

# CONNECTIONS

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## The need for diverse book collections

**Australia is a diverse nation.** Statistics from organisations such as the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS, 2022), the Australian Bureau of Statistics 2016 Census (ABS 2017), and the Australian Institute of Health and Welfare (AIHW, 2019) have painted a very clear picture. In Australia:

there are more than 250 Indigenous languages including 800 dialects

120 Indigenous languages are still spoken

more than 300 languages are spoken, and we identify with more than 300 ancestries

21% of Australians speak a language other than English at home

26% of the population was born overseas

nearly 46,800 same-sex couples live together

51% of the population are women

1 in 7 families are one-parent families

more than 4 million Australians (18% of total population) live with a disability.

Figure 1: How diverse is Australia?



Helen Caple and Ping Tian in the picture book section of Fisher Library at Sydney University.

Recognising, respecting and valuing these diversities is firmly embedded in every level of the Australian Curriculum (ACARA 2020). The fourth principle of the Early Years Learning Framework, 'Respect for Diversity', states:

When early childhood educators respect the diversity of families and communities, and the aspirations they hold for children, they are able to foster children's motivation to learn and reinforce their sense of themselves as competent learners. They make curriculum decisions that uphold all children's rights to have their cultures, identities, abilities and strengths acknowledged and valued, and respond to the complexity of children's and families' lives (AGDET 2020, p. 14).

One of the ways in which children can see their cultures, identities, abilities and strengths acknowledged and valued is through reading. That is, in the literature that they engage with both inside the classroom and at home. For the young reader, this literature usually comes in the form of a picture book, which, as Adam and Barratt-Pugh (2020, p. 1) note, 'can be

a powerful tool for extending children's knowledge and understandings of themselves and others who may be different culturally, socially or historically'.

In 1990, Rudine Sims Bishop used a wonderfully powerful analogy to *mirrors*, *windows* and *sliding glass doors* to capture these ideas. Children not only need to see themselves reflected in the literature that they read, but also need to see through *windows* into the worlds of others. At the same time, they need to have the opportunity to step through those *sliding glass doors* and enter the world of another. In this way, children expand their own horizons, developing a deeper understanding of others, and challenging the way they view the world and their place in it.

Fast forward to 2021, Sarah Mokrzycki wrote in *Connections*: 'representation in books should be a right, not a privilege'. This means the book collections we build need to be true to the times we live in, offering young readers *mirrors*, *windows* and *sliding glass doors*.

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### Connections

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## CONNECT WITH SCIS



[www.scisdata.com](http://www.scisdata.com)

# Professional learning

## Special offer!

When you purchase any professional learning session or 15-minute tutorial, you'll get an invite to a special SCIS Q&A session on 7 September. At this session you'll be able to ask our cataloguing experts questions that will help you consolidate the skills you've learned from SCIS. This offer is valid for purchases made before September 7th only.

## Term 3 Webinars

### Introduction to SCIS Data

Thursday 27 July 2PM (AEST)

New to the school library? Or simply need a refresher? This one-hour webinar provides an overview of how SCIS can support the provision of a more effective library service to your school community.

### How SCIS can do more for you

Thursday 11 August 2PM (AEST)

SCIS provides data for resources that go into your school's library catalogue, but SCIS delivers more for library staff than just data. This one-hour webinar will demonstrate additional features of SCIS Data that will help you make the most of your subscription.

### Develop your library collection with SCIS

**NEW!**

Thursday 25 August 2PM (AEST)

Ever struggled choosing new resources for your library? Never fear, SCIS is here! This new webinar will show you how to make selecting new resources easier using the SCIS discovery tool.

## 15-minute video tutorials

Need shorter, more concise professional learning? Our on-demand tutorials are designed to fit around your busy schedule and only cost \$10 each!

- **Covering a book:** **NEW!** Ever struggled covering a book? Cataloguing Team Leader Ceinwen Jones shows you her top tips for making book preservation a breeze!
- **Searching in SCIS:** **NEW!** SCIS Content Manager Renate Beilharz shows you how to search the SCIS database with confidence.
- **Genres in SCIS:** This tutorial will describe the genre headings used by SCIS, and explain how they are used in catalogue records.
- **Series headings and authorities:** This tutorial covers how series authorities can assist with searching and the difference between heading and series statements in SCIS records.
- **4 free digital collections to import to your catalogue:** This short tutorial demonstrates how to import free eBooks, websites and apps into your LMS.
- **SCIS doesn't have a record for my resource – what now?** This tutorial presents three ways to place a SCIS catalogue request.

## FIND OUT MORE AND REGISTER NOW

[scisdata.com/professional-learning](http://scisdata.com/professional-learning) | [help@scisdata.com](mailto:help@scisdata.com)

**SCIS**

Schools Catalogue  
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## Diverse picture book categories

Australian picture books focusing on:

- Aboriginal & Torres Strait Islander characters
- Culturally and linguistically diverse characters (please note the focus is English language books that feature CALD characters)
- Gender, sex and sexually diverse characters
- Characters with disability
- Characters from regional or rural areas

## DIVERSE PICTURE BOOK LISTS

The full list of Australian books is in the following spreadsheet

[DIVERSE PICTURE BOOKS AUSTRALIAN LIST >](#)

Figure 2: The diversity categories used to build the Diverse picture book collections page at the State Library of NSW

## ASSESSMENT CRITERIA

### Inclusiveness

The picture book includes characters from diverse backgrounds.

### Character representation/characterisation

The characters are represented in a non-stereotypical manner with an identity that is described and developed through the story.

### Theme

The theme of the picture book is closely related to issues of diversity. It is developed through the story, using narrative to create and share lived experiences of the characters.

### Multimodal storytelling

The illustrations and text work together to develop ambience and atmosphere, creating a complex world. The story world is open to different interpretations and emotional responses to the characters and themes.

### Educational engagement

The picture book serves as an educational tool for the discussion of diversity issues for library staff, carers and teachers. This could be through the story and theme or through additional information or background content in the book.

Figure 3: The assessment criteria used to select books for the Diverse picture book collections page at the State Library of NSW

## So how do we go about bringing these diversities in the Australian community into our book collections?

One place to start is with the book lists that we have developed for the State Library of NSW. This resource is based on suggestions made by council library staff across New South Wales. The Diverse picture book collections website provides two different diverse picture book lists.

There are two book lists on the site. One focuses exclusively on Australian titles and the other list includes internationally published picture books. The book lists include publishing information and the key diversity category that each book addresses.

The site also includes a list of featured books, as well as the criteria that we used to assess how the books address issues of diversity (in Figure 3).

These criteria can be used to assess the books in your own collection or to build an entirely new one. Here we share a few tips to help you get started.

## When selecting picture books that truly reflect these diversities in nuanced, respectful ways:

- ✓ choose books that do actually focus on marginalised groups in our society
- ✓ choose books that engage deeply with diverse characters where their identities and lived experiences are fully developed and explored
- ✓ choose books where the storytelling comes from the diverse characters themselves, in their own voices
- ✓ choose books where the illustrations represent diverse characters in non-stereotypical ways, and that reflect how we look and act in the real world.

Be on the look out to avoid the following.

- ✗ Books that only offer tokenistic nods to diversity (e.g. a minor character in a wheelchair, a person of colour that might be present in the setting or the environment that the main characters live and act in) do not meaningfully engage with diversity.

- ✗ Avoid stereotypical representations of characters and diversity, especially in the illustrations.

## Exploring the plurality of diversity

No single picture book is going to fully represent a diverse community in all of its richness, nor should it attempt to do this. This means that another important aspect of diversifying our book collections is to look for depth within a diversity category. This would offer readers a range of titles that tackle different aspects of one form of diversity.

For example, for those wishing to explore the lived experiences of members of the LGBTIQ+ community, the picture books in Table 1 each focus on particular experiences and themes from the category 'Gender, sex and sexually diverse'. This small collection includes books on same-sex parenting, books that cover trans issues, or gender non-conforming characters and LGBTIQ+ history.

## Celebrating diversity

We all know the adage 'representation matters'. It matters from the earliest of ages. Picture books are a prime site for helping children to not only see themselves and their lived experiences represented, but also to see and experience the lives of others. In this way we can learn about each other and learn to respect and celebrate the wonderful array of diversities that make up Australian society.

## Resources

**Diverse picture book collections**, State Library of NSW: <https://www.sl.nsw.gov.au/public-library-services/diverse-picture-books>

**The Henry Parkes Equity Resource Library** has more than 45,000 resources including multimedia classroom resources, teaching and learning resources, and professional development materials: <https://education.nsw.gov.au/teaching-and-learning/curriculum/multicultural-education/henry-parkes-equity-resource-centre#The0>

**Austlit** is an authoritative database about Australian literature and storytelling, with biographical and bibliographical information, full text, exhibitions and rich online content: <https://www.austlit.edu.au/>

If you wish to undertake a diversity audit of your own collection, the following resource might help you get started: <https://www.slj.com/story/diversity-auditing-101-how-to-evaluate-collection>

Picture book	Theme
<b><i>And Tango makes three</i></b> Justin Richardson, Peter Parnell and Henry Cole	Based on true events, this book retells the story of two male penguins who raise a chick together in New York's Central Park Zoo. The book challenges the concept of family and addresses same-sex parenting.
<b><i>Heather has two mummies</i></b> Leslea Newman and Laura Cornell	Heather is raised by lesbian women: her biological mother, Jane, who gave birth to her after artificial insemination, and her biological mother's same-sex partner, Kate.
<b><i>I'm not a girl</i></b> Maddox Lyons, Jessica Verdi and Dana Simpson	This book, about a boy who is determined to be himself, is based on a true transgender identity journey. He battles his parents, friends and teachers to become the person he really is.
<b><i>My shadow is pink</i></b> Scott Stuart	This book draws on Stuart's own experiences of fatherhood through his relationship with his son. The book challenges the gender stereotypes that Stuart had known throughout his own life, and explores toxic masculinity, gender identity, fatherhood, diversity, childhood bullying and self-expression.
<b><i>Julián is a mermaid</i></b> Jessica Love	This is a story about a boy who wants to be a mermaid. This book will resonate with all kids who might be struggling with their identity.
<b><i>Jacob's room to choose</i></b> Sarah and Ian Hoffman and Chris Case	When Jacob and Sophie have negative experiences when trying to go the bathroom at school, their teacher uses this as a teachable moment: to respect one another regardless of how we choose to express our identity.
<b><i>This day in June</i></b> Gayle E. Pitman and Kristyna Litten	This book celebrates the enthusiasm of gay, lesbian, bisexual, and transgender people and their supporters as they participate in a Pride March. It is an excellent tool for teaching respect, acceptance and understanding of the LGBTIQ+ community.

Table 1: Picture books that focus on different aspects of the lived experiences of the LGBTIQ+ community

International websites championing diversity in book collections:

**We need diverse books:**

<https://diversebooks.org/>

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Mokrzycki, S. (2021) The need for family-diverse picture books. *Connections*, 119(4). Retrieved from: <https://www.scisdata.com/connections/issue-119/the-need-for-family-diverse-picture-books/>

**Further reading**

Adam, H. (2021). *Transforming Practice: Transforming lives through diverse children's literature*. Issue 128. Marrickville: PETAA.

Caple, H. & Tian, P. (2020). In 20 years of award-winning picture books, non-white people made up just 12% of main characters. *The Conversation*, 15 October, 2020. <https://theconversation.com/in-20-years-of-award-winning-picture-books-non-white-people-made-up-just-12-of-main-characters-147026>



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Helen Caple is Associate Professor in Journalism at the University of New South Wales, Australia. Her research interests centre on visual representation and diversity, news photography, text-image relations and discursive news values analysis. Helen has published in the area of diversity in children's picture books, photojournalism and social semiotics. Her latest monograph with Routledge is *Photojournalism Disrupted: The View from Australia* (2019).

Ping Tian is an Honorary Associate in Linguistics at the University of Sydney, Australia. Her research centres on the application of linguistics and semiotic theory and analytical framework in various contexts. Ping has taught and published in the areas of children's picture books, multimodality, discourse analysis, media studies and business communication (organisational studies).



# HELPING LITERACY LEARNERS: THE VITAL ROLE OF LIBRARIANS

Kerrie Shanahan explores the vital early literacy skills students need to become independent readers.

**We all love** that feeling of being lost in a book, fully engrossed in a novel or an interesting biography. As educators it's also wonderful to see children immersed in books when they too have developed a love of reading.

For this to happen, it's essential that students develop the skills needed to become independent readers in their early years. Teaching these vital foundational literacy skills is a complex task, and it's one in which library professionals play a key role.

## Understanding literacy learning

Substantial research over the past few decades provides us with an evidence base on how children learn to read. This evidence base is referred to as the science of reading. Our understanding of the science of reading is crucial because it informs us about what to teach and how to teach it.

We know that learning to read requires children to develop skills in six main areas. Commonly known as the 'Big Six', these areas of development are: oral language, phonological awareness, phonics, comprehension, fluency, vocabulary.

All areas of the Big Six need to be taught to students, and this involves:

- clearly and **explicitly teaching** concepts, and modelling skills
- planning for students to **practise** skills in a supported way
- giving targeted **feedback** that reinforces skills and knowledge and corrects any errors or misconceptions.

The Big Six is a great framework to use when planning teaching programs in your library. Understanding the elements of the Big Six will also help when sharing resources with teachers, and when reflecting on your own professional development.

## Teaching practices to support literacy learning

What might teaching the Big Six look like in your library? There are a range of teaching strategies you can use that incorporate this teaching.

### Modelled reading

As you read aloud to students you can model a range of reading skills such as comprehension, vocabulary building and fluency. For example, you could use the think aloud process to explain what you do to understand the text you are reading.

### Shared reading

As you read aloud, have students join in as they feel confident. This provides opportunities to develop students' phonological awareness of the sounds and patterns of language. During a shared reading session, you can revisit the book or parts of it to do a 'deeper dive' and focus on various aspects such as the structure of the text, word choice, visual elements and meaning.

### Oral storytelling

Telling a story orally to students models exemplary oral language



skills, and helps students develop listening skills. Students could also act out a story or role-play parts of it to practise their developing oral language skills.

## Resources to support library staff

If you're looking for evidence-based resources for F–2 students in your role as a library professional, visit [the Literacy Hub](#). You'll discover great ideas for your teaching and can also build your knowledge and confidence to support school leaders, teachers and families in their quest to develop children's literacy skills.

On the Literacy Hub you can:

- explore classroom resources
- find out more about the latest research regarding literacy learning
- access planning and curriculum documents
- complete professional learning
- learn about strategies to support students' literacy development.

In particular, you might like to read more about the [Big Six](#) and discover related [practical ideas](#) for your students.

So, if you'd like to refresh your knowledge on literacy learning, find out about the latest research or browse the wide range of exciting and up-to-date resources, then the Literacy Hub is a wonderful place to start. Happy reading!



**Kerrie Shanahan**  
Content Manager  
Literacy Hub

Kerrie has a strong background in education, having taught in both the primary and tertiary sectors. She is an experienced educational author who has published more than 150 books for students, as well as many varied resources for teachers, specialising in the early years.

# SCIS is more

‘The Schools Catalogue Information Service (SCIS) creates **high-quality, consistent** catalogue records for **school libraries**.’

The quote above introduces SCIS to all those who use our website. **High quality** means that we adhere to international cataloguing standards, ensuring SCIS records are compatible with catalogue records around the world. These international cataloguing standards include options and alternatives that allow cataloguing agencies to create records which suit the needs of their users. In the case of SCIS, records are created to meet the needs of a very particular user group, **school libraries**. SCIS has documented instructions for SCIS cataloguers to ensure that international standards are applied in a **consistent** manner.

## SCIS Standards

How SCIS applies international standards is recorded in the document called *SCIS Standards for Cataloguing and Data Entry* (SSCDE), available at <https://www.scisdata.com/media/2297/sscde-dec-2021.pdf>. SSCDE explains how SCIS cataloguers apply the three international standards:

- Resource Description and Access Toolkit (<https://www.rdatoolkit.org/>)
- MARC 21 (<https://www.loc.gov/marc/>)
- Dewey Decimal Classification (<https://www.oclc.org/en/dewey.html>).

SSCDE also outlines the subject vocabularies used by SCIS:

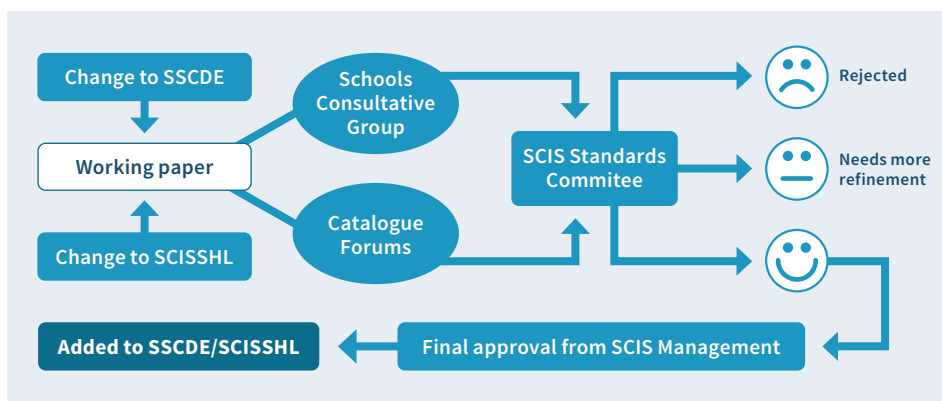
- SCIS Subject Headings List (SCISSHL) (<https://my.scisdata.com/standards>)
- Schools Online Thesaurus (ScOT) (<http://scot.esa.edu.au/>).

## Keeping SCIS Standards up to date

The SSCDE and SCISSHL are constantly reviewed and updated. Any changes to SSCDE (or suggestions for new or changed subject headings) go through a thorough process that ensures all due diligence is undertaken before any changes are made. The process is overseen by the SCIS Standards Committee (SSC) and incorporates input from key stakeholders.

## The change process (see diagram)

- **Working papers** detailing and justifying the changes are written by SCIS



- **Responses** to the working papers are sought from cataloguer forums and from the Schools Consultative Group.
- The **SCIS Standards Committee**, which meets four times a year, considers the responses. The SSC makes a recommendation to SCIS management on the working paper proposal.
- **SCIS Management** undertake final approval and implements any changes to SSCDE and SCISSHL.
- **End-users** are informed of changes to SCISSHL and SSCDE in the Term 1 edition of *Connections*.

## SCIS Schools Consultative Committee

The SCIS Schools Consultative Committee (SSC) was inaugurated in August 2021 and exists to help ensure that SCIS draws from a range of perspectives when updating standards. School library staff from around Australia and New Zealand were selected to join the SSC, ensuring a range of school types are represented. The current 10-member SCC has representatives from government, Catholic and independent schools, covering primary, secondary and F-12 schools across all states in Australia plus New Zealand.

The SSC meets quarterly with an agenda that includes consideration of any working papers, as well as general discussion of all things SCIS and school libraries. The SCIS Standards Committee has been very appreciative of the thoughtful and helpful feedback the SSC provides to the standards decision-making process. SCIS management is grateful to everyone on the SSC for their input and giving up their time to ensure that SCIS remains relevant.

## Changing international cataloguing standards

In December 2020, the Resource Description and Access Toolkit (RDA), the cataloguing standard that underpins most elements of a SCIS cataloguing record, was adapted and changed to more accurately reflect the latest conceptual model for bibliographic data, IFLA's Library Reference Model ([https://www.ifla.org/wp-content/uploads/2019/05/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017\\_rev201712.pdf](https://www.ifla.org/wp-content/uploads/2019/05/assets/cataloguing/frbr-lrm/ifla-lrm-august-2017_rev201712.pdf)).

A small team of SCIS cataloguers is currently undertaking the mammoth task of mapping SCIS's existing standards against elements of the 'new' RDA Toolkit, with a view to rewriting chapter 2 of the SSCDE. It is envisaged that this will be available to SCIS customers and stakeholders in 2023. To coincide with this release, SCIS is planning a series of professional learning workshops and webinars on the SCIS Standards and the new RDA Toolkit.

## How you can be involved

Schools are invited make suggestions for improvements to the existing SCIS standards and Subject Headings, by emailing your suggestions to [help@scisdata.com](mailto:help@scisdata.com). Please provide as much detail and justification as possible for your proposed change. This will be considered by SCIS cataloguers, and a working paper prepared if appropriate.

Any other feedback or suggestions on SCIS services and products are also welcome. I hope you enjoy reading all the fascinating articles in this issue of *Connections*.



**Renate Beilharz**  
Content Manager, SCIS

# WEBSITE + APP REVIEWS

## ABORIGINAL AND TORRES STRAIT ISLANDER CURRICULA

<https://indigenouknowledge.unimelb.edu.au/curriculum>

An initiative of the University of Melbourne, this website 'aims to empower teachers to integrate Aboriginal and Torres Strait Islander histories and cultures into their teaching'. The curriculum resources are searchable by KLA and the themes are water, fire and astronomy.

SCIS no: 1992685

## BRIGHT TOMORROWS

<https://apps.apple.com/au/app/bright-tomorrows/id1474778931>

Developed in partnership with the Minderoo Foundation's Thrive by Five and Telethon Kids Institute, Bright Tomorrows encourages parents to support babies and young children to grow and learn. Designed to help build children's brains in key areas, the information presented aims to be simple, presentable and fun. Also available on Google Play.

SCIS no: 5415546

## CLIMATE KIDS

<https://climatekids.nasa.gov>

Devised by NASA, this engrossing climate science website is suitable for Stage 3 (Years 5–6) students. The content covers weather and climate, the greenhouse effect, energy, animals, the atmosphere, water and the NASA missions which harvest the data.

SCIS no: 1794257

## INCLUSIVE EDUCATION

<https://inclusive.tki.org.nz/>

'The New Zealand Curriculum and Te Marautanga o Aotearoa require that all students' identities, languages, cultures, abilities, and talents are recognised,' is the idea that underpins this program. This NZ Ministry of Education initiative outlines the key aspects of an inclusive learning community.

SCIS no: 5415562

## KOKODA VR

<https://play.google.com/store/apps/details?id=au.net.abc.kokoda.vr>

Emanating from the Australian Broadcasting Corporation, this virtual-reality resource tells the story of the WWII Kokoda Track campaign. Content is linked to Year 10 of the Australian History Curriculum, and features include historical interviews, museum artefacts and videos. Available from the App Store.

SCIS no: 5415573

## LONDON INSTITUTE FOR MATHEMATICAL SCIENCE (LIMS)

<https://lims.ac.uk/>

The highly regarded LIMS site encourages its scientists to pursue curiosity-driven research into mathematics, physics and the theoretical sciences. This exemplary website offers clear and concise content of the scientists' varied discoveries.

SCIS no: 5415589

## NATIONAL TRUST – EDUCATION

<https://www.nationaltrust.org.au>

The National Trust offers teachers a collection of resources pertaining to Australia's natural, historic and Indigenous heritage. The education programs meet national curriculum standards and are stage-specific. Most programs are related to site visits, although several 3D interactive activities can be undertaken.

SCIS no: 1158328

## SNOWY HYDRO VIRTUAL EXCURSION

<https://education.nsw.gov.au/teaching-and-learning/curriculum/hsie/virtual-excursions---stages-4-6/snowy-hydro-virtual-excursion#landing>

The Snowy Hydro scheme is the focus of this virtual fieldwork excursion. The site uses oral histories, archival film, photographs and industry experts to explore the history, function and impact of the scheme. Renewable energy and Snowy Hydro 2.0 are also investigated.

SCIS no: 5415612

## SYDNEY JEWISH MUSEUM

<https://sydneyjewishmuseum.com.au>

The Sydney Jewish Museum 'gives history a voice through collecting and preserving historic objects, commemorating and educating, with a mission to challenge visitors' 'perceptions of morality, social justice, democracy and human rights'. Included are details of exhibitions, Holocaust survivor biographies, virtual tours, school excursions, and curriculum-aligned teaching resources.

SCIS no: 5415625

## WACKI – FUN YOUTH GROUP GAMES

<https://funyouthgroupgames.com>

This website offers an introduction to a variety of indoor and outdoor games suitable for groups. A selection of 'energiser' games for revitalising students in the classroom, or as lesson breaks, are a valuable addition. Additional games involve a fee, indicated on the various app stores.

SCIS no: 5415653

## WIND TUNNEL FREE

<https://apps.apple.com/au/app/wind-tunnel-free/id381971296>

Science students can turn their IOS or Android devices into a wind tunnel simulator with this app from the App Store or Google Play. They can experiment with different obstacles and recognise how an obstacle's shape, size and profile affect aerodynamic principles. This version is free, with extra features available for an additional fee.

SCIS no: 5415661



**Nigel Paull**  
Teacher Librarian  
North Coast, NSW

*The websites and apps selected for review are often of a professional nature and should be initially viewed by teachers and library staff to determine suitability for students. The links and content of these sites are subject to change.*



# IMAGINING THE FUTURE

**Lili Wilkinson is one of Australia's leading writers for children and young adults. Lili is the lead writer of *Imagining the future*, a new online New Fiction program with a STEM focus launching in September, to be followed by a nationwide creative writing and graphic art competition.**

## What is *Imagining the future*?

*Imagining the Future* is the New Fiction strand of Future You, a major government initiative designed to get mid- to upper-primary children excited about working in STEM ([www.futureyouaustralia.com](http://www.futureyouaustralia.com)), a topic explored in our interview with Professor Lisa Harvey-Smith in *Connections* Issue 121. *Imagining the Future* presents five speculative stories set in a shared future storyworld. The interlinked narratives, which will be available as texts and dramatised podcasts, feature diverse protagonists grappling with future societal and environmental challenges. I've been working with an awesome group of leading Young Adult writers – Rebecca Lim, Alison Evans, Gary Lonesborough and Melissa Keil – to map out this future and the stories, which are aimed at 10- to 12-year-olds. The program taps into children's love of storytelling, innate creativity and empathy, and invites them to imagine their place in the future alongside our characters, and to speculate on solutions to the problems the world (and other worlds!) will face.

## How were the stories developed?

The five authors, plus Future You producer Dan Prichard and our brilliant editor Kate Whitfield, spent a day in Melbourne workshopping the scenario for our stories. We agreed we wanted our future to be a positive one – no bleak dystopian nightmares, thank you! Our future is inclusive, diverse and kind, and one where we are well on the way to solving the problems of climate change.

We were all drawn to the idea of space exploration – I mean, who isn't? – so we came up with the idea of all the stories being about the establishment of a human outpost on Callisto (Jupiter's second largest moon), with each story taking place at a different point on a timeline.

## What are some of the themes of the stories?

The stories are about hope for the future, as well as young women, non-binary and diverse young people solving problems

using STEM. My story is the first one in the series and is about a fourteen-year-old girl leaving Earth with her family to be the first ones to arrive on Callisto and set up the outpost. Other stories feature characters learning to understand Callisto using traditional cultural knowledge from Earth and creating a holistic, non-destructive relationship with their new home. Like all good stories, our protagonists make mistakes, but then learn to fix them.

## What attracted you to the project?

At school, I was terrible at maths and science. I had plenty of teachers who encouraged my skills in English, Drama and other humanities subjects, but I got the impression that when it came to STEM, I was basically a write-off. However, I really liked the ideas in the STEM subjects, even if I couldn't wrap my head around the technicalities of them. Looking back now, I wonder how things might have been if STEM had been framed a little more positively.

Everyone knows the story of when NASA tried to send Sally Ride into space with 100 tampons for a one-week trip. It's funny, because ... men, amirite? But there's an important lesson to be learned there. When only half of our population is involved in imagining the future – with further barriers thrown up due to ethnicity, LGBTQIA+, identity, disability, geography and educational background – we get a future that isn't inclusive, a future that isn't for everybody. We need everyone, everywhere to be able to think STEM could be for them, and this project is a great way to introduce that idea to young people.

## How can schools, libraries and individuals get involved?

*Imagining the Future* will be providing a suite of resources that are great for use in schools and in the library. There will be a set of posters featuring the writers (see the back page for mine!), created by the incredible Claudia Chinyere Akole ([claudinsky.com](http://claudinsky.com)). The stories themselves will be available digitally as both text and podcast.



Pictured from left to right: Alison Evans, Lili Wilkinson, Rebecca Lim, Melissa Keil and Gary Lonesborough.

Young people and schools can be directly involved in the program by writing and drawing the future themselves. As part of the program, Future You will be launching a nationwide fiction writing competition, inviting teenagers and adults to write short stories for 10- to 12-year-olds underpinned by STEM thinking, and that can sit alongside our stories. Ten of these stories will feature on the Future You website and in an e-book – and there are cash prizes too!

In 2023 we will also be launching a graphic art competition inviting Australia's young graphic artists to create works based on the new stories. The winning entries will be published alongside the curated stories in the e-book, accompanied by dramatised readings of the stories, all of which will be available for download from [www.futureyouaustralia.com](http://www.futureyouaustralia.com). Full details of the competitions will be announced on the website, so sign up now to get them as soon as they are announced.

### **You are a leading writer of YA and speculative fiction. Why does this genre and this audience appeal?**

I love teenagers. I love their enthusiasm and idealism, and their strong sense of justice. Teens are clear-eyed and passionate about what they believe in, and about creating a beautiful, kind future. Adolescence is also a time of firsts – the first time you fall in love, have your heart broken, or get a glimpse of the person you really want to be. And speculative fiction is also often about firsts – new discoveries, and journeys into the unknown.

Storytelling is all about the question 'what if?', and the speculative arena is where you find the most fascinating answers. For me, speculative fiction is a way of thinking about our world here and now, and exploring ideas about identity, society and politics, away from the complex messiness and biases of our current reality.



**Lili Wilkinson**

Author and lead writer on Imagining the Future  
Future You Australia

Lili Wilkinson is the author of 16 books, including *Green valentine*, *The boundless sublime* and *After the lights go out*. She established [insideadog.com.au](http://insideadog.com.au) and the Inky Awards at the Centre for Youth Literature, State Library of Victoria. Lili has a PhD in Creative Writing from the University of Melbourne, which examined the influence of young adult fiction on the politicisation of teenagers. Her latest books are *The erasure initiative* and *How to make a pet monster: hodgepodge*. [www.liliwilkinson.com.au](http://www.liliwilkinson.com.au)

Connections giveaway competition. We have FIVE sets of novels by the Imagining the Future writers to give away. To find out the titles and how to enter, go to <https://womeninstem.org.au/imaginingthefuture>. Good luck – and see you in the future!



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# SCHOOL LIBRARY SPOTLIGHT: VAL WARDLEY

Librarian Val Wardley speaks to SCIS about the two school libraries she works in.



Val Wardley's school library in the Northern Territory.

## What is your job title? What does your role entail?

I am the **Library Administrator** at Clyde Fenton Primary School and Casuarina Street Primary School, which are both in Katherine in the Northern Territory.

I have lived and worked in the Northern Territory since 1997, and have spent most of this time working in libraries in some capacity. I have seen many changes in libraries over this time, from Command Line Library Systems and HyperCards, through to SQL and cloud-based systems. All have their advantages and disadvantages.

There have also been many changes with resource processing in order to use these systems, but SCIS has been there through all of this, from the days when we would microfiche records and mail them via floppy disc (taking up to 2 weeks to receive it back) through to current practices which see us searching, processing and having books on the shelves within a day.

In my role I work across two schools that have very different cohorts. One is a feeder school for the local area's RAAF (Airforce) Base, and it has a very transient population because families move on a regular basis. The other has a long history of providing education to local Indigenous communities as well as to other local families. The Indigenous families also move regularly between Katherine and other communities in the region making Clyde Fenton's student population very changeable. There are three

other primary schools and two secondary schools in town.

I purchase, catalogue, display, cull, repair and fulfil any other maintenance requirements to support the collections in both schools. I help both adults and students coming to the library to find resources and use the library catalogue system. I encourage the use of the OPAC in both the library and on any device in the school to help library users find whatever they need.



The Fiction section in Val Wardley's school library.

## What is the most rewarding aspect of working in a school library, and why?

Choosing, processing, displaying, reading and finding all those particular books that students are looking for is very satisfying every single day. I also get to interact with students through doing storytelling each recess and lunch, which attracts a variety of kids.

Exposure to literacy is the biggest factor in encouraging anyone to look for books and read for themselves, so making sure there is a wide range that caters for all abilities and interests takes up a lot of my daydreaming time. I love to be able to provide that 'just right' book when each child comes for their library time.

Our teaching support collection is also quite extensive, so being able to familiarise staff on how to filter through and find relevant materials – whatever the curriculum area – is also very satisfying, especially with new staff who can find it quite daunting with the extent of the collection.

## Are there currently any issues or challenges facing your library? How are you working to overcome them?

As I am only in the library for 2 days at one school – with no other staff available for support in my absence – it has been interesting familiarising the classroom support staff in how to circulate, search and find resources in the school. Space is also at a premium, so the collection



is spread across many different areas. Communication is the key to ensure staff can find what they need efficiently, so I always encourage anyone to get in touch via email if they have difficulties finding anything.

The other school chooses to do all their library class activities on the 3 days I am in the school, which helps immensely alleviate their circulation and searching difficulties.

### How do you promote reading and literacy in your school? Are there any challenges?

I run a Book club and Book fair at both schools, which is a great way to promote reading and literacy with students. Creating enticing displays covering titles related to prominent days – such as Anzac Day, Mother's Day, Father's Day, Easter, Christmas, thematic ideas (transport, Australian animals etc), or spotlight on different authors – also encourages students to dive into a book they may not naturally pick as their first choice.

We are also fortunate to have some local writers and illustrators: Rosemary Sullivan (*Tom Tom, Tell 'em!*), Mandy Tootell (*Yellow*

*truck road train*) and Kriol books by Karen Manbulloo (*Moli det bigibigi*). It has been great to have these local authors come in and talk about making and publishing a book.

### How do you promote an interest in STEM/STEAM areas in your school? What are the challenges?

Digital Technology and Technology and Design are important curriculum areas expected to be addressed and explored. Providing supporting printed resources is an exciting and interesting aspect of my role via picture books, teaching resources and online resources.

We are lucky to be able to expose the students to a variety of technologies (Spheros, Dot and Dash, Beebots, Makey Makey, Lego WeDo) with programming through laptop and tablet technologies that involve and engage the students in classroom and elective subjects.

### How do you encourage students to use the library?

The libraries are available on a scheduled basis to all students, but they are also open

at recess and lunchtime, which the students make very good use of.

We are fortunate to be supported by a number of companies that provide books to Indigenous students with formats and content that are relevant to them.

When choosing resources I also keep students in mind, seeking out titles about what people have been able to achieve in their lives. Books by Indigenous writers, as well as biographies and titles by and about local artists, all feature in our collections at both schools.

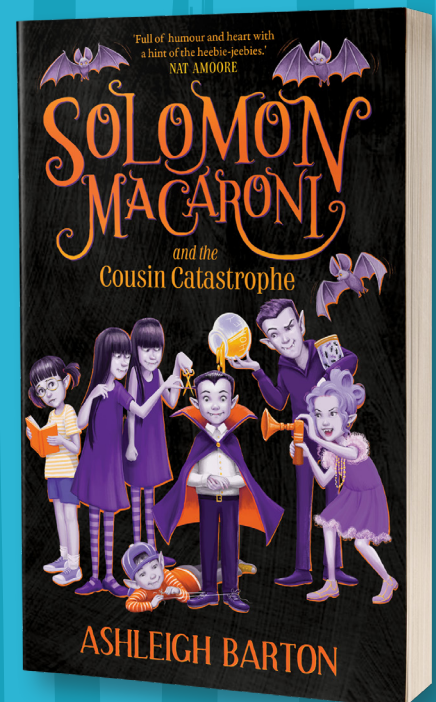
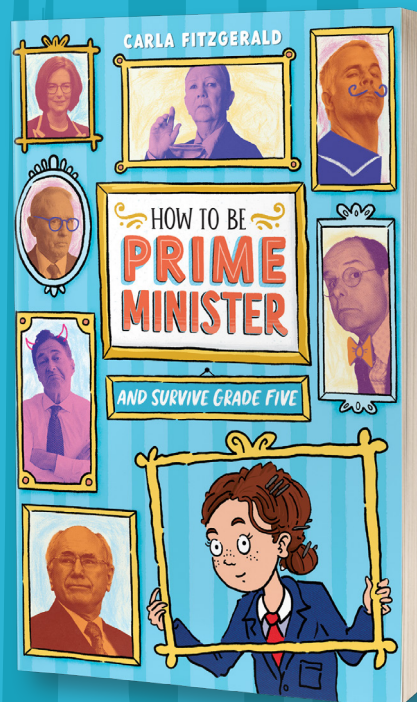
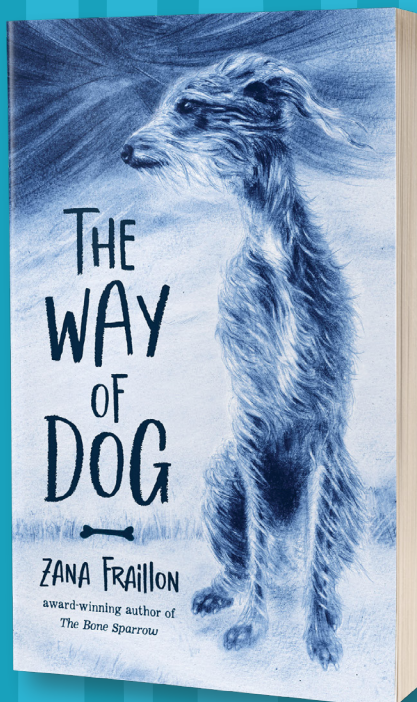
### What would you like to see SCIS do more of?

I was fortunate to be able to participate in a professional development session in Darwin provided by SCIS.

In these COVID times we have not been able to do this so readily but the time and opportunity will hopefully come again soon.



**Val Wardley**  
School Librarian – Northern Territory



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# INTERVIEW WITH GABRIELLE WANG, AUSTRALIAN CHILDREN'S LAUREATE

Gabrielle Wang shares her fond memories of libraries, librarians, and speaks about the importance of reading in tackling racism.

## Were school libraries an important part of your childhood? Do you have any favourite memories?

School libraries were important because I felt they were a good shelter. I liked playing sport and I liked being outside at lunchtime, but sometimes if you just want quiet time, it's a really good place to be. And I always remember where titles by my favourite authors were kept in the shelves. I was a very slow reader, so I sort of stuck to my favourites.

In Year 12 I was appointed a senior school librarian. There were four of us, and we would help the librarian catalogue and cover books and help when students came to take books out. So yes, I have very fond memories of my school library.

Because there was so much racial prejudice around during the time when I was young – though not at school – I was always aware of which places were safe. The library was a safe place to be, the Art Room was a safe place because that's what I loved.

What I'm so saddened to hear is that libraries are closing down, and all the books are going into individual classrooms. The library is the heartbeat of a school. That's the central point of all schools and a beautiful meeting place.

## Have you encountered particularly memorable ways in which teachers and school librarians have engaged students with literature?

There's this one memory of when my daughter was in Year 6. She had one of those incredible teachers – I think we all have a teacher we'll never forget because they had such an impact on our lives. He was one of the teachers who have a unique teaching style. I was helping out in the library and he brought his students in and he grabbed a book off the shelf, just seemingly at random. And it had this really old-fashioned cover – it was grey and not a good cover at all – and he just did this incredible spiel. He sold the book so well that by the end of his five-minute rave he said, 'Who wants to borrow it?' and every single person wanted to borrow it. This is what's so fantastic about having teacher librarians who know their books and can sell the books to everybody, or just to an appropriate student, to suit the student's needs.

## The theme you've adopted for your time as Children's Laureate is 'Imagine a story', and you emphasise the importance of children exercising their imaginations. Do you have any advice for teachers who want to extend students' imaginations in their classrooms?

For teachers, reading aloud a class text is a fantastic thing, because even slow readers or children who have reading difficulties can enjoy the book as well. If it's a book with a female protagonist, boys can also enjoy it. I know from first-hand experience that this happens with my books. All my novels have female protagonists, but when teacher librarians read my books out loud in co-ed



“ I think it's very important to encourage children to read stories about other cultures. Reading is the only creative art form where you are actually inside the head of the main character. ”



schools, the boys are just as excited because it's an exciting read.

Maybe the teacher can read out a few chapters then set the students questions, for example: What do they think will happen next in the story? What do you think will happen to the characters? Get them to use their imaginations.

Once the book is finished, teachers could ask the students to write a few paragraphs on what happened before or after the story in the novel as the story isn't isolated in the novel's time frame; there is a backstory and there is an after story. The students could write a few paragraphs about what happened before the story began in the style of the author, for example, first person, present tense. Or after the story finishes, students could explain what happened to the character in the following ten years.

I also think using visual literacy is important. A teacher could use works of art, a Frederick McCubbin painting for example, where there is a scene, and without telling the students the name of the painting, the teacher could ask what's happening in the painting. Who are the characters? No answer is incorrect. They're using their imaginations to think about and go inside the characters.

Students can then write a short story from the perspective of someone in the painting. This is a good exercise to get inside the heads of the characters to feel how they feel and see what they see, because that's what we do all the time as authors. We get inside the heads of our characters. And that's how we tell our stories.

**In an interview with SBS you describe your shock at discovering that many children aren't happy being Asian in contemporary Australian society, and you note that Australia has experienced waves of anti-Asian sentiment since the mid-19th century. Do you think you can address racism in your role as Children's Laureate? Are there ways in which literature can play a part?**

I think it's very important to encourage children to read stories about other cultures. Reading is the only creative art form where you are actually inside the head of the main character. So, you can feel how they feel and if they're not of your colour or not of your culture, then you can feel how they feel, like when somebody taunts them or treats them badly or bullies them. And that's a powerful tool if you're reading. So I would encourage teachers and teacher librarians to give students books about other cultures, especially by diverse authors.

**Every year school library staff are invited to participate in the Educational Lending Right School Library Survey (ELR). The survey is part of a process that determines how much recompense authors and publishers receive for revenue lost because their books are available for free in school libraries. How important are ELR payments to Australian authors, and what are the benefits of receiving them?**

Well, according to the 2020 Australian Society of Authors Survey, 80 per cent of authors and illustrators (probably more than that) receive an average yearly income of \$15,000, so how important is ELR to us?

The last few years have been bad for us because as children's authors and illustrators, we go around to schools and we talk about books, and that forms a large part of our income. In the last

two years especially, we haven't been able to do that.

PLR (Public Lending Right) and ELR are vitally important as authors and creators have continued to receive ELR payments in the last few years as their books have been held in school libraries, so it's important that school library staff participate in the ELR survey so authors and publishers can get what they deserve.

“... it's important that school library staff participate in the ELR survey so authors and publishers can get what they deserve.”

**Finally, you note that you want to give children a sense of belonging, a sense of who they are. Do you believe that immersing students in literature can achieve this?**

Absolutely. I'm going to read an email that I received a couple of weeks ago that blew me away and will answer this question.

‘Hi, I'm 16, so probably way older than the demographic that you're usually contacted by. I just remembered how important your books were to me as a fellow Chinese-Australian kid who got bullied for that heritage. My school librarian introduced me to your books, and reading about characters that looked like me was so important to me growing up, so I just wanted to thank you for that. Because of you and your characters and your stories, I knew it wasn't bad to be Chinese in the hardest of times, and that our culture is beautiful. I loved *A ghost in my suitcase*, *The pearl of Tiger Bay*, *The garden of Empress Cassia* and *Our Australian girl: the Pearlie stories* books very much as a kid. And I still do. I reread them to this day.

Sincerely, Rachel (a fellow Chinese-Australian girl).’

**Gabrielle Wang**  
Author/Illustrator

Gabrielle Wang is an author and illustrator born in Melbourne of Chinese heritage. Her maternal great-grandfather came to Victoria during the Gold Rush and her father from Shanghai. Her stories are a blend of Chinese and Western culture with a touch of fantasy. She has written more than 20 books for young readers, with many of them shortlisted for awards, from the Prime Minister's Award to children's choice awards such as the Yabba and Koala Awards. One of Gabrielle's most popular books *A ghost in my suitcase* won the 2009 Aurealis Award and was made into a stage play by Barking Gecko Theatre in 2018. Her latest book is *Zadie Ma and the dog who chased the moon*. Gabrielle is the current Australian Children's Laureate for 2022–23.



# PLANNING A THOUGHTFUL STEM LEARNING APPROACH

**Dr Adrian Bertolini on how teachers and library staff can work together in the interest of enhancing STEM learning.**

## It's the small stuff

You can't develop great STEM learners in a piecemeal approach, and it doesn't have to cost too much either. As research into excellence shows, high performance in any field arises from 'a confluence of dozens of small skills or activities, each one learned or stumbled upon, which have been carefully drilled into habit and then are fitted together in a synthesized whole' (Chambliss, 1989).<sup>1</sup>

I grew up in a working-class immigrant family and it seemed we never had enough money to do things I wanted to do. This led me to entertain myself with activities such as tadpoling, riding my bike to see friends, playing sport, delivering the local paper to earn some money, and even finding and attempting to repair stuff tossed out in hard rubbish. I often couldn't repair what I brought home, but it taught me something special – the importance of being curious and having a desire to know how things worked.

This curiosity and desire for knowledge led me to do well at school, get degrees in science and engineering, teach Aerospace Engineering and eventually start my own educational consultancy to empower students and teachers around STEM learning.

In the past two years I have been working on a book called *Igniting STEM learning: A guide to designing an authentic primary school STEM program* about developing an authentic primary school STEM program. What I have realised during the writing process is that my ability to be a great STEM learner and educator is due to the repetition of small skills and thinking via seemingly inconsequential activities in and out of school.

In this article, I am going to share one structure from my book that makes a big difference in planning, resourcing and leading STEM learning in school. It will enable your school to create a whole-school plan to develop great STEM learners. While I will be using primary school examples here, the approach is equally applicable to secondary and specialist schools.

## Developing a STEM learning ladder

Resourcing STEM learning is a persistent challenge for library staff and schools. Questions constantly arise about whether the school should buy product X or software Y, and how much it would cost. Do we buy robotic system Z or purchase this science equipment? Also, what if teacher so-and-so leaves – will the equipment end up gathering dust in the cupboard?

Before purchasing anything, teachers and library staff should work together to create a learning ladder. A learning ladder maps the progression of core skills, materials, equipment and resources that will support students as they become highly capable STEM learners. This could include practical skills, digital and design technologies' knowledge and skills, as well as any other STEM-based skills. It is useful to have this map because it ensures there is a plan to provide students with the necessary habitual exposure, practice and skills to tackle more complex STEM tasks and projects as they progress through their schooling.

Digital and design learning ladders can be developed using the requirements of the Australian Curriculum: Technologies as their guide. This will enable schools to think of the technology and physical resourcing requirements for embedding the digital and design technologies curriculums in an effective and progressive manner through students' years of schooling. It will also support coherent future planning for when new technologies and approaches become available (for example, augmented and virtual reality, 3D printing, laser cutting and so on).

Table 1 shows an extract from a draft digital literacies learning ladder. The teacher examined the Australian Curriculum: Technologies documents to get a sense of what was required at each year level and categorised the possible software, hardware and concepts that could be applied at each point. She explored what free and paid software could be most valuable, what technology the school already owned and what software or technology the school may need to buy.

One of the key features of the learning ladder shown in the table is the **Stage of development** row. This row outlines the expected progression of development students will go through as they learn to drive their own learning. By using the ladder to plan for repeated coverage and interwoven practice, teachers will be able to move students from acquisition to consolidation to application.

Learning ladders can be designed to capture a progression of milestones for other key STEM skills, such as practical skills (e.g. sewing, drawing, cutting, using tools), research skills, ICT skills, and the ability to use general software programs such as Word, Excel and PowerPoint. Once designed, year-level teaching teams can use the learning ladders to ensure their planning, pedagogy and assessments develop the students in the identified knowledge, skills and thinking.

“There is so much that is free online you can achieve quite a lot on a shoestring budget.”

1 Chambliss, D. (1989). The Mundanity of Excellence. *Sociological Theory* 7(1):76.

Year level: Focus	Foundation: Language and movement	Years 1 and 2: Language and movement	Years 3 and 4: Software	Years 5 and 6: Software
Stage of development	Acquire	Acquire	Acquire and consolidate	Consolidate and apply
<b>Programming</b>	Programming a person using step cards.  Lightbot Jr (Term 4).  Unplugged coding.	Programming a person using step cards.  Scratch Jr.  lightbot.com.  Unplugged coding.	Scratch (creating games and animations).  Minecraft Education.  GameStar Mechanic.  Hopscotch (block code).  Kodable.  Code Combat (Python).	Scratch (creating games and animations).  Minecraft Education.  Python (written code).  Code Academy (written code).  Grok Learning.
<b>Robotics</b>	Program BeeBots to move to a particular destination and write down simple coding using pictures /arrows / directional language (tie in with procedural texts)  Lego® WeDo.	BeeBots - program a dance, link to counting and number lines, addition, subtraction.  Dash & Dot  Lego® WeDo.	Probot (buy?).  Dash & Dot.  Blue Bots.  Lego® WeDo2.0.  Lego SPIKE™ Prime.	Probot (buy?).  Sphero machines.  Lego® WeDo2.0.  Lego SPIKE™ Prime.
<b>Hardware</b>	Breaker space – students use tools to pull apart different household items and even computers. (Need to ask parents to donate appropriate items they would normally throw away in hard rubbish.)  Labelling a paper computer.  What is a website or the internet?	Breaker space – as in Foundation  Make a computer (out of materials).  What is the internet? Browsers, search engines, login and navigation.  Folders – what does this look like? (organisation).	Maker space – could use Lego blocks, blocks or planks.  iFixit.com – gets students to pull items apart and then put it back together to develop simple creation (need items donated for students to put back together).  micro:bit, LittleBits, Arduino (buy?), 3D printers.  Organising files into folders.	Maker space – as in Year 3/4 but more complex making.  iFixit.com – as in Year 3/4 but have students fix more complex items.  micro:bit, LittleBits, Arduino (buy?), 3D printers.  Network routers etc – map the home network.

Table 1: Extract of a draft digital literacies learning ladder

### What to focus on

There is so much that is free online you can achieve quite a lot on a shoestring budget, which is why I wrote *Igniting STEM learning: A guide to designing an authentic primary school STEM program*. It takes schools through the thinking and planning to come up with their own solutions to their circumstances while meeting Australian Curriculum requirements. Whatever programs you design, just make sure students are left curious and wanting to know how things work!

Adrian has taught Aerospace Engineering, run the ruMAD? (aRe yoU Making A Difference) program, and led leadership programs in Australia and the US. He now leads his own educational consultancy coaching teachers and school leaders while organising unique STEM conferences across Australia for students and teachers. His book *Igniting STEM learning: A guide to designing an authentic primary school STEM program* will be available from Hawker-Brownlow Education in August.



**Adrian Bertolini**  
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