

DTiF

Digital Technologies in focus

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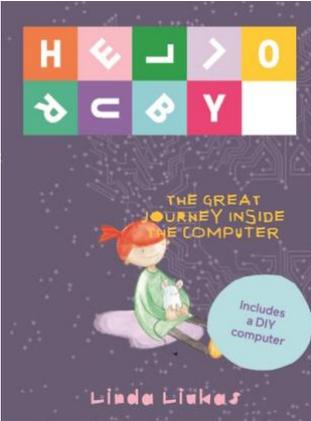
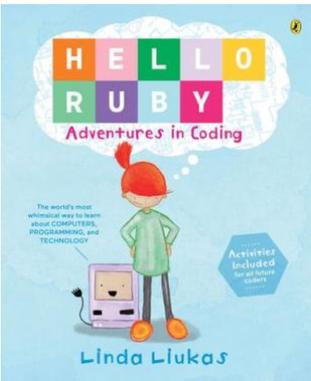


BOOKS FOR EXPLORING DIGITAL TECHNOLOGIES CONCEPTS

To implement the Australian Curriculum: Digital Technologies, equipment or materials that will allow students to identify and discuss core concepts, and related ways of thinking are required. The following list is an indicative sample only*. ACARA advises teachers to use their own judgement as to the value of the references for their teaching context and, also, to use the list as a model for identifying other appropriate materials. Search online for more information about these books such as International Standard Book Number (ISBN), reviews and videos of discussions or readings*.

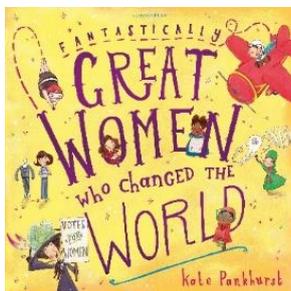
See <https://www.australiancurriculum.edu.au/resources/digital-technologies-in-focus/> for further resources and support materials.

Book details	Age group	Digital Technologies Core concepts
Name: <i>Which one is Nettie?</i> Authors: Wendy Goucher Publisher: University of Buckingham, 2021 Description: Nettie is terrified to discover Scammy the dog pretending to be her after she had left her device unattended.	4–7 years	<ul style="list-style-type: none">• privacy and security• digital systems (hardware, software, and the internet) <i>computational thinking (CT)</i>
Name: <i>The technology tail</i> Authors: Julia Cook and Anita Dufalla Publisher: Boys town PR, 2017 Description: Whether tapping out messages on their computers, tablets or phones, Screen wants kids to know their words will follow them for life, creating a digital trail that can't be erased.	4+	<ul style="list-style-type: none">• privacy and security• digital systems (hardware, software, and the internet) <i>computational thinking (CT)</i>
Name: <i>Kids get coding: our digital world</i> Authors: Heather Lyons and Elizabeth Tweedale Publisher: Wayland, 2016 Description: An explanatory text with quick activities for children to do as they read.	4–7 years	<ul style="list-style-type: none">• algorithms (following and describing)• digital systems (hardware, software, and networks and the internet) <i>computational thinking (CT)</i>
Name: <i>Kids get coding: learn to program</i> Authors: Heather Lyons and Elizabeth Tweedale Publisher: Wayland, 2016 Description: A basic introduction to programming. The extension activities may be challenging but are useful to work towards mastery.	4–7 years	<ul style="list-style-type: none">• abstraction• algorithms (following and describing)• specification (descriptions and techniques)

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<p>Name: <i>Kids get coding: coding, bugs and fixes</i> Authors: Heather Lyons and Elizabeth Tweedale Publisher: Lerner Classroom, 2016 Description: Explores how computers know what we want them to do. The book describes how computers receive instructions called code with the specific steps needed to perform a task. The reader will learn how to create codes, what happens when instructions are out of order, and how mistakes in code are fixed. There is a link in the book for users to go online and try coding for themselves.</p>	4–7 years	<p><i>computational thinking (CT)</i></p> <ul style="list-style-type: none"> • abstraction • algorithms (following and describing) • specification (descriptions and techniques) <p><i>computational thinking (CT)</i></p>	
<p>Name: <i>Hello Ruby: the great journey inside the computer</i> Author and illustrator: Linda Liukas Publisher: Penguin Random House Australia, 2017 (Melbourne, Victoria) Description: In this story, Ruby puts her mind to fixing her father's broken computer. Ruby and her friend Mouse go on a journey inside the computer searching for the missing Cursor. Ruby learns about computer hardware and the basic elements of the machines in our world. Using the knowledge gained in the story, readers can try some fun included activities. Notes: Visit www.helloruby.com for ideas, videos and free resources that link to the book. See also other titles in the Hello Ruby series.</p>		4–8 years	<ul style="list-style-type: none"> • abstraction • digital systems (hardware, software, and networks and the internet) <p><i>computational thinking (CT)</i> <i>systems thinking (ST)</i></p>
<p>Name: <i>Hello Ruby: adventures in coding</i> Author and illustrator: Linda Liukas Publisher: Penguin Random House Australia, 2016 (Melbourne, Victoria) Description: In this adventure with Ruby, readers are introduced to the basic concepts of coding. Each chapter includes activities to try along the way. Notes: Visit www.helloruby.com for ideas, videos and free resources that link to the book. See also other titles in the Hello Ruby series.</p>		4–8 years	<ul style="list-style-type: none"> • abstraction • algorithms (following and describing) • specification (descriptions and techniques) <p><i>computational thinking (CT)</i></p>

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<p>Name: <i>How to code a sandcastle</i> Author: Josh Funk Publisher: Viking Books for Young Readers, 2018 Description: A little girl named Pearl discovers the best way to make a sandcastle at the beach. This fun narrative is also an introduction to coding principles.</p>	4–8 years	<ul style="list-style-type: none"> abstraction algorithms (following and describing) specification (descriptions and techniques) <p><i>computational thinking (CT)</i></p>
<p>Name: <i>Once upon a time ... online</i> Authors: David Bedford and Rosie Reeve Publisher: Parragon, 2016 Description: Once upon a time, a laptop arrived in Fairy-tale Land and things to do are just a click away. What will happen when the fairy-tale characters use a laptop? Will they learn a lesson in online safety?</p>	4–8 years	<ul style="list-style-type: none"> impact (sustainability and empowerment) interactions (people and digital systems, data and processes)
<p>Name: <i>Nerdy Birdy Tweets</i> Author: Aaron Reynolds Publisher: Roaring Brook Press, 2017 Description: Nerdy Birdy joins Tweetster, and the friend requests start flying in. Vulture watches as Nerdy Birdy gets swept up in his new friendships, but when she finally gets angry, Nerdy Birdy knows just what to do to make things right.</p>	5–8 years	<ul style="list-style-type: none"> privacy and security digital systems (hardware, software, and the internet) <p><i>computational thinking (CT)</i></p>
<p>Name: <i>Rosie Revere, engineer</i> Author: Andrea Beaty Publisher: Harry N Abrams, 2013 Description: The story of a girl in Year 2 who wants to be a great engineer. She loves making gadgets and tries to make a machine for her great-great-great-aunt so she can fly. The story encourages readers to follow their dreams and to understand that failure is part of the inventor's (or engineer's) process.</p>	5–7 years	<ul style="list-style-type: none"> algorithms (following and describing) impact (sustainability and empowerment) <p><i>computational thinking (CT)</i> <i>design thinking (DT)</i></p>
<p>Name: <i>The most magnificent thing</i> Author: Ashley Spires Publisher: Kids Can Press, 2014 Description: A story about a little girl who is trying and failing to design the most magnificent thing. Children can learn about the design process, iteration and never giving up. Note: See the stop motion animation www.youtube.com/watch?v=GqECc3gKuTo</p>	5–8 years	<ul style="list-style-type: none"> algorithms (following and describing) specification (descriptions and techniques) <p><i>computational thinking (CT)</i> <i>design thinking (DT)</i></p>
<p>Name: <i>Peter and Pablo the printer: adventures in making the future</i> Author: Jeffrey Ito Publisher: CreateSpace Independent Publishing Platform, 2016 Description: Peter is about to turn seven years old. On his birthday he is given a 3D printer by his father. It's a special printer that is capable of printing anything ...</p>	5–8 years	<ul style="list-style-type: none"> abstraction digital systems (hardware, software, and networks and the internet) impact (sustainability and empowerment)

Book details	Age group	Digital Technologies Core concepts
<p>Name: <i>Brilliant ideas from wonderful women</i> Author: Aitziber Lopez Publisher: Wide Eyed Editions, 2019 Description: Did you know that all kinds of revolutionary inventions were all pioneered by women? These include wi-fi, diagnostic tests and eBooks. Learn all about the women who invented these things in this colourful book.</p>	5–8 years	<ul style="list-style-type: none"> digital systems (hardware, software, and networks and the internet) impact (sustainability and empowerment) <p><i>computational thinking (CT)</i> <i>design thinking (DT)</i> <i>systems thinking (ST)</i></p>
<p>Name: <i>The technology tail</i> Author: Julia Cook Publisher: Boys Town Press, 2017 Description: A story about what we do online and how it creates the digital footprint we all leave behind us</p>	5 years+	<ul style="list-style-type: none"> abstraction impact (sustainability and empowerment) <p><i>computational thinking (CT)</i> <i>systems thinking (ST)</i></p>
<p>Name: <i>Grace Hopper: queen of computer code</i> Author: Laurie Wallmark Publisher: Sterling Children's Books, 2017 Description: Grace Hopper coined the term 'computer bug' and taught computers to 'speak English'. During her lifetime, she succeeded in doing things no one had ever done before. She was right at home with difficult ideas and in defying expectations.</p>	5 years+	<ul style="list-style-type: none"> impact (sustainability and empowerment) <p><i>computational thinking (CT)</i> <i>systems thinking (ST)</i></p>
<p>Name: <i>Fantastically great women who changed the world</i> Author: Kate Pankhurst Publisher: Bloomsbury USA Children's Books, 2016 Description: Empowering stories of women who changed the world.</p>	6 years+	<ul style="list-style-type: none"> impact (sustainability and empowerment)
<p>Name: <i>Three little hackers</i> Author: Marcus J. Carey Publisher: Self-published, 2020 Description: A focus on how criminals use social engineering and how children can guard their privacy online. The book revamps the classic three little pigs story to help children understand the concept of privacy.</p>	6 years+	<ul style="list-style-type: none"> privacy and security <p><i>computational thinking (CT)</i></p>
<p>Name: <i>Sarah the Cyber Hero</i> Author: Emily Rauer Publisher: Book Baby, 2017 Description: A school cyber education program has been teaching Sarah all about cyber safety and how to protect a computer from intruders. Can Sarah use her new cyber skills to shut down the dreaded virus?</p>	8 years+	<ul style="list-style-type: none"> privacy and security <p><i>computational thinking (CT)</i></p>
<p>Name: <i>Webster's Email</i> Author: Hannah Whaley Publisher: Born Digital Books, 2014 Description: Webster's Email is a wonderfully witty</p>	8 years+	<ul style="list-style-type: none"> privacy and security <p><i>computational thinking (CT)</i></p>



Book details	Age group	Digital Technologies Core concepts
rhyming story that gathers pace as the little spider begins to regret emailing a funny picture of his sister.		
<p>Name: <i>If I were a wizard</i> Author: Paul Hamilton Publisher: Edtechtteam Press, 2016 Description: This picture book introduces the concepts of coding through a story about a boy named Ralph. It includes a glossary to aid understanding. Notes: Visit www.wizardcodingbook.com for more ideas, videos and resources. Links to the augmented reality app: Wizard AR</p>	8 years+	<ul style="list-style-type: none"> abstraction algorithms (following and describing) specification (descriptions and techniques) <p><i>computational thinking (CT)</i></p>
<p>Name: <i>Create your own secret language</i> Author: David J. Peterson Publisher: Odd Dot 2020 Description: This book is a guide to creating secret languages, codes, ciphers, and hidden messages. From simple cyphers to entirely new alphabets, mastering the skills of secret communication, whether it's written, drawn, or spoken.</p>	10 years+	<ul style="list-style-type: none"> privacy and security algorithms data representation <p><i>computational thinking (CT)</i></p>
<p>Name: <i>How it works: book of amazing technology, volume 2 (magazine)</i> Author: Aaron Asadi (Editor) Publisher: Imagine Publishing, 2013 Description: From computing to engineering, gadgets to domestic appliances, discover how things work with interesting cutaways and cross-sections.</p>	10 years+	<ul style="list-style-type: none"> abstraction digital systems (hardware, software, and networks and the internet) impact (sustainability and empowerment) <p><i>systems thinking (ST)</i></p>
<p>Name: <i>The way things work now</i> Author: David Macaulay Publisher: HMH Books for Young Readers, 2016 Description: Full of information on the inner workings of everything from windmills to wi-fi. Readers are guided through the fundamental principles of machines, and the developments of the past and how they are building the world of tomorrow. Also available in a board game format.</p>	12 years+	<ul style="list-style-type: none"> abstraction digital systems (hardware, software, and networks and the internet) impact (sustainability and empowerment) <p><i>computational thinking (CT)</i> <i>systems thinking (ST)</i></p>
<p>Name: <i>A Hacker I am</i> Author: Craig Ford Publisher: Self-published, 2019 Description: Covers many topics in cyber security including IoT, autonomous cars, hackers and many more. This book will be great at helping introduce individuals to the area and help them get a better understanding of what to look out for, what problems we are all going to face in the future but also have a bit of fun while we are at it.</p>	13+	<ul style="list-style-type: none"> privacy and security algorithms data representation digital systems <p><i>computational thinking (CT)</i></p>

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