connections

SCIS SCHOOLS CATALOGUE INFORMATION SERVICE

Tinkering, making and building in the school library

Computers touch our lives in so many ways, from movies to medicine, education to entertainment, gaming to government, construction to commerce. Computers and digital technology are at the centre of every industry and code is the language of computers, so it makes sense that we give our children the opportunity to write code. After all, it was just a few centuries ago when only the elite and religious could scribe for others so they could communicate through writing and reading. With computers dominating nearly every aspect of our lives, our students need to be able to create and instruct these digital technologies, hence the desire to teach coding.

At St Aidan's Anglican Girls' School, the library program is one way to interest our students in computational thinking and coding. Library lessons are scheduled once a week for students from Foundation to Year 6. The younger students mostly work as a class group whereas students in years 3 to 6 work in three weekly rotational groups of Recreational Reading, Inquiry Learning and 'Technology + X'. The groups enjoy their names: Tinkers, Makers and Builders, which derived from our Junior Library Makerspace. Few resources need to be purchased and more one-on-one interaction happens within smaller groups. Each week one group, Technology + X, is engaged in computational thinking and coding activities.

Megan Daley of Children's Books Daily (http://childrensbooks-daily.com) and I job share and we have found storytelling to be a key in making coding accessible to young people. We have resourced our library with stories that can connect the idea of coding in meaningful and real-life ways. Books to inspire coding and robotics can be found on my blog, TinkeringChild.com.

'Code is the 21st-century literacy, and the need for people to speak the ABCs of programming is imminent. Our world is increasingly run by software, and we need more diversity in the people who are building it.' — Linda Liukas

in this issue

Linda Liukas is the author of *Hello Ruby: Adventures in Coding*. This book provides a useful way to introduce coding to younger students. You can take one chapter at a time and follow up with activities at the back of the book or on the website (www. helloruby.com). These activities are all unplugged and cover many aspects of the English and mathematics curriculums such as sequencing, algorithms, patterns, and structures. They also cover aspects in the digital technologies curriculum like decomposition, debugging, Booleans, abstraction, and computational thinking.

As an example, early in the story Ruby needs correct instructions, as computers do (algorithms), and after enjoying Ruby's antics, our students sequenced instructions for Ruby to complete tasks such as packing a school bag and feeding a pet. Some students role-played the task and others played charades, all inspired from the story. Throughout the story links were made to using coding apps on the iPads. For example, Kodable tied in very well with clues and completing a quest, just like the Fuzz Family who land on Smeeborg and need help navigating the technomazes.

Coding is being referred to as the 21st-century literacy and, as teacher librarians, literacy is our passion and expertise. At St Aidan's we have been running a Robotics and Coding Club within our makerspace for the last two years. Our students begin with 'unplugged' activities — many great examples can be found on CSUnplugged (http://csunplugged.org) — moving onto programming robots like Bee Bot and Pro Bot. We have iPads with many coding apps, and games we have made to develop computational-thinking skills. As the students progress, they have fun coding programs for other robots like WeDo, BB8, and Mindstorms NXTs and EV3s.

Giving our students the language to use is crucial, so we have used the interactive

book *Lift-the-flap computers and coding* by Rosie Dickins and added code-related quotes to our 'window of words'. This book is fun, challenging, and has plenty of tips and extra resources online.

Coding develops understanding and many skills that students can use in everyday life; for example, that learning is a process and not a product, computational thinking, breaking down problems into smaller pieces, persistence and perseverance, risk taking, determination, and, of course, collaboration and sharing. It makes learning meaningful.

'Computational thinking is a fundamental skill for everyone, not just for computer scientists. To reading, writing, and arithmetic, we should add computational thinking to every child's analytical ability' — Jeannette M Wing, Vice-President of Microsoft Research

Our students thoroughly enjoyed learning binary by making bracelets. Author Samantha Turnbull visited and stimulated from one of the activities in the fifth Anti-Princess Club series, showing how the students could write code messages using beads. A binary decoder chart can be found for BinaryBracelets (http://bit.ly/binarybracelets), as well as other resources, on Code.org (https://code.org/educate).

Students write code messages using beads.

Another fabulous book is *Ada Bryon Lovelace and the Thinking Machine* written by Laurie Wallmark and illustrated by April Chu. Our older students discussed and researched issues from the
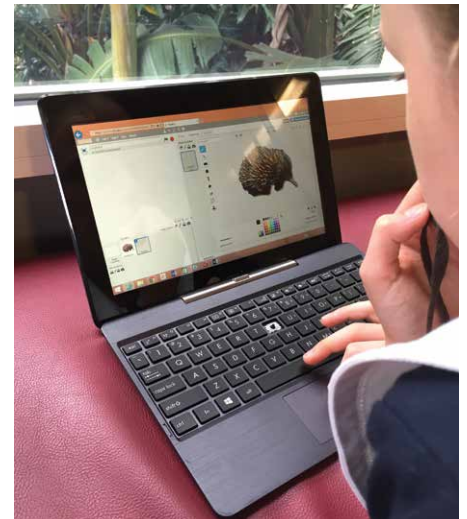
Students use web-based applications to learn the basics of coding.

story and then went on to enjoy binary games and apps. They played magic number games and challenged themselves in Code Combat. Through playing and experimenting with Scratch (https://scratch.mit.edu), the students learnt visual programming that enabled them to develop simple apps in BitsBox, and some students went on to writing code for Lego Mindstorms NXTs.

The popularity of *Star Wars* was a fabulous way to link coding to literature. After reading *Star Wars: Finn & Rey Escape* by Michael Siglain, the students were introduced to BB8, the latest droid in the series of *Star Wars* droids. Using the 'Tickle' app the students were able to write programs to move BB8 around the room, and they created a mission for BB8 to complete. Two students set up a course for BB8 to navigate and land on a helipad ready to be rescued! There are many novels, craft and activity books that can also be used to expose students to many coding skills. Code.org has an Hour of Code (https://code.org/learn) using Blockly and Javascript to code BB8 to collect scrap metal. The *Star Wars* activity on this page is a wonderful way to whet the students' appetite to learn coding.

As teacher librarians motivating and sharing our love of reading, we are

naturals at creating activities that flow on from literature. Using any number of stories, we can stimulate ideas to code in Scratch: interactive stories, games and animations relating to elements of the story. After reading *Duck and the Darklings* by Glenda Millard, our students used ScratchJr (https://www.scratchjr.org) on the iPads to create beauty from darkness; one student created a rainbow connecting a blob transforming into a snail. It was creative, imaginative and interactive.

Scratch visual programming, developed by MIT Media Lab under the guidance of Mitch Resnick, is a coding platform that junior students can manage competently. Scratch enables students to create interactives in all genres. Our students have designed and coded reports, narratives, procedures and informative interactives from research during library lessons.

Through our rotation of Technology + X, students learnt how to generate a QR code, which was printed and placed on our library shelves and can be scanned by other students to discover the author and books written by that author. Once this skill was mastered the students created apps in BitsBox (http://bitsbox.com) relating to the Readers' Cup competition books. Using code, the students created apps on their tablets with fun quiz-type questions on the books. These were created and shared using the QR code provided for their app and uploaded to their smartphones. The students used code to create apps relating to literature!

Coding is creative, challenging, satisfying, and excellent fun. It will also be one of the most sought-after skills of the future, and a vital skill to develop. This 'new literacy' will enable students to not just use digital technologies but to create digital technologies that create solutions for the future. Our library is the information and innovation hub of our junior school and it has been a natural progression for us to include coding in our teaching and learning as part of library lessons, Coding and Robotics Club and our Makerspace Zone.

We have plenty of coding displays around our library. Our students enjoy looking up and discussing significant people in coding: Mitch Resnick, Steve Jobs, Steve Wozniak, Markus Persson, Mark Zuckerberg, Margaret Hamilton, Ada Lovelace, Alan Turing, Hadi Partovi, and Grace Hopper.

The library and library lessons have been a wonderful introduction to interest our students in coding. The digital technologies curriculum, of which coding is a component, is an exciting and important part of our students' learning. There are many resources available to assist teachers in accessing materials and ideas; the University of Adelaide CSER site has a wealth of resources, including a robot lending library (https://csermoocs.adelaide.edu.au/library).

We continue to integrate coding into our library lessons through literature and activities in our library-based clubs.

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Jackie Child
Teacher librarian
St Aidan's Anglican Girls' School

Jackie Child has been teaching primary-aged students for 40 years in a number of countries. She is passionate about how children learn through constructivist pedagogy. She is a teacher librarian at St Aidan's Anglican Girls' School and a sessional tutor at Griffith University for preservice teachers. Jackie doesn't believe in standing still. There is always plenty to 'do' and learn!

A thank you to libraries and ELR

Mem Fox shares her experiences with libraries and children's literature, and emphasises the need for trained librarians in all schools.

What role have libraries played in your life?

I grew up in Zimbabwe, Africa, so libraries didn't play a huge role in my early life. But at high school I spent a lot of time in the Bulawayo Library (our major city library) which was very well endowed at the time, and full of excellent non-fiction that I devoured for my studies. I loved being surrounded by open books, and losing myself in the silence and the knowledge I was gaining. Making information connections between one book and another was like an exciting journey of discovery. It was uplifting.

How can we promote a love of reading in children?

There are two fundamental ways we can help children love reading.

First, by borrowing vast quantities of books from libraries from the time children are babies, and reading at least three marvellous stories to them every day before they start school. It could be the same book three times.

Second, we could insist that every primary and high school had a trained librarian who knows students' individual tastes and can cater for them: who knows books and what is new and cool; who knows how to read aloud; and who knows how to inspire kids to go above and beyond their current level of interest.

What inspired you to go down the path of children's literature?

I had loved reading from the earliest age and was acknowledged to be a good writer in my high school years. I had a latent ambition to be a writer back then,

> '**We could insist that every primary and high school had a trained librarian who knows students' individual tastes and can cater for them: who knows books and what is new and cool; who knows how to read aloud; and who knows how to inspire kids to go above and beyond their current level of interest.**'

but I sidestepped that idea and went to drama school for three years instead. I wrote *Possum Magic* as an assignment in a children's literature course at Flinders University, as a mature age student. Without that shove, I doubt I would have started. Thank God I had an inspiring lecturer, Felicity Hughes, who encouraged me and believed in me.

What has been your most memorable experience working in children's literature?

After 34 years, there have been so many exquisite moments that I can't really choose between them. Recently, however, I read my latest book, *I'm Australian too*, to a high school class of refugees who were learning English, and was aghast to find myself choked with sobs at the end of it.

Why do you think school libraries are so necessary for today's children?

It's not just the libraries themselves, filled though they are with magical books of all kinds, but also the librarians who are so important. Without their expert guidance, help and inspiration, what's the point, really? I exaggerate, I know, but honestly: long may librarians live and thrive.

On that note, may I thank the Educational Lending Right for the overwhelming support it has shown to me and to all the other Australian authors of books for children. We are deeply, deeply grateful.

Mem Fox, Adelaide, May 2017

What is the Educational Lending Right?

The Educational Lending Right (ELR) is the modest cornerstone of school libraries; it quietly keeps the literary wheel turning — the one that keeps writers writing, library shelves stocked, and students reading. A cultural initiative of the Australian Government, ELR recompenses book creators for income lost as a result of having their works held in educational libraries. Annual payments to authors are based on the results of the ELR survey.

In Term 4, 750 schools will be invited to participate in the ELR survey. Unlike other surveys, ELR is not based on a series of questions. The 'survey' is an automated process within your library management system (LMS) that extracts a count of your library's book holdings, and can be completed in just a few clicks. The results are collated and used to create an estimate of book holdings in Australia, which then determine payment to book creators.

For statistical validity, ELR requires data from a minimum of 300 schools. For this reason, participation from schools is highly valued; if you're invited, we encourage you to spare five minutes to run the automated survey within your LMS. These five minutes go a long way in contributing to the strength and longevity of the Australian writing and publishing industry.

In this issue of *Connections,* Mem Fox joins a long list of authors, including Jackie French, Morris Gleitzman and Isobelle Carmody, in singing the praises of ELR and school libraries in their support of the Australian publishing industry. 'Long may librarians live and thrive', Mem writes. Long may Australia's publishing industry live and thrive, ELR echoes. May our writers keep writing, library shelves remain stocked, and students remain enchanted by the magic of books.

Nicole Richardson
Communications & Projects Coordinator, SCIS
Education Services Australia

The great escape

In 2017, the CBCA's Book Week theme is 'Escape to Everywhere'. Sarah Bakker offers suggestions for using the shortlisted books to inspire creative writing activities.

'If you truly want to escape this reality all you have to do is open a book and your imagination.'
— Unknown

This idea that reading can magically transport you somewhere else is at the heart of this year's Children's Book Week theme, *Escape to Everywhere*.

With Book Week fast approaching, what better time to encourage students to explore this idea further by using creative writing as another form of escape?

'Writing helps me create a different world that I can escape to' — Ashwin Sanghi

Here are some ideas on how three of the shortlisted books can be used to inspire students' creative writing and facilitate their escape.

Sizzling starts

The start of this trailer for Ross Watkins' beautiful and heartbreaking picture book, *One Photo*, instantly makes the reader curious: https://vimeo.com/180841397.

'Dad came home one day with one of those old cameras, the kind that use film. But Dad didn't take photos of the regular things people photograph.'

Ask students to form groups and brainstorm ideas on what might be so unusual about the photos that the narrator's dad takes. Get students to use the ideas from the group brainstorm to write an engaging start to their own story and share some of the best examples with the class.

Show, don't tell

All I Want for Christmas is Rain by Megan Forward is a great example of how a simple picture book can give readers insight into the plight of Australian farmers. The beautiful scene in which the rain starts pouring and the whole family dance in the mud shows just how important the rain is to the farming community.

Ask students to form groups and think of an issue that affects their community. Get students to brainstorm ideas for a 'show' scene based on their chosen issue using six senses (see, hear, touch, taste, smell, feel). After students have written their 'show' scene, get them to act it out and present it to the class.

Exciting endings

Leila Rudge's *Gary* is a wonderful example of a circular ending. Unlike the other racing pigeons, Gary can't fly so he has to stay at home on race days. He dreams of great adventures, but has never been anywhere until one day when he accidentally falls into the travel basket and has to find his way home. The end of the story links back to the beginning, but this time the other pigeons want to be like Gary.

Ask students to look at a range of different picture books and find examples of different types of endings: surprise endings, humorous endings, moral endings. Get students to pick their favourite example and write an alternative ending.

Read, inspire, create

Encouraging students to see reading and writing as a form of escape is a great way to increase their engagement and inspire creativity. Read some of the other shortlisted picture books aloud with your students and then get them to explore new places and possibilities in their writing.

To access a list of this year's shortlisted titles for 'Book of the Year', please visit the Children's Book Council of Australia's website (https://cbca.org.au/short-list-2017).

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Sarah Bakker
Publishing and Content Manager
Seven Steps to Writing Success

Genrefying the fiction collection

Radford College recently genrefied their senior library's fiction collection. Susan Davenport discusses the genrefication process, and how the school community has responded.

'What sort of books do you like reading?' and 'What do you do outside school?' are two questions that I regularly find myself asking students looking for something to read. Usually the answer is a variation on 'I dunno', 'Anything!' or 'Stuff'.

Early in 2016, several things were on our radar regarding Radford College Library's 5–12 Fiction Area:

1. How do our students choose books to read?
2. Do we provide enough support to make selecting books straightforward?
3. Does the physical space and its furnishings meet client needs?

The fiction collection

In early 2016, our 8,000+ book fiction collection included a mixture of wall and static double-sided shelves and spinners; three small collections for graphic novels, biographies and audiobooks; and separate shelving for years 5–6 books — all organised by author (A–Z). Some book spines had genre stickers: some with up to three labels, and many with none. After much discussion about our library space and genres, it was clear we needed to review our whole genre-labelling system.

Lyn Hay presented a timely Syba Academy seminar, 'Rethinking the collection: principles and practice for 21C school libraries', and our four teacher librarians were given the opportunity to attend. As the reasoning for genrefication unfolded, it was clear that we were on the cusp, and hadn't realised it. We resolved to bring this topic up for open discussion with the library team upon our return.

After we received the support of the leadership team and the English department, we talked to the students and seeded the idea that the fiction area would be changing.

Why genrefy?

Organising the collection by author is logical. It's clear, rarely subjective, and makes the books easy to locate — if you're searching by author. We observed that our students know some authors, but not many, and are more likely to read in genres.

When considering the questions I regularly ask students, I realised that I ask about genre as well. When a student says they enjoyed reading about sport, we then hunt for a book with a sport label, or search the catalogue, which may use 'Sport — Fiction' or a narrower term like 'Gymnastics — Fiction'.

After brainstorming our organisation process with the secondary library's staff (teacher librarians, techs, and assistants), we embarked on the following:

- to group books based on genre, then by A–Z within each
- to expand the number of genres
- to review each book in our fiction collection, assign it a genre, and record it on both the item and its catalogue record
- to change each book's catalogue collection to the genre shelf instead of the ubiquitous 'Fiction', eg *Harry Potter*; Branch: Secondary Library; Collection: Fantasy; Classification: F ROW
- to use an orange spine label for books suitable for years 5–6 and white for 7–12, and to interfile them in the genres
- to use funds allocated for library refurbishment to purchase new portable shelving.

Genres

There was much debate around genres. We tried to tie many of them to the units studied by the English classes, particularly those from the new Senior Secondary English Australian Curriculum. We now have 32 different genres on their individual shelves (please see online version of this article for full list of genres). Where we couldn't source a label from a supplier, we made our own.

There is also a subset of 'FYI labels'. These are books that feature the following aspects, but are not allocated their own shelves: Aboriginal peoples, Australian, Book to screen, Classical literature, and Translated into English.

Surveying our students

We sent out an electronic survey for our years 5–12 students to complete voluntarily. While only 24 per cent responded, it gave us an overview across year levels and from frequent and non-frequent fiction readers. For comparative purposes, the questions were designed to be adjusted slightly so that the survey could be repeated mid-Term 4 after the changes. The results showed that there was work to be done in educating our students in how to use the library's physical and electronic resources, and that our current application of genre labels wasn't having much effect.

Reviewing the books

We embarked on this lengthy project around our other duties. With pre-allocated fiction sections, we took a trolley of books off the shelf at a time to perform the following actions:

- review the book for genre allocation using the book's blurb, SCIS Subject Headings and Goodreads — and brainstorm difficult genre allocations
- print new spine labels if required; for example, where a series is by multiple authors, eg *The Quentaris Chronicles*, the call number was changed to F QUE
- remove obsolete genre labels from books
- add the new genre label(s) to the book and cover with a clear label
- group like genres near each other; for example, Horror and Supernatural.

Change commences

In the fortnight before our changes were to take place, we warned classes that the fiction area would be closed for about 10 days.

When the new shelving arrived, we moved into action. With assistance from the College's maintenance team, the new shelving was assembled and the old decommissioned.

The fiction area was cordoned off to isolate the collection. No entry. No borrowing. Students wanting books were able to borrow from the returns trolley. The entry was DIY-curtained, and

the windows covered, creating an air of mystery. Student volunteers assisted staff with the reorganisation.

Promotion

To promote the new genrefied collection, we featured each genre via our social media channels, wrote an article in the College's Bulletin, added lots of signage to the collection, and held a reopening ribbon-cutting ceremony with morning tea. (We opened with it mostly done, catching up later on things like catalogue updating and reviewing returned books.)

Signage in the library included:
- A3 signs created in Word, and featuring each genre's name, a genre picture, short description, example book covers, popular authors
- a corresponding shelf marker jutting out from beneath the books, featuring the genre picture, explanation and colour
- shelf markers sitting atop the shelves
- an A3 cheat sheet listing all the genres, with pictures and descriptions
- a map of the fiction area
- how-to sheets for using the catalogue to search for a genre, series, title or author.

Reactions to the genrefication

The English and class teachers love it. They feel it is now much easier to help students find something to read, without their needing to know the whole collection. They also like the new layout, which has improved line of sight for supervision.

The students have mostly been quite positive about the change. The hard-core readers are exclaiming that it's easier for them to find new authors or books similar to what they read. The 'I don't know what to read' students are able to pick a genre and select a book from there. It's far less overwhelming to choose from two shelves rather than stare at over 8,000 books. One Year 8 lad exclaimed that 'You finally have books I want to read!' having selected an Andy Griffiths book from the Humorous section. I refrained from telling him it was there all along.

Being able to search by label colour and theme means that you can find appropriate books for students of all ages and interests who ask you for recommendations at the Loans Desk. A teacher recently sent students down to find dystopian books to match their class novel, which would have been a daunting on-the-spot task two months previously.

Guiding students

After genrefication, as each class came to the library a teacher librarian would do a 15-minute talk about the changes to the collection, why it happened, and how they might locate books using a combination of genre and catalogue. We followed this up for the rest of Term 4, providing low-key guidance and class instruction where needed.

Recommendations

- Weed your collection first. Weed it hard, then weed as you go. You'll find that you will end up purchasing books to fill the gaps in series and develop smaller genres. Genrefication also takes up more shelving than an A–Z layout.
- Set genrefication as a major project for a set timeframe and prioritise it. Involve as many of your staff in the process as possible.
- Select genres that best align with your collection and your clients' needs.
- Survey your clients before and after the change.
- Talk to people who have already genrefied. It will help inform your thinking, but keep in mind that every library is unique.

- Work with your catalogue and investigate the features available to you. Factor in the requirements for stocktake, how users will search for books on the OPAC, and how you can use bulk processing to make changes.
- Choose labels that clearly articulate the genre and complement them with prominent signage that explains them.
- Ask a mixture of your clients for their feedback on genres, labels, maps, signage, etc.
- Keep your organisation's staff and senior management updated.
- Promote the library and the changes you're making by listening to the feedback from your clients.
- Accept that there are many unknowns and some things you'll just have to work out as you go.

Moving forward

Keeping the collection current and relevant will be a source of constant revision and renewal.

Since our original genrefication, we have reviewed our loans stats and observed that the 'School' genre wasn't moving — so it's been decommissioned and its books interspersed within other genres.

In response to student requests and publishing trends, we've added a new genre, 'Resilience', to encompass books about people overcoming significant obstacles.

Genrefication highlights areas that need development; we will focus on building our 'Sport' and 'LGBT' genres.

I wholeheartedly recommend considering whether a genrefied collection is right for your library. Our library staff have enjoyed the challenges of the genre set-up; our teachers are better able to help their students choose books; students are self-selecting books with greater ease; and our fiction area is more engaging.

Find Radford Secondary Library on Instagram (@radford_secondary_library) or Facebook and Twitter (@RadSecLib).

Susan Davenport
*Head of Library
and Information Services
Radford College, ACT*

Read, respond, celebrate: engaging with the CBCA short list

Josephine Laretive suggests ways to explore the CBCA's short list, providing students with rich reading experiences.

Each year The Children's Book Council of Australia (CBCA) promotes and celebrates children's books with the major event of Children's Book Week during August. The five CBCA short list book categories offer schools an abundance of opportunities to engage with reading, responding to, and celebrating literature. Exploring the short list books aligns with the Australian Curriculum and provides important opportunities to build students' literacy skills through incorporating rich, objectively selected, and aesthetically valuable texts. This article focuses on using the Early Childhood and Picture Book short list books, as well as providing an insight into exploring the Younger Readers chapter books in the F−6 school context.

Reading and examining the short list books ensures students are given opportunities to 'develop an informed appreciation of literature' (ACARA). Engaging with the short list books enables teacher librarians to effectively apply the Australian School Library Association (ASLA) teacher librarian standards: Professional knowledge and promotion of reading; Professional practice encouraging and empowering 'learners … to read, view, listen and respond for understanding and enjoyment'; and Professional commitment supporting 'a reading culture through the active promotion of literature' (ASLA 2004).

Designing teaching and learning opportunities using the short list allows for authentic reading experiences and literacy activities that stimulate ideas and feelings, making reading meaningful and exciting. The short list books require reading aloud; Lowe (2016, p 38) emphasises that reading aloud exposes children to a wide variety of texts, 'creates a desire to read … gives students access to the rich language of stories [and] stimulates curiosity'. Reading aloud and

'shared oral responses [also] offer differing perspectives to a text' (Evans 2009, as cited in Turner 2014, p 52), enhancing sense-making. Furthermore, the range of books in each category and purposefully planning lessons where students are 'aware' of the learning intention, such as examining story elements, utilising thinking routines, or expressing personal preference, allows for content to be introduced and applied to the different books, binding various aspects of the curriculum and providing opportunities for students to relate new learning to the range of texts (Lowe 2016, p 39).

Proven Early Childhood activities

Starting the first week of Term 3, we introduce students to the plan for the weeks leading up to Book Week. We create and show students a voting chart so they are clear about the six books to read, explore and share personal preferences on (see the Australian Curriculum: ACELT1577, ACELT1582, ACELT1590). We use a prop such as an old suitcase to store the books. Each lesson we open the case and select a new book — this simple act prepares 'a route' into each book, creating 'suspense and engagement' before the book is opened (*Seven Stories* 2013, p 104).

Using a prop such as a suitcase to store short listed books creates an engaging display.

Foundation classes

In Foundation classes we focus on the main character (ACELT1578), and at the end of each story we discuss the term 'character' as the main person, animal or lifelike thing. Once all books have been read, children vote for their favourite book by placing a star on the voting chart. Each child selects a character to illustrate on a pre-cut triangle that can be easily placed within a bunting to display in the library.

Year 1

Following the Visible Thinking guidelines (Harvard University n.d.) for 'Step inside a character', we ask Year 1 to respond to each book using focus questions that include (ACELT1584):

- Who is the main character?
- What can the character see?
- What might the character think?
- What might the character care about?

These questions elicit structured thinking, which deepens the students' understanding.

Once we finish reading and exploring all the books, we ask the children to illustrate the main character from one of the stories. Writing prompts are introduced to structure the writing and follow the Step Inside questions. The students are able to respond productively and deeply as the thinking routine is revised for each book.

Year 2

The shortlisted books lend themselves to investigation of character, setting, plot, theme, symbols, and perspectives, and are 'a rich source for guiding classroom enquiries into how literary texts work' (McDonald 2013, p 66). Examining the short list with Year 2 provides the most energetic and exciting of lessons. The first story is read and the activity modelled with students responding to the following questions (ACELT1591, ACELA1469):

- Who is the main character? Are there supporting characters?
- Where is the story set? Is the setting realistic, magical, set in the past, present, or future?
- What is a message or a lesson from the story?
- What is a symbol (object, action, or expression) in the story?
- The story made me think about …

After the additional stories have been read, the students work in small teams and answer one of the focus questions, which they record and share with the class. For the main activity, we divide the students into six groups to design and create a diorama. We provide a planning guide, assign roles within the group, and students devotedly create dioramas in response to the books (ACELT1593).

Proven Picture Book activities

The shortlisted Picture Books comprise complex social, cultural, and/or historical issues, as well as multiple connections 'between pictures, texts and narratives' (Waugh, Neaum & Waugh 2013, p 75). By applying Visible Thinking routines, a 'procedure … that is used repeatedly [and] provides … a framework for focusing attention on specific thinking' (Ritchhart, Church & Morrison 2011, p 45), multifaceted aspects within the texts can be observed and comprehended.

Year 3

Applying the Colour, Symbol, Image (CSI) thinking routine to each Picture Book, Year 3 are able to apply their thinking and observe others' thoughts to extend their understanding (ACELY1680). After sharing responses for each book, students select one book to respond to, following the CSI prompts to write and illustrate. Displaying students' work in the library not only celebrates the students' achievements but also provides an extensive range of thoughtful responses to the shortlisted picture books.

Year 4

Year 4 follow the Step Inside thinking routine (ACELT1605), responding to each book and recording their ideas on a sticky note or using Socrative.com. The Step Inside questions are similar to those for Year 1: What can the character see, observe or notice? What might the character know, understand or believe?

> **Promoting Book Week in the library**
> - Ensure the library program allows time to read, respond to and celebrate the short list.
> - Organise an author or illustrator to visit during Book Week.
> - Review the numerous resources and activities provided and purchase promotional items from the CBCA (http://cbca.org.au/program-2017).
> - Create a display in the library to promote the annual Book Week theme.
> - Plan and promote a book character dress-up parade.
> - Promote Children's Book Week to the school community.
> - Coordinate with class teachers' Book-Week-related activities.

What might the character care deeply about?

The students select one of the books to extend on, illustrating a character and scene, and writing their response following the Step Inside questions. The end results are imaginative and entail reflection from the point of view of the character.

Suggested Younger Readers activities

Year 5

To explore the Younger Readers chapter books, we organise Year 5 into six groups and provide each with one of the books to review. Each group is asked to investigate the book based on a set of questions, and to create a poster to share with the class and a display to promote the books to others. As there is limited time, we provide students with guides to help them discover different features of the book as they skim, scan and analyse the texts (ACELY1703, ACELY1702). The key questions relate to the genre (ACELT1608), point of view of the character (ACELT1609, ACELT1610), descriptive language devices for a setting, and describing the main character (ACELA1508).

Year 6

It would be suitable for Year 6 to do an extension of the book investigation using technology to create a presentation. As it is difficult to read all the novels to the class, an in-depth study of one or two of the novels would be a wonderful way to engage with the Younger Readers short list. The Primary English Teachers Association Australia (PETAA) provides an extensive range of ideas for each book to assist with such a task. Revisiting

the previous short lists also provides a sound avenue to select quality literature for reading suggestions and class novel studies. Alternatively, an investigation of the Picture Books' visual literacy elements (ACELT1617), where students examine and share findings of salience, reading paths, composition, vectors, and gaze, would make a focused and significant unit of work to 'engage … with both image and word acknowledging … other modes and communicative forms [that] are part of the literary landscape' (Callow 2013).

To honour and celebrate the CBCA short list, students' written and artistic responses provide outstanding displays for the school. Engaging students with quality literature sparks ideas and emotions, while sharing literature with students ultimately informs and motivates reading appreciation and passion.

References
For a full list of references, please visit the online version of this article.

Image credits
Photo supplied by Josephine Laretive.

Josephine Laretive
Teacher librarian
Moriah College, NSW

*Josephine Laretive is the K–6 teacher librarian at Moriah College, Sydney, and has been working in the profession since 2002. Having previously completed a Graduate Diploma in Information Studies Teacher Librarianship, she is currently completing a Master of Education Teacher Librarianship at CSU. You can find additional information about engaging with Book Week on her blog **http://libraryowl.edublogs.org**.*

How are you using SCIS?

Ben Chadwick provides insight into the way subscribers use the SCIS platform — and how these statistics are being used to inform decisions about the next chapter of SCIS.

We collect quite a few statistics at SCIS. Besides enabling us to remain accountable within our broader organisation, our statistics inform our cataloguing practices, and help us seek out new services or make improvements to our current operations. For example, our search logs may show us that there is a particular book that we have not catalogued but that many subscribers are ordering.

More recently, with the upcoming launch of our new website, we have been consulting our usage statistics to get an idea of what features of our current site are best utilised. This will help us make the new site as useful, user-friendly, and value-adding as possible.

Looking back over some of our statistics for 2016, I thought I would take the opportunity to provide some feedback to you on SCIS usage.

Search

Statistics may come from a variety of sources, and I'll begin with some data we pick up from Google Analytics (https://analytics.google.com). To sign up for Google Analytics, you need an email address registered as a Google account. You will then need to put a small piece of code on your website. It can tell you all sorts of information about who visits your site and what they do when they are there. We are particularly interested in knowing how various areas and features of our website are used.

In 2016, nearly 1.5 million searches were performed on the SCIS database. Google Analytics data showed that almost all searches within the SCIS catalogue were basic searches. In a small number of cases, users made use of the advanced search features (3.5 per cent) and browsing by subject or author's name. This tells us that, while a range of search options are important for our users, it is the default search screen that gets the vast majority of traffic and therefore needs to be as user-friendly as possible.

Basic search

On the basic search screen, users have options for limiting their search. The default keyword search ('Anywhere') was used 80 per cent of the time. The most popular index used in basic search was *Title contains* (7 per cent), followed by *Subject browse* (6 per cent) and *Standard number* (5 per cent), which includes ISBN.

The basic search screen has options for limiting the search. The most prominent limit was *resource type* (13 per cent of basic searches) followed distantly by *year of publication* (2 per cent) and *place of publication* (0.3 per cent). Within the resource-type options, limiting by *videorecording* was by far the most used (89 per cent of resource-type limits).

Advanced search

In advanced search users can select up to three indexes to search on. They can also apply one or more search limits.

Limits were used in 35 per cent of searches. Advanced search splits resource type into *format* (or 'medium') and *content* (or 'type'). These were the most popular limits in advanced search, used in 19 per cent and 5 per cent of searches respectively.

In half of advanced searches only one index was selected to search on. These were keyword searches (*Keyword anywhere*) in 53 per cent of cases. When more than one index was searched on, just over half (53 per cent) involved at least one index besides keyword. Across all advanced searches, the most popular index was *Keyword anywhere* (91 per cent), but *Title* (24 per cent), *ISBN* (18 per cent), *Author name* (12 per cent), *Series* (7 per cent), *Publisher name* (4 per cent) and *Subject keyword* (3 per cent) were also used.

Our Google Analytics data makes it clear that the convenience and breadth of the default keyword search is popular among users. However, we must continue to enable users to hone in on specific works by their title and standard numbers and to gather similar works on the basis of their author, series, publisher, and subject. This is particularly important for advanced search, but true to a lesser extent in the default basic search as well.

We can also learn that searching for videorecordings (probably DVDs and Blu-ray) is an important workflow for our subscribers, and we should make it as easy and intuitive as possible.
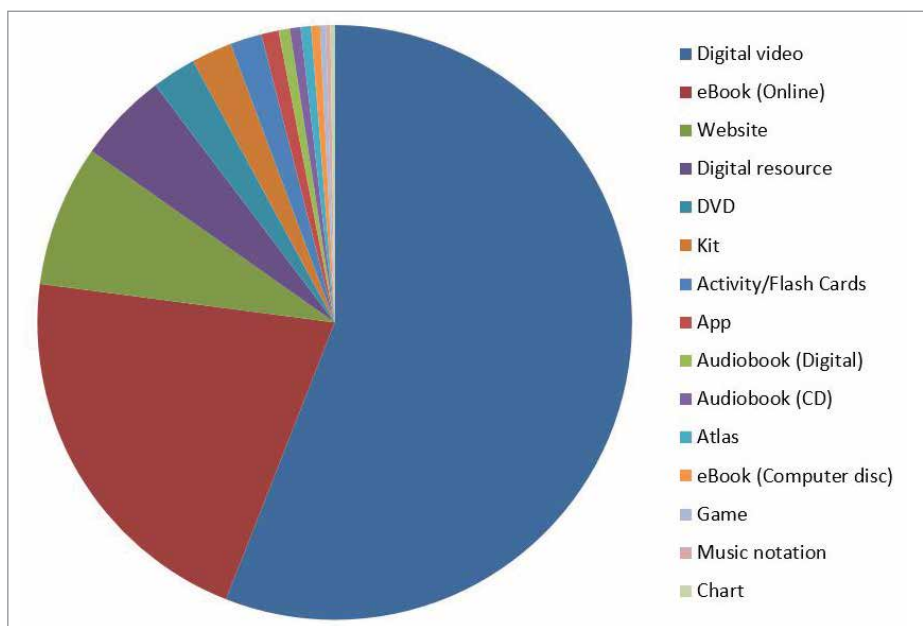

Figure 1 Downloads by resource type

Legend: Digital video, eBook (Online), Website, Digital resource, DVD, Kit, Activity/Flash Cards, App, Audiobook (Digital), Audiobook (CD), Atlas, eBook (Computer disc), Game, Music notation, Chart

Downloads

The applications we use also provide data, just as you would be able to run reports from your library management system (LMS).

In 2016, 62 per cent of our subscribers had their z39.50 capability switched on (enabling them to do their SCIS cataloguing within their LMS). Fifty-four per cent of subscribers downloaded from the SCIS website. This reveals a degree of overlap: almost 13 per cent of subscribers that use z39.50 still come to our website to download records, at least occasionally. People tell us they sometimes do this to use the advanced search features on the SCIS database, to find the correct record when an ISBN matches more than one title, or when they are trying to find a resource that does not have an ISBN or any other standard number to search on.

Over recent years we have seen a slow but steady uptake in automated importing of SCIS records into library systems. In response we will continue to support z39.50, but we will also explore exciting contemporary web services for transmitting SCIS data to library systems. Having said that, we will continue to maintain our own presence and encourage subscribers to visit our site to read *Connections*, sign up for professional development, explore the database, and download records and cover images (and pay their invoices!).

SCIS subscribers download records for many things other than hard-copy books. In 2016, records for digital resources constituted 12.3 per cent of downloads. Figure 1 shows the frequency of non-book downloads, with digital video, ebooks, and websites being the most popular. Other resources included DVDs, kits, activity cards and flash cards, digital databases, mobile apps, audiobooks (online and CD), hardcopy games, music notation, posters and charts, music CDs, maps, and toys. These figures justify our policy on the cataloguing of good quality electronic resources to supplement libraries' physical collections.

In terms of resource content, based on Dewey classifications, the majority of downloads were for fictional works. Within non-fiction, the greatest interest was in science (12 per cent) and social sciences (7 per cent), with literature other than fiction, technology, history and geography, arts and recreation, and languages all coming in at around 5 per cent of downloads. While fiction is obviously central to any school library, it is interesting to see the prominence of STEM in the non-fiction collection, and we will continue to explore ways of supporting collection development to directly sustain curriculum delivery in schools.

Some of us are cursed with a love of statistics, but at SCIS they serve serious purposes beyond just pure enjoyment. I hope this snapshot has given you some ideas of the how you and other subscribers are using SCIS, and an indication of some of the directions they provide us as we maintain and reinvent our services.

Ben Chadwick
Manager, SCIS
Education Services Australia

School library spotlight

Karys McEwen, College Librarian at Glen Eira College, talks to SCIS about what's happening in her library.

What is your job title, and what does your role entail?

I am the College Librarian, which means I manage the library and all the diverse, rollicking, fabulous things that entails! Every day is different, but the main tasks I focus on are collection development, encouraging a love of reading through library programs and astute readers' advisory, working with teachers to provide information literacy sessions and curriculum support, and creating a warm, vibrant library space for the whole school community. I am lucky to have an incredibly supportive team of staff and a group of dedicated student library monitors that help keep the library cogs well and truly turning.

How long have you worked in school libraries, and what inspired you to go down this path?

I have been in school libraries for four years. My undergraduate degree was in Fine Art and I worked in art galleries and museums for several years, which I did enjoy, but I never felt quite like myself in those jobs. I have always been passionate about libraries and archives, so on a bit of a whim I enrolled to study a Master of Information Management. Six months into my degree, I was offered a position at Korowa Anglican Girls' School, and as corny as it sounds, I realised that I had found my calling, and perhaps my move in this direction wasn't on such a whim after all. At the beginning of this year I moved to Glen Eira College, with the

incredible opportunity to manage the library, and my love for school libraries continues to grow.

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

I think working with teenagers is very tough at times, and certainly quite emotionally draining. I find that even more so now that I am working in a school with a more diverse student body, where the library is relied upon for support and wellbeing. In saying that, I find the welfare aspect of my job immensely fulfilling. When I finally match a reluctant or struggling reader with their perfect book, help someone find the information they need to get through a difficult life experience, or receive an email from a parent saying the welcoming and positive nature of the library is one of the reasons they chose to send their child to Glen Eira College (this happened last week!), those are the moments that keep me motivated.

How do you promote reading and literacy in your school?

We have numerous programs, events and displays to support reading and literacy in the library, but we are also fortunate to have teachers and a school leadership team that support and promote a love of reading and excellent literacy standards throughout the school. All English classes have wider reading sessions with reflection activities and reading logs, and the students can select their own books to read during these classes, rather than having material prescribed, which I think makes a huge difference. Because modelling is so important, we also have a considerable staff collection in the library, which helps encourage the teachers to borrow and read for pleasure as well.

How do you encourage students to make use of the library?

Our library is very well-utilised, and we do a number of things to motivate this usage. The obvious ones are keeping the collection fresh and exciting, and focusing on making the space an inclusive safe haven. We give the students ownership over their library by requesting feedback for improvement or ideas through surveys, offering to purchase resources they suggest, and taking them on book-buying excursions. I also like to

Karys hosted a pop-up library in the school's basketball court to encourage holiday reading.

make the library super visible throughout the school, which last term prompted a successful pop-up library on the basketball courts at recess to encourage holiday reading. Another thing is offering alternative entry points to the library. We work hard to keep the space flexible, so it can be used for different purposes such as student committee meetings and clubs, as well as offering left-of-centre options for students that may not be interested in traditional library resources, such as a zine collection, games and tutoring services. We do what we can to get people into the library in the first place, and find that once they do, they tend to stick around!

How do you engage with your students in a digital environment?

Our library management system Accessit has a really customisable OPAC where I post about new books, events, competitions and other library-related information. Anyone can access the OPAC while at school, and we have a computer at the front desk for patrons to use. I wasn't sure if this would take off, but it seems every time I look over there are students (or teachers) keenly searching for books, reading news items, and clicking on the links to quirky articles and websites. We also have a number of desktops and laptops that students can use in

the library, and various subscriptions to digital resources and databases, including ClickView (www.clickview.com.au), A to Z of World Cultures (www.atozworld-culture.com) and Echo Education (www.echoeducation.com.au).

Are there any current issues or challenges facing your library? How are you working to overcome these?

Leigh Hobbs, the current Australian Children's Laureate, recently posted on social media that he is shocked by the lack of funding and staffing in school libraries in Australia today. We are lucky at Glen Eira College to have a well-resourced library with a team of qualified librarians, but of course it is always on my mind that we need to keep our standards high and make ourselves indispensable. There are numerous studies and articles (Softlink 2016; ALIA 2017) that show academic success and student wellbeing are closely linked to great school libraries; however, there seems to be an ongoing problem with getting people to realise this. To overcome this immense challenge, I aim to keep our library relevant, visible and appreciated.

What is your favourite thing about SCIS?

School libraries are busy places, and where I am at the moment is the busiest one I've ever experienced. Having a SCIS subscription means our lovely, hard-working Library Technician Megan Gatt doesn't always need to catalogue from scratch, so she can also be involved in other aspects of the library and not be constantly chained to her desk. Updates to SCIS mean the system is getting better all the time, and the recent addition of genres was particularly exciting for us. We are both grateful for the support SCIS provides in giving us one of the most precious resources: time.

References

ALIA 2017, 10 Ways that libraries power high performance schools, www.alia.org.au/sites/default/files/10%20ways%20A4%20handout_0.pdf

Softlink 2016, Australian and NZ school library survey, www.softlinkint.com/downloads/Australian_and_New_Zealand_School_library_survey_report.pdf

Karys McEwen
College Librarian
Glen Eira College

School libraries support digital technologies

Martin Richards explains how libraries can extend their offering of digital technologies, using some practical examples.

Over recent times, school libraries have become much more than a place for students to read and enjoy books, conduct research, and enjoy the comforts of a pleasant, welcoming environment at lunchtimes. With the ever-increasing emergence of new digital technologies, many schools are considering how they might adapt their programs and look for ways to accommodate relevant technologies in meaningful ways.

Developing students' ICT capabilities

School library staff teach students how to learn. Consider a student coming into the library to conduct research using a range of digital sources. No matter what the source, you will naturally guide students on how to navigate information, do research, note take, consider different points of view, and determine what's credible and what's not credible. Knowing what digital sources are available and relevant is also part of a librarian's role.

Of course, students' use of digital technologies in the library can go well beyond researching information. Whatever the focus, device, or application, the support you provide to students helps them develop their ICT capabilities, which are of importance across all subject areas. View the YouTube clip 'School libraries matter' for inspiration (http://bit.ly/2ql0IcQ).

Coding: an opportunity to play and explore

At the heart of most school libraries is the desire to promote a love of learning. A library set up with access to devices such as tablets, notebooks, or desktop computers can extend this love of learning by including an opportunity for students to explore coding. Coding clubs are becoming a popular offering in school libraries.

Many of the coding applications or environments enable students to explore and learn at their own pace through challenges, step-by-step tutorials, or remixing a sample block of code. Knowing what apps are available and which ones are right for your students is important. If you have iPads, for example, it's handy to know which apps can be used on iPads, which apps are web-browser-based, and which apps are multiplatform.

In a library setting, I suggest looking for coding applications or environments that have the features I mentioned that enable self-paced learning. Some web-based applications for primary school students include: Scratch, Snap, Lightbot, Blockly Games, and, for the more advanced, Pencil code.For tablet devices try these for the early years: Scratch Jr, The Foos, Daisy the Dinosaur, and, for the more advanced, Codea or Swift Playgrounds. Whatever you decide to choose, many of these applications have online tutorials or supporting YouTube videos that help students to code and create.

For secondary school students, try these applications, which enable students to create easy-to-code projects: Thimble, Google CS First: Storytelling, Swift Playgrounds, or, to create games, use Touch develop or Cargo-Bot. If you feel up for the challenge, you can move on to a programming language such as Python, but if you don't feel comfortable moving to this level, leave it to the computer science teacher.

Ideally, teachers in your school are incorporating coding in their classes. The webpage 'Choosing the right apps for your class' (http://bit.ly/dth-therightapps) provides advice about different apps for your teachers to use in class.

Connecting robotic devices and programming apps

You may be able to set up an area in your library space where students can program a robot, for example, Sphero, Ollie Ozobot, or Dash and Dot. A fun, suitable task is for students to set up a maze and program their robot to negotiate it, incorporating computation and design thinking.

The article 'Robots in the 2016 Australian classroom' (http://bit.ly/dth-robots) provides an insight into different types of robots available for schools.

Makerspaces

Some libraries are even creating an area set aside for making. The activity in this space can include designing, tinkering, and engineering using various types of materials, tools, and equipment, including digital-based invention kits such as Makey Makey, LilyPad Arduino, Hummingbird or Littlebits.

Imagine students playing a piano using bananas as the keys, or an online game where their controller is made out of play dough. These types of activities are made possible using the Makey Makey programming board or other similar boards. Instead of pressing keys on a keyboard, a programming board allows students to control devices by designing and using different inputs. It's a whole load of fun.
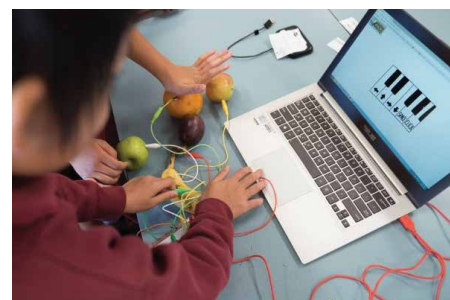
Students playing a piano using fruit as the keys.

Another relevant piece of kit often referred to as a microcontroller is the LilyPad Arduino, which enables students to incorporate wearable technology. The LilyPad microcontroller can be sown directly into a garment, hence the tag 'wearable technology'. You might design a jacket that lights up in different colours or one that buzzes, depending on the project.

Want to find out more about maker-spaces? View the 'Makerspaces' topic on the Digital Technologies Hub (http://bit.ly/dth-makerspaces). With lesson plans, case studies, programs, applications, games, and competitions, it should provide you with insight as to how you might create a makerspace in your school.

So, reflecting on your journey into offering digital technologies in your library, to what extent are your students empowered to learn as they create and explore digital technologies?

Where to find resources

The Digital Technologies Hub (www.digitaltechnologieshub.edu.au) has a wealth of resources to help you provide learning experiences with a digital technologies focus and support teachers in your school to implement digital technologies in their classes. Check out the lesson ideas and topics as a starting point, or search for particular resources.

Digital Technologies Hub webinars

A great way to increase your own understanding of the digital technologies is to view the webinars presented by the Digital Technologies Hub (http://bit.ly/dth-webinars). Check out our webinar recordings and keep your eye out for upcoming webinars, which are presented on the last Wednesday of each month. Sign up for the newsletter to keep abreast of latest news.

Image credits

Glenn Dixon. Digital Technologies Hub. Used with permission.

Martin Richards
Content Manager,
Digital Technologies Hub
Education Services Australia

REGULAR FEATURE

SCIS is more

Change is the only constant. In last issue's 'SCIS is more', I mentioned some of the features in the new SCIS website due for release in late 2017. We've made a lot of progress and every day is exciting as we see it come together.

The SCIS preferences settings you are used to will see some changes in the new website. We will no longer offer the option to retain genre headings in the MARC 650 Topical Subject Headings field. Genres are *genres*, and we believe it is wrong to treat them as *topics*. After all, *Harry Potter* books are not *about* school stories, they *are* school stories. SCIS recently completed a large project to retrospectively move all of our genre headings into the dedicated MARC 655 field, and our new system will support full search, faceting, and display by genre.

We will no longer offer the 'SCIS' record format, but offer library industry standard formats including MARC-21, MARC-XML, and MODS-XML. In addition, we will only be offering our Authority Files in the industry standard MARC-21 format and dropping the 'ASCII' format. We have been in discussion with library system partners to ensure they are ready to support these changes.

A few other features on the new site will include:

- a simple, streamlined login environment

- capacity to build your own collections in the SCIS database (imagine 'wishlist' or 'websites for the geography department')

- easily curated and downloadable records for recent digital content (apps, websites, digital video)

- easy download of records from a database search

- a search for DVDs directly from the record-ordering page (instead of going to the catalogue separately)

- faster search and improved search options, including faceting by fiction and non-fiction, genre, and key learning areas

- a user-friendly system for requesting cataloguing, sending items to your nearest SCIS cataloguer, and tracking their progress.

In preparation for this system, and after consultation with our library system partners, we have made some significant changes in our data and standards. For starters, our RDA implementation (http://bit.ly/rdaupdate) has taken its next step with the adoption of the MARC 264 production/publication details field, and the cessation of the GMD in the MARC 245 field.

We have also taken large steps to improve discoverability in two areas very important to young readers: genres and series. Our big genre heading clean-up project will enable systems to display and provide search on these headings. Also, after listening to significant feedback about the difficulties of searching on and displaying series titles (http://bit.ly/scis-series), we have commenced cataloguing series authorities. This is a significant step that SCIS is taking within the broader international libraries community because we believe it will provide schools with valuable consistency in the naming and coverage of series across titles, despite the vagaries of the information publishers provide. Thanks for your feedback — it made this happen.

The simplified invoicing process in the new system means that invoices this year will be sent via email rather than post. Please make sure your email address is up to date in your SCIS profile (http://bit.ly/scisprofile).

We will provide full training on the new site as we get closer to release. We'll also be attending ASLA and SLANZA this year to talk in more detail about some of the features. We hope to see you there.

Ben Chadwick
Manager, SCIS
Education Services Australia

Website & app reviews

Nigel Paull
Teacher librarian
North Coast, NSW

Augmented and virtual reality

www.schrockguide.net/augmented-reality

The impact of augmented and virtual reality on education will be significant. Kathy Schrock explains the essentials of augmented and virtual reality and their application to teaching and learning. She also includes background information, teaching tips, appropriate apps, projects, and current research.

SCIS no. 1817209

Australian Ballet

https://australianballet.com.au

Students and teachers studying dance will discover an assortment of material on this wonderful website. The Education section includes curriculum-related resources for specialist and non-specialist K–12 teachers, and provides details for expressions of interest for education programs commencing in 2018.

SCIS no. 1817219

BBC Earth

www.bbc.com/earth/world

Stunning, quirky and thought-provoking information and vignettes about the universe are presented on this captivating website. Students can wander through a variety of topics including over 1,000 of Sir David Attenborough's greatest wildlife moments, the latest discoveries, videos, and answers to 'big questions'.

SCIS no. 1817223

Code the future

www.codefuture.org

Code the future is an interesting Australian initiative that matches educators with volunteer coders, programmers and software engineers to work with students on coding projects. The website includes current projects, testimonials, and a blog.

SCIS no. 1817234

Governing Australia

https://itunes.apple.com/au/app/governing-australia/id683927919?mt=8&ign-mpt=uo%3D4

This free app allows students to investigate most aspects of how the Australian Government governs. Using animation, illustrations, photos and videos, the content covers the Constitution, how laws are passed, election procedures, judicial power, and funding.

SCIS no. 1704704

In space we trust

http://inspacewetrust.org/en

Available in Russian and English, this absorbing art-based website is dedicated to space pioneers and researchers. Significant events in space exploration, spacecraft design, space flights, and voyages of discovery are examined utilising graphics, links, and original music.

SCIS no. 1817375

Learn about the Reef

www.gbrmpa.gov.au/learn-about-the-reef/resources-by-theme

An initiative of the Great Barrier Reef Marine Park Authority, this wide-ranging website covers: details of the Authority and reef management; facts about the reef, its biodiversity and animals; and educational resources, coupled with F–12 Australian curriculum material.

SCIS no. 1817389

Learning – Royal Australian Mint

www.ramint.gov.au/learning

The education section of the Royal Australian Mint's website offers resources for teachers, students and parents. Content includes the history of coins, the process of designing and minting coins, student interactives, and curriculum material for teachers.

SCIS no. 1817397

Science Bob

https://sciencebob.com

US science teacher and television presenter 'Science Bob' is committed to sharing his enthusiasm for science with students, teachers, and the wider public. Using instructions and videos, Science Bob presents an array of experiments to undertake, ideas for running science fairs, a selection of websites, and a blog.

SCIS no. 1530285

Science learning hub

www.sciencelearn.org.nz

This award-winning NZ website uses a variety of media to connect schools with the science community. The content has been developed by educators in conjunction with multimedia specialists, and can be searched by topic, concepts, or professional learning modules.

SCIS no. 1360566

State of the world's plants

https://stateoftheworldsplants.com

The information on this website offers 'a baseline assessment of our current knowledge on the diversity of plants on earth [and] the global threats these plants currently face'. Reports include new plant discoveries, plant genomics, the impact of climate change, plant health, and extinction.

SCIS no. 1817481

STEM lesson plans & hands-on activities

www.microsoft.com/en-us/education/education-workshop/default.aspx

Microsoft has developed a dynamic series of free downloadable STEM lesson plans featuring a variety of topics using affordable and accessible materials. Although the material is written with US curriculums in mind, most lesson plans are applicable to teaching STEM in other education systems.

SCIS no. 1817483

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