online behaviour. Ask students to consider all the ways they connect with technology on a typical day and connect this back to being a good digital citizen.	Discuss and ensure students understand protocols to use online; for example: <ul style="list-style-type: none"> ethical protocols may deal with copyright and fair use of others' content and images social protocols may deal with respectful online behaviour, ways of providing feedback (eg not responding to hurtful or nasty comments), blocking and reporting cyberbullying technical protocols may deal with activating privacy settings to avoid divulging personal data such as images, addresses and names. Provide tasks that require students to develop a set of 'rules' about appropriate conduct, language and content when communicating online. Refer to these rules and apply them when collaborating with others online.	Tools such as Google Docs enable students to collaborate on shared documents. Set up a task where students work in small groups to produce a document, spreadsheet or slide presentation on a relevant topic. It may be a video script, a collaborative story, a report on an excursion or a science investigation. As part of their studies students may be required to interview an expert to gather information. Students can include voice and video conversations from their computer using Google Hangouts or other suitable collaboration tools that offer these options, using agreed protocols. Schools may also use a platform that provides a closed online community to share student work with parents (eg Weebly or Seesaw).	Providing a safe online learning space for sharing ideas offers an effective way to build relationships with students while exchanging ideas, offering feedback and engaging in more conversations. Creating a blog, website or contributing to an online learning space to share ideas enables students to apply agreed protocols and develop their digital identities. Students create their own website to record and present their learning. As part of the process students respectfully and constructively comment on each other's webpage.
Supporting resources and tools and purpose/context for use	Padlet Padlet is an easy-to-use collaboration tool that enables students to share ideas in real time. OneNote Users' notes (handwritten or typed), drawings, screen captures and audio commentaries can be shared with other OneNote users over the network. Digital Life 101 Gain a better understanding of students' familiarity with digital media and vocabulary associated with digital life. Requires registration for free use of materials.	When I post something online; how permanent is it? Investigate the permanency of online information and collaboratively develop a set of protocols around sharing information online. Digital citizenship Students learn to think critically about the user information that some websites request or require. The Office of the Children's eSafety Commissioner: Standalone lesson plans for primary classes	Google Docs Collaborate on shared documents. Seesaw This portfolio platform can be used to share student work with parents and peers. It models a safe, closed online community. Weebly This is an easy-to-use tool for creating classroom websites. Videos, images and text can be added using the drag-and-drop website editor. Students can also collaborate with others via blogs with	Class blog Investigate the concept, purpose and critical features of a good blog. Work through protocols when designing a class blog that displays a 'public' profile. Personal webpage/digital portfolio Students create their own website to record and present their learning. As part of the process students respectfully and constructively comment on each other's webpage.

	<p>iBrainstorm iBrainstorm is a multi-device collaboration tool.</p> <p>Poll Everywhere Poll Everywhere is a collaboration tool.</p>	<p>Online safety resources for primary schools, supported by lesson plans and multimedia resources.</p> <p>Digizen Use this resource to discuss protocols.</p>	<p>comment moderation features allowing open, moderated or closed discussions.</p>	
Assessment	<p>Suggested approaches</p> <ul style="list-style-type: none"> Labelled diagram (affinity or concept map) <p>Achievement standard Manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.</p>	<p>Suggested approaches</p> <ul style="list-style-type: none"> Adapted worksheet covering understanding of what is safe to share online Ability to express the permanence of online information or charter of rules <p>Achievement standard Manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.</p>	<p>Suggested approaches</p> <ul style="list-style-type: none"> Artefact analysis Students work collaboratively in an online space to design and create a short three-minute documentary to help younger students to be cyber safe <p>Achievement standard Manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.</p>	<p>Suggested approaches</p> <ul style="list-style-type: none"> Artefact analysis Design plan (task allocation, timing, file management) <p>Achievement standard Manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols.</p>