Digital Technologies – 3 and 4_ Collaboration and protocols

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	Producing and implementing	Evaluating	Collaborating and managing
Content Description		Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)	Recognise different types of data and explore how the same data can be represented in different ways (ACTDIK008)	Collect, access and present different types of data using simple software to create information and solve problems (ACTDIP009)	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)	Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011)	Explain how student solutions and existing information systems meet common personal, school or community needs (ACTDIP012)	Plan, create and communicate ideas and information independently and with others, applying agreed ethical and social protocols (ACTDIP013)

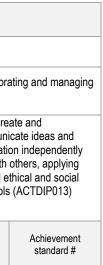| Sequence of Lessons / Unit	Approx. time rq'd	Year	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #
Apply protocols	7-8	4	☐		☐		☐		☐		☐		☐		☑	

Years F-2 Achievement Standard	Years 3 and 4 Achievement Standard	Years 5 and 6 Achievement Standard
By the end of Year 2 • Students identify how common digital systems (hardware and software) are used to meet specific purposes. (1) • They use digital systems to represent simple patterns in data in different ways. (2) • Students design solutions to simple problems using a sequence of steps and decisions. (3) • They collect familiar data and display them to convey meaning. (4) • They create and organise ideas and information using information systems, and share information in safe online environments. (5)	By the end of Year 4 • Students describe how a range of digital systems (hardware and software) and their peripheral devices can be used for different purposes. (1) • 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)	By the end of Year 6: • 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)

Topic: Collaboration

Units

Year 3

Year 4

Communicate ideas and information 5-7 hours Learn how information systems can be used by students and others in their community.	**Apply protocols** 7-8 hours Develop a school ICT agreement and collaborate with others to complete an online task, using agreed protocols.

Apply protocols

Technology is an embedded part of our lives, and it is essential that students understand how to engage responsibly in online spaces. Using the school's ICT agreement as a focus, develop an agreed set of rules and discuss protocols for ICT use. It is important students understand what it means to behave safely online and have an opportunity to explore this in more detail. Discuss the use of personal information or images when communicating online. Empower students with the knowledge of how to act responsibly online and equip them with the tools to know how to deal with cyberbullying behaviour. Use a collaborative online project to apply protocols and manage a task.

These lessons can be integrated in conjunction with English with a focus on interacting with others and/or with Health and Physical Education with a focus on being healthy, safe and active.

Flow of activities				
Short text	Rules for ICT use Develop an agreed set of rules and discuss protocols for ICT use.	Being safe online Use an interactive session to discuss ways to stay safe online.	Cyberbullying Explore cyberbullying and ways to deal with situations and act responsibly online.	Collaborating online Use a collaborative online project to apply protocols and manage a task.
AC alignment	*Collaborating and managing (ACTDIP013)*	*Collaborating and managing (ACTDIP013)*	*Collaborating and managing (ACTDIP013)*	*Collaborating and managing (ACTDIP013)*
Questions to guide exploration	*What rules should we follow when using ICT?*	*How do we stay safe online?*	*How do we recognise and deal with cyberbullying?*	*How can we work together online?*
What's this about?	All schools have ICT agreements that students and parents sign in order to use the technology in their schools. It is important for students to be familiar with, and understand, these agreements before they use the technology. A key understanding underpinning digital citizenship is the idea of responsible ICT use and engagement in online spaces. Technology is an embedded part of our lives, and it is essential that students understand how to engage responsibly in online spaces. This includes understanding what to do when they stumble upon an inappropriate website, and how to socialise or collaborate in an acceptable manner with their peers in an online setting. Responsible ICT use also means that students have a good understanding of how to care for and respect the devices and hardware that they work with.	It is important students understand what it means to behave safely online and have an opportunity to explore this in more detail. Being safe online includes being careful with your personal details. It is important not to reveal personal information that can be used to identify you. In an online setting, be aware that not everything people say online will be the truth. If someone is rude or offensive or makes you feel unsafe leave the site immediately. Never meet anyone in person from an online site that you haven't met before.	Cyberbullying is the use of online technology, such as computers and mobile phones, to bully a person or group. Bullying is repeated behaviour by an individual or group with the intent to harm another person or group. It is important to empower students with the knowledge of how to act responsibly and with resilience online, and equip them with the tools to know how to deal with cyberbullying behaviour. It is also crucial to demonstrate how others can be affected by their interactions online and what language and actions are considered appropriate in the online environment.	Discuss and ensure students understand protocols to use online; for example: • **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. Tools such as Google Docs enable students to collaborate on shared documents. Schools may also use a platform that provides a closed online community for students to share their ideas (eg Weebly or Seesaw).
The focus of the learning (in simple terms)	Brainstorm the dangers, problems and pitfalls in using ICT and online spaces. Organise and distil the main ideas and use these to form the areas to address for an ICT agreement. Use a collaborative approach to agree upon a set of protocols and rules for using technology, and develop processes and procedures to follow when using ICT.	Discuss ways students protect themselves online and how to identify differences between sensible and risky online behaviours. Incorporate drama and give students the opportunity to role play some scenarios as how they might/should react. Discuss the use of personal information or images when communicating online, for example, using avatars and pseudonyms instead of real photos or your real name. Use a relevant video such as 'Cybersmart detectives' as a teacher-led activity viewed on a large screen or electronic whiteboard. Facilitate class discussion and support students to discuss online safety.	As a class, discuss some of the ways you can cope when you experience unfriendly behaviour online, such as being cyberbullied. After the discussion, have students identify personal ways they can put good self-care strategies in place. Develop a set of quiz questions that identify cyberbullying behaviours and ways we can respond to a cyberbullying situation. Potentially, these quiz questions could be added together to form the basis of a questionnaire that the students can work through before deciding whether or not they are being bullied in any instance. Both sessions could be run collaboratively with students in small groups using Padlet or similar tool to post their ideas and quiz questions and having other students comment or answer.	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 collaborative story, a report on an excursion or a science investigation. Alternatively, provide a question that will evoke some interest and passionate discussion and feeling, for example, should students in Year grade 3 be allowed to use social media? Use the online project to apply protocols and manage timelines around delivering on a task. Discuss how to assign roles within the group and strategies to achieve the desired result.

Supporting resources and tools and purpose/ context for use.	**Lesson ideas** [Agreeing to an ICT Agreement](#) Use this resource to develop an ICT to agreement and discuss protocols for using ICT.	**Lesson ideas** [Cybersmart detectives](#) This interactive class activity is built around an animation that asks students to step into the shoes of a Cybersmart Detective. It reinforces messages about personal safety and protective measures for dealing with strangers online. [Cybersmart forever](#) Use this lesson to follow up the use of personal information, in particular the sharing of images online.	**Lesson ideas** [Middle Primary lessons plans: Cyberbullying](#) Download this lesson on cyberbullying. **Online tools** [Padlet](#) An online collaboration tool	**Online tools** [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 comment moderation features allowing open, moderated or closed discussions
Assessment	**Suggested approaches may include:** completed ICT agreement written by the student. **Achievement standard** **Safely use** and **manage** information systems for identified needs using agreed protocols and **describe** how information systems are used.	**Suggested approaches may include:** student engaging in discussion. **Achievement standard** **Safely use** and **manage** information systems for identified needs using agreed protocols and **describe** how information systems are used.	**Suggested approaches may include:** students' ideas about self-care strategies and their quiz questions. **Achievement standard** **Safely use** and **manage** information systems for identified needs using agreed protocols and **describe** how information systems are used.	**Suggested approaches may include:** peer assessment on how each member performed on the collaborative task. **Achievement standard** **Safely use** and **manage** information systems for identified needs using agreed protocols and **describe** how information systems are used.