

CCEN Digital Technologies Curriculum Overview Document Year 4















Digital Technologies Year 4 Level Description






















In Year 4, students further develop understanding and skills in computational thinking, such as categorising and outlining procedures. They have opportunities to create a range of solutions, such as interactive adventures that involve user choice, modelling simplified real world systems. Students explore digital systems in terms of their components, and peripheral devices, such as digital microscopes, cameras and interactive whiteboards. They collect, manipulate and interpret data, developing a capacity to use data and their representations to communicate ideas. Students learn to define problems and to deduce and record conclusions through text and diagrams. They have opportunities to experiment with refining designing skills, describing their own algorithms that support branching (choice of options) and user input. Students implement solutions using appropriate software, including visual programming environments that use a variety of graphical elements. They define solutions to meet specific needs and consider society's use of digital systems that meet community requirements.








Students explain the safety aspects of communicating ideas and information using digital technologies.

Sub-Strands		Year 4 Achievement Standard		
Knowledge & Understanding	Processes & Production Skills	To be developed in 2016 using (assessment) work sample evidence to 'set' standards through paired comparisons.		
Digital Systems	Collecting, Managing & Analysing Data			
Representation of Data	Digital Implementation Creating Solutions			
ICT Capabilities –Information and Communication Technology Learning Continuum – Level 3				
1. Applying Social and Ethical Protocols and Practices When Using ICT		2. Investigating with ICT		3. Creating with ICT
Recognise ownership of digital products that others produce and that what they create or provide can be used or misused by others. Follow class rules about applying selected standard guidelines and techniques to secure digital information. Follow class guidelines when sharing personal information and apply basic social protocols when using ICT to communicate with known audiences. Identify how ICT is used at home and at school.		Use ICT to identify, record and classify textual and graphic information to show what is known and what needs to be investigated. Locate information from a given set of digital sources. Explain the usefulness of located data or information.		Use ICT to prepare simple plans to find solutions or answers to questions. Experiment with ICT as a creative tool to generate simple solutions, modifications or data representations for particular audiences or purposes.
4. Communicating with ICT		5. Managing and Operating ICT		
Manage and maintain digital data with guidance. Identify and safely operate a selected range of appropriate devices, software when operating an ICT system. Attempt to solve problem before seeking help. Identify the main components of common consumer ICT systems, their fundamental functions, and describe them using basic ICT terminology.		Use purposefully selected ICT tools safely to share and exchange information with appropriate local audience. Understand that computer mediated communications may be received later by the receive.		

CCEN Digital Technologies Curriculum Overview Document Year 4

SCASA Scope & Sequence		Task Examples	Digital Technology & Other Resources						
Strand	Pointers Year 4								
Knowledge & Understanding									
Digital Systems	<i>Digital systems and peripheral devices are used for different purposes and can store and transmit different types of data</i>	Brainstorm or list different digital (computing) systems and devices and discuss how they can be used.	<table border="1"> <tr> <td><u>Popplet</u> </td> <td>Class explosion chart - IWB</td> </tr> <tr> <td><u>Seesaw</u> </td> <td><u>Mind Node</u> </td> </tr> <tr> <td><u>Explain Everything</u> </td> <td>Class Discussions</td> </tr> </table>	<u>Popplet</u> 	Class explosion chart - IWB	<u>Seesaw</u> 	<u>Mind Node</u> 	<u>Explain Everything</u> 	Class Discussions
		<u>Popplet</u> 	Class explosion chart - IWB						
<u>Seesaw</u> 	<u>Mind Node</u> 								
<u>Explain Everything</u> 	Class Discussions								
Representation of Data	<i>Different types of data, and the same data, can be represented in different ways</i>	Introduce different data (video, audio, text) and link them to peripheral (external) devices that can create and view them.	Cameras on digital devices, Hard Drives, Apple TV, Airplay, Airdrop, USB.						
		Experiment with different types of components to perform input, output and storage functions (keyboard, stylus, touch screen) to input instructions or a monitor, printer or tablet to display information.							
		Understand how to use an external USB or hard drive to save and access information.	Class Discussions & Modelling.						
		Recognise that images and music can be transferred from a mobile device to a computer, for example using a cable to connect a camera and computer to upload images for a photo story.							
		Explore codes and symbols for example Morse code and semaphore.	Morse codes						
		Look at how similar symbols in Aboriginal and Torres Strait Islander art can represent different concepts depending on the context, (for example three circles, drawn as lines, can represent ants, fruit, flowers or eggs depending on the art region).	<u>iMovie</u> 						
		Create your own secret code to communicate with other	<u>Explain Everything</u> 						
		Discuss binary code with class.	Class Discussion & IWB						

SCASA Scope & Sequence		Task Examples	Digital Technology & Other Resources
Strand	Pointers Year 4		
Collecting, Managing & Analysing Data	Collect and present different types of data for a specific purpose using software	Create documents on a digital device using apps or software.	<div style="display: flex; justify-content: space-between;"> <div> <p><u>Word</u> </p> <p><u>Keynote</u> </p> </div> <div> <p><u>Pages</u> </p> <p><u>Powerpoint</u> </p> </div> </div>
		Search for images on Google search	<p>Web Based Search Engines</p> <p><u>iMovie</u> </p> <p><u>Explain Everything</u> </p>
		Create video or audio files for use in an app or software program on a chosen digital device.	<p><u>Book Creator</u> </p> <p>iPad, Tablet, Laptop</p>
		Take time-lapse photographs showing the sprouting of a seed and use software to animate and present. Use internet research to investigate and present on a topic.	<p><u>Keynote</u> </p> <p><u>Powerpoint</u> </p> <p><u>Book Creator</u> </p> <p>iPad, Tablet or Laptop</p>
		Add buttons and links within slideshows and multimedia presentations.	<p><u>Keynote</u> </p> <p><u>Book Creator</u> </p> <p><u>Weebly</u> </p> <p>Internet Browser – Google Chrome</p>
		Discuss and explore website navigation bars. Create own website to explore these options.	<p><u>Keynote</u> </p> <p><u>Powerpoint</u> </p>
		Prepare the content and design of a simple guessing game that provides options for the viewer using Keynote or Powerpoint slideshow links.	<p><u>Scratch Jnr</u> </p> <p><u>Scratch</u> </p>
		Use coding apps or software to explore and list a sequence of steps.	<p><u>The Fools Web</u> </p> <p><u>The Fools App</u> </p> <p><u>Sphero Robot</u> </p> <p><u>Lego Mindstorms</u> </p>

SCASA Scope & Sequence		Task Examples	Digital Technology & Other Resources
Strand	Pointers Year 4		
Digital Implementation	<i>Work with others to create and communicate ideas and information safely, using agreed protocols (netiquette)</i>	<p>Use online communication tools to collaborate with peers.</p>	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%; text-align: center;"> Google Docs  </div> <div style="width: 50%; text-align: center;"> Edmodo  </div> <div style="width: 50%; text-align: center;"> Kidblog  </div> <div style="width: 50%; text-align: center;"> Connect  </div> <div style="width: 50%; text-align: center;"> Google Sites  </div> <div style="width: 50%; text-align: center;"> DET Email  </div> </div>
		<p>Discuss Cybersafety in the classroom and implementing class rules around this.</p>	<p>https://www.common sense media.org</p>
		<p>Discuss topics online with a scientist using online conferencing. Setting up an Edublog ensuring correct netiquette.</p>	<div style="text-align: center;">  </div>

SCASA Scope & Sequence		Task Examples	Digital Technology & Other Resources
Strand	Pointers Year 4		
Creating Solutions By:			
Investigating and Defining	<i>Define a sequence of steps to design a solution for a given task</i>	Explain how digital information was used in an activity.	Select any appropriate devices, apps, programs or non-technology resources to achieve the result.
	<i>Identify and choose the appropriate resources from a given set</i>	Outline the design process of a task. Choose from a range of resources to assist their learning tasks	
Designing	<i>Develop and communicate design ideas and decisions using annotated drawings and appropriate technical terms</i>	Create, label and explain drawings of a design. Create a video of design ideas and explain using appropriate language.	
	<i>Select, and safely use, appropriate components and equipment to make solutions</i>	Follow appropriate use guidelines in the classroom for using technology. Use appropriate technology to complete set tasks.	
Producing and Implementing	<i>Use criteria to evaluate and justify simple design processes and solutions</i>	Review design process and identify areas of success or weakness. Use rubrics to reflect on and assess work.	
	<i>Work collaboratively to safely plan and publish a sequence of steps</i>	Work in small groups to complete design processes. Use of online communication tools to collaborate with peers.	
Collecting, Managing & Analysing Data			