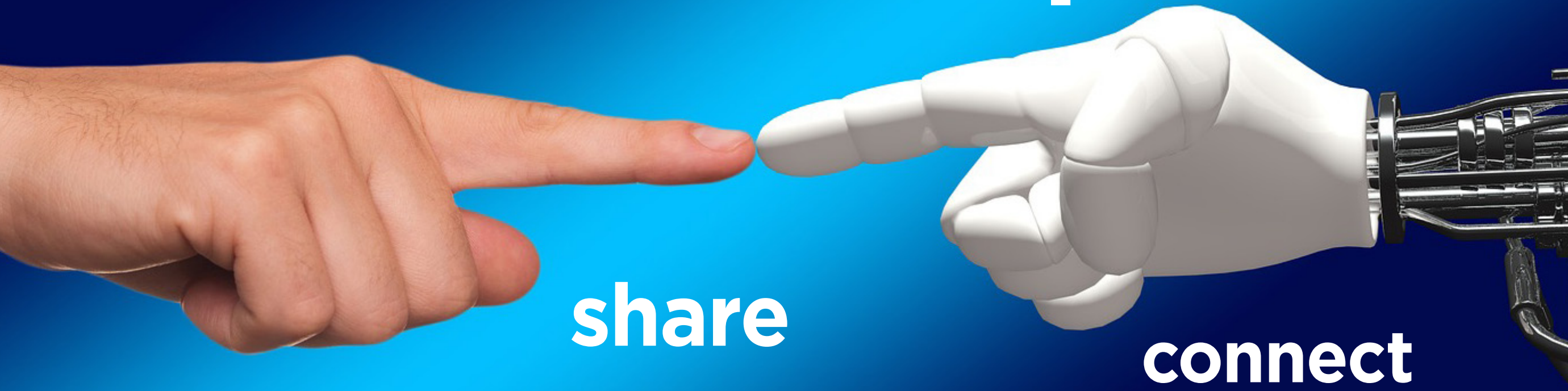


Scan

the journal for educators

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In this issue
empowering school staff
future focused libraries
computational thinking
STEM showcase
Innovation

Scan

Inspiring innovation and libraries

'Scan' is a quarterly refereed journal that focuses on information in a digital age and effective student learning. 'Scan's' articles and reviews explore the use of curriculum resources in the learning environment.

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from the editor

Welcome to the first issue of 'Scan' for 2017.

In this issue, we explore innovation. What do schools need to consider to empower their staff? How have schools been innovative with curriculum? What types of considerations do you need to consider when designing new library spaces? Why is computational thinking important and how can it be assessed?

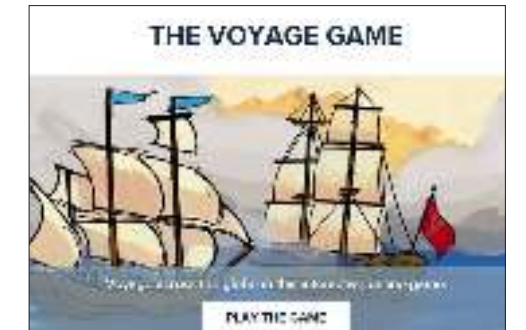
Readers familiar with 'Scan' may notice changes in this year's format. These changes reflect the recent publication of the [NSW Department of Education content style guide](#), which is used for all department websites and publications.

Colleen Foley, a long-standing and respected member of the teacher librarian profession, retired in January 2017. As a teacher librarian, Scan Reviews

Coordinator, manager of the School Libraries and Information Literacy unit and, more recently, Library Coordinator Learning Systems, Colleen has always shown a passion for empowering teachers, teacher librarians and students to be collaboratively engaged learners who transform information into knowledge. Colleen is a lifelong learner who has moved to a new stage in life. We wish Colleen all the best for the future.

Enjoy the informative content in this 'Scan' and remember to share it with your colleagues.

Cheers,
The 'Scan' Editorial team



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The challenge of managing the empowered school community



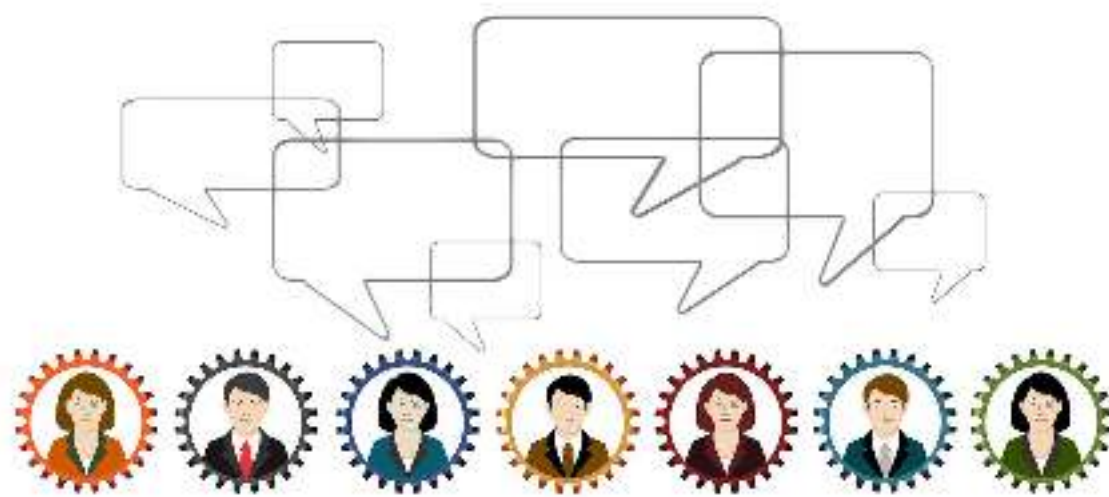
Mal Lee is an author and educational consultant whose research and writings over the past twenty plus years have focused on the digital evolution and transformation of schooling globally.

Managing empowerment

The dividends from empowerment can be immense. The sustaining of that empowerment as the norm is emerging as a major issue.

It is becoming increasingly apparent, in researching those schools globally that have normalised the use of the digital, and successfully empowered their staff, students and parent community, that the challenge of daily managing those hundreds of empowered people is immense and potentially overwhelming.

More schools in NSW are taking advantage of 'Local Schools, Local Decisions' to move to a digital operational mode, to socially network and to genuinely collaborate with and empower their school community. It is a challenge for which all schools need to ready themselves.



The challenge of empowerment

It is a matter of addressing the issue while simultaneously shaping the desired school digital ecosystem and contending with the everyday realities of running a school.

The experience of the early adopter schools (Lee and Broadie, 2016a) affirms empowerment requires the school's leaders, and most assuredly its teacher librarians, to shape and support the daily contribution of potentially hundreds of empowered, often palpably excited contributors, all keen to do the utmost for the school and the students. All will want the school to fly, but all come with their distinct personalities, ways of working, egos and agendas.

The research affirms the empowered are simultaneously a delight to work with, great contributors to the work and growth of the school but they are also on trend to be one of the greater challenges digital and socially networked schools will have to manage. Some highly committed contributors can be a pain.



Unless handled astutely, and as a normal facet of everyday schooling, the challenge could crush even the best of school principals.

Within the traditional, strongly hierarchical, silo-like organisational structure, each teacher's contribution was constrained, bounded and relatively easy to manage. All understood their place, with many staff in larger schools having no dealings with the head.

The same held with the parents, the students and the wider school community. They had learned from childhood their place, understood the school executive unilaterally ran the school and, at best, they could have but a small voice.

All that changes when the schools go digital, socially network, genuinely collaborate with their community and are of a mind to trust, respect, empower and work with all staff, the students, the parents and the wider community.

Unwittingly, many of the established mores, practices and parameters are soon discarded or seriously questioned, necessitating the evolution of a replacement set appropriate for the new ecosystem. Mature digital schools have experienced the same kind of digital transformation that has impacted every other mature digital organisation (Kane, et.al, 2016) and, like them, the schools have needed time to adjust their ways.

Recognise the speed of change

In shaping the digital evolution and transformation of your school, bear in mind the recentness and speed of the change, and that none of the staff or parents experienced in their youth a digitally-based mode of schooling. All need to be educated on the new ways.

The research affirms the empowered are simultaneously a delight to work with, great contributors but are also on trend to be one of the greater challenges ...



What is clear in working with the case study schools is that the empowerment has yielded all the hoped for benefits and more. The trend line is pointing to increasingly greater involvement and contribution.

However, that further contribution could, if not managed astutely, amplify an already daunting challenge. That said it would be educational and economic folly for any school to try and stymie the contribution.

Dynamic leadership approach

The challenge has to be managed by taking a dynamic leadership approach, where the delegated responsibilities for evolving how the school operates and how learning happens is kept at the top end of

delegation. At this point, the leader is largely 'hands-off' in managing staff, due to their high confidence and high skills.

However, in a rapidly changing environment staff can find themselves struggling with newly emerging aspects of their job, so the leader has to have constant light-touch interactions to check their levels of confidence and that their decisions are contributing properly to the overall shaping of development. Sometimes it might entail touching the brakes or simply giving a highly committed teacher breathing time.



What is required is a solution that allows an already committed staff and school leadership to continue doing their job well, working within what society would regard as reasonable hours. Highly committed professionals cannot be crushed and the well-being of the school compromised. It would be as well to bear these operational givens in mind in finding the apt way forward.

The desired solution is likely to be found in enhancing the efficiency and effectiveness of the school's ecosystem, making best use of the professional's time and adopting processes that naturally, and largely invisibly, channel the contribution of the empowered.

While the early adopters with their organisational agility are responding well to the challenge, they are nonetheless daily coming to better understand the potential magnitude and nature of the challenge, and are trying different strategies to make the going easier.

It bears underscoring that all the case study schools are working on solutions while contending with the everyday pressures that come with operating a school, of finding replacement staff for those taking leave, working with scarce monies, dealing with dysfunctional families and their offspring, and appeasing the occasional bureaucratic request.

So far, the research on staff empowerment within digital organisations has rightly focused on how best to empower the total staff, and support that empowerment. Little, as yet, has been written on the challenge of daily shaping and sustaining the contribution of the dynamic empowered staff.



Nothing moreover has been penned on the even greater challenge that schools have to contend with of not only managing the professionals but also an empowered parent group and community, none of whom are bound by the staff members conditions of employment.

Most assuredly, nothing has been written on the challenge of doing so in an ever evolving, complex, adaptive system and an increasingly integrated digital school ecosystem where the natural forces at play will impact, in often quite unintended ways, on the workings of the school.

How that challenge is best met, time, experience and research will hopefully reveal.

Meeting the challenge

That said, there appear to be a number of key moves the case study schools have made that should help prepare the later adopter schools. Nine key moves are summarised here.

1. Successful digitally-based school ecosystem

All have created a tightly integrated, mature digitally-based ecosystem, where all operations are focused on realising the school's shaping educational vision.

2. Shaping vision

All have a clear shaping educational vision – readily understood by the total school community – that is the glue that holds the networked organisation together (Lipnack and Stamps, 1994). Vitally it must be strong glue, able to withstand daily stress testing by literally hundreds of the school's community.

3. Astute principal, with the requisite people skills

Every one of the case study schools had an astute school principal with the wherewithal to lead and orchestrate the workings of a digital and socially networked school community (Lee and Broadie, 2016b).

The person has had the requisite people management skills, readily able to daily manage the contribution of a dynamic empowered staff and parent community.

The last thing a digital and socially networked school needs is a highly qualified head with limited or no people skills.

4. Distribute the management

When schools succeed in empowering all staff, the homes and the local community, one is talking about genuine empowerment with hundreds of people, all with their own agendas.



No one person, no single principal, no one executive position has the time – or indeed the need – to manage the contribution of such a vast body of empowered personnel.

The job should rightly be distributed across the staff such that the management happens naturally as part of everyday interaction.

5. Professional staff

Central to the quest to empower the staff and the wider school community has been the creation of a highly professional staff, whose professionalism is developed to the full, able to play a lead role in both educating the children and in nurturing the teaching contribution of the other teachers of the young – the parents, carers, grandparents, the community and the children themselves.

The schools have tried to avoid adding to the workload of the staff.

Done well, the principal should be able to rely on all the staff, teaching and professional support, playing the major frontline role in managing the empowered parent group, leaving the executive team to supplement that support when needed.

6. Macro understanding

That desired level of professionalism necessitates all the staff (Lee and Broadie, 2016c) having a strong macro understanding of the workings of the school's ecosystem, the value of empowerment and genuine collaboration and the importance of doing so naturally as part of the everyday dealings.

7. Astute use of the digital

With digital normalisation the school is able to look to all manner of digital smarts and efficiencies to reduce or contain the load on staff.

That said, unless clear parameters are set the same technology can, as all well know, add to the burden on staff.

8. Known operational parameters

In the seeming chaos of the rapid digital evolution of schools and the disbanding of many of the traditional operational parameters, the pathfinder schools found it is very easy to forget the importance of always having apt and clear operational parameters to guide all within the school's community.

In a state of flux when people are being empowered – and given greater power – it is probably inevitable that some will test the new boundaries.

In a genuinely collaborative environment it should be relatively easy to proactively decide as a group what the parameters will be and how they will be observed.

The lesson appears to be, be conscious of always having in place and publicised the operational boundaries. Teacher and executive time should be protected.

9. Operational units

Further, to the earlier comment about distributing the management of the empowerment, some of the larger case study schools have opted to use small operational units to better manage the empowered.

Thought was being given to using bite sized operational units, mini-schools that can more readily manage the empowered group.

The advantage of such units is that their size can be tailored to the extent of parent collaboration, understanding that, for some time yet, it is likely that collaboration will be greater with the younger students.

Many schools globally are already using such groupings based on the stages of schooling. While the management of an empowered group was not the reason for their creation, the more manageable logistics could make the going that much easier for the staff.

Conclusion

In making these observations it bears stressing these are still early days with the development, with much still to be learnt.

As indicated at the outset, what we are seeing globally – and not solely in NSW – is the emergence of a highly laudable educational development that has the potential to add immensely to the school, that needs to be managed astutely if it is to be sustained and not crush the school's leadership.

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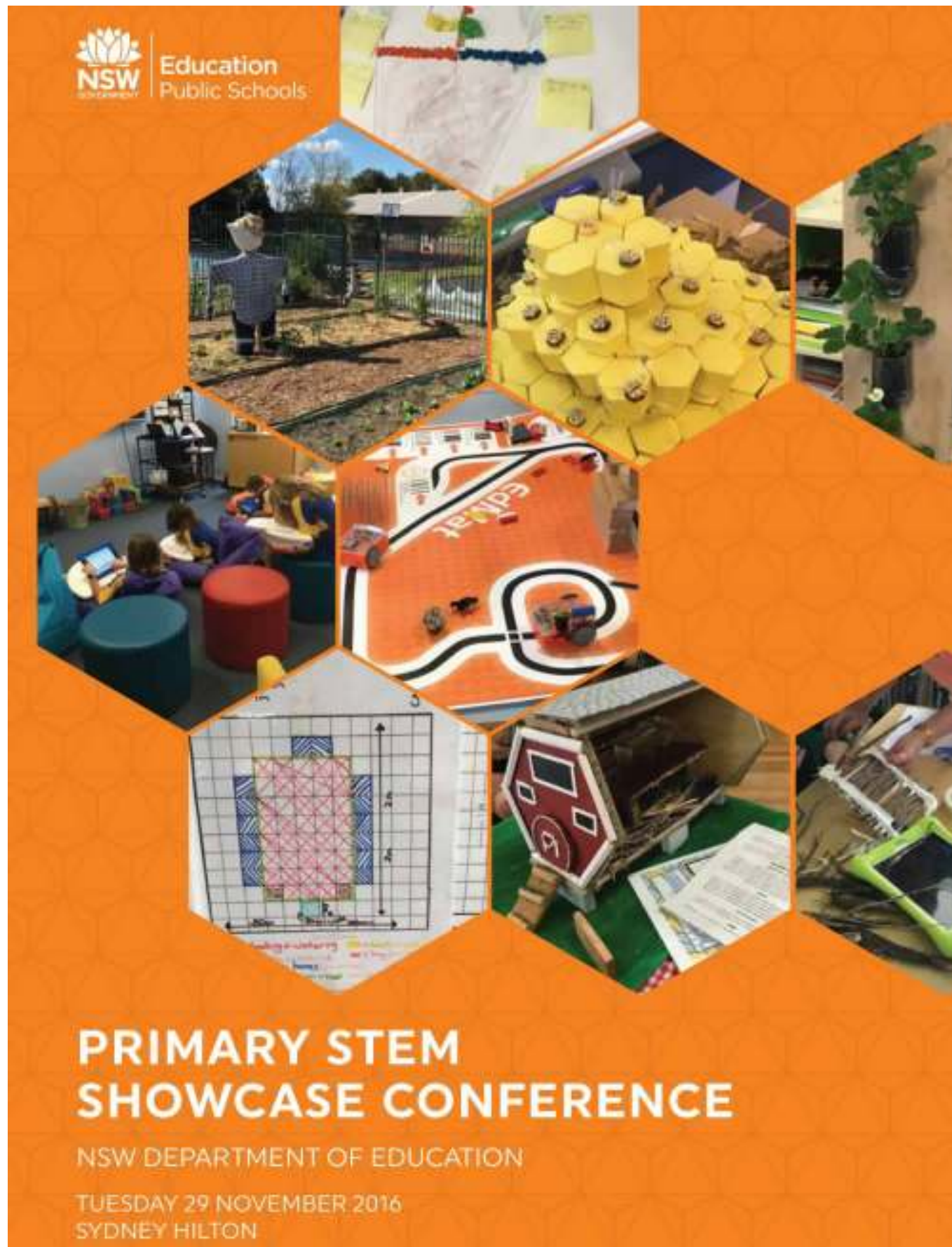
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NSW Education Public Schools

PRIMARY STEM SHOWCASE CONFERENCE

NSW DEPARTMENT OF EDUCATION

TUESDAY 29 NOVEMBER 2016
SYDNEY HILTON

STEM education: primary STEM showcase



Rachelle Winning, Assistant Principal, Gymea Bay Public School, was a member of the NSW Department of Education's STEM education advisory team in 2016.

STEM education is an integrated approach to the learning of science, technology, engineering and mathematics. The focus is on deepening student understanding and developing creative and critical thinking skills within an authentic context.

Following on from the [STEM education: the story so far](#) article, published in [Scan](#), this article focuses on the Stage 3 STEM Project.

The Primary STEM Project 2016 culminated in a showcase conference in November 2016, bringing together the project schools

from across NSW to share how they embraced STEM learning within their school or community of schools with a wider audience of teachers and educators.

Each school began this project with varying levels of understanding, experience and expertise, and with the set purpose of implementing quality learning experiences using project-based learning strategies and improving student learning through pedagogical change.

This project incorporated supporting teacher pedagogy in several areas including:

- inquiry-based learning
- working mathematically
- working scientifically
- working technologically.

It often challenged teachers' notions of planning and programming, particularly with regard to designing real, authentic and contextual learning experiences

that engaged the students and allowed the students to drive their learning. Making connections across the NSW Mathematics K-10 syllabus and NSW Science K-10 (Incorporating Science and Technology K-6 syllabus), and focusing design thinking methods to develop problems and design solutions was key to implementing STEM successfully.

An interesting article, [Learning creatively with STEM](#) by Chris Hopkins, Principal, Scarborough Public School, appears in Scan, Volume 35, Issue 4. Chris discussed how he has implemented STEM principles and authentic learning at his school and was a participant of the Primary STEM Project 2016.

This article will focus on two project schools and their STEM journey, from their starting point of identifying the needs to be addressed, developing a driving question that would enable them to focus on the needs of staff and students, and highlighting the processes they undertook to implement sustainable STEM learning within their school.

Crabbes Creek Public School – How can we ensure our school is bee friendly?

Crabbes Creek Public School is a small school of 37 students on the Far North Coast of NSW. The school is well known for its creative and caring students and its balanced approach to education. Crabbes Creek is part of the Fingal Head Community of Schools, which participated in the [Stage 3 STEM Project](#), 2016. Their driving question looked at why STEM education was important for their students and what they could do to support the future focused learning needs of their students. Initially, they formed an action team and the schools met as a community of schools (CoS) group and participated in quality professional

learning that would bring about sustainable change in pedagogy.

Belinda Eadsforth teaches the Year 3-6 class at Crabbes Creek Public School and was new to STEM and project-based learning in 2016. Belinda and 16 of her amazing students presented their STEM journey at the Showcase Conference. They had a captive audience while explaining the highs and lows of their STEM journey. Belinda inspired everyone with her honesty about embarking on an unexpected journey into STEM and problem-based learning. Her students also impressed with their presentation about how it impacted on their learning in this small country school.



Year 3-6 class from Crabbes Creek Public School

Belinda spoke about the initial process of brainstorming with students the ideas they were interested in learning about and, after voting, wrote the driving question:

Is Crabbes Creek Public School a bee friendly environment? How can we as students ensure that we are doing our part in helping the survival of bees? Why is it important?

Belinda explained how writing a driving question posed learning challenges for them to explore and included explicit teaching. The idea of a 'non-googleable question' is an interesting and important notion for students to understand.

It was evident from the presentation that there was high student engagement in this project, which encouraged student autonomy in a student led classroom. The multidisciplinary approach to learning enabled students to pursue their areas of interest.



Students' beehive construction

One unexpected benefit was the new connections to their community, from a bee enthusiast to a local resident with a beehive, who is now a frequent visitor to the school.



A local beekeeper shares his knowledge with the students

Accustomed to programming and organising resources during the holidays for a ten week unit, Belinda acknowledged the fact that this approach challenged her traditional teaching style. Her honesty in describing her fear of moving into the unknown, not having a plan and not knowing what the result would be was refreshing and reflected the concerns of many teachers in the audience. Listening to her describe how the learning evolved, the strong connections to mathematics, science and technology throughout the process, and her concerns about programming

and assessing student learning were powerful and challenging messages for all teachers.

St Ives North Public School – the Firestorm Project

St Ives North Public School is located in the leafy north shore of the Sydney metropolitan area adjoining the Ku-ring-gai National Park and has a proud tradition of academic excellence. It has a diverse student population of over 770 and values strong partnerships with the community.

Students from St Ives North co-presented with their teachers at the conference, giving a real sense of validity to their project. As their school is located in a bushland setting, the impact of bushfires is an authentic issue for the students and the local community. Based on an authentic local area scenario, the students' developed the driving question:

How can the community of St Ives prepare for, survive or recover from a catastrophic bushfire event?'

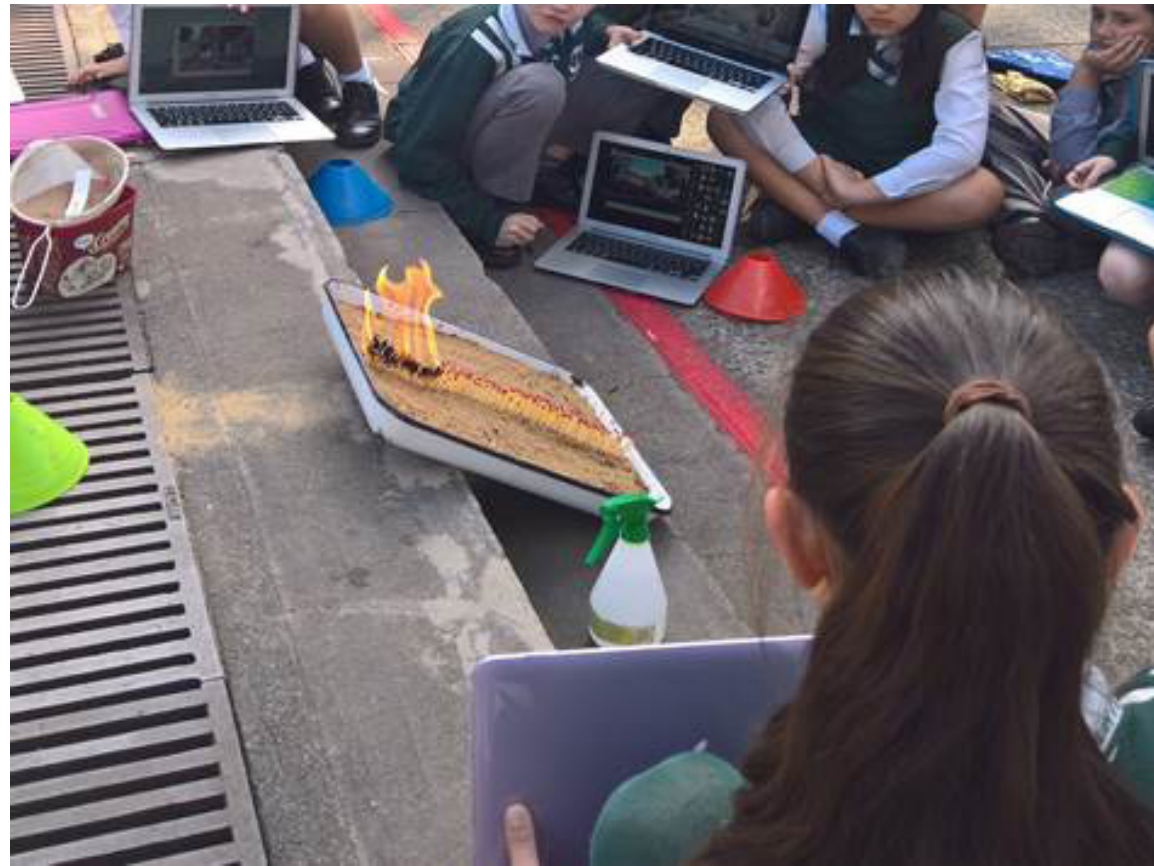
Teachers explored the fundamental question with the students through open-ended problem solving strategies, which included the five elements of the design thinking process:

- empathise
- define
- ideate
- prototype
- test.



Ideation phase of the design thinking process

This process highlighted the frequency of students discussing and debating alternatives when they grappled with the many aspects of problematic knowledge within the design process. Students were encouraged to work collaboratively in small groups with a design, create and develop focus. During this process, teachers guided the learning and observed student interactions.



Students collaboratively created, shared and tested their prototypes

Their project had an authentic audience which culminated in the successful school STEM Firestorm Project showcase with the attendance of NSW Rural Fire Service Commissioner and community members. It was interesting to hear how there was a dramatic shift in pedagogical change. Particularly relevant was the underlying notion that working mathematically, working scientifically and working technologically are natural and essential components of authentic STEM learning. It highlighted student ownership over their learning – they supported and critically observed other students, and made real connections with their learning. It was evident that students are confident

and articulate, can demonstrate deep knowledge and can make strong connections between concepts. Most importantly, the engagement and excitement in learning was at the forefront through this STEM initiative.

Feedback from conference attendees included:

The Firestorm project was relevant to the local community and students had produced amazing results.

Technology was used wisely by students in innovative ways – not just gadgets for the sake of gadgets.

Teachers had drawn on community experts to be involved and the end results were astounding.

Where to from here?

The application of quality, effective learning experiences within the STEM disciplines of science, technology, mathematics and engineering and the empowerment of teachers to design, implement and evaluate innovative practice targeting student needs is critical to ensuring successful and sustainable STEM learning in our schools. It is about engaging and equipping students and embracing new technologies to support 21st century learning in real and authentic contexts.

authentic STEM learning ... highlighted student ownership over their learning

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School libraries as incubators – where good ideas hatch!



Sunny South, Teacher Librarian, Sydney Secondary College, Leichhardt campus

Create and connect

School libraries need to be much more than a repository for books and print resources to maintain their relevance in the digital age. Teacher librarians must keep moving forward and push the boundaries of what libraries can and should be as a response to changing clientele profiles, attitudes and usage patterns. As well as maintaining their traditional roles, libraries are a great place for students and teachers to create and connect in environments that encourage and enhance a sense of innovation, play, tinkering, creativity and entrepreneurship.

Teacher librarians must keep moving forward and push the boundaries.



Hughes, H., Bland, D. and Willis, J. 2013, 'What makes an innovative school library learning space? Teacher-librarian perspectives', by ASLAonline

The journey I embarked on in 2014 as the new teacher librarian in a busy middle school was to take inspiration from everywhere, including a kit bag of ideas from my previous position as a technology integrator. Today, the original school library space is barely recognisable; it offers a range of activities and events that are more akin to what is happening in the public library space or in a museum. Student and staff input is crucial for improving what the library offers to the school community. It is a work in progress and a constantly changing learning space.

Creating a future focused library, or a library as an incubator, has been a journey of discovery with a huge amount of satisfaction, a lot of hard work and a bit of fun thrown in. [The Library as Incubator Project](#) connects creativity and the arts to the public library

space and invites librarians from all over the world to contribute their ideas. Adapt this idea so that the school library becomes a place to trial new ideas, a space to venture into creativity and technology without fear of failure so the whole community can grow as learners. The school library as incubator is a space where teachers and students can innovate and experiment with the support of the teacher librarian.



[The Library as Incubator Project](#)

Here are six ways to begin creating a library as an incubator – where good ideas hatch.

Offer a range of learning spaces

We are all talking and thinking about more flexible learning spaces. There is plenty of support information for schools to move towards learning spaces to reflect a variety of pedagogies. Spaces that promote collaboration, connection and creativity, while enabling students and teachers to work and learn independently, are key to a successful environment. Teacher librarians can be at the vanguard of this change, offering an incubator for trialling, practising and learning in different environments.

Find ideas for exciting uses of space from many quarters. Develop flexible and innovative spaces in the school library by:

- gathering ideas from museums, art galleries, public libraries and airports
- browsing the online environment for ideas
- visiting different spaces, including exhibitions, festivals, pop-ups and events as well for ideas
- investigating new coworking spaces in major cities, including the amazing spaces created by [WeWork](#) and others.

In a flexible library space, teachers can experiment, innovate with their teaching styles to incorporate multi modal learning, digital and non digital creation and presentation tools, and plan for individual learning experiences as well as collaborative investigation with greater ease than in a traditional classroom environment. Students need to feel comfortable about choosing how they sit and work together or individually for the best creative output. Libraries that offer a range of environments encourage different teaching practices that allow learners to grow and meet the challenges of rigorous and creative investigation, creation and presentation.



Flexible learning spaces by Furnware

Look at the space and begin to create zones. Try using David Thornburg's (2007) concept of the cave, the watering hole and the campfire for flexibility and variety. Each space should be able to seat at least 30 students and be reconfigured in several ways depending on need.

Make sure there is a place to gather a group – a campfire – to launch a session and share presentations. Our campfire has tiered seating which can be moved around. It becomes many things and has even been transformed into a robotic arena.



The campfire space

A conversation zone – ours is called the Café – where students can meet more informally, read quietly, and join a discussion group or game, is a must. This is our most popular space in the library. It has comfortable sofas, cushions, ottomans and huge beanbags that seat four students. The furniture can be rearranged and students create new seating configurations as needed.



The informal conversation zone

Utilise rooms connected to the library for different purposes. Our cave houses a maker studio. Its open space allows students to bring in furniture for a particular activity. The inCubator is a group learning space with as many write on surfaces as possible, including desks at varying heights and an ideas wall where students can collaborate and brainstorm large scale.

Lastly, our cubes are small seminar rooms with whiteboards, comfortable seating and traditional desks. The video, [Tour the Google Ventures war room in San Francisco](#), inspired these more intimate sharing spaces.

Provide the right furniture and fun

Purchase portable and stackable furniture – desks with multiple heights and write on surfaces, chairs and stools – for flexible use of open space. Our high density foam fruit cushions are popular. They are used to sit on, as a back rest or on a student's lap to stabilise a laptop or tablet device. Stored in inexpensive plastic tubs, they can be moved around the library and put away easily.



Fruit cushions stabilise laptops

Our school library continues to evolve. Over three years the spaces have all changed. We develop the spaces according to need, combining some high end purchase items with some low cost in order to make sure that any experimentation is not a costly mistake.

An important element of our library is the incorporation of playfulness and whimsy. Many of the spaces offer something for students to play with or think about – the fruit cushions are practical and are even juggled at lunchtime. A major purchase for us, Norva Nivel's [Mis-shape bench collection](#) is a focal point at break times and students create all sorts of structures with the nine ottomans in the set. A Genga wall from the same supplier is another great addition for student interaction and playfulness with furniture. Other spaces house boards with magnetic poetry, a Lego wall, a three storey dolls house and areas to create pop-up displays and galleries.

Nothing is too precious. The space looks different at the end of the week to how it began at the beginning of the week. That is the beauty of the flexibility.



Students arrange furniture to suit their needs

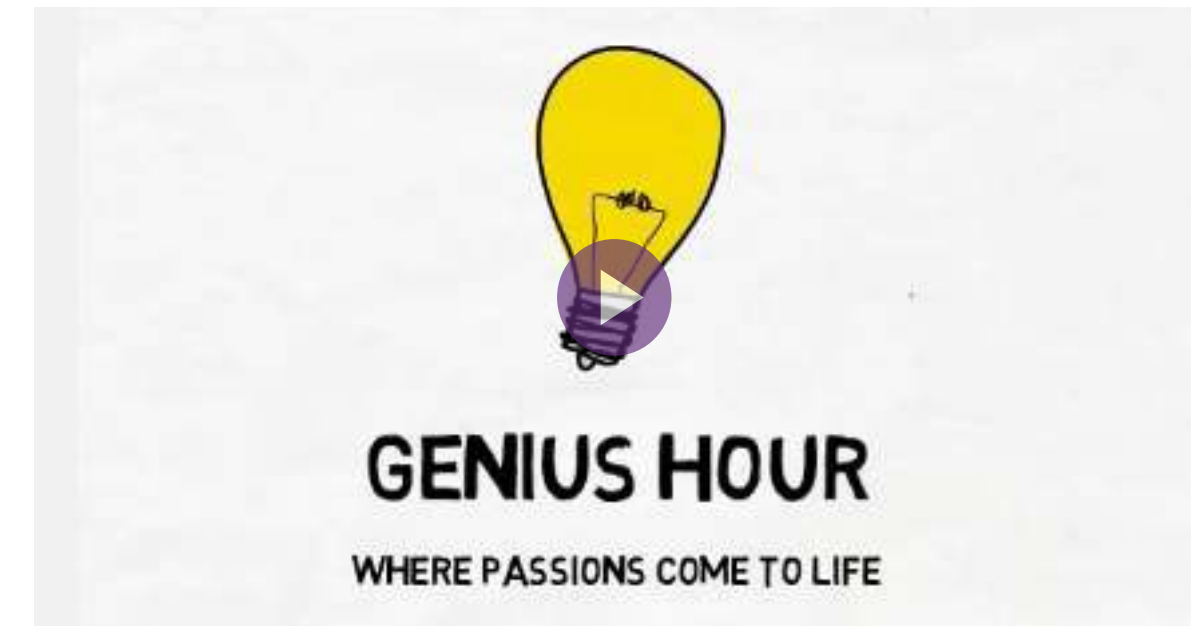
Provide a variety of tools for learning

Flexible learning spaces require flexible teaching and learning practices. Teachers choose from a range of digital and non digital tools to facilitate great thinking and innovating, prototyping and drawing. Some of our desks are writable surfaces, and we also have stick on white boards that can transform a wall or desk quickly. Rolls of butcher's paper enable student groups to work on brainstorming and visual notetaking – Ikea's rolls and holders work well. Coloured felt pens and highlighters, sticky notes of all shapes and sizes and liquid chalk for writing on glass surfaces are well used.

Use these tools and your knowledge of the physical space to inspire pedagogical shifts at your school. Become an expert in the design thinking process and in a variety of [Visible thinking](#) routines and reflection methods. Be part of the curriculum planning to ensure teachers undertake collaborative and individual thinking routines into their lessons and model these techniques during team teaching sessions.

The teacher librarian's kitbag should also contain knowledge on how to implement and facilitate learning through project-based learning, [Genius hour](#), inquisitive research techniques such as [A Google a day](#) and [School in the Cloud's](#) self-organised learning environments (SOEs).

With dynamic learning spaces and a range of learning tools, the school library easily becomes the most sort after learning environment in the school.



[What is genius hour? – An introduction to genius hour in the classroom](#) by Chris Kesler

Ignite passion for learning

A library as incubator is a great opportunity for the space to facilitate learning by students and teachers that reflect their passions and interests. Makerspaces, maker studios or fab labs are springboards for creativity and innovation. The maker area may open all the time or on specific days. It needs good storage, with areas of shelving or containers to keep ongoing projects. As well as a range of technology equipment, provide lots of craft and stationery in order for your makers to be creative. There are plenty of guides on creating a makerspace and [Invent to learn](#) is a really good starting point. Buying equipment and providing resources in response to students' needs and interests will ensure its success.



Makerspaces inspire students to explore and create

Our maker studio is used well and often by the school community. Several maker groups, including a learning and leading technology group, the Tech Ninjas, and GirlsMake, a girls and technology group, meet at exclusive times through the week.

Provide materials to inspire students as well as examples of student made products. We have a growing resource of instructional materials for self discovery. Our maker studio has VR viewing and creation equipment, a 3D printer, Littlebits, Spheros, Ozobots, Raspberry Pis, Makey Makey's, Arduino, and 3D printing pens. iPads with Minecraft, movie making, music making and animation tools are available to document making and offer apps for students interested in media creation.

We encourage a range of craft and communal activities such as knitting, badge making and large format colouring-in. Students display their creations in gallery spaces. Pop-up studios occur from time to time. For example, a local florist donated unsold flowers. This inspired the Florography studio. With tripods, backdrops and the flowers, it was set up over a couple of weeks for students and staff to experiment with photography and photographic editing. Best works were printed on photographic paper and displayed.

Maker spaces include card making and Christmas decoration, book sculpture workshops, paperform sculptures and a sketch book gallery to encourage our manga artists to share their illustrations.



Paperform sculptures

These activities all contribute to students and teachers thinking about the library not just as an academic space for learning but as a space for experimentation and creativity. Studio and pop-up spaces meet the needs of student creators and innovators. They provide access to information and technical resources that support discovery and the creation of new knowledge and artistry.

Hold large scale events

Make the library a focal point for school activity and celebrate the variety of interests across the school. Book Week and special days, such as World Read Aloud Day, are times when libraries can be in the spotlight. Other learning opportunities include:

- [Hour of code](#) – promotes coding and programming
- [Ada Lovelace day](#) – highlights the importance of women and technology
- [Rube Goldberg challenge](#)
- [Star Wars Day](#) (4 May) – celebrates puns, science fiction and film making.

With dynamic learning spaces and a range of learning tools, the school library easily becomes the most sort after learning environment in the school.

Keep innovating

What else can the library provide to continue to be a relevant and dynamic player in the school community? This year, Sydney Secondary College, Leichhardt campus community will investigate and experiment by:

- creating a Library of Things – science and art equipment, musical instruments like ukuleles with sheet music, craft making tools, costumes and some technology equipment may be on offer for loan
- providing more video/computer gaming tools – encouraging movement away from consumption to creation
- looking at the possibility of volunteer residential programs – artists, writers, designers and musicians in residence
- thinking about how to promote and encourage entrepreneurial ventures for students – providing authentic experiences, including in house publishing, for students to share their output with the wider community
- expanding our events and exhibitions – Sculpture Month, Frocktober, Augmented August (a look into the future of AR and VR) and Vivid Library (a celebration of light and sound).

It is a bright and diverse future for the library that adopts an incubator approach and one which is sure to keep the school library relevant in our changing learning environment.

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Sailing uncharted territory – The Voyage game



Hulks and other shipping in a busy harbour, 1783-1852, ANMM Collection



Jeffrey Fletcher, Senior Education Officer,
Australian National Maritime Museum

A different learning model for teaching a convicts unit

The learning task:

The year is 1830. You are the Surgeon Superintendent aboard a convict vessel transporting its human cargo from Britain to the far reaches of the known world – Van Diemen's Land. You are charged with delivering several hundred convicts to the colony in good health and in the shortest time possible, with minimum loss of life. This is the way to make money and further your reputation and position. Players must make decisions, solve problems and deal with conflicts on a perilous journey across the globe. Are you up to the task?



[The Voyage game](#), Australian National Museum (ANMM)

This is the premise of [The Voyage](#) – a free online game available on the Australian National Maritime Museum’s website. The scenarios, although invented, are based on approximately 10,000 real convict and voyage records.

Students role-play the ship’s Surgeon Superintendent, who was responsible for the delivery of convicts on time, alive and in good health. This was a pathway to future success – doing well on these voyages enhanced a surgeon’s prospects in both Britain and the colonies.

Students role-play the ship’s Surgeon Superintendent.



Choosing convicts in The Voyage game

Students must decide on what supplies they will take, how they will manage the convicts and make decisions on pop-up scenarios that can alter the direction the game takes, and the ultimate result. A series of gauges keep players informed as to status of key areas such as supplies, morale and health aboard ship.

When I was first introduced to the concept for The Voyage, my immediate thoughts turned to how accurate it would need to be for teachers to adopt it as a legitimate educational tool and how the graphics, humour and competitive pathway structure would need to pass the ever-discerning and somewhat punishing scrutiny of students. The Voyage needed to engage a particular audience for a specific purpose, yet effectively serve two masters – the students who would play it and the teachers who would implement



Leaving port in The Voyage game



Locked up in The Voyage game

it. This game needed to be good. What gave me confidence for this project was the quality of our partners – Dr Hamish Maxwell Stewart, an amazingly knowledgeable and engaging history professor from the University of Tasmania and the diverse and vibrant visual storytelling of ROAR films and Screen Australia.

Why choose a game?

Games in education have been around a long time, from board games to electronic games and now digital games online. Benefits include improving skills in:

- group dynamics
- literacy and numeracy
- decision-making
- critical thinking
- strategy
- empathy
- engagement with the curriculum.

Today, virtual gaming offers a plethora of learning opportunities through online playing, sharing, collaborating, challenging, investigating and resourcing. Much has been written on the effectiveness of games-based learning and research continues but, as educators, the key question is ‘How do we maximise the value of games for students through holistic learning strategies that support both investigative and serendipitous learning?’

Indeed, as a museum, placing our interpretation and learning strategies in a gaming format was quite a leap, not dissimilar, I suspect, to many teachers giving over valuable lesson time to a game. However, playing games in ‘learning time’ is different to ‘leisure time’ and is certainly nothing to be feared. Like any situation, we learn from our mistakes, so playing multiple times with a challenge to improve the end result is an intrinsic motivation for players. However, when introducing any new learning tool – digital or not – into a structured pedagogy, we must make discerning choices. [Richard Halverson](#) (2005) posits the need for teachers to re-examine the core principles of learning in new environments:

... Gee (2003) argues that the compelling nature of video game participation is in part due to the underlying social, cognitive, and developmental learning principles around which game designers build successful games ... When school leaders and teachers begin to appreciate the compelling nature of gameplay and the powerful learning principles embedded in games as positives, they then can consider how games might inspire alternative approaches to learning.

Real stories – authentic learning

We based the game on voyages to Hobart as it was an incredibly important and infamous penal colony, and because, as a national museum, we endeavour to tell stories from every corner of our country. Being grounded in real stories brings an intrinsic authenticity to the project, and the game is enjoyable to play.



Hobart arrival in The Voyage game



Catching rats in The Voyage game

A series of break-out games use humour and anachronisms to advantage, such as ‘shooting’ as many rats as you can to prevent the spread of disease and infestation of food. In fact, the whole game uses humour as a pathway to engagement – a most difficult thing to do, particularly across a spread of age groups, as The Voyage straddles the history curriculum for Years 5 and 9 of the Australian curriculum.

Some Year 4 classes have also found it useful as part of the Explorers unit. There are also applied competencies for English, visual arts, science, design and technology, maths and geography, so it is most suitable as a core element in an integrated primary school program and has cross-curriculum, literacy, numeracy and critical thinking benefits for high school students.

The game is also eminently relevant for those studying computing, particularly game mechanics. During our trials with different aged school groups we asked them to think of it in terms of an alternative way to approach their school work rather than a game made purely for entertainment. It seemed to resonate with students as a viable learning approach, some choosing to play it solo and others to collaborate in groups. Teachers can introduce the game in a way that suits the dynamics of their particular class.

The Voyage initiative—including the focus, design and introduction of the game into the museum – reflects interdisciplinary conversations relating to the potential relationship between digital innovations, game play, young people, education, history and the contemporary museums.

[Rowan, L., Townend, G. & Beavis, C. \(2016\)](#)



Key project components highlighting the multi-faceted approach to the Voyage game

We were also very aware of making the game as accessible to as many students and school digital systems as possible. Creating it in HTML 5 with capability across different devices was something that was important to its central functionality. In our trials, some students preferred using their phone, others tablets and others laptops, although the popular choice appears to have been tablets. The project also needed to be serviceable for teachers as an overall package, so the construction and playability needed to synchronise with usage and resourcing.



Ship's medicine chest used by a Liverpool captain, c.1875, ANMM Collection



[The historian - The Voyage](#) by Australian National Maritime Museum



European Impact

[European impact](#) by Australian National Maritime Museum

As a museum, we feel that our education remit and commitment does not stop at exhibitions, events and programs. It is important that [resources](#) from our Collection, expertise and associates are made available to teachers and students for use in the classroom to augment and support their museum experience. We have created a first tier of resources which will be regularly populated with additional material. These include an image gallery of associated documents and artefacts from the Australian National Maritime Collection, such as a pardon for a convict from Hobart and a 19th century medicine chest, similar to those used on such voyages.

Accompanying these are interviews with the game developers on how they put the game together, historians on convict voyages and descendants, including the experience of children, as well as two short films that explore the impact of the European presence on Indigenous people.

There are also suggested [classroom activities](#) for secondary and primary schools, web links to other resources and we will shortly be adding an open-ended storytelling video and an iTunesU course – all specifically designed to assist teachers in embedding The Voyage into a well-resourced and sequenced



Coverdale medical kit, ANMM Collection

unit of work. This year, we also hope to run a series of ‘meet the curator’ workshops where students can talk to an expert in the field and learn more about these fascinating, compelling and important voyages.

Post script

To date, over 125,000 people have played the game in Australia. We are also proud to have received a 2016 Museums and Galleries National Award (MAGNA) for The Voyage in the Interpretation, Learning and Audience Engagement category and an Australian Teachers of Media (ATOM) award in the Educational Game category. The London Grid for Learning has also made the game available to London schools. The game and associated materials also appear on [ABC Splash](#).

The Voyage Game and resources are available free at www.anmm.gov.au/voyagegame. Enquiries to thevoyage@anmm.gov.au

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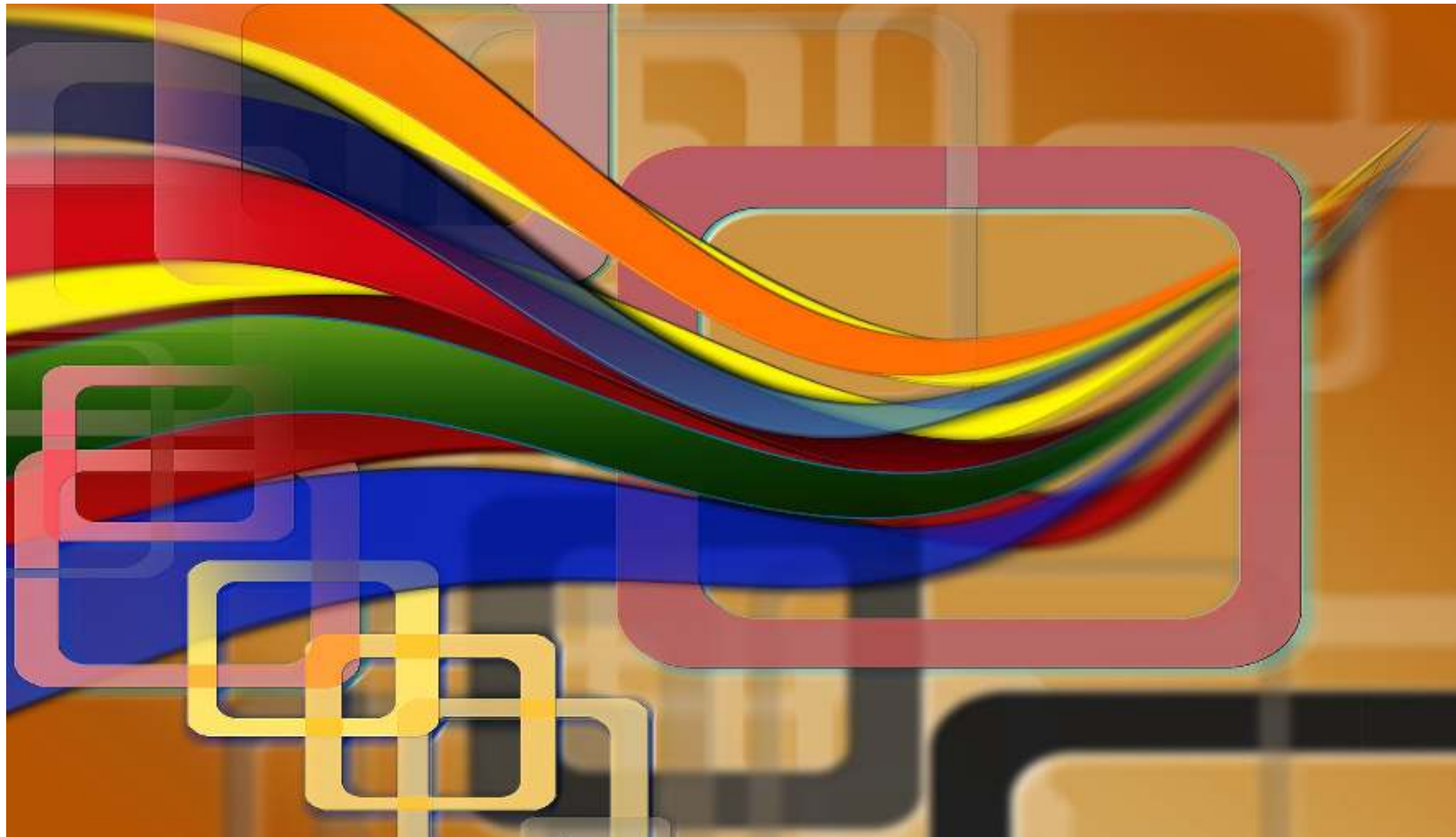
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Innovation at Narranga Public School



Nicki Chaffey, Assistant Principal and instructional leader, Narranga Public School

Preparing students for their future

Narranga means place of learning in the Gumbanyggirr language and at Narranga Public School learning is at the centre of everything we aim to achieve. As part of our strategic planning, we identified that learning in the 21st century certainly looks different to ways things had been traditionally done. In particular, our innovations focused on collaboration – among teachers and students, integrating technology into classroom practice and the importance of financial literacy. The pace of life continues to accelerate and the skills that we need are constantly expanding.

Narranga Public School, under the leadership of Principal Michael Trist, provides extensive educational opportunities for approximately 620 children in the west Coffs Harbour area. Students work, play and achieve with the support of highly skilled staff,

parents and community members. The school is set in manicured gardens and well maintained playing fields. The school curriculum has particular emphasis on literacy and numeracy. The school is actively supported by its local community and through this partnership has developed excellent educational facilities. Students work within a positive environment which has its focus on individual and team accomplishment.



Teaching and learning – writing focus at Narranga Public School, Filmpond

Challenges

In 2016, largely due to the increased Gonski funding model, Narranga appointed myself and another Assistant Principal, Melissa Fenton, into a school self-funding instructional leader (IL) role for one semester each. Although some team teaching and lesson planning occurred in the previous two years, the IL model was new. Most teachers welcomed the opportunity to work with another teacher in their

room, but some questioned the need to improve their practice. Also, with no formal instructional leader training, such as those ILs trained through Early Action for Success, I also wondered about what my role should be and how to maximise the investment that the school had made in improving practice.

There was some resistance to formal evaluation. Staff were surveyed about their ideas, and while mostly positive, one experienced teacher commented:

I would be very disappointed if we were to implement the formal model proposed at the beginning of the year because that looked and sounded more like an official appraisal, slightly ominous and out of character with the culture we desire to build in our school of building morale in our staff as well as our students.

Building teacher capacity

Based on NAPLAN results and school-based assessment, writing was identified as our prime teaching focus for the IL model. Underlying this was the aim of improving teacher confidence and quality via the adoption of improved classroom practice. Early in the year, the two ILs and our Deputy Principal, Diane Blevin, produced an observation proforma incorporating the quality teaching documents, the [CESE What works best](#) document, continuums, visible learning documentation and many other readings on exactly what ‘good quality 21st century learning’ looks like. This proforma was not designed as a checklist, but rather as something to aspire to and help us to guide discussions with our colleagues. The focus has always been on building teacher capacity to benefit students based around individual teacher needs.

Melissa and I undertook many modelled lessons, team teaching, joint lesson planning, feedback conversations and, finally, some formal observations. The process taught me so much about exactly what teaching in the 21st century really needs to be. At Narranga it was not a one-size-fits-all model, but was guided by the needs of each teacher and, of course, each student.

We surveyed our teachers at the conclusion of the Instructional Leader program and found that 100% of teachers felt their own teaching, and their students’ writing had improved in 2016. Importantly, 100% strongly agreed with the statement that the process had been supportive. Our 2016 NAPLAN results and school-based assessment reflected growth in student writing outcomes, and we look forward to our 2017 results for a clearer indication of our progress.

The strength of the IL model is reflected in this comment by the experienced teacher, whose concerns were cited previously:

Being able to work collaboratively with another teacher based on this model is invaluable for sharing ideas, comparing observations and developing further lesson experiences designed to promote further progress in our students.

Integrating technology

Integrated into any discussion of what expert teaching looks like is the concept of access to technology. We were slowly moving from technology being taught once a week in the computer lab, to being integrated into all our teaching and learning. 2016 saw a major leap forward in this regard.

Having physical access to technology is key and with 24 classes to manage this is a large task. As well as the computer labs and classroom computers, all years have access to banks of iPads, with Kindergarten and Year 1 choosing to primarily base their in-class usage on these. From Years 2 to 6, classes now have at least doubled their access to trolleys of laptops. 2017 will see a trial of BYOD in Year 6.

The Instructional Leader project highlighted, that for some teachers, technology integration was a key area for improvement. Melissa and I worked with teachers and students to look at exactly what writing looks like in 2016 and beyond. With another teacher, Mitchell Johnston, we team-taught lessons using the Office 365 and Google classroom suites. Allowing students to collaborate across the classroom, and across the Coffs Coast after hours, increased engagement, motivation and learning.

Coding and robotics

2016 also saw advances in coding and robotics. Our coding efforts were introduced by our computer teacher, Rodney Bullivant, and further extended through the use of an external provider. Through the urging of Stage 3 teacher, Jessica Wilson, the school purchased Lego robotics with Kindergarten, Stage

2 and Stage 3 students being involved. Jessica and Stage 3 students presented their work at the North Coast Principals Conference.

Financial literacy

The final area of innovation came out of a personal passion of mine, financial literacy. I was successful in receiving the Premier's First State Super Financial Literacy Scholarship based on a long held belief in the importance of financial literacy being taught early to students. Prior to becoming a primary school teacher, I was a Certified Practising Accountant and had seen first-hand the importance of having a good understanding of consumer and financial concepts.

US Secretary for Education Arne Duncan believes in the importance of teaching financial literacy, stating that:

Young people, to be successful, to secure retirement, to take care of their families, and to not be in poverty, have to have a level of financial literacy that 30, 40, 50 years ago maybe wasn't required. Today it's an absolute necessity.

Financial literacy is increasingly being called essential learning in NSW primary schools. [The National Financial Literacy Strategy 2014-17](#), states that it is 'critical to start financial education at a young age and school is the most effective place for this learning to occur'.



[Making the connections - mathematics and consumer and financial literacy by MoneySmartAu](#)

Supporting this direction, Melissa and I had the opportunity to become MoneySmart facilitators. Many practical ways teachers and parents can introduce financial literacy to their children right now can be found at the [MoneySmart website](#). With our principal and executive team's support, we have introduced MoneySmart Teaching and units across Narranga, as well as, to other Coffs Harbour schools.

Financial literacy is increasingly being called essential learning.

Teaching resources

Units of work and digital resources



[MoneySmart Teaching resources](#)

Some of the highlights in 2016 of this have included Stage 2 students planning, budgeting, purchasing and preparing breakfast, and Kindergarten students conducting fundraising stalls.

Additionally, we are incorporating and expanding current quality practice that can further enhance students' financial literacy skills, for example regular market days, Kids in the Kitchen, in conjunction with the school canteen, and fete stalls. We have partnered with the Smith Family to provide financial education to parents.

Learning continues

During 2017 as part of my scholarship, I will visit Institutions and schools in Australia, the United States, Hong Kong and Shanghai. I will make observations and conduct interviews about their programs against set criteria. I will participate in 21st century

teaching and learning conferences to develop my understanding of the latest research in preparing students for a successful financial future.

My focus question is:

What common criteria do successful early financial literacy programs exhibit and how can we ensure that these are emulated in all NSW primary schools?

Further, it is my proposal to promote Narranga Public School as a demonstration school for excellence in financial literacy education and share our experiences and expertise throughout the Coffs Harbour district and potentially beyond. My aim is to take a lead role in advocating for financial literacy education at a school, regional and state level.

Narranga Public School is only beginning on our journey to help prepare our students for their future. I have outlined three main areas that we have been involved in 2016, with collaboration being the key between all of them - our Instructional Leader model, integrating technology and financial literacy.

A collaborative environment is essential for whole school team innovation and positive change. Innovation is not something that is done and ticked off, but a mindset. I look forward to being part of our team as our innovation continues in 2017 and beyond.

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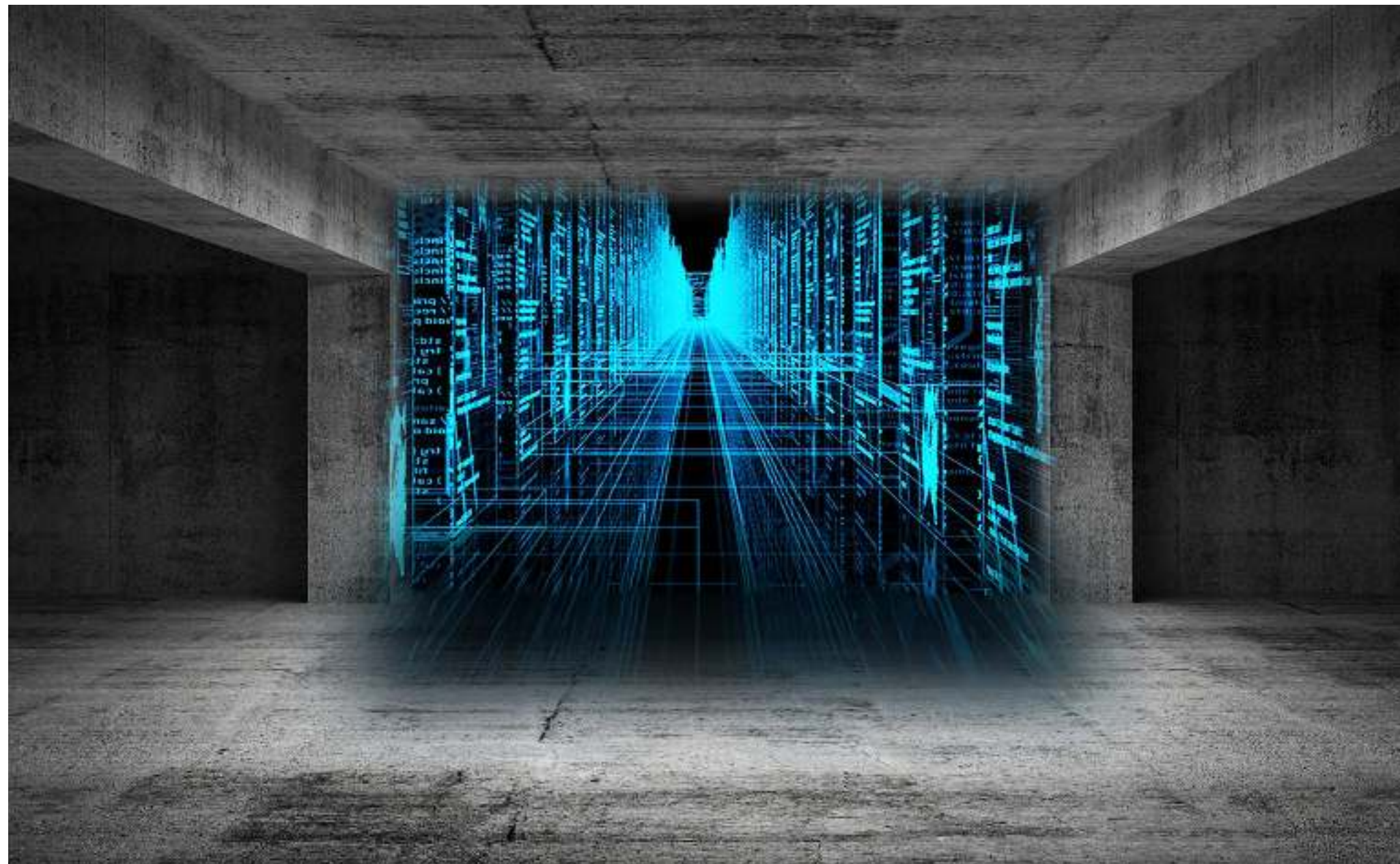
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ICAP – internal curriculum access program



James Armitage, Principal of Kandos High School

Kandos High School (KHS) is a co-educational high school catering for the towns of Kandos, Rylstone and several smaller rural communities. Kandos High School is in the picturesque Capertee Valley, boarding the Wollemi National Park and relies on industry centred on agriculture, tourism, mining and a famous history linked to the production of cement in Australia.

As with many rural communities, the greater Kandos and Rylstone area has seen a significant, recent and ongoing demographic decline and the associated changes to communities that have links to declining rural industries.

Our schools mainstream enrolment is currently 232 and enrolment data for the next five years indicates a further 15% reduction. This decrease carries with it a significant reduction in staffing.

Collectively, staff at KHS have a strong commitment to the continuing provision of opportunities for all

students. In 2015 this led to the introduction of a curriculum review to investigate methods of delivery that would secure and maintain our senior curriculum into the future. This is despite an immediate and long term drop in staffing numbers that threaten to force a reduction in the broad stage 6 curriculum offerings of which the school was extremely proud.

There were many alternatives considered and investigated. Ultimately, the decision was made that we would trial a new initiative developed at Kandos High called iCap (Internal Curriculum Access Program).

In essence, iCap was an idea born out of the successful [Access programs](#) that exist across a variety of rural and isolated settings in NSW Department of Education schools. Students under supervision undertake online learning in a subject that has been developed by staff at Kandos High School. Teachers in iCap have a face to face class and a number of students from another class as individualised learners all in one room that has been setup to cater for this need.



iCap learning space at Kandos High

Each iCap line involved in the trial in 2017, has four iCap subjects linked on respective lines, each with eight 50 minute periods on student timetables – 4 x face to face periods and 4 x tutorial periods.

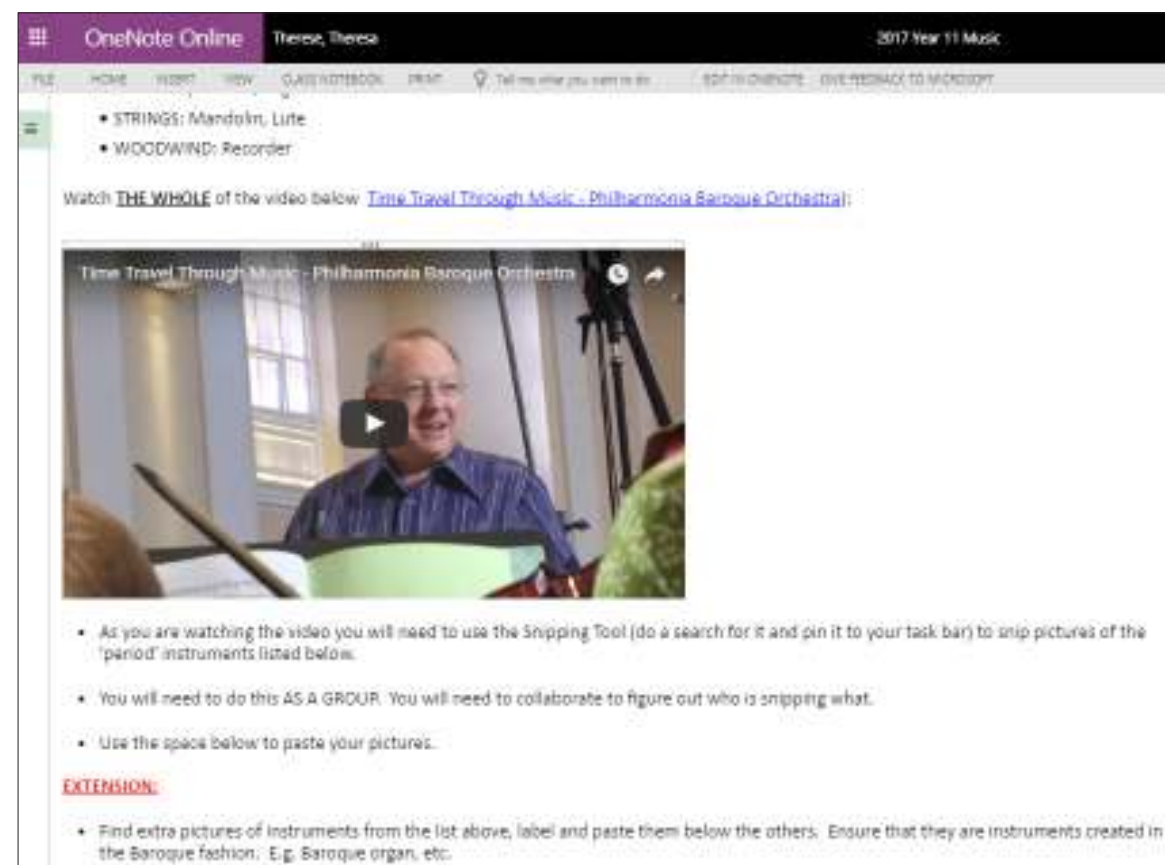
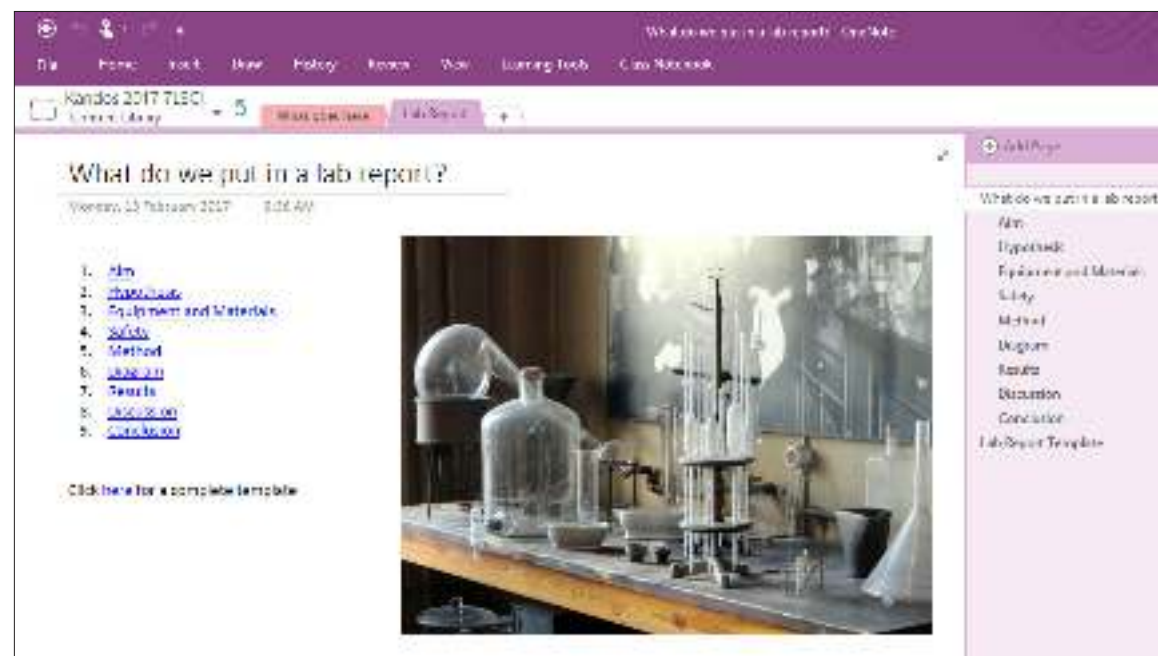
The four tutorial periods have been allocated to a room that has been designed to nurture an independent adult learning environment. Each

teacher supervises one of the four combined tutorial periods whilst teaching their own class in the iCap room, in addition to teaching four face to face periods.

This year, as the trial year, a 6th timetabled preparation period has been built into staff timetables to support the changes in delivery required for this alternate style of teaching and learning.

Line X Subjects	Teacher
A	Teacher A
B	Teacher B
C	Teacher C
D	Teacher D

P1	P2	P3	P4	P5	P6	P7	P8
Face to Face	Tutorial	Face to Face	Tutorial	Face to Face	Tutorial	Face to Face	Tutorial
All staff timetabled in their own space	Teacher A working with their class while supervising B,C & D working independently, all in the iCap room	All staff timetabled in their own space	Teacher B working with their class while supervising A,C & D working independently, all in the iCap room	All staff timetabled in their own space	Teacher C working with their class while supervising A, B & D working independently, all in the iCap room	All staff timetabled in their own space	Teacher D working with their class while supervising A, B & C working independently, all in the iCap room



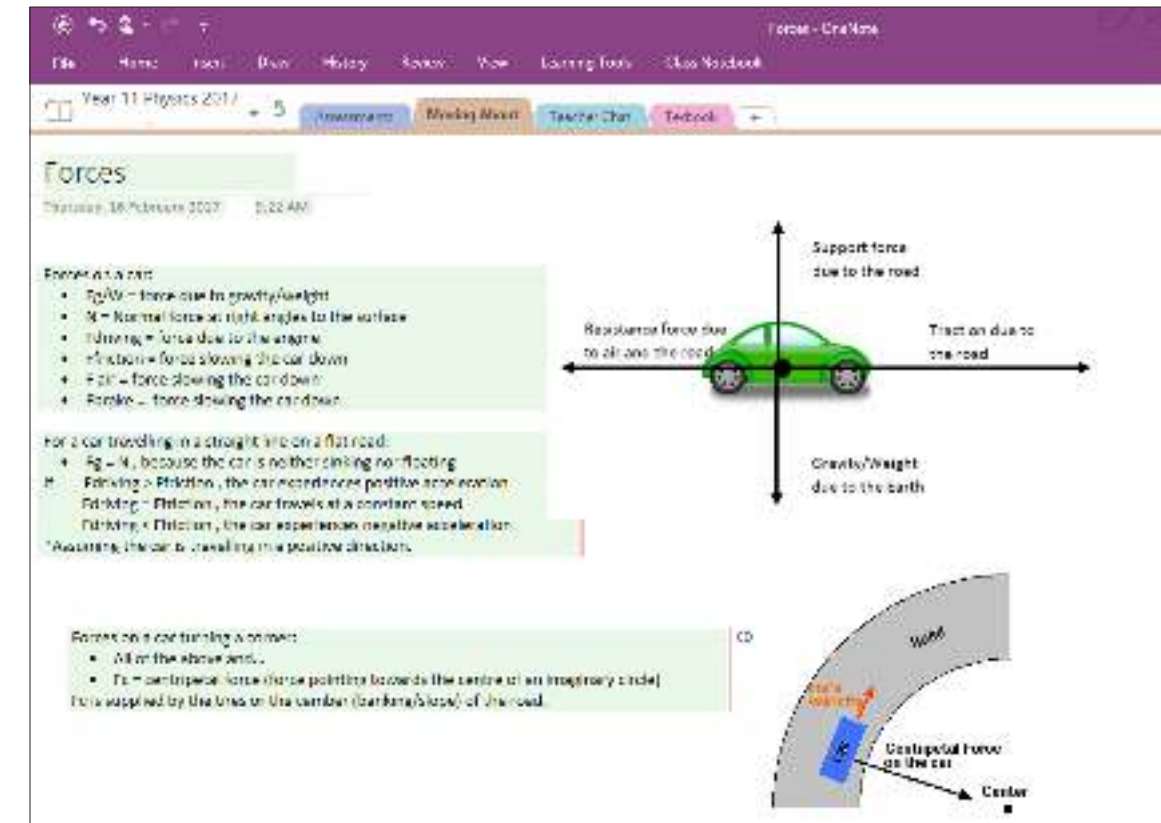
Critical elements of success

Thus far, the critical elements of success have been:

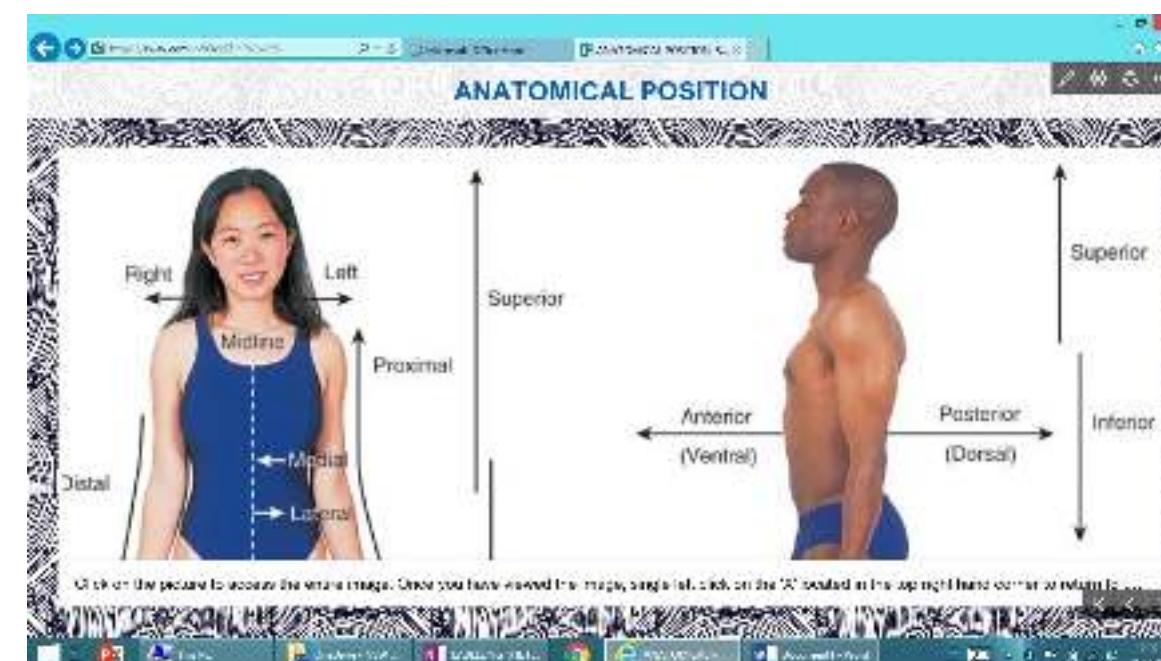
- **Consultation** – The significant nature of this change required substantial consultation with students, parents and most importantly staff. Through the consultation period there was undisputed recognition that something needed to be done and iCap provided the opportunity to:
 - maintain a broad curriculum,
 - provided the flexibility required in a small comprehensive High School and;
 - most importantly forced the need for promotion of 21st century learning skills or 21CLD skills.

With this in mind, it is important to note that a number of staff had significant and genuine concerns about many aspects of this delivery most of which focused around three areas:

- reduction of face to face time
- our student’s ability to self-regulate and work independently
- that this concept was untried



Examples of a curriculum built in OneNote and used by students



Example of curriculum topic in Sway



Individualised learning in iCap classroom

With these concerns in mind, the decision was made to trial iCap in 2017 with two lines of four subjects each in 2017.

- **Flexibility and staff voice** – having been involved in the inception of iCap, many of the structures with the trial are not what I envisaged. Listening and adapting to staff requests and expectations has produced a much different model, that I believe has a better chance of success as a result of the professional and collaborative nature of the staff at Kandos High School.



Peer learning in iCap classroom

- **Technology** – has really been the backbone to this project. The introduction of iCap has coincided with Kandos High School rolling out BYOD in Year 7 and 11. From a professional learning perspective, we also had to narrow our focus of support and Microsoft (namely OneNote/Onedrive and Sway) have been the preferred delivery mechanisms in the early stages of this trial.
- **Building links** – we are currently working very closely with Megan Townes from Microsoft and Deb Clarke from Charles Sturt University



Megan Townes from Microsoft supporting students and staff develop their skills

to upskill staff and students with the resources and most importantly the skills required to support the many changes in delivery and the expectation of skills required by the student body.

From a Principals perspective, I am extremely excited at the prospect of being able to shape our future as a school in the face of those things we cannot control. I am tremendously grateful that the staff of Kandos High School have worked so very hard to give this the best chance of success.

Computational thinking task design and assessment



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Introduction

Recent media coverage in Australia has highlighted the need to prepare students for a future in which digital communications and technology will present an increasingly important source of distinction in allowing access to employment opportunities and in participation as informed, capable and engaged citizens (Dodd, 2014; Foo, 2014; McDougall, 2015; Shiffman, 2015). Following the revised Australian Curriculum, NSW Educational Standards Authority (NESA), formerly The Board of Studies Teaching and Educational Standards NSW has published [resources](#) to support teaching across this broad and varied discourse which makes explicit connections to coding as well as to other elements such as critical and creative thinking that can be incorporated across the curriculum.

What is computational thinking?

Conceptual definition

A leading proponent on computational thinking, Jeanette Wing, (who popularised the term) considers computational thinking to be characterised by:

- recursive thinking
- reduction
- transformation
- simplicity
- elegance
- aesthetics
- decomposition
- representation
- modelling
- modularization
- and pattern recognition

all of which is underpinned by its defining feature: abstraction (or generalisation beyond specific instances) (Wing, 2006, 2008, [2011](#)).



[Computational thinking Jeanette Wing](#)

Following a literature synthesis on computational thinking, [Selby and Woollard \(2014\)](#) proposed that computational thinking is a thought process that reflects:

- The ability to think in abstractions
- The ability to think in terms of decomposition, or breaking problems down by functionality
- The ability to think algorithmically
- The ability to think in terms of evaluations, or the ability to analyse the trade-offs of using different solutions
- The ability to think in terms of generalisations, which follows from decomposition in being able to reuse functional components to solve different problems.

While these abilities may be present individually or as separate components of other forms of thinking, it is their combination that constitutes computational thinking.

Concepts

Seven computational thinking concepts are identified (in the context of the design of interactive media but are applicable to other design and problem solving contexts) ([Brennan & Resnick](#)).

1. Sequences

Sequences can be understood as a set of programming instructions specifying the intended behaviour or action. The concepts described below rely on an understanding of sequences.

2. Loops

Loops are a mechanism for running the same sequence multiple times.

3. Parallelism

While a single sequence is typically expressed as a single serial set of instructions, parallelism is used to describe sequences that are being run at the same time.

4. Events

An event can be conceptualised as an outcome that needs to be met to cause something to happen; a trigger.

5. Conditionals

The ability to describe a set of conditions that must be met for a certain outcome to occur can be conceived as conditionals. Conditionals are commonly introduced to students in the context of 'if/then' statements.

6. Data

A broad set of related understandings fall under the category of data. Students should understand the structure of data, as variables and lists. They also require an understanding of what can be done with data, such as storing, retrieving, manipulating and updating it.

7. Operators

This concept is best understood as an enabler of data manipulation which may be numerical, logical or string (such as text) in nature.

Practices

Brennan and Resnick (2012) suggest that while computational thinking concepts focus on the what, computational thinking practices focus on the process of thinking and learning, or the how. These practices were inferred through observations of young programmers using [Scratch](#) (Resnick et al., 2009):

- **being incremental and iterative**

This practice involves iterative cycles of imagining and building, where students develop some of the program, try it out and then develop further based on their experiences, feedback from the system and new ideas.

- **testing and debugging**

Students need strategies for anticipating and dealing with problems. These may include trial and error, transfer from other activities or support from peers or experts.

- **reusing and remixing**

The practice of building on the work of others is an accepted practice for programmers; this has the benefit of being able to create artefacts that are more complex than what may be created alone.

- **abstracting and modularising**

The ability to build something by putting together collections of smaller pieces (of code).

Perspectives

[Brennan and Resnick](#) identified computational thinking perspectives that reflect the shifts that they observed in students' understandings of themselves, their relationships to others and the technological world

through their work in [Scratch](#) (Brennan & Resnick, 2012). These perspectives can be seen as components of computational thinking.

- **Expressing**

Thinking beyond computation as a consumption activity and instead seeing it as a medium for creation and exploration.

- **Connecting**

Being able to form intentional partnerships and collaborations with others who are designing or benefiting from their work; creating with and for others. The diversity of audiences and purposes through which connection could take place span the ability entertain, engage, equip and educate.

- **Questioning**

Brennan and Resnick describe the ability to critically analyse assumptions that are taken for-granted through design. They highlight the transformative possibilities of this perspective in that students come to realise that they have the potential to modify the status quo through design.

General capabilities

Underlying computational thinking are four general capabilities: critical thinking, systematic thinking, holistic thinking and creative thinking.

Critical thinking can be defined as thinking that

1. facilitates judgement
2. relies on criteria [a 'standard' relative to which judgements are made]
3. is self-correcting

4. is sensitive to context.
(Lipman, 2003, pp.211-212)

The ability to think in terms of evaluations (against criteria) is a form of critical thinking.

Systematic thinking is characterised as involving a system or method of thinking that is complete – not leaving out any important consideration. It involves addressing a problem or a puzzle in such a way that all relevant issues are considered and no crucial issues are missed by haste and inadvertence. Algorithmic thinking involves the ability to understand, execute, evaluate and create step-by-step instructions for solving a task (Brown, 2013). Thus algorithmic thinking appears to be a form of systematic thinking, since it involves taking account of all relevant considerations

Holistic thinking is the ability to understand the relationships between whole and part. At lower levels it involves an understanding about the contribution that a part makes to the whole. Decomposition is a (lower order) form of holistic thinking. At higher levels it involves being able to think about how the whole influences and shapes its components; for example: how a genome influences its component genes or how an ecosystem influences the characteristics of the component organisms – through providing ecological niches (Stevens, 2012). Abstraction can be seen as a form of holistic thinking, involving generalisation beyond specific instances.

Creative thinking can be understood in two ways. In one sense to create is to make something – an artefact. In another sense, to be creative is to extend ideas in new ways. In this sense, computational

thinking requires higher levels of critical, systematic and holistic thinking that involve extending ideas.

These capabilities are essential to enable learners to address the economic, technological, social, ecological and health challenges to be faced in the future (Stevens, 2012). Critical and creative thinking are embedded in the learning across the curriculum components of NSW syllabuses.

'ANGRY BIRDS' DESIGN OF SIMPLICITY...



[Computational thinking: what is it? How should it be taught?](#) David Higson

Focal categories of computational thinking tasks

How can the quality of a student's performance of computational thinking be assessed?

Computational thinking literature is notable for its embedded approach to assessment (embedding assessment in practical tasks). This could be attributed to the practical affordances of the

medium in which computational thinking is naturally associated and also underscores the emphasis on computational thinking as a practice. A discussion on assessment is therefore incomplete without a discussion of instructional tasks. This is reflective of an integrated approach to assessment and the affordances of the contexts in which computational thinking can be developed.

We propose that practical tasks that require students to create a product that solves a problem can enable teachers to observe the different dimensions of computational thinking (concepts, practices, and perspectives). Teachers might design assessment/learning tasks in such a way that success in the task requires particular concepts, practices, perspectives and capabilities. If students are assessed as succeeding in these tasks, then this would provide evidence that students have mastered the pre-requisite concepts, practices, dispositions and general capabilities. If students are not successful in the task, then nothing can be inferred about the students having acquired the pre-requisite concepts, practices, dispositions and capabilities. They may have acquired some and not others. To determine this, teachers may test the concepts, practices, perspectives and general capabilities directly and individually. An alternative approach would be to design a new learning as assessment task, perhaps consisting of a series of sub-tasks, to be sequenced from the simple to the more complex, as informed by the levels of the [SOLO](#) or [Bloom's taxonomy](#) (Anderson, 2001; Biggs & Collis, 1982). These taxonomies can be used to assess where a student is at and where the student might go next.

It is preferable for students to learn computational thinking holistically by performing tasks that involve computational thinking and associated concepts, practices, perspectives and capabilities. This is because such learning is likely to have more significance to the students, (helping to make the learning more meaningful and important to students) and it is easier for students to understand the relationships between concepts as an example.

Assessment models

The Structure of the Observed Learning Outcome (SOLO) taxonomy, (Biggs, 1995; Biggs & Collis, 1991 & 1882) provides a systematic way of describing how a learner's performance grows in complexity when mastering varied tasks. The SOLO taxonomy postulates five levels of increasing complexity in growth or development of concepts or skills:

Prestructural	The task is engaged, but the learner is distracted or misled by an irrelevant aspect belonging to a previous stage or mode
Unistructural	The learner focuses on the relevant domain and picks up one aspect to work with
Multistructural	The learner picks up more and more relevant and correct features, but does not integrate them
Relational	The learner now integrates the parts with each other, so that the whole has a coherent structure and meaning

Extended abstract The learner now **generalises** the structures to **take in new** and more abstract features, representing **a new and higher mode of operation** (Biggs & Collis, 1991, p. 65).

Implicit in the SOLO model is a set of criteria for evaluating the quality of a response to (or outcome of) a task. The quality (or richness or complexity) of a response to a complex task varies with the **relevance** of the considerations brought to bear on the task, the range or **plurality** of those considerations, and the extent to which these considerations are **integrated** into a whole, and **extended** into broader contexts to create something new.

An alternative taxonomy or framework to SOLO was developed by Benjamin Bloom and colleagues in 1956 (Bloom & Krathwohl, 1956). Bloom's original taxonomy was organised around six broad Levels: Knowledge; Comprehension; Application; Analysis; Synthesis and Evaluation. Bloom's revised taxonomy is also organised around six levels: Remember; Understand; Apply; Analyse; Evaluate and Create (Anderson, 2001).

The SOLO framework can be used to assess the quality of a performance in a task involving computational thinking. It can be used to assess the quality of an individual performance, the performance of a group working collaboratively on a task, and the contribution of an individual to a group performance. SOLO can be used to design learning and assessment tasks and sequencing of learning tasks from simpler to more complex. Most crucially, SOLO can be used to document a learning journey – identifying where

a learner has been, where they are now, and where they might go next, as the examples below illustrate.

Examples of learning/assessment task design

We now consider a number of task designs to cultivate and assess computational thinking.

TangibleK

[Bers](#) (2010) notes that robotics provides opportunities for young children to learn about mechanics, sensors, motors, programming, and the digital domain. The approach invites young children to build their own robotic projects, such as cars that follow a light, or puppets that can play music (Bers, 2010, pp.1-2). [TangibleK](#) involves children making robotic artefacts and programming their behaviours.



Children are required to keep design journals while creating robots. This helps make visible to the children, their teachers and parents their own thinking and their learning over time (Bers, 2010, p. 6). TangibleK consists of seven sessions.

1. What Is a Robot? After an introduction to robotics by looking at different robots and talking about the functions they serve, children build their own robotic vehicles and explore the parts and instructions they can use to program them.
2. Sturdy building: Children build a nonrobotic vehicle to take small toy people from home to school. The vehicle needs to be sturdy and able to perform its intended functions. Design journals: Children will use the design journals to learn the engineering design process.
3. The Hokey-Pokey: Choose the appropriate commands and put them in order to program a robot to dance the Hokey-Pokey.
4. Again and Again until I Say When: Students use a pair of loop blocks ('repeat'/'end repeat') to make the robot go forward again and again, infinitely, and then just the right number of times to arrive at a fixed location.
5. Through the Tunnel: Children use light sensors and commands to program a robot to turn its lights on when its surroundings are dark and vice versa.
6. The Robot Decides: Students program their robots to travel to one of two destinations based on light or touch sensor information.

7. The Final Project: students design a robotic city, a zoo with moving animals, a dinosaur park, a circus, and a garden with robotic flowers responsive to different sensors. These projects all incorporated use of inexpensive recyclable materials. These final projects are shared in an open house for the wider community.

These sessions can be sequenced in increasing complexity in terms of the SOLO taxonomy (though Bers did not). They are, metaphorically, **low floor – high ceiling**: starting with simpler tasks and moving to more complex (and session 7 has **wide walls** – allowing a wide variety of activities) (Papert, 1980). Session 2 requires performance at a unistructural level – making a non-robotic vehicle. Session 3 and 4 requires performance at least at a multistructural level – programming a robot to dance and move forward repeatedly. Sessions 5 and 6 requires performance at a relational level – programming a robot to respond to its environment. Session 7 provides the opportunity for performance at an extended abstract level – extending what they have learned in Session 1-6.

Each session focuses on a key computational thinking concept: Session 3 sequences; Session 4 loops; Session 5 conditionals; Session 6 events.

Sessions 2-7 involve students being incremental and iterative; sessions 3-7 involve students testing and potentially de-bugging, as well as abstracting and modularizing. Session 7 would involve re-using and re-mixing.

Session 3-7 in particular would require systematic thinking; sessions 5-7 critical thinking (understanding conditionals). Each session involves some level of holistic thinking and creativity (in the sense of making something).

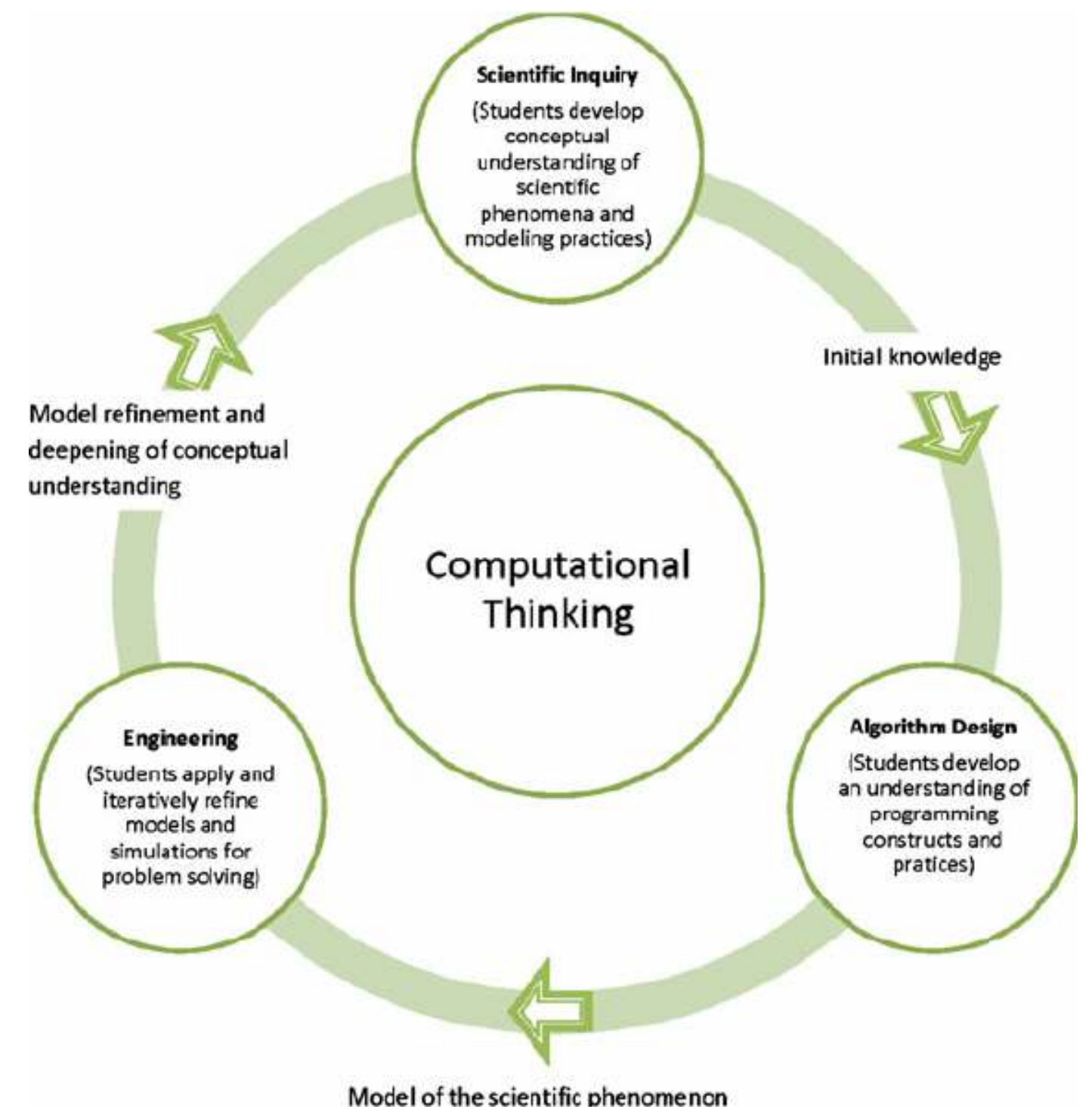
Each session involves the three perspectives of

- expressing – creating content
- connecting – communicating, community building and caring are at the heart of TangibleK and
- questioning – students make choices and ask ‘what if?’

These tasks can be assessment tasks as well as learning tasks since success in these tasks is sufficient evidence for the student having acquired the concepts, practices, perspectives and capabilities to a level necessary for that success.

Multi-agent based modelling

[Sengupta, Kinnebrew, Basu, Biswas, and Clark \(2013\)](#) describe a unit of work that can be used to cultivate and assess computational thinking. The task involves modelling an ecosystem using [NetLogo](#).



[CTSiM pedagogical framework for integrating computational thinking with K12 science](#)

The task involves designing a simulation of a closed fish tank system consisting of fish, duckweed, Nitrosomonas bacteria and Nitrobacter bacteria. It involves designing a model of the entities and processes involved in the phenomenon using an agent-based, visual programming platform. A possible sequence of tasks could be:

1. Students begin with programming the behaviour of **single agents** in the ecosystem [Unistructural]
2. Students gradually develop more complex programs for modelling the behaviour of **multiple species** within the ecosystem [Multistructural]
3. Students gradually develop more complex programs for modelling the **interactions** between multiple species within the ecosystem [Relational] (Sengupta et al., 2013, p. 363)
4. Students compare their model to an expert model of the phenomenon and adjust their model accordingly using data [Extended Abstract]
5. Students program new agents – for example, water snails – and re-test models [Extended Abstract]
6. Students may apply the developed model and the learned science concepts in a new context [Extended Abstract].

In terms of learning programming, according to Sengupta (2013) these modelling activities introduce students to fundamental programming constructs:

- conditionals (needs-based interactions between agents)
- loops (for repetitions of an action)
- code re-use and encapsulation (Sengupta et al., 2013, p. 369) [Reusing and modularising in Brennan and Resnick's terminology].

In addition to these, the modelling activities would introduce students to concepts discussed by Brennan and Resnick, namely: events; parallelism; operators; data.

The activity would clearly provide opportunities for students to enact the four practices identified by Brennan and Resnick, namely,

- being incremental and iterative
- testing and debugging, (particularly in step 4)
- reusing and remixing, (particularly in steps 4-6) and
- abstracting and modularizing (particularly in steps 4-6).

The task requires each of the general capabilities constitutive of computational thinking:

- systematic thinking
- holistic thinking – particularly in steps 3,4,5 and 6
- critical thinking
- creative thinking (in both senses we identified).

Seeding success in these tasks demands pedagogy that satisfies the three dimensions of the [NSW Quality Teaching Model](#)

- intellectual quality – pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas
- quality learning environment – pedagogy that creates classrooms where students and teachers work productively in an environment focused on learning
- significance – pedagogy that helps make learning meaningful and important to students. (NSW Department of Education and Training, 2003).

The guided design processes in these tasks is analogous to a guided inquiry process ([Kuhlthau, 2010](#)). Both are planned, targeted, supervised interventions, grounded in the constructivist approach. Both can be designed and assessed using the SOLO framework.

Conclusions

In this paper we have examined the question of what computational thinking is and how it might be assessed. We suggested that the SOLO taxonomy could be used as a framework for evaluating the quality of performances in tasks involving computational thinking, and at the same time, the requisite computational concepts, practices, perspectives and capabilities. The SOLO framework can be used to indicate how students might build on their performance (for example, how they might relate and extend their ideas). Teachers can use the framework to ensure that assessment and learning tasks have a low floor but a high ceiling.

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Share this

National Simultaneous Storytime

This year, National Simultaneous Storytime takes place on Wednesday 24 May at 11am (AEST). Join in by sharing *The Cow Tripped Over the Moon* written by Tony Wilson and illustrated by Laura Wood.

Visit [ALIA](#) for details.



Art Gallery NSW – education

Are you visiting the Art Gallery NSW or searching for online resources to enhance your creative arts program? The Gallery's [education site](#) has developed a dynamic collection of [learning resources](#) for the classroom.

Future ready teacher librarians



[Changing the conversation about librarians](#)
| Mark Ray | TEDxElCajonSalon

Meris Stansbury's 2016 article, '[Are librarians the key to a future ready school?](#)' in *eSchool News* will interest teacher librarians grappling with innovative strategies and practices. It features the TEDx video, '[Changing the conversation about librarians](#)'.

ASLA 2017 conference – in Sydney

The national association, ASLA, is holding its biennial conference at Shore School, North Sydney on 13 – 14 July, 2017. The theme is Challenge to Change – check out the [website](#) for more information.

**Challenge
to
Change**



The Libraries for future learners conference will become a biennial event for teacher librarians and library staff. The next conference will be held in Sydney in 2018. You may like to consider attending the ASLA conference in 2017.

resource reviews

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Resource reviews are provided for teachers to support their teaching and learning programs.

The views expressed by reviewers are their own and should not be considered as an endorsement of the material by the NSW Department of Education (NSW DoE).

Reviews are sometimes accompanied by embedded video or multimedia content, book trailers, or links to other sources. Publication of such does not imply endorsement by the NSW Government, the department or 'Scan'. Since many of these videos are sourced from YouTube, teachers in NSW DoE schools should note that these resources are accessible only by staff.

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Resources are reviewed by teacher librarians, teachers and consultants

across NSW. See [Who reviews?](#) for more information.

Access to reviews and resources

The searchable [database of resource reviews](#) includes those published in 'Scan' and more!

Use 'Scan' to select resources for learning, teaching and leisure. For example, use the barcodes of eresources to scan your selections into a SCIS order or go to the SCIS **Special order files** for the 'Scan' Primary, Secondary and Professional website compilations. NSW DoE users can ensure ready access for teachers and students to the range of online resources through **Library**, in their portal.

Classification given in 'Scan' for nonfiction material is the 14th Abridged Dewey, although when ordering SCIS cataloguing records, the 23rd may be specified.

KLA and **USER LEVEL** should only be used as a guide, as many resources transcend age and subject barriers.

USER LEVELS ARE GIVEN IN STAGES AS FOLLOWS:

Early Stage 1	preschool/Kindergarten/early childhood
Stage 1	Years 1-2
Stage 2	Years 3-4
Stage 3	Years 5-6
Stage 4	Years 7-8
Stage 5	Years 9-10
Stage 6	Years 11-12
Community	for community/parent/adult
Professional	for teachers

KEY LEARNING AREA (KLA) ABBREVIATIONS USED:

CA	creative arts
English	English
HSIE	human society and its environment
Languages	languages
Mathematics	mathematics
PDHPE	personal development, health and physical education
Science	science
SciTech	science and technology
TAS	technology and applied studies

AND

VET	vocational education and training
CEC	content endorsed course

Abstract - indicates a resource is described rather than evaluated





A Child of Books

English

Stage 5. Years 9-10

Using quality literature springboard

A Child of Books

JEFFERS, Oliver and WINSTON, Sam
Walker Books, UK, 2016
ISBN 9781406358315



USER LEVEL: Stage 5
KLA: English
SYLLABUS: English K-10
SCIS 1770894 \$27.99

Related texts:

- The Day the Crayons Quit by Drew Daywalt and Oliver Jeffers
- [Dictionary Story Book](#)

Resources:

- [‘A Child of Books’ teachers’ guide](#), Candlewick Press
- [Oliver Jeffers & Sam Winston discuss ‘A Child of Books’ part 1](#), Candlewick Press [video]
- [Oliver Jeffers & Sam Winston discuss ‘A Child of Books’ part 2](#), Candlewick Press [video]
- [Oliver Jeffers and Sam Winston’s ‘A Child of Books’ cover reveal and interview](#), The Guardian, 31 March 2016

Learning and teaching activities in this springboard are centred on outcomes and content from the [NSW English K-10 Syllabus](#) and the [English Textual Concepts resource](#).

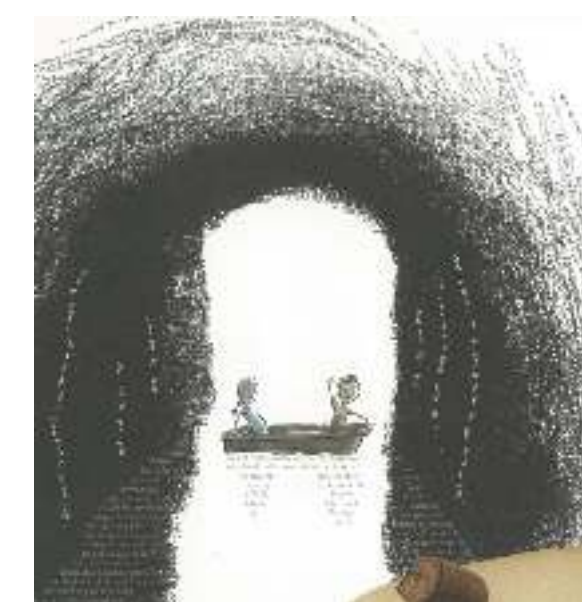
What is it about?

‘A Child of Books’ is a unique picture book experience; a collaborative creation between Oliver Jeffers (well known for his picture books, including ‘The Day the Crayons Quit’ and ‘Once Upon an Alphabet’) and Sam Winston (best known for his typography and ‘A Dictionary Story’). The story revolves around two children, one of whom is timid, the other adventurous and a lover of books and the imagination. She introduces herself in the opening pages, ‘I am a child of BOOKS. I come from a WORLD of stories / and upon my IMAGINation I float.’ She asks the boy to join her and subsequently shows him the way into many different genres, including lullabies, fairy tales and adventure classics. There are over forty intertextual references in total. The imagery uses lines of text from these classics to create seas and mountains, forests and the night sky. At each stage, the characters share experiences and insight into the world through the imagination until the boy is ready to move through the world of literature alone.

This text is appropriate for teaching students about **Intertextuality, Connotation, Imagery and Symbol**, and **Theme**. It could also be used to teach many of the other concepts such as Literary value, Character, Narrative, Style, Perspective and Point of view. It can be used to address cross curricular priorities and capabilities including Critical and creative thinking, and Literacy. K. Hodkinson

Why is this important? Why does it matter?

‘A Child of Books’ is a book which can be read at many levels. It provides an opportunity to discuss and explore the use of **Intertextuality** and the ways that our own knowledge and social and cultural upbringing influence our readings. The use of canonical texts invites discussion regarding the value of these books and the influences they have on our formation in our youth. The interviews with the creators (see [Resources](#)) clearly show the power of books and the importance Jeffers and Winston place on imagination. These interviews could be used in conjunction with the book to understand **themes** and explore the techniques used to develop them through both plot and imagery. **Connotation, Imagery and Symbol** can be explored on every page with intertextual references appearing in both words and images symbolically. For example, the written text, ‘Discover treasure in the darkness’, is accompanied by a cave formed by words from ‘Kidnapped’ and ‘Treasure Island’. Some text is clear to read, while other words blend together to create the form of the cave and the darkness which contrasts strongly and symbolically with the children in the light. The colour symbolism throughout the book is also worth considering, especially the changing strength of the colour blue in relation to the protagonist. This picture book also provides the opportunity to explore collaborative works and have students experiment with their own works in a collaboration with peers.





A Child of Books (continued)

Using quality literature springboard

English
Stage 5. Years 9-10

How do I use the text to teach the textual concepts of Intertextuality, Connotation, Imagery and Symbol, and Theme?

Intertextuality and Connotation, Imagery and Symbol activity:

Intertextual reference	How was it recognised?	How do you know this text? (Read it, seen the film, heard of it, don't know it etc.)
Robinson Crusoe	Bold italics in the sea image	Seen the film
Rapunzel	Image of the children climbing down the side of the tower and the text about long hair	Read the story

As an introductory activity, ask students to find as many intertextual references as they can in the language, words and visuals. Identify how they knew they were from another text and then how well they know each text. Discuss the purpose of intertextuality and the ways it can influence our responses to texts. Ask students if they noticed any patterns in the way that texts have been included. The ideas on the pages are reflective of the genre of classics that have been used in the lines of text used to create the images. For instance, the 'we can lose ourselves in forests of fairy tales' page includes 'Snow White and Rose Red', 'Beauty and the Beast', 'Tom Thumb', 'The Golden Goose', and 'Hansel and Gretel'. The written text forms the branches of the trees, while the trunks are photos of the side of ageing books. Ask students to choose 5 of the intertextual texts they know well and evaluate the way they have been incorporated by answering the following questions about each.



1. How and where is the intertextual reference incorporated?
2. How does it relate to the overall story and the specific instance(s) in the plot where it has been used?
3. Does it augment meaning in this text? If yes, how so? If no, why don't you think so?
4. Is the interpretation of this text influenced by the cultural perspective of the classic?

Students write an exposition on the value of **Intertextuality** in 'A Child of Books' using their analysis as the basis of their argument (**understanding, engaging personally, connecting** and **engaging critically**).

EN5-1A

- analyse and explain the use of symbols, icons and myth in still and moving images and how these augment meaning (ACELA1560)

EN5-3B

- compose and respond to a wide range of visual texts, e.g. picture books, graphic novels and films, using a range of appropriate techniques and metalanguage
- analyse and explain how text structures, language features and visual features of texts and the context in which texts are experienced may influence audience response (ACELT1641)

EN5-6C

- analyse and evaluate text structures and language features of literary texts and make relevant thematic and intertextual connections with other texts (ACELT1772, ACELT1774)

EN5-8D

- analyse how the construction and interpretation of texts, including media texts, can be influenced by cultural perspectives and other texts (ACELY1739).

Exploring the themes:

The Candlewick Press YouTube clips (see [Resources](#)) show aspects of the collaborative partnership between the text's two creators and their purpose and inspiration for 'A Child of Books'. Watch the opening 10 seconds of the second video (part 2) and pause to ask students to answer the question that initially stumps Sam Winston: '3 words to describe the book... 1,2,3, go'. Share and discuss student responses and then watch the end of the clip and discuss what they found out about the book's authors as well as their intent in creating the book. Oliver Jeffers describes the book as an 'ode to literature' and Sam Winston describes it as a 'world of words'. Does this suggest some themes to students? Can they see similarities and differences in the two creators' thinking and creation processes? Explain that an author's world view can help us to uncover the theme of a work. Determine, as a class, the possible themes of the book, based on the interview and students' reading of the book. For example, 'stories have the ability to transform lives', 'we all need an overarching narrative', 'classic books help your imagination flourish', 'storytelling is a huge part of our identity' etc. Split students into groups to explore the book for evidence on a given theme. Ask students to consider the characterisation; plot line; intertextual references; connotations, imagery and symbols; tone; and point of view used in the book, and how they support or negate the given theme. Based



A Child of Books (continued)

English

Stage 5. Years 9-10

Using quality literature springboard

on their analysis, groups design a short argument to present to the class as to whether this theme should be considered as a major or minor theme in the work or if the theme is not evident or needs reconsidering (**understanding, engaging personally** and **engaging critically**).

EN5-1A

- explore and explain the combinations of language and visual choices that authors make to present information, opinions and perspectives in different texts (ACELY1745)
- present an argument about a literary text based on initial impressions and subsequent analysis of the whole text (ACELT1771)

EN5-7D

- analyse the ways in which creative and imaginative texts can explore human experience, universal themes and social contexts.

Page analysis activity focusing on Connotation, Imagery and Symbol:

Explain to students the key ideas from this concept. Discuss notions of audience and purpose for this text. Who is the intended audience? Is there more than one age bracket here? Both adults and children can appreciate this book at different levels and we need to consider this in our reading. Consider the page with the colourful images flying around the world. How does this page appeal to both a child and an adult audience? What is the purpose of the page if we consider it from the perspective of the different intended audiences? Ask students to choose 2 or 3 of the images and write a paragraph explaining what each image symbolises to them, both in terms of the text they represent and what that text means to them personally, socially and or culturally. For example:

The image of the frog wearing a crown, with 'a kiss!' written around it, symbolises the fairy tale 'The Frog Prince'. This makes me personally think about love and kindness and how people can be transformed. It links to my cultural heritage of fairy tales being told to young children and my social world of promoting understanding and ridiculing selfishness and self-centred behaviour. This highlights one of the ideas of 'A Child of Books' in that books and the imagination can help make the world a better place.

Ask students to find other students who chose the same symbols and compare their answers to see how their own knowledge and personal perspectives may shape meaning in different ways. Then as a class, consider the page as a whole and the story text. What are the different interpretations of meaning we can create from the line, 'For this is our world... we've made from stories...'? Which interpretations are supported by the symbols, and intertextual references made? Next ask students to create/find a symbol, using technology, to represent a text of their own choosing – one that they believe deserves to be added to this image. Students should then decide on a line from the text to accompany their image and write a reflection about their choice, what it adds, and why they value

this text. If possible, merge all the students' work into one image representing the class to share with students or display in your room. Ask students to decide what the compilation of images suggests about the class, their upbringing and cultural context. Do they think it is an accurate depiction or is it surprising in some way (**connecting, experimenting, understanding** and **reflecting**)?

EN5-1A

- appreciate, explain and respond to the aesthetic qualities and the power of language in an increasingly sophisticated range of texts
- analyse and explain the use of symbols, icons and myth in still and moving images and how these augment meaning (ACELA1560)

EN5-2A

- use a range of software, including word processing programs, confidently, flexibly and imaginatively to create, edit and publish texts, considering the identified purpose and the characteristics of the user (ACELY2748, ACELY2776)

EN5-5C

- respond to and compose texts that use inference and figurative language, e.g. symbolism and allusion, in complex and subtle ways
- respond to and compose texts that use inference and figurative language, e.g. symbolism and allusion, in complex and subtle ways

EN5-6C

- analyse and evaluate text structures and language features of literary texts and make relevant thematic and intertextual connections with other texts (ACELT1772, ACELT1774)

EN5-9E

- choose effective learning processes, resources and technologies appropriate for particular tasks and situations.





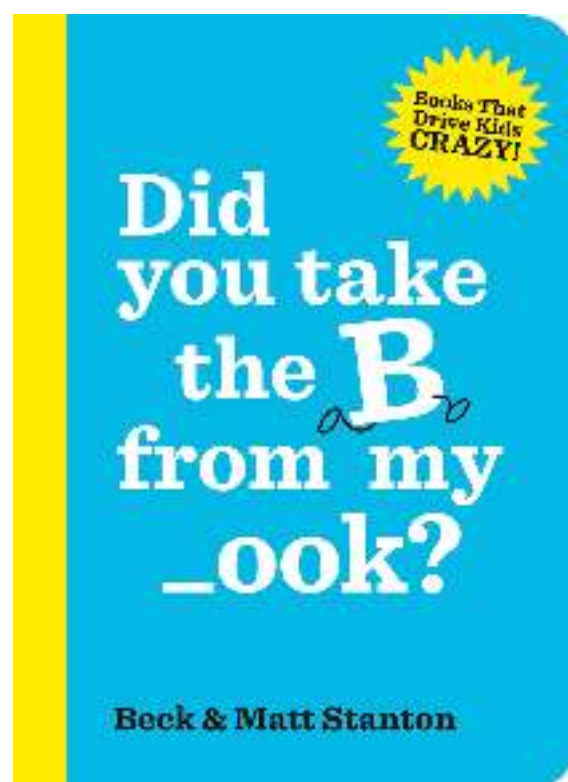
Did You Take the B from My _ook?

English

Using quality literature springboard Early Stage 1. Kindergarten

Did You Take the B from My _ook?

STANTON, Beck and STANTON, Matt
ABC Books, NSW, 2016
ISBN 9780733334832



USER LEVEL: Early Stage 1
KLA: English
SYLLABUS: English K-10
SCIS 1762644 \$19.99

Related texts:

- This is a Ball by Beck Stanton and Matt Stanton

Resources:

- 'Did You Take the B from My _ook?' teaching notes Harper Collins

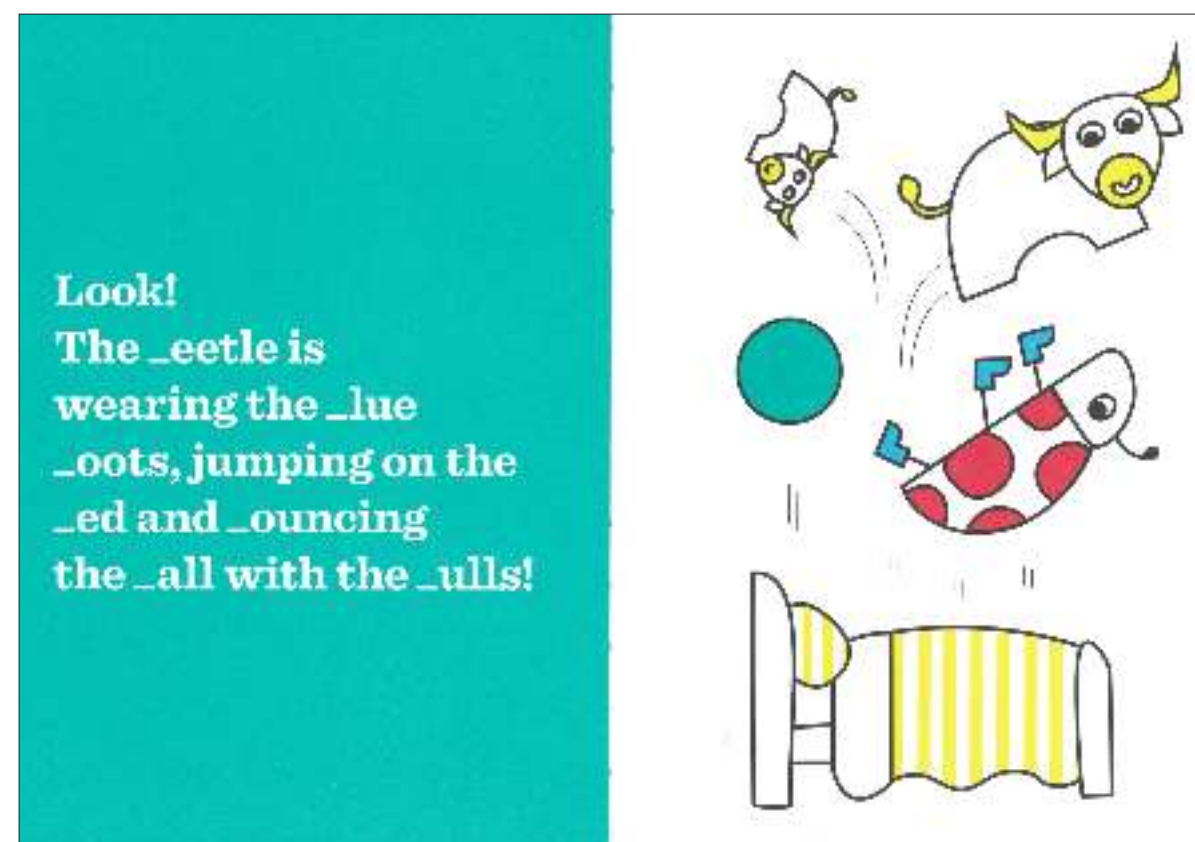
Learning and teaching activities in this springboard are centred on outcomes and content from the [NSW English K-10 Syllabus](#) and the [English Textual Concepts resource](#).

What is it about?

'Did You Take the B from My _ook?' is an original story based on the narrator losing the letter B after a sneeze. The narrator repeatedly tries to say words beginning with the letter B but cannot make the sound, causing all the words to sound funny. Children are invited into the story through frequent questioning and beautiful clear images which support their imagination and understanding of the meaning of words like '_ull', and '_eetle' in the story. This is Beck and Matt Stanton's second book in their series 'Books that drive kids CRAZY!' and adopts a similar style and feel to 'This is a Ball'. Children will once again yell out responses and corrections as you read the book and they lose themselves in the silliness of this story. K. Hodkinson

Why is this important? Why does it matter?

The simple premise of the letter B being lost during a sneeze makes it a perfect story to accompany the learning of letters and sounds. Many spelling, reading and writing activities could be based on this text and students can learn about these **Codes and Conventions**. The book offers the opportunity to explore the concept of **Connotation, Imagery and Symbol** through the use of the underlined space (_) and the imagination to create humour. Students are supported to see that the _ symbolises the missing letter by the pairing of the images on each page. This further adds humour to the story as students clearly know what the words should sound like, even if they do not know how to spell or read them yet. You could ask students to look for other ways of using black lines to symbolise things, such as the underlining of words like 'whole world' to show importance and to prompt emphasis when reading aloud. Black lines are also used to indicate movement in some of the images, such as when the large letter B is running away or when the '_eetle' is jumping on the '_ed'. Students will identify the characters in the story as the beetle, the bull, the butterfly and maybe even the letter B itself due to the visuals. We can extend this understanding by introducing the concept of **Point of View** with discussion about the creation of characters in stories through the voice of the story coming from the narrator and how the students become part of the story, through their answers to the many questions.





Did You Take the B from My _ook? (continued)

English

Using quality literature springboard Early Stage 1. Kindergarten

How do I use the text to teach the textual concepts of Connotation, Imagery and Symbol, Point of View, and Code and Convention?

Book discussion linked to understanding Point of View and Connotation, Imagery and Symbol:

After an initial reading of the picture book with students, discuss what happened in the story and why they thought it was funny. Talk about the sound of the words with the letter B missing and how we realise more and more words start with that letter. Repeat some of the funny lines and ask students to try saying them. For example, 'Here's a pair of _lue _oots'. Talk to students about using our imagination when we read and write stories. Do we really believe we could sneeze and lose a letter? Now ask students who they think are the characters in this book. Look through the images in the book to see if they can find a character. You will only be able to find images linked to the missing letter B from the words. Point out to students that the images help us understand the story and the words with the missing B but they do not show us the main character. Explain to the students that you as the teacher/narrator take on the role of the main character and the students are also characters in this book as they engage in the story. The questions at the end of the page are asked to them: 'Am I saying it wrong?' 'Is it there when you say it?' This makes us feel a part of the story. Ask students to imagine that they have lost the first letter of their name and ask them to introduce themselves to the person beside them. 'Hi, my name is _elly.' Who has the funniest sounding name in the class with the first letter missing? What would be the worst letter to lose (**understanding** and **engaging personally**)?

ES110CTICUA2

- discuss creative language features in imaginative texts that can enhance enjoyment, e.g. illustrations, repetition

ES108BRV2UA5

- identify some features of texts including events and characters and retell events from a text (ACELT1578)

ES110CTICDA2

- engage with and appreciate the imaginative use of language through storytelling.

Add the letter b	Draw a picture to match the word
B <u>all</u>	 <u>Beachball</u> by Openclipart
_ull	
_utterfly	
_eetle	
_ed	
_lue _oots	

Code and Convention linked to Connotation, Imagery and Symbol activity:

Ask students to look at the pages of the book and identify the symbol used to indicate that a letter is missing. Throughout the book, an underlined space (_) is used to identify where the B should be in a word. The picture helps us know what the word should be although we say it differently. Provide students with a list of the words in the book which are missing the letter B. Students are asked to say the words without the letter and then write in the letter B, say the word aloud and draw a picture to go with it. Repeat this activity with another letter that you have been learning about in class or brainstorm a list of words with students that all start with a certain letter, write them on the board, have students come and draw a matching image, then erase the initial sound and have students try to say the new words together. Create a quiz for students with 3 images of things that start with the same letter and ask students to work out what letter has gone missing (**understanding**).

Sample quiz cards:

 <u>_at</u> Dark cat by Ossidiana	 <u>_ar</u> Beetle (car) by Chrisdesign	 <u>_ard</u> White deck: 2 of diamonds by Nicubunu	 <u>_og</u> Dog by Gerald_G	 <u>_onut</u> Pink donut by PinkJellyfish	 <u>_uck</u> Badeendji by Klàro
The missing letter is _			The missing letter is _		

ES104ARVIDAPK2

- understand that spoken words are made up of sounds

ES104ARVIDAPK4

- consistently identify words that start with the same initial sound

ES104ARVIDAPK6

- identify the beginning and end sounds of words

ES104ARVIDAPK8

- segment simple spoken words into separate sounds

ES104ARVIDAPK9

- identify the new word when asked to delete or add a phoneme (sound) to an existing spoken word

ES104ARVIDACK1

- identify some familiar written symbols in context, e.g. logos, computer icons and commands, labels of packages, signs.



Did You Take the B from My _ook? (continued)

English

Using quality literature springboard Early Stage 1. Kindergarten

Point of view creative activity:

Tell students we are going to write our own book about a new letter going missing. Decide on the new letter with the students or base it on your current program and brainstorm all the things they can think of that start with that letter. Look at the features of each page with the students. Point out that the left side of the page has the written text and the right side of the page has the image. Remind students to leave a _ for the missing letter when they are writing their part of the story and that the sentence sounds like someone is speaking to us. They can be asked to write the big sentence only, or multiple sentences, depending on student ability. Start by asking students to fold an A4 piece of paper down the middle to make the two-page spread of the book. Students then choose one of the words and create their page, with a sentence on the left and a picture on the right. When students have completed their page, they need to read it to the teacher or another adult support person and explain what they have written and why. Collate the pages into a story book format and add in the initial story line and ending to make it similar in format to 'Did You Take the B from My _ook?' Read the book with the class and share it electronically or on a borrowing basis for students to share with their families and other kindergarten classes (**connecting, experimenting and reflecting**).

ES11OCTICRC1

- use imagination to represent aspects of an experience using written text, drawings and other visual media

ES102AWR1RC4

- compose texts on familiar topics using pictures and graphics to support their choice of words

ES107BWR2RC3

- reread own texts with peers and known adults and explain the purpose for the writing.

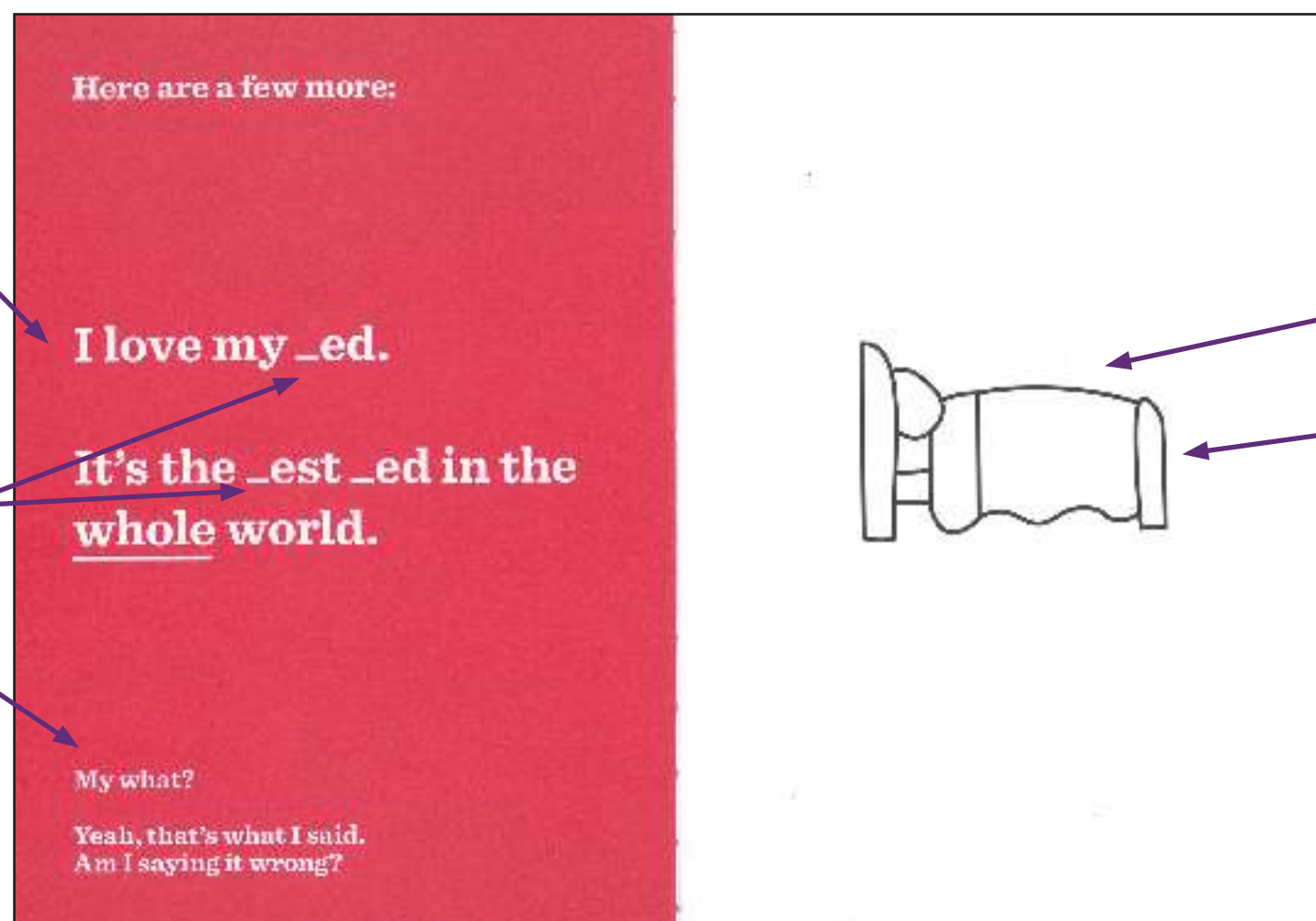
Sample text explanation for students:

Left page

The sentences give an example of a word with the missing letter and why it is important

_ shows where the missing letter should be

Little writing talks to the audience about the problem



Right page

Picture in the centre

Picture of the word starting with the missing letter



My Two Blankets



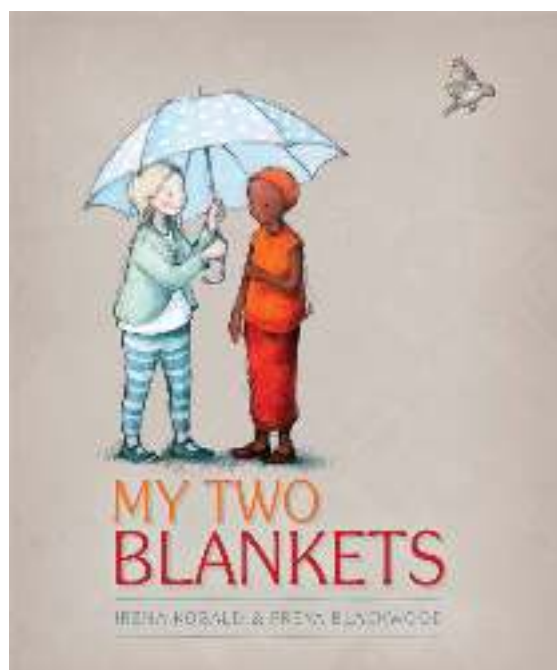
English

Stage 2. Years 3-4

Using quality literature springboard

My Two Blankets

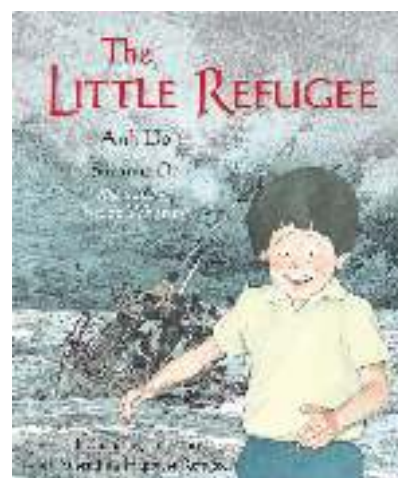
KOBALD, Irena and BLACKWOOD, Freya
Little Hare, Vic, 2014
ISBN 9781921714764



USER LEVEL: Stage 2
KLA: English
SYLLABUS: English K-10
SCIS 1641848 \$24.99

Related texts:

- The Little Refugee by Anh Do, Suzanne Do and Bruce Whatley



- A Piece of Home by Jeri Watts and Hyewon Yum



Learning and teaching activities in this springboard are centred on outcomes and content from the [NSW English K-10 Syllabus](#) and the [English Textual Concepts resource](#).

What is it about?

'My Two Blankets' tells the story of a young girl who is trying to transition between her old and new world. Cartwheel, as her auntie used to call her, has immigrated to a new country and her blanket is a metaphor for the culture she knows and feels safe in. Cartwheel then creates a new blanket with what she learns about her new culture, as she starts to feel more comfortable in her new world. This is a beautiful story exploring the need to belong and the power of language. M. Najdovska and K. Hodkinson

Why is this important? Why does it matter?

This story is told through the **Point of View** of the main character, Cartwheel. The use of personal pronouns enables the reader to connect with and relate to the protagonist. The first person narration provides opportunities for the reader to explore and make inferences about her motives, actions and feelings in more depth. Students could interpret the meaning of the story through the eyes of different characters and could adapt the story through different points of view to demonstrate an in-depth understanding of the text.

The written and visual text invite exploration of **Connotation, Imagery and Symbol**. Colour is used symbolically throughout the text, depicting Cartwheel's old life in rich red tones and her new life in pale and cool watercolours. Figurative language is subtle and used elegantly to describe the new language and sounds Cartwheel hears in her new country as 'a waterfall of strange sounds'. Both the words and images provide layers of meaning, allowing the reader to extend their understandings beyond the literal meaning of the text and providing opportunities to look at the use of metaphors and similes.





My Two Blankets (continued)



English

Stage 2. Years 3-4

Using quality literature springboard

How do I use the text to teach the textual concepts of Point of View and Connotation, Imagery and Symbol?

Understanding and experimenting with Point of View

Focus on the event where the two friends meet at the park for the second time. Have students change this extract from first to third person point of view. Ask students to comment on the effect of this change in point of view by answering the following questions.

- What effect does this change have on the reader?
- Does it change the reader's attitude towards or intimacy with the main character?
- Does third person point of view give the writer more freedom to present scenes from the viewpoint of other characters?
- Students could also choose to retell the same event from the point of view of Auntie or Cartwheel's new friend. What effect does this have on the story (**experimenting** and **engaging critically**)?



EN2-11D

- identify the point of view in a text and suggest alternative points of view (ACELY1675)

EN2-2A

- understand, interpret and experiment with a range of devices and deliberate word play in poetry and other literary texts (ACELT1606)

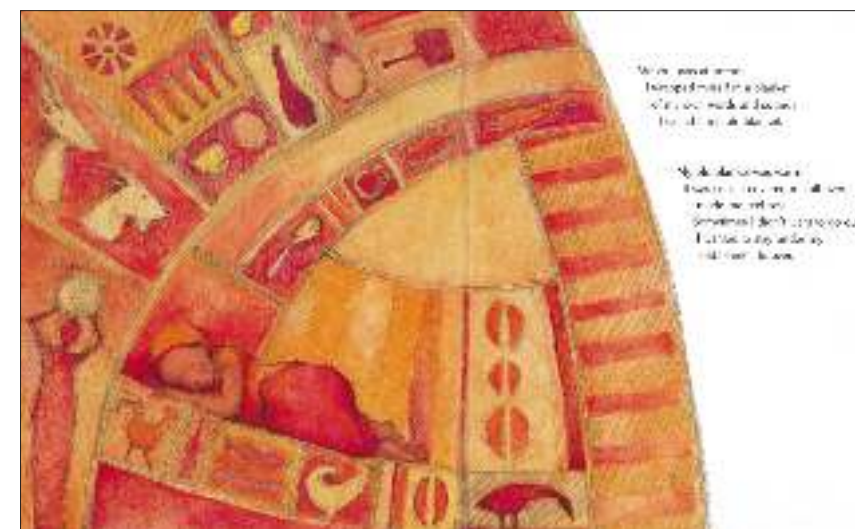
EN2-4A

- use metalanguage to describe the effects of ideas, text structures and language features of literary texts (ACELT1604).

Interpreting figurative language and symbols

Irena Kobald has used the blanket in this story as a metaphor for Cartwheel's familiar life experiences and language. As Cartwheel collects and learns new words, her English language develops and she has two blankets of life experiences and language that she can feel comfortable with. After some discussion about the blanket being a metaphor for familiar life experiences and language, look at other examples of metaphors.

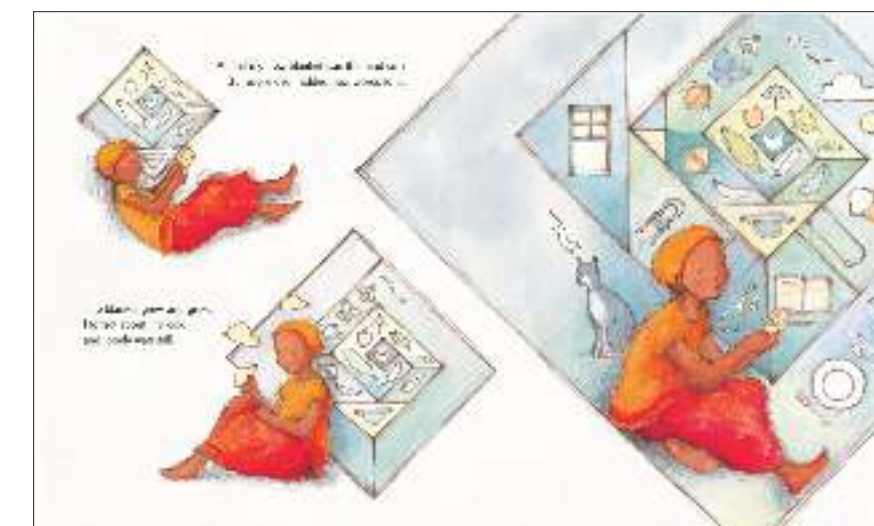
Then as a whole group, extract the literal statements from the text for each blanket. Using the old blanket text and image, jointly create a mind map showing how the literal statements can be interpreted. Together, construct a justification statement about the interpretation, referencing the text, images and colours. Then in pairs, using the new blanket text and image, students create a mind map showing an interpretation of these statements or the inferred meanings. In their justification statement about their interpretation, students should make reference to the meaning of the written text, as well as the meaning of the colours and symbols used in the images (**understanding** and **engaging critically**).



My old blanket was warm.
It was soft. It covered me all over.
It made me feel safe.
Sometimes I didn't want to go out.

Soon they [new words] didn't sound so cold
and sharp any more.
They started to sound warm and soft.

At first my new blanket was thin and small.
But every day I added new words to it.
The blanket grew and grew.
I forgot about the cold
and lonely waterfall.





My Two Blankets (continued)

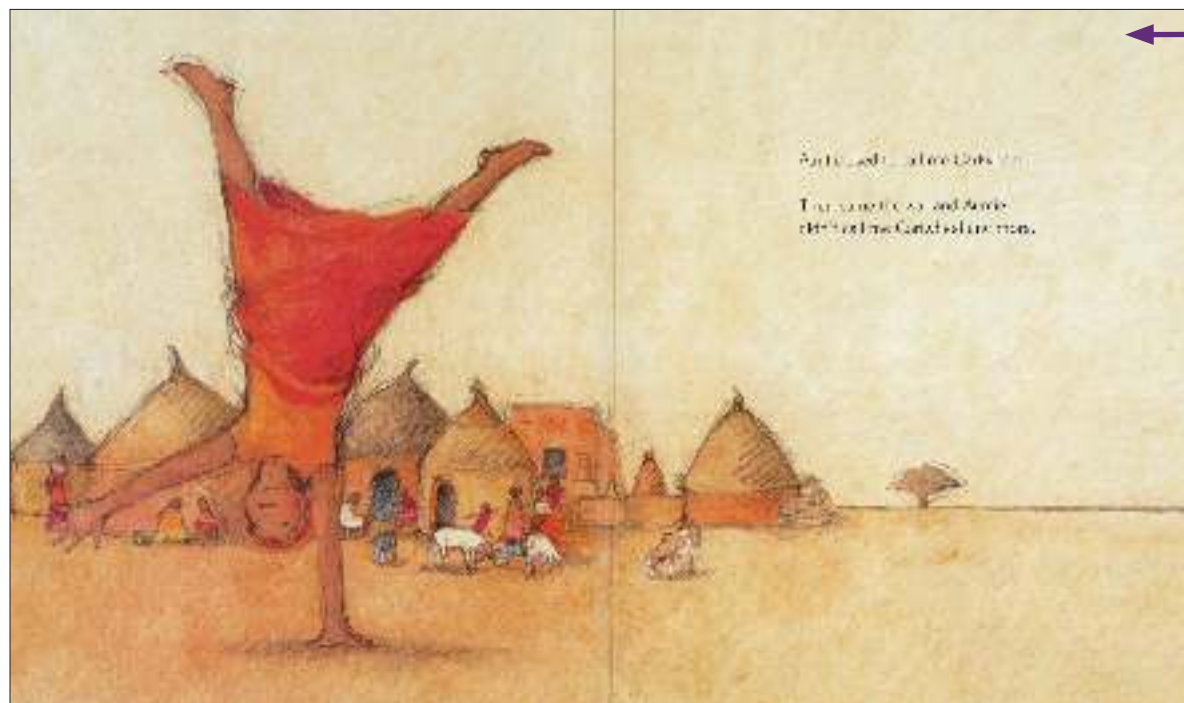


English

Stage 2. Years 3-4

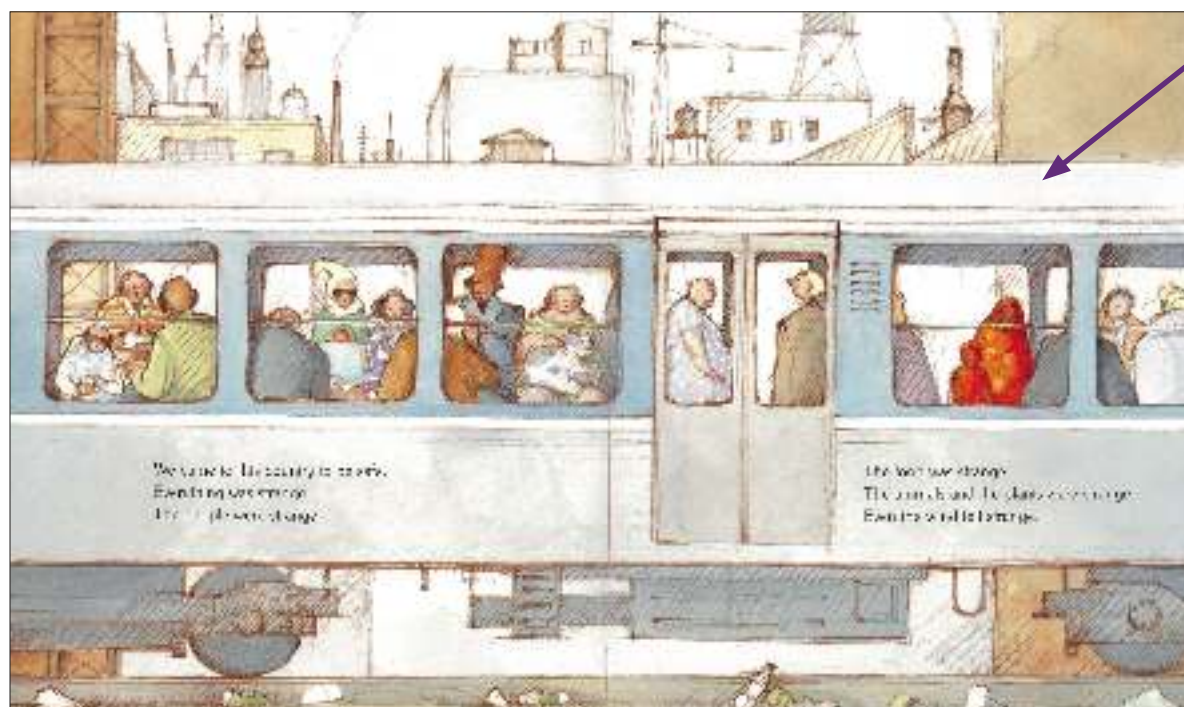
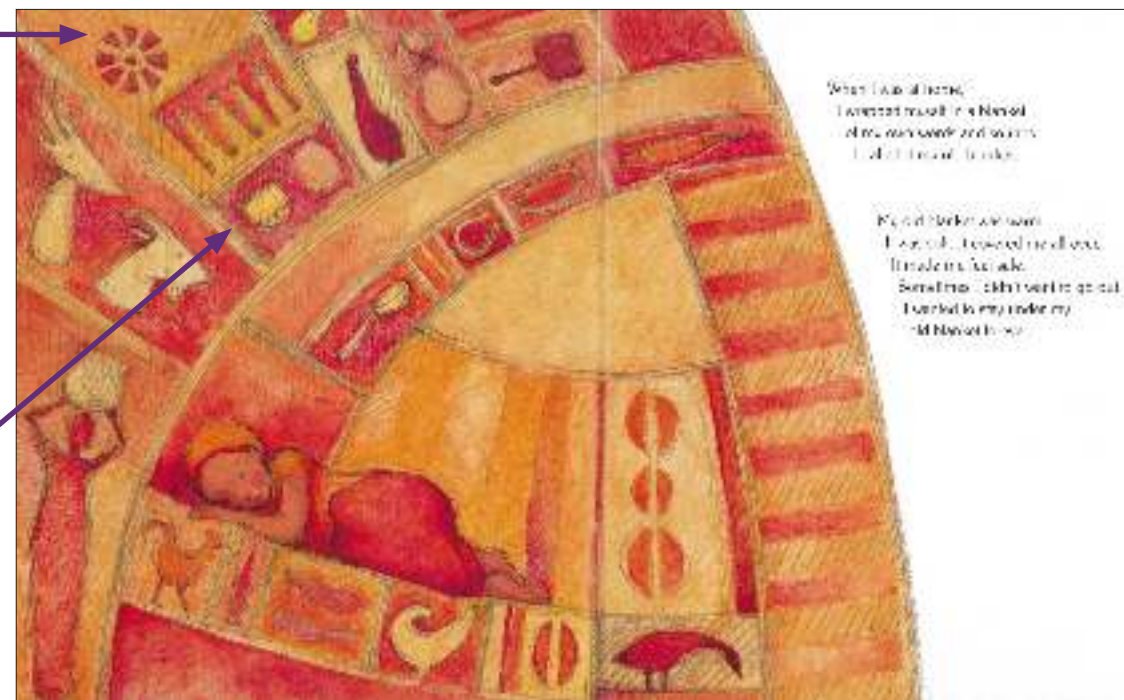
Using quality literature springboard

Sample colour analysis for students:



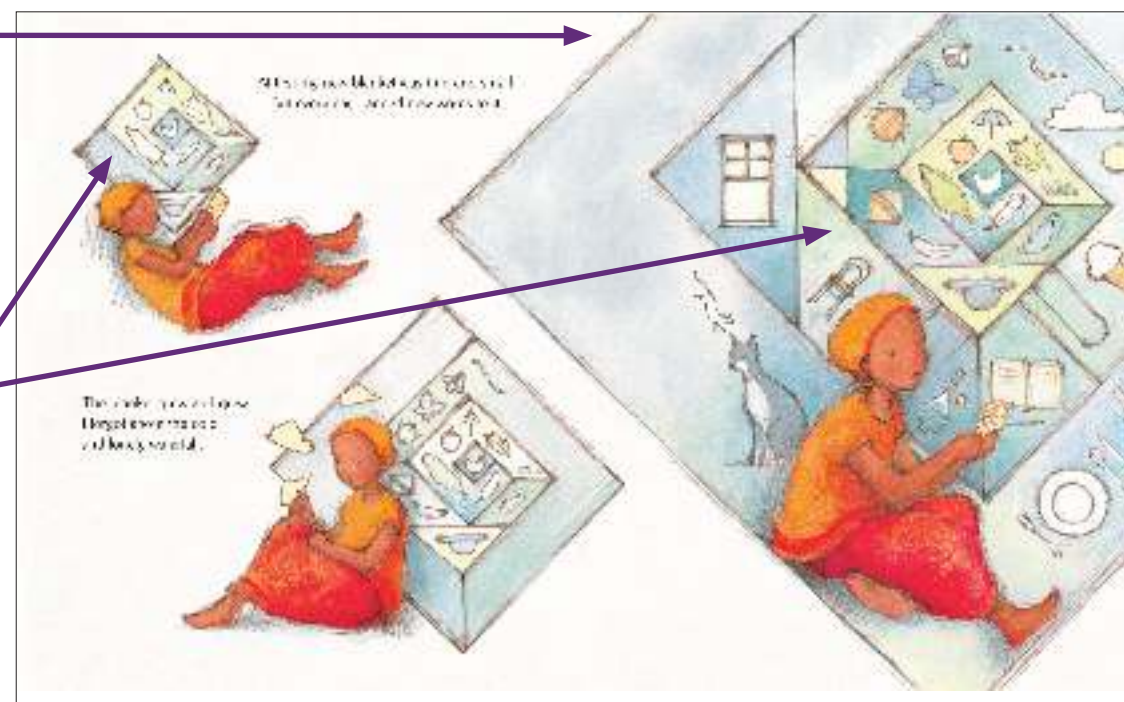
Rich red, orange, brown and gold tones suggest warmth and represent comfort and familiarity

Images of objects on the blanket are drawn with great detail, signifying familiarity



Blue, green, pink and yellow water colours suggest a cool or cold feeling, representing discomfort, loneliness or isolation

Images of objects develop from origami pieces to simple outlines, and then into detailed representations as they become more familiar words



- EN2-8B
- recognise the use of figurative language in texts, e.g. similes, metaphors, idioms and personification, and discuss their effects
- EN2-4A
- interpret text by discussing the differences between literal and inferred meanings
 - use metalanguage to describe the effects of ideas, text structures and language features of literary texts (ACELT1604)
 - justify interpretations of a text, including responses to characters, information and ideas.



My Two Blankets (continued)



English

Stage 2. Years 3-4

Using quality literature springboard

Experimenting with similes and metaphors

Irena Kobald has used the waterfall in this story as a metaphor for the strange, new unfamiliar language that Cartwheel hears. In the example of figurative language pictured, she has used a simile. Similes use 'like' or 'as' to make a comparison and often connect two items which might not otherwise be connected. Authors use similes to create vivid images and spark the reader's imagination. They help the readers to 'see' the scene in their heads.

In this example, writing 'foreign language is like a waterfall' does not provide enough detail. Instead, the author has used a simile within a sentence, creating a vivid image: '... it was **like** standing under a waterfall of strange sounds.' Using the pictured double page spread that refers to the waterfall, have pairs discuss and share their ideas about how the author and illustrator have successfully represented foreign language **to be like** a waterfall.

Then, as a whole group, use the mind map strategy to record one word thoughts, feelings and ideas that come to mind when students think about having to understand a foreign language. You could role play this situation to achieve a more emotive response. Students then individually choose one of these ideas which they would like to develop into a simile or metaphor for the topic. Provide time for students to write a sentence or phrase that transforms the words into a vivid image. Encourage students to experiment with figurative language to provide enough detail to show how the two things being compared are similar.

After some work on identifying and interpreting similes and metaphors, students can start developing their own similes and metaphors and incorporating them when they compose texts. As a class, brainstorm ideas, emotions, objects or topics that the students find interesting or make them experience strong feelings. Then in pairs, students need to choose one topic from the list and, using the mind map strategy, write down one word thoughts, feelings and ideas that come to mind when they think about this topic. Students then individually choose some of the ideas they would like to develop into a simile or metaphor for the topic. Encourage students to write a sentence or phrase that transforms the words into a vivid image. After composing their own similes and metaphors, each pair could combine their efforts to make a short poem about the topic. Similes and metaphors do not have to rhyme. What is important here is to create strong images (**understanding, experimenting and engaging personally**).



When I went out, it was **like** standing under a waterfall of strange sounds. The waterfall was cold. It made me feel alone.

EN2-8B

- discuss the nature and effects of some language devices used to enhance meaning and shape the reader's reaction, (ACELT1600)

EN2-9B

- experiment with figurative language when composing texts to engage an audience, e.g. similes, metaphors, idioms and personification

EN2-10C

- create literary texts that explore students' own experiences and imagining (ACELT1607)
- identify creative language features in imaginative, informative and persuasive texts that contribute to engagement.



How and why is robotic milking changing dairy farming?

Dairy Farming Into the Future



Agriculture. Food Technology.
Stages 5-6. Years 9-12

Curriculum springboard

Outcomes:

Agriculture Stage 6

HSC: Elective 3 – Farming for the 21st Century

Students learn:

- about innovation, ethics and current issues: developments in agricultural technologies
- to evaluate a range of new technological developments that may assist agricultural industries including robotics, eg milking, shearing and machinery
- about managing processes in agricultural systems: adopting a technological development.

For ONE recent technological development, students learn to:

- explain the reasons for the development of the technology
- outline the historical development of the technology
- describe in detail the technological development
- evaluate the impact of the technological development in terms of: economic, environmental, social, legal and managerial factors.

HSC: Farm Product Study – Agricultural Technology

Students learn:

- about the impact scientific research and associated technology has had on agricultural production
- to outline the importance of ongoing research related to agricultural industries
- to describe recent technologies and their impact on agricultural production/marketing.

Preliminary: Animal Production – Technology

Students learn:

- about the use of technologies in producing animal products within animal welfare guidelines
- to research and describe a current technology in animal production or marketing.

[Agriculture Stage 6 Syllabus](#)

Food Technology Stage 6

HSC – The Australian Food Industry

Students learn:

- about emerging technologies in food production, manufacturing and packaging
- to investigate an emerging technology in ONE sector of the Australian food industry.

[Food Technology Stage 6 Syllabus](#)

Agricultural Technology 7-10

Core B: 5.4.1

- Students learn about the application of current and emerging technologies to agricultural enterprises.

[Agricultural Technology Years 7-10 Syllabus](#)

Review:

Dairy Farming Into the Future

[videorecording]

ABSTRACT



Robots milking cows is a recent technological development which will have a significant impact on the dairy industry. In this free video resource, information is presented by a current leader in

the development of this innovative technology. The video footage provides a detailed view of the way the robotic dairy operates during the milking process, and is supported by a clear verbal explanation. The economic, managerial, environmental and social factors which drive this change in production methods are discussed simply and clearly. Animal welfare considerations are also outlined. This video is the first and most detailed in a [suite of six online videos](#) produced by the NSW Department of Education which explain aspects of robotic dairying. This series would be particularly useful for students and teachers studying the Stage 6 Agriculture elective, 'Farming for the 21st Century', and may also have some relevance in the HSC topic, 'Farm Product Study', as well as the Preliminary course.

USER LEVEL: Stage 5 Stage 6

KLA: TAS

SYLLABUS: Agricultural Technology 7-10; Agriculture Stage 6; Food Technology Stage 6

PUBLISHER: NSW Department of Education, NSW

REVIEW DATE: 13/01/2017 [636.2]

SCIS 1788762



Teaching and learning opportunities:

- Discuss the factors which might lead a dairy farmer to install a robotic dairy
- Watch [Dairy Farming Into the Future](#) and the other 5 short YouTube videos in the [series](#). This could be supplemented with videos available on the [Future Dairy](#) website
- Students respond to the videos by describing the operation of a robotic dairy
- Read case studies of farms which have adopted robotic dairies from [Future Dairy](#) or the [Tasmanian Institute of Agriculture](#)
- Research the economic, environmental, social, legal and managerial factors associated with robotic milking from [Dairy Australia](#), [Future Dairy](#), [Tasmanian Institute of Agriculture](#) and [NSW Department of Primary Industries](#).
- evaluate the impact of robotic dairies in terms of: economic, environmental, social, legal and managerial factors.



How do people change the natural environment in Australia?

Sticky



Geography. Science and Technology.
Stage 3. Years 5-6

Australian curriculum springboard

Geography K-10

Outcomes:

A student:

- explains interactions and connections between people, places and environments [GE3-2](#)
- compares and contrasts influences on the management of places and environments [GE3-3](#)
- acquires, processes and communicates geographical information using geographical tools for inquiry [GE3-4](#).

Content:

Factors that change environments:

- Students investigate the ways people change the natural environment in Australia and another country (ACHGK026, ACHGK027)

Humans shape places:

- Students investigate how people influence places (ACHGK029).

Science K-10 (SciTech K-6)

Outcomes: Living world

A student describes how structural features and other adaptations of living things help them to survive in their environment [ST3-10LW](#)

Content:

Living things have structural features and adaptations that help them to survive in their environment (ACSSU043).

Review:

Sticky [videorecording]



What a story! This complex 20 minute animated documentary commences with five minutes of

powerful wordless imagery that explains the biodiversity value, demise and extinction of the Lord Howe Island stick insect. Strong symbolic images, a haunting musical score and strategic use of silence work together to cleverly portray the temporal human impacts and their effects on this nocturnal invertebrate species. In the remainder of the video, a personable recount explains the scientific rescue mission and captive breeding program of the stick insects found clinging beneath a single bush on Balls Pyramid, demonstrating the use of scientific knowledge to protect the species. Through mention of a potential rat eradication program, the viewer is left with hope for the future. G. Braiding

USER LEVEL: Stage 3 Stage 4 Stage 5
KLA: HSIE; science; SciTech
SYLLABUS: Geography K-10; Science 7-10; Science and Technology K-6
PUBLISHER: Jillie Rose, NSW
REVIEW DATE: 13/01/2017 [595.7]
SCIS 1794546



Teaching and learning opportunities:











- Generate inquiry questions using Lord Howe Island as a case study to investigate human changes to natural environments
- Locate Lord Howe Island and other Australian islands on a map. For example, Norfolk Island and Macquarie Island
- Zoom in on a satellite image of Lord Howe Island. Create a précis map overlay to show the vegetation cover and main land uses.
- Examine contemporary photographs of Lord Howe Island. Create a photo sketch, labelling the human and natural features. For example, the [view to Transit Hill](#)
- Using screenshots or sketches, create a visual timeline of human impacts on Lord Howe Island that led to the extinction of the Lord Howe Island stick insect. Include the rescue mission and captive breeding program
- Create a scientific drawing of the Lord Howe Island stick insect. Label physical adaptations and describe behavioural adaptations
- Create a food chain or food web incorporating the Lord Howe Island stick insect. Explain the effects of the loss of the stick insect from the food chain
- Create a cause and effect chart that identifies the past and present human impacts and their effects on Lord Howe Island's endemic flora and fauna
- Compare the video 'Sticky' to the hybrid text 'One Small Island'. Identify similarities between the texts. For example, the fluorescent green swathe that appears in both, intertextual uses of historic sources
- Create a Venn diagram of the similarities and differences between the story of Sticky and the story of Macquarie Island
- Generate a mind map of management strategies in place for the Lord Howe Island stick insect
- Compose a persuasive text to persuade Lord Howe Island environmental managers to undertake strategies to enable the reintroduction of the Lord Howe Island stick insect
- In an imagined future, create an animation or documentary that describes the reintroduction to the wild of the Lord Howe Island stick insect.

Resources:

- Cat on the Island by Gary Crew and Gillian Warden
- '[Cat on the Island](#)' [teaching notes](#), Harper Collins Publishers
- [Lord Howe Island](#), Lord Howe Island Tourism Association
- [Lord Howe Island - Just Paradise](#), Destination NSW
- [Lord Howe Island Stick Insect](#), Zoos Victoria
- One Small Island by Alison Lester and Coral Tulloch
- '[One Small Island](#)' [teaching notes](#), Puffin
- [Phasmids](#) by Elizabeth Shenstone and Steven Papp (ebook)
- [Save One Island, Save Them All](#), English for the Australian Curriculum.

Advice, implementation support and resources for NSW DoE teachers: [AC - NSW Syllabuses for the Australian Curriculum](#) [intranet].

Icons used:

-  app for iPad/iPhone/iPod touch; app for Android
-  digital authoring tool; learning platform software
-  ebook; ejournal; online database
-  interactive; e.g. game; learning object
-  media presentation; e.g. podcast; slide show; digital story; video; audio
-  website
-  supports STEM learning and teaching
-  supports multicultural education
-  must be purchased
-  scan selected eresources into SCIS Create orders or check SCIS Special order files

Icons for eresources are from [Office Clip Art](#) and [Media](#) and [Open Clip Art Library](#).

eresources

Resources are listed in Dewey order

Sites may not be permanent or structured as they were when reviewed. Reviews indicate fees, registration or devices as needed.

Psychlopaedia

Subtitled 'Psychology to live by', this site provides evidence-based information to the community about [Health, Family & Relationships](#), [Work & Performance](#), [Learning & Development](#) and [Society](#). [Top Tips](#) highlights issues such as stress, healthy lifestyle, racism and [Tips for Protecting Children from Conflict & Terror](#). The information on this website should be of interest to teachers, careers advisors and school counsellors. Parents will be drawn to this valuable resource for advice on bringing up children and helping them to improve their learning. Students will find useful information that includes anger management and how to spot abusive relationships. A. Soutter

USER LEVEL: Stage 4 Stage 5
Community
Professional

KLA: PDHPE

SYLLABUS: PDHPE 7-10

PUBLISHER: Australian Psychological Society, Vic

REVIEW DATE: 13/01/2017 [150]

SCIS 1788833



Reword It

An effective dictionary tool on this site acts as a deterrent to cyberbullying. The bold colours and images show how words can damage in this digital age. When insulting statements are identified in a user's social media comment, a red line is drawn through the words, prompting the writer to rethink what they are posting. It aims to change the way students communicate in cyberspace. The tool was developed by teachers in collaboration with [HeadSpace](#) because of the statistic that 450,000 children were victims of cyberbullying in 2013. 78% of people bullied online are between 10 and 15 years old. Compatible with Facebook, YouTube, Twitter, ASKfm and Google+, 'Reword It' is constantly being improved by teachers and students, who can easily add insulting words, slang and phrases to the inbuilt dictionary. The site has stories to which students can relate and advice

is given for students to never feel alone. [Get Help](#) encourages users to avail themselves of support from [HeadSpace](#) and [Lifeline](#). A. Soutter

USER LEVEL: Stage 2 Stage 3
Stage 4 Stage 5
Community
Professional

KLA: PDHPE

SYLLABUS: PDHPE K-6;
PDHPE 7-10

PUBLISHER: Leo Burnett, Vic

REVIEW DATE: 13/01/2017 [302.3]

SCIS 1788826

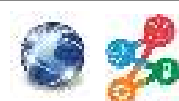


'Reword' – the tool to help end online bullying by Reword



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STEM: Science, Technology, Engineering, Mathematics



ABSTRACT

The integrated approach to science, technology, engineering and mathematics (STEM) allows students to develop a wide range of skills in a credible learning environment. This website, developed for STEM teachers, provides guidance, resources and insights from teachers and advisors which have been developed and tested in a school context. Video and web-based resources allow classroom teachers and school leaders to develop a pedagogy which supports this interdisciplinary approach to learning. The site outlines the role of STEM action schools and also contains examples of interdisciplinary projects from a wide range of schools. There are 27 examples of integrated projects for Stage 4 and projects for Stage 3 are currently in progress. An integrated Stage 5 elective STEM course is presented, and additional detail is available through links to the [ME Program](#). This website also offers reference and resource links, including STEM based competitions which could be a useful step into integrated STEM teaching.

USER LEVEL:

Stage 3 Stage 4
Stage 5 Professional

KLA:

mathematics; science;
SciTech; TAS

SYLLABUS:

Agricultural Technology 7-10; Design and Technology 7-10; Food Technology 7-10; Graphics Technology 7-10; Industrial Technology 7-10; Information and Software Technology 7-10; Marine and Aquaculture Technology CEC 7-10; Mathematics K-10; Science K-10 (SciTech K-6); Technology (Mandatory) 7-8; Textiles Technology 7-10

PUBLISHER:

NSW Education
Public Schools, NSW

REVIEW DATE:

13/01/2017 [507.1]

SCIS 1788761



Primary STEM Conference Sydney – STEM by NSW Department of Education – Learning Systems

Sticky [videorecording]



What a story! This complex 20 minute animated documentary commences with five minutes of powerful wordless imagery that explains the biodiversity value, demise and extinction of the Lord Howe Island stick insect. Strong symbolic images, a haunting musical score and strategic use of silence work together to cleverly portray the temporal human impacts and their effects on this nocturnal invertebrate species. In the remainder of the video, a personable recount explains the scientific rescue mission and captive breeding program of the stick insects found clinging beneath a single bush on Balls Pyramid, demonstrating the use of scientific knowledge to protect the species. Through mention of a

potential rat eradication program, the viewer is left with hope for the future. The video supports the geography focus areas, 'Factors That Shape Places' (Stage 3) and 'Environmental Change and Management' (Stage 5), as well as the 'Living World' strand in science for Stages 3, 4 and 5 students. See the [Australian curriculum springboard](#) in this issue for additional ideas and information about using this resource. G. Braiding

USER LEVEL:

Stage 3 Stage 4
Stage 5

KLA:

HSIE; science;
SciTech

SYLLABUS:

Geography K-10;
Science 7-10; Science
and Technology K-6

PUBLISHER:

Jilli Rose, NSW

REVIEW DATE:

13/01/2017 [595.7]

SCIS 1794546



Sticky – trailer by Jilli Rose

[Dairy Farming Into the Future](#) [videorecording]



ABSTRACT

Robots milking cows is a recent technological development which will have a significant impact on the dairy industry. In this free video resource, information is presented by a current leader in the development of this innovative technology. The video footage provides a detailed view of the way the robotic dairy operates during the milking process, and is supported by a clear verbal explanation. The economic, managerial, environmental and social factors which drive this change in production methods are discussed simply and clearly. Animal welfare considerations are also outlined. This video is the first and most detailed in a [suite of six online videos](#) produced by the NSW Department of Education which explain aspects of robotic dairying. This series would be particularly useful for students and teachers studying the Stage 6 Agriculture elective, 'Farming for the 21st Century', and may also have some relevance in the HSC topic, 'Farm Product Study', as well as the Preliminary course. The content could also support understanding of concepts in the Agricultural Technology Years 7-10 Syllabus and the Food Technology

Stage 6 Syllabus. See the [Australian curriculum springboard](#) in this issue for additional ideas and information about using this resource.

USER LEVEL: Stage 5 Stage 6
KLA: TAS
SYLLABUS: Agricultural Technology 7-10; Agriculture Stage 6; Food Technology Stage 6

PUBLISHER: NSW Department of Education, NSW

REVIEW DATE: 13/01/2017 [636.2]

SCIS 1788762



[Dairy farming into the future](#) by NSW Department of Education - Learning Systems



Planning learning activities using YouTube videos embedded in 'Scan'? Note that a teacher log in is required to view YouTube videos in the NSW DoE online environment. Stage 6 students also have access.

[Raising the Steaks - the Science of Cattle Breeding](#)



ABSTRACT

Outlining some of the scientific advances in cattle breeding, this detailed and up to date video uses a combination of interviews with Australian cattle producers and industry experts. Supported by animations, the 23 minute clip explains embryo transfer as a tool which can improve the productivity and quality of beef animals. Integrated with this is the need for objective measurement of animal traits when selecting seed stock, and the use of Estimated Breeding Values (EBV) and [Breedplan](#) for identifying superior genotypes in a beef herd. Other reproductive technologies are discussed, including artificial insemination and juvenile in vitro embryo transfer. The advantages and disadvantages of the increased use of superior animals in breeding programs are also presented.

USER LEVEL: Stage 5 Stage 6

KLA: TAS

SYLLABUS: Agricultural Technology 7-10; Agriculture Stage 6

PUBLISHER: State of NSW Department of Education, NSW

REVIEW DATE: 13/01/2017 [636.208]

SCIS 1788756



[Raising the steaks - the science of cattle breeding](#) by NSW Department of Education - Learning Systems

[What's the Mood?](#)



Created as part of the '[Scholastic Scope](#)' language arts magazine program, the main focus of this video is authorship. By defining mood as the feeling or atmosphere created by art or literature, the video is a little restrictive, although later it does mention how music can also be used to alter the mood of a scene. Without using the terms 'adjectives' and 'adverbs', the video provides examples showing a variety of descriptive language tools enhancing a written passage through

word choice, imagery appealing to the five senses, and setting. Following each example there is a direction to 'pause and discuss', encouraging student participation. Support for incorporating feelings and emotions into writing can also be found via the [Feelings, emotions and mood II](#) worksheet or the English syllabus work samples at [Stage 3 - Activity 9](#). Combined with the video, these may be suitable additions to support outcomes [EN2-8B](#) and [EN3-5B](#). S. Morton

USER LEVEL: Stage 2 Stage 3
Professional

KLA: English

SYLLABUS: English K-10

PUBLISHER: Blue Seat Studios,
USA

REVIEW DATE: 13/01/2017 [808]

SCIS 1788821



[What's the mood?](#) by Scholastic

[Writing and Illustrating with Andy Griffiths and Terry Denton](#)



The successful partnership between Andy Griffiths and Terry Denton has endured for 20 years. In this series of videos, the multi-storeyed treehouse author and illustrator offer suggestions and encouragement for all writers as they discuss their creative process. This digibook includes 'What makes a great creative partnership?', 'Where do ideas come from?', 'Getting a story started!', 'Shaping your story', 'Arranging words and pictures' and 'Get some expert tips!' Andy and Terry reiterate the importance of wide reading as a foundation for good story writing, constantly observing the world and people, looking within to build upon memories or fears, and including humour in stories. Students are encouraged to continually edit and rework their storylines and are given tips to build up their imagination. The discussion in the fifth video may support the study of the [English textual concepts](#) of Style and Representation, providing insight into aspects of visual literacy. S. Morton

USER LEVEL: Stage 1 Stage 2
Stage 3 Stage 4
Professional

KLA: English

SYLLABUS: English K-10

PUBLISHER: ABC, NSW

REVIEW DATE: 13/01/2017 [808.3]

SCIS 1788815



professional reading

Resources are listed in Dewey order.

[Transliteracy in Complex Information Environments](#)

SUKOVIC, Suzana

Chandos Publishing, USA, 2016

9780081009017 [028.7]



Available in print or PDF ebook format, this resource offers a critical research discussion about the development and application of transliteracy concepts and practices in school and academic library settings. Sukovic

provides a model of transliteracy as being more than information literacy or digital literacy, and highlights the role of transliteracy as a cross disciplinary practice bringing together the print and digital information environments, skills, general capabilities and challenges. Throughout the text, the voice of a range

of research participants, from secondary school through to academics, provides the basis for a reflective analysis of the use of transliteracy in these environments. Project-based learning and inquiry learning are suggested as pedagogies that can be incorporated with transliteracy. Teachers interested in research on information literacy may find this useful as background reading. J. Wall

USER LEVEL: Professional
SCIS 1791501 Paper \$94.90;
ebook \$112.90

Teaching and Learning for a Sustainable Future: A Multimedia Teacher Education Programme



Divided into 27 modules covering 100 hours, this free multimedia professional development programme is suitable for the education of teachers, curriculum developers, education policy makers and authors of educational material. Addressing the belief that education is the forum for fostering the 'values, behaviour and lifestyles required for a sustainable future', the programme enables teachers to plan appropriate learning experiences for their students. The site is organised into comprehensive

sections, including a rationale, contemporary issues, and strategies for teaching and learning. [About the Programme](#) reveals the objectives, themes and modules, and an overview of this innovative programme. Within [Teaching and Learning Strategies](#), [Telling a Story](#) suggests using 'The ingenious Inuit' story as stimulus for the module. Teachers should be aware that this story could be upsetting for students. S. Rasaiah

USER LEVEL: Stage 3 Stage 4
Stage 5 Stage 6
Professional

KLA: English; HSIE;
mathematics; science;
SciTech; TAS

SYLLABUS: Aboriginal Studies
Stage 6; Agricultural
Technology 7-10;
Agriculture Stage 6;
English K-10;
Mathematics K-10;
Geography K-10;
Geography Stage 6;
Science K-10 (SciTech
K-6); Society and
Culture Stage 6

PUBLISHER: UNESCO, France

REVIEW DATE: 13/01/2017 [333.7]

SCIS 1162984



Innovation in Education: Innovate Here



ABSTRACT

Describing innovation as a process through which a need for something new can be identified, exiting ideas enhanced, and concepts shared, this site is for educators who are trying new ways of teaching and learning. Tools, templates and guides are provided in [Getting Started](#). [Intercultural Understanding](#) shows how a culturally inclusive curriculum can be achieved through an engaging and collaborative approach to education. Success in Aboriginal education is exemplified in 'Keynote: tapping into new ways of learning'. Culturally inclusive teaching and learning through language programs is the focus in 'Keynote: bilingual immersion', in which a Japanese immersion program has resulted in a greater understanding of cultural similarities, rather than cultural differences, in a small K-6 school. Sharing ideas, work or trials with other learning communities is encouraged via [How to Share](#).

USER LEVEL: Professional
KLA: CA; English;
HSIE; languages;
mathematics; PDHPE;
science; SciTech; TAS

PUBLISHER: Victoria Education
and Training, Vic

REVIEW DATE: 13/01/2017 [370.15]

SCIS 1783506



10 Schools for the 21st Century



HAMPSON, Martha, PATTON,
Alec and SHANKS, Leonie



Data in this ebook comes from a collection of 10 schools, recording each school's different response to the challenges for education in the 21st century. A set of approaches are described that value

innovation where students are trusted with autonomy and responsibility for learning. Each case study highlights specific and different learning challenges that link to the demands of rapidly changing technology, global uncertainty and education systems that are required to prepare the full range of students with ethical skills to form complex relationships and interactions. From the approaches that counteract a one size fits all model, it is possible

to extrapolate a range of pedagogical practices that support high possibility classrooms. These practices include computer-generated personalised learning plans and public exhibitions of student work, as well as individual, small groups and whole class activities where students develop personal relationships with experts as they grapple with a demanding curriculum. F. Whalan

USER LEVEL: Professional
PUBLISHER: Innovation Unit, UK
REVIEW DATE: 13/01/2017 [371.102]
SCIS 1790462



Evaluative Thinking for Successful Education Innovation



EARL, Lorna and TIMPERLEY, Helen



Addressing the somewhat perplexing issue of evaluation and innovation in education, which do not always sit comfortably together, this working paper concludes by outlining the

synergies that can be made. The contemporary concepts of educational innovation and educational evaluation are defined as they relate to practice. Further, the nexus is explored between innovation and evaluation in the context of the demands and complexity of the changing societal and global landscape and the challenges of measuring impact. In bringing innovation and evaluation together, the authors propose a continuous cycle of generating hypotheses, collecting evidence, and reflecting on progress that values the learning from taking risks and making mistakes resulting from experimenting with new approaches and innovative strategies. An often overwhelming task of systematically collecting, analysing, and interpreting results to generate new understandings is made more accessible in the coherent approach explicated as a continuous, manageable and sustainable set of processes that are evidence based, supported by research and illustrated by vignettes from practice. F. Whalan

USER LEVEL: Professional
PUBLISHER: OECD, France
REVIEW DATE: 13/01/2017 [371.102]
SCIS 1790548



Innovative Learning Environments



Documenting the way that educators in a number of countries are engaging in bold and forward thinking innovations to renew, re-imagine and reinvent contexts for teaching and

learning, this digital publication presents a wealth of material. The pedagogical core is described as composing seven learning principles as central to four design elements that bring clarity to the links between complex goals, processes and outcomes for 21st century learning. The four design elements, comprising learners, educators, content and resources, are encapsulated in a framework situated within a holistic and innovative learning environment. The framework supports a future-orientation design for school improvement based on best practice research, from understanding culture to systemic improvement through a progression of five phases, each described by a set of key features. The framework is illustrated by cases that, in general, assume that innovation depends critically on unique contexts that

define the learning approach within the learning environment. F. Whalan

USER LEVEL: Professional
PUBLISHER: OECD, France
REVIEW DATE: 13/01/2017 [371.2]
SCIS 1790716



Inside-Out and Downside-Up: How Leading From the Middle has the Power to Transform Education Systems



MUNBY, Steve and FULLAN, Michael



Drawn from the Global Dialogue online forum, this discussion paper focuses on outcomes for collaboration, leadership capacity for a network system, and the power and potential of middle leaders.

Conflicting views of top down policy solutions and bottom up decision making for systems and schools are addressed as a way forward in countering the proven ineffectiveness

and unintended consequences that can result. While arguments are put forward that exceptional leadership in schools can drive system-wide reform, the discussion supports school-to-school networks focused on improving student outcomes through collaboration based on transparency, trust and professional obligation. Eight critical factors for effective school collaboration are explored, inviting the reader to respond to the challenges of developing such practices in their context for system or school reform agendas. An interesting conception of the behaviours and approaches of a transformational system leader who leads coherent change through collaboration, and a transactional leader of school systems based on political cycles and media pressure, are contrasted. F. Whalan

USER LEVEL: Professional

PUBLISHER: Education Development Trust, UK

REVIEW DATE: 13/01/2017 [371.2]

SCIS 1790453



Measuring Innovation in Education: A New Perspective



OECD asserts that a measurement agenda is essential to innovation and improvement. The primary objective in this ebook is to provide evidence-based research about how innovation can improve learning

outcomes and the quality of education as a means to enhance equity and equality in schools. The sample for the study is 20 countries, including Australia. The research, based on survey data, highlights key findings for innovation in primary and secondary education, concluding that innovation is more evident in classroom practices as opposed to school practices. An exploration of how innovation in primary and secondary schools related to student performance, equality and equity, expenditure per student, and teacher and student satisfaction can provide a basis for discussion about what more is needed to measure the impact of innovation. Significant chapters are devoted to innovation in teaching and learning in classrooms

and schools. Comparative data is presented for Australia on a range of survey measures of innovation related to teaching. These include classroom organisation, use of textbooks, methods of assessment, and availability and use of computers. These topics have the potential to stimulate wide debate.

F. Whalan

USER LEVEL: Professional

PUBLISHER: OECD, France

REVIEW DATE: 13/01/2017 [371.2]

SCIS 1790713



Learning Frontiers: Insights and Ideas



In addressing international evidence about the level of student disengagement and the need to increase students' agency in how and what they learn, the Learning Frontiers project offers a range of new

approaches to this prevailing dilemma in education. Central to this project is the access by networks of schools to professional learning through design

hubs where teachers can learn from each other and from experts about learning that engages students behaviourally, emotionally and cognitively. Design hubs explore teaching, learning and assessment practices based on the principles that learning is co-created, personal, connected and integrated. Each of these design principles is described and illustrated with case studies in this ebook. This content draws from national and international research into how design hubs can extend learning environments and opportunities beyond the classroom, and connect in-school learning to authentic issues in students' lives. F. Whalan

USER LEVEL: Professional

PUBLISHER: AITSL, Vic

REVIEW DATE: 13/01/2017 [371.3]

SCIS 1790558



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Spaces Toolkit



ABSTRACT

Redesigning existing space or designing a new space within schools requires a shift in teaching and learning practice. The information on this site recommends strategies for those wishing to make effective change happen in their schools. A succession of steps is outlined, building up the process from inception, including [identifying desired learning](#), through to [evaluating the impact of the new space](#). [Build Teacher Capacity](#) explores the importance of developing teachers' skills, knowledge and confidence in using flexible learning spaces. [Scale and Diffuse](#) encourages stakeholders to share successes and challenges across the school, once the impact of the space has been tested on teacher practice and student learning and engagement.



USER LEVEL:

Professional

KLA:

CA; English; HSIE; languages; mathematics; PDHPE; science; SciTech; TAS

PUBLISHER:

NSW Department of Education, NSW

REVIEW DATE:

13/01/2017 [371.3]

SCIS 1783511



Iteration and Innovation in Education: Keynote by Jaime Casap



Espousing the notion that education is about converting information into intelligence, Jaime Casap talks about how educators have been discussing the way that technology can be the catalyst for change in education. As Chief Education Evangelist at Google, Jaime works with teams that impact and improve the quality of global education through the use of technology. In this keynote address, Jaime gives examples of how students learn in the 21st century and how life today includes technology in so many vital ways. The questions teachers need to ask include 'What problem do you want to solve?', rather than 'What do you want to be when you

grow up?' Iteration and collaboration are essential aspects in the use of technology and should be taught to students, as reiterated in this address. Building students to be digital leaders instead of digital citizens is Jaime's passion, teaching the audience about empowering students to analyse and vet information. Teachers need to be strong leaders who can encourage innovation and iteration to drive transformation in education. The Google model is used in this keynote as the example of change and growth. S. Rasaiah

USER LEVEL:

Professional

KLA:

CA; English; HSIE; languages; mathematics; PDHPE; science; SciTech; TAS

PUBLISHER:

Education Elements, USA

REVIEW DATE:

13/01/2017 [371.33]

SCIS 1783513



[Jaime Casap's keynote at the Education Elements Personalized Learning Summit 2015](#)
by Education Elements

Building Bridges: Dramatic Dialogue in Early Childhood Classes

HARDEN, Annette

PETAA, NSW, 2016 (PETAA Paper, 204)

ISBN none [372.139]



Using a combination of classroom vignettes and drama plans, the author of this paper explores drama pedagogy and its advantages and challenges. For early years' teachers, the discussion of drama pedagogy

and its relationship to classroom discourse is clear and well supported by theory. It is the detailed and very supportive discussion of how to implement a drama program which will engage most teachers. There are three tables presenting drama plans, one of which is a generic plan which could be used with any scenario or text. Clear links are also made to the [Australian Curriculum: English](#) and the vignettes are used to exemplify the drama plans in action. A powerful argument is made for using drama pedagogy to develop a balanced classroom discourse which supports

the development of language and literacy. K. Rushton

USER LEVEL: Professional
KLA: English
SYLLABUS: English K-10
SCIS 1778822 \$ Available via subscription

Design Thinking Toolkit



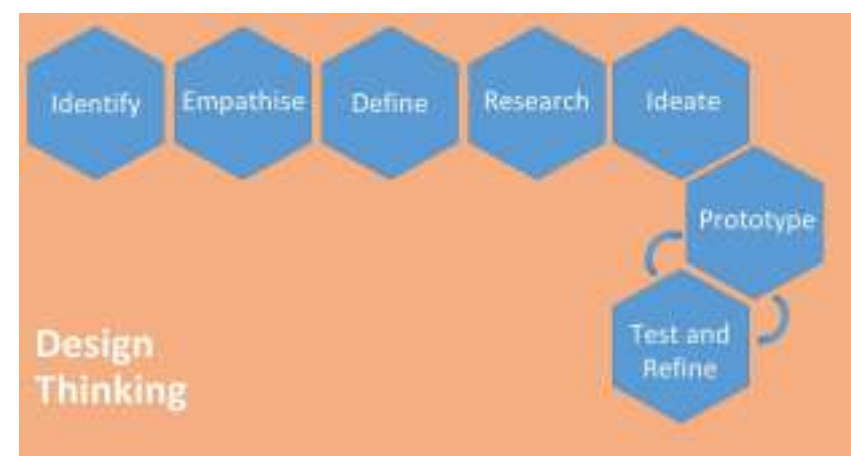
ABSTRACT

Addressing educational challenges and initiating productive change encompasses steps which mirror the [information process](#) in that each step builds upon its predecessor and each is of equal importance. This toolkit presents steps that embed future focused pedagogies into teaching practice, promoting critical reflection, a culture of disciplined innovation, shared leadership and ownership of the change for school and student improvement. [Identify](#), [Empathise](#), [Define](#), [Research](#), [Ideate](#), [Prototype](#) and [Test and Refine](#) include templates and discussion questions for whole staff, focus teams or individual teachers addressing a classroom issue.

USER LEVEL: Professional
KLA: CA; English; HSIE; languages;

PUBLISHER: NSW Department of Education, NSW
REVIEW DATE: 13/01/2017 [745.2071]
SCIS 1783508

mathematics; PDHPE; science; SciTech; TAS



Beyond the Script: Take Three: Drama in the English Literacy Classroom

EWING, Robyn, SIMONS, Jennifer et al.
 Primary English Teaching Association Australia, NSW, 2016

ISBN 9781925132311 [792]

Providing teachers with practical strategies for teaching drama in primary classrooms, this third edition continues to provide fresh insights. The resource includes chapters on many aspects of drama, from the use of puppets to play building, storying, readers' theatre, mime



and movement. The author and the very well-qualified contributors bring to this edition their varied and valuable experiences teaching EAL/D, tertiary, primary and secondary students and work as a professional storyteller. For teachers, unfamiliar with drama, there is a very useful glossary as well as suggestions for assessment and evaluation. Similarly, the teacher's role in developing drama in the classroom is very well explored in chapters which focus on programming and the teacher-in-role or in the mantle of the expert. K. Rushton

USER LEVEL: Professional
KLA: English
SYLLABUS: English K-10
SCIS 1778242 Paper \$25.95 (member); \$39.95 (non member)

The Power of Poetry

OEHLMAN, Catherine
 PETAA, NSW, 2016 (PETAA Paper, 203)
 ISBN none [808.1071]



Available to members only, this resource assists teachers who want to explore some practical strategies for teaching poetry. Ideas about poetry and how the teaching of poetry

connects to outcomes in [Australian Curriculum: English](#) are made explicit and supported with a table. Throughout the text, there are also breakaway boxes which feature a discussion about poetry with children's author, Libby Hathorn. As well as the practical suggestions and samples of children's writing, multimodal possibilities are also explored and suggestions given to support this exploration. 'Assessing student poetry' rounds off the paper, providing a solid springboard into the teaching of poetry writing. K. Rushton

USER LEVEL: Professional
KLA: English
SYLLABUS: English K-10
SCIS 1778827 \$ Available via subscription

picture books

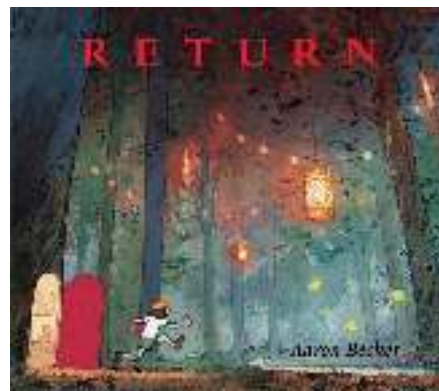
Resources are arranged alphabetically by author. Some books in this section are nonfiction or have relevance to a particular KLA.

Return

BECKER, Aaron

Walker Books Australia, NSW, 2016

ISBN 9781406368437



The third wordless picture book of the 'Journey' trilogy opens to a dark and gloomy double page spread with the girl

unable to distract her father from his work. Having learnt how to find some friends, she draws her magical red doorway. This time her father notices her disappearance and follows, puzzled and amazed, searching for his daughter who has eagerly rushed ahead to the castle. Unfortunately, they arrive just as the kingdom is invaded by soldiers wishing to drain the kingdom of colour. Using

the two remaining coloured crayons and some creative drawing, escape is achieved, with father becoming the hero in destroying the colour capture machine and liberating the land from its bleakness. Teachers could use the style of these books to enhance critical and visual literacy as students seek cohesion and threads across the three books. Studying aspects such as the growth of the girl's character from hesitant to proactive, the resourceful father using his strengths, and the use of colour to create atmosphere and mood could deepen understanding of the worth of this wordless picture book. Resources such as '[Your guide to reading a wordless book](#)' may also help students explore this engaging text. S. Morton

USER LEVEL: Stage 1 Stage 2
Stage 3

KLA: English

SYLLABUS: English K-10

SCIS 1768875 \$27.99



'Return' by Aaron Becker book trailer
by Candlewick Press

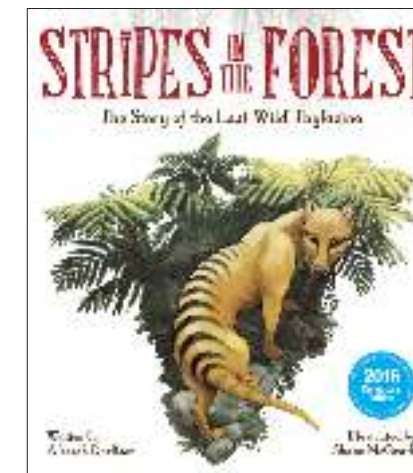
Stripes in the Forest: the Story of the Last Wild Thylacine



DARLISON, Aleesah and McGRATH, Shane

Big Sky Publishing, NSW, 2016

ISBN 9781925275711



Looking like a mythical creature with its dog snout and distinctive stripes, the experience of the thylacine, or Tasmanian tiger, resonates with many Australians.

Portraying an animal that just wants to live in safety, this picture book captures the mysterious air that envelops this now extinct creature. Told in the first person, readers will empathise with the main character as she hopes her young can grow up deep in the forest, far from humans and their guns. Beautifully illustrated with dramatic double page spreads, the images could stimulate discussions about salience and the [English textual concept](#), Point of View. The list of facts provided will extend the experience of the narrative and lead students into discussions about

conservation and the implications of the loss of endangered species. P. Galloway

USER LEVEL: Stage 2 Stage 3

KLA: English; SciTech

SYLLABUS: English K-10; Science K-10 (SciTech K-6)

SCIS 1771234 Paper \$14.99



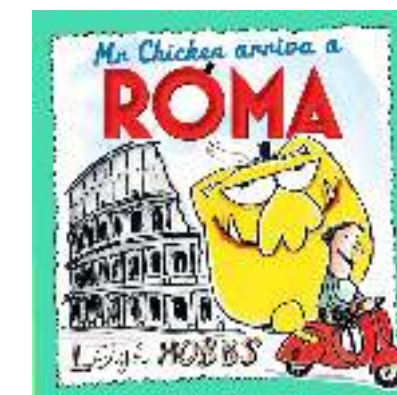
Tasmanian tiger footage (1932)
by Australian Screen

Mr Chicken Arriva a Roma

HOBBS, Leigh

Allen & Unwin, NSW, 2016

ISBN 9781925266771



Continuing his European sightseeing tours, Mr Chicken achieves a lifelong dream to visit Rome in this familiar picture book. Readers

who followed this larger than life bird through Paris and London will expect to chuckle over this next escapade and they won't be disappointed. The sight of Mr Chicken on a Vespa, having a sneaky lick of someone's gelato, and taking a dip in the Trevi Fountain make this an entertaining travelogue. The Italian culture is represented throughout this story as iconic buildings, cuisine, the Italian language, family life and a taste of Ancient Rome are interspersed across Signor Pollo's day. This book could be a vehicle to demonstrate how an author's chosen style can have an impact on an audience. The way that the central character is exaggerated in this story leads readers to understand how and why representations are deliberately constructed to influence responses from a target audience. S. Rasaiah

USER LEVEL: Early Stage 1 Stage 1
Stage 2

KLA: English

SYLLABUS: English K-10

SCIS 1770516 \$23.99

A Child of Books

JEFFERS, Oliver and WINSTON, Sam
Walker Books, UK, 2016
ISBN 9781406358315



A unique picture book experience, this is a collaborative creation between Oliver Jeffers (well known for his picture books, including 'The Day the Crayons Quit' and 'Once Upon an Alphabet') and Sam Winston (best known for his typography and 'A Dictionary Story'). The story revolves around two children, one of whom is timid, the other adventurous and a lover of books and the imagination. She introduces herself in the opening pages, 'I am a child of BOOKS. I come from a WORLD of stories / and upon my IMAGINation I float.' She asks the boy to join her and subsequently shows him the way into many different genres, including lullabies, fairy tales and adventure classics. There are over forty intertextual references in total. The imagery uses lines of text from these classics to create seas and mountains, forests and the night sky. At each

stage, the characters share experiences and insight into the world through the imagination until the boy is ready to move through the world of literature alone. This text is appropriate for teaching students about Intertextuality, Connotation, Imagery and Symbol, and Theme. It could also be used to teach many of the other concepts such as Literary value, Character, Narrative, Style, Perspective and Point of view. It can be used to address cross curricular priorities and capabilities including Critical and creative thinking, and Literacy. See the '[Using quality literature springboard](#)' in this issue for additional ideas and information about using this text to teach the [English Textual Concepts](#). K. Hodkinson

USER LEVEL: Stage 5

KLA: English

SYLLABUS: English K-10

SCIS 1770894 \$27.99

My Two Blankets



KOBALD, Irena and BLACKWOOD, Freya
Little Hare, Vic, 2014
ISBN 9781921714764

This engaging picture book tells the story of a young girl who is trying to



transition between her old and new world. Cartwheel, as her auntie used to call her, has immigrated to a new country and her blanket is a metaphor for the culture she knows and feels safe in. Cartwheel

then creates a new blanket with what she learns about her new culture, as she starts to feel more comfortable in her new world. This is a beautiful story exploring the need to belong and the power of language. See the '[Using quality literature springboard](#)' in this issue for additional ideas and information about using this text to teach the [English Textual Concepts](#). M. Najdovska and K. Hodkinson

USER LEVEL: Stage 2

KLA: English

SYLLABUS: English K-10

SCIS 1641848 \$24.99



Supports multicultural education

Grandpa's Big Adventure

NEWMAN, Paul and JELLET, Tom
Penguin Viking, Vic, 2016
ISBN 9780670078172



Overcoming the trepidation surrounding learning to swim is the focus of this amusing picture book. Grandpa, with his confidence and vast experience describing the

fun he has had swimming around the world, is just the person to allay his grandson's fears. Younger readers may take his words literally, until they discover the humorous illustrations, while older readers will appreciate the telling of tall tales with word play and double meanings such as '...shows me the lump on his head where he bumped into the equator.' With laughter surpassing anxiety, the little boy is in the water, determined to keep up with his impressive Grandpa. Class discussions about Grandpa's promise to reveal his journey to the moon might create opportunities for students to compose creative texts using similar word play techniques. S. Morton

USER LEVEL: Early Stage 1 Stage 1
KLA: English
SYLLABUS: English K-10
SCIS 1767804 \$24.95

Dog Lost

RAMAGE, Jan and SIMMONDS, Brian
Windy Hollow Books, Vic, 2016
ISBN 9781922081612



The evocative description of Australia's outback landscape on the opening endpaper gives an indication of the quality and richness of this picture book. The simple storyline of

a working dog separated from his owner in a flood and finally being reunited, is greatly enhanced through skillful use of figurative and descriptive language including imagery, rhyme, rhythm and alliteration. Also brought into focus is the variety of Australia's natural environment with flooded rivers, dusty plains, giant gorges, native flora and fauna and the inherent dangers that lurk. Above all, is the love and loyalty of a dog to its master. Simmonds' close-up illustrations clearly show the dog's resilience and

determination, adding to the tension of the text, while other illustrations are less finely detailed, encouraging discussion about the visual techniques employed. S. Morton

USER LEVEL: Stage 1 Stage 2
Stage 3
KLA: English
SYLLABUS: English K-10
SCIS 1767786 \$25.99

Did You Take the B from My _ook?

STANTON, Beck and STANTON, Matt
ABC Books, NSW, 2016
ISBN 9780733334832



'Did You Take the B from My _ook?' is an original story based on the narrator losing the letter B after a sneeze. The narrator repeatedly tries to say words beginning with the letter B but cannot make the sound, causing all

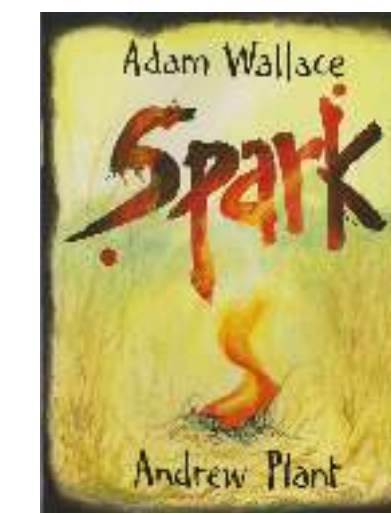
the words to sound funny. Children are invited into the story through frequent questioning and beautiful clear images which support their imagination and

understanding of the meaning of words like '_ull', and '_eetle' in the story. This is Beck and Matt Stanton's second book in their series 'Books that drive kids CRAZY!' and adopts a similar style and feel to 'This is a Ball'. Children will once again yell out responses and corrections as you read the book and they lose themselves in the silliness of this story. See the '[Using quality literature springboard](#)' in this issue for additional ideas and information about using this text to teach the [English Textual Concepts](#). K. Hodkinson

USER LEVEL: Early Stage 1
KLA: English
SYLLABUS: English K-10
SCIS 1762644 \$19.99

Spark

WALLACE, Adam and PLANT, Andrew
Ford St, Vic, 2016
ISBN 9781925272413



Beginning with a carelessly thrown cigarette butt that ignites dry grass on the roadside, this picture book builds tension then de-escalates it. Readers are taken

on a journey as the spark is befriended by the wind in an alliance that becomes destructive as the evils of peer pressure are revealed. The font and illustrations neatly reflect the subject matter and students will imagine the ash and countless other sparks flying as the main character reaches its roaring crescendo. Responders can identify how the verbs build drama and pace, moving from 'whistled' and 'tickled' to 'hauled' and 'surged' as the spark, now a mighty fire, is whipped along by the wind, razing everything in its path. By personifying the fire, wind and rain clouds, the composer offers a new way for younger readers to engage with these natural elements and the plot. The story ends with the comforting image of new life returning as a tiny green shoot protrudes from a blackened stump. This book is an example of how a quality text can support learning across the curriculum. Students will gain a deeper understanding of the effect of bushfires by engaging with this story. P. Galloway

USER LEVEL: Stage 2 Stage 3

KLA: English; HSIE

SYLLABUS: English K-10;
Geography K-10

SCIS 1777663 Paper \$14.95

One Photo

WATKINS, Ross and ANELLI, Liz

Penguin Viking, Vic, 2016

ISBN 9780670077977



Treated sensitively and with insight, this picture book tells, through the eyes of the young son, Dad's increasing forgetfulness and confusion as he struggles with Alzheimer's disease. As the

father is absorbed with photography and an old style camera that uses film, the boy and his mother become increasingly upset when all the photos Dad takes do not include them. Apparently inconsequential things are photographed, like Dad's breakfast. The family believes these photos are to assist the father's memory and it is only after his death, when the last photo has been developed, that they realise the photos have been taken so that it is Dad who is not forgotten. The endpapers show two different photo albums. Dad's collection concludes with an image that hints at a new beginning for mother and son. The representation of the events in this moving story influences readers to

respond with empathy and compassion. S. Morton

USER LEVEL: Stage 1 Stage 2
Stage 3 Community

KLA: English

SYLLABUS: English K-10

SCIS 1773963 \$24.99



'One photo' book trailer (a picture book by Ross Watkins & Liz Anelli) by Ross Watkins

The Pocket Dogs and the Lost Kitten

WILD, Margaret and KING, Stephen Michael

Omnibus Books, SA, 2016

ISBN 9781742991054

The inseparable trio of Mr Pockets and his two dogs enjoy another chapter in this charming picture book. A knock on the door late one rainy night introduces a fourth character, a bedraggled lost



kitten. Initially welcomed by the dogs, there is a gradual dawning realisation that perhaps the kitten is becoming Mr Pockets' favourite. Jealousy takes over, the dogs' anguish poignantly depicted

by their dreams of displacement, and the dogs become antagonistic. When Mr Pockets realises what is happening he patiently explains why his attention has been given to the kitten, and points out all the wonderful things he loves about the dogs. To make amends, the dogs search for the kitten only to discover it missing. Once found, reconciliation takes place and all is once again more harmonious. The incidents in this story may evoke students' discussions regarding jealousy caused by the arrival of a new sibling and sharing within friendships. Teachers can explore onomatopoeic language, assisted by [teaching notes](#) produced by the publisher. S. Morton

USER LEVEL: Early Stage 1 Stage 1

KLA: English; PDHPE

SYLLABUS: English K-10;
PDHPE K-6

SCIS 1744659 \$24.99

fiction for younger readers

Resources are arranged alphabetically by author. See also [eresources](#).

Some of these books are also suitable for lower secondary students.

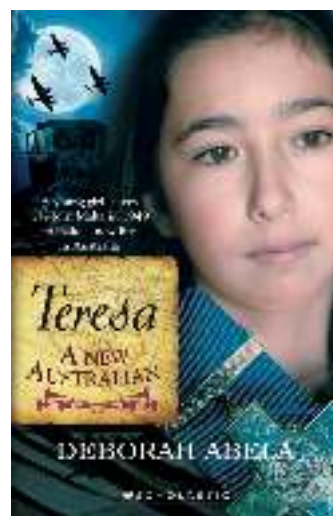
Teresa: a New Australian



ABELA, Deborah

Omnibus Books, SA, 2016 (New Australian)

ISBN 9781742990941



Continuing the series of historical narratives about immigration to Australia, this novel takes readers through the suffering of the Maltese people during prolonged bombing in World War II. At war's end many, including Teresa's family,

sought a new life in Australia. Teresa

experiences the misery of leaving her Nanna and best friend George behind, the wonder of a large, bustling city, the loneliness and unfamiliarity, and the conflicting attitudes of the day towards new Australians. Just as her courage, empathy and innate sense of fairness saw her overcome the deprivations in Malta, now they come into play against racism, intolerance and bullying, assisting those not yet able to stand up for themselves. Supporting outcomes [HT2-2](#) and [HT3-2](#), this text provides a basis for comparisons between immigration today and that of the 1950s, with support for English through exploration of context, theme and perspective. [Teaching notes](#) are available. S. Morton

USER LEVEL: Stage 2 Stage 3

KLA: English; HSIE

SYLLABUS: English K-10;
History K-10

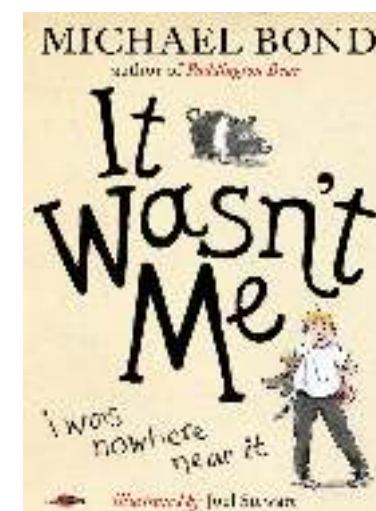
SCIS 1748054 Paper \$16.99

It Wasn't Me

BOND, Michael and STEWART, Joel

Corgi Books, UK, 2016

ISBN 9780552573139



Inspired by the antics of his own grandson, Harry, Michael Bond exaggerates Harry's adventures in this very funny book. Harry tells each of the stories in the first person, which makes the style instantly appealing as readers

engage with one madcap escapade after another. From firing a gun in church to phoning Fort Knox, Harry manages to turn seemingly innocuous situations into disasters. The hilarious descriptions of Harry's family outings in the car, holidays and visits to grandparents are illustrated appropriately, with cheerful sketches. The references to British television shows, food and shops do not detract from the enjoyment of this book. The wry comments from Harry's parents and Big Sister underpin the premise that Harry really is unaware of the chaos he causes. The manner in which the author writes makes this book valuable in lessons about audience and purpose. S. Rasaiah

USER LEVEL: Stage 2 Stage 3

KLA: English

SYLLABUS: English K-10

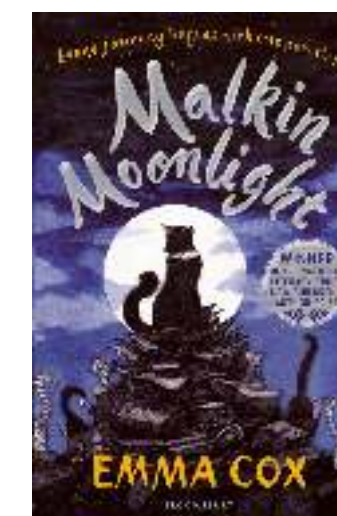
SCIS 1778648 Paper \$16.99

Malkin Moonlight

COX, Emma

Bloomsbury Publishing, UK, 2016

ISBN 9781408870846



Cats that exhibit human traits yet are empowered with mysticism take the reader through a journey of personal discovery. Malkin, the small unassuming black cat, becomes a hero in the world of abandoned animals in the Recycling

Centre when he transforms the warlike behaviour of the Putrescibles into peace and harmony. Astute readers may interpret this novel as a metaphor for the plight of displaced people, facing life with courage and determination. The humans in this novel take a back seat as the cats view of the world is mirrored in the small acts of kindness thrown their way. There is much in this story that transcends the ordinary and provides teachers with rich, literary material with which to invigorate their students. S. Rasaiah

USER LEVEL: Stage 3

KLA: English

SYLLABUS: English K-10

SCIS 1775891 Paper \$12.99

Brobot

FOLEY, James

Fremantle Press, WA, 2016

ISBN 9781925163919



A new graphic novel for younger readers, this humorous story will appeal to students who enjoy following a story through pictures with minimal text. Sally is a foremost child inventor who believes that she can build a finer brother

than the present smelly version that she maintains is defective. Dialogue is used throughout to move the story along and the computer text and onomatopoeia create the appropriate visual chaos that ensues. The smatterings of sibling closeness rein the story in as, eventually, the science fiction aspects of the story return the reader to the real meaning of family relationships. The [teaching notes](#) describe the author's intentions for creating visual stories. S. Rasaiah

USER LEVEL: Stage 1 Stage 2

KLA: English

SYLLABUS: English K-10

SCIS 1770933 Paper \$14.99



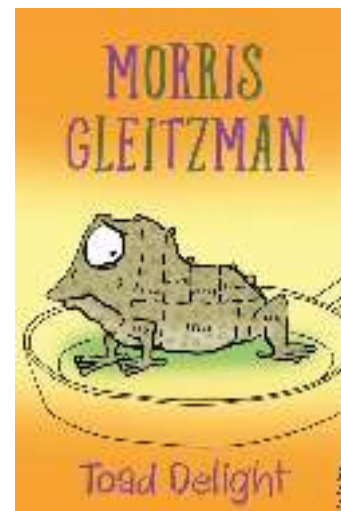
['Brobot' book trailer](#) by James Foley

Toad Delight

GLEITZMAN, Morris

Puffin Books, Vic, 2016

ISBN 9780143309239



Continuing the Toad saga, Limpy, the cane toad, is horrified at the carnage of his relatives being flattened on the roads. Seeing hurtful videos portraying cane toads as Australia's most horrible creatures, Limpy decides it is time

for an image makeover. He broaches this delicate subject with his family, advocating altering cane toad feeding habits so as not to appear greedy and environmentally harmful. This is not met with much enthusiasm. When cousin

Goliath takes off to the city following his love, hitching a ride with a swamp-visiting camera crew, Limpy joins him, wanting to use the opportunity to launch a media campaign in favour of toads. All does not go to plan, with the camera crew filming a cooking show rather than a documentary, using unusual ingredients such as battered cane toad buttocks. Limpy, as always, finds a means of escape and he and Goliath, his love being not what she seemed, return to the swamp a little worse for wear, but with a surprise waiting. Morris Gleitzman reads [Chapter 1](#) on his website. S. Morton

USER LEVEL: Stage 2 Stage 3

SCIS 1767819 Paper \$16.95

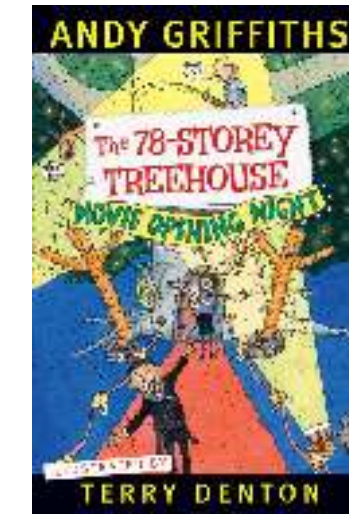


[Morris Gleitzman on 'Toad Delight'](#)
by Bolinda audio

The 78-Storey Treehouse

GRIFFITHS, Andy and DENTON, Terry Pan, NSW, 2016

ISBN 9781743535004



Following the previous treehouse books, this edition is also a mix of intricate, maze-like drawings and words depicting a madcap world in an ever-rising fantasy treehouse. In this book, Andy and Terry have added 13 new levels to their

65-storey treehouse. This style of illustrative story writing may show how authors can hold readers' interest by making stories absorbing by using various techniques such as humour and plot tension. The hectic pace, snappy short sentences and picture-driven plot may suit readers who are challenged by stories that require imagination created by text alone. Fans of the treehouse books will be eagerly anticipating the next instalment, 'The 91-Storey Treehouse'. An interview with these two creators is available at [Writing and Illustrating with Andy Griffiths and Terry Denton](#), which is also [reviewed](#) in this edition of 'Scan'. M. Sutera

USER LEVEL: Stage 2 Stage 3

SCIS 1771153 Paper \$14.99

400 Minutes of Danger

HEATH, Jack

Scholastic Australia, NSW, 2016

ISBN 9781760158798



Jack Heath's 10 nail-bitingly dangerous short stories will fascinate and terrify readers as the perilous situations unfold, right down to the last crucial moment. Each chapter in this sequel to '300 Minutes of Danger' is a thrilling forty minute

episode in the life of a young person who must survive insurmountable odds. Protagonists problem-solve to overcome the dangers of a lion's enclosure, lethal snakes, sinking ships, a rogue military robot and hazardous glaciers. The tense atmosphere is enhanced by the minutes running out on each page. The use of such literary devices to create suspense and urgency enriches the stories and provides models for students to incorporate similar techniques in their own creative writing. M. Sutura

USER LEVEL: Stage 3

KLA: English

SYLLABUS: English K-10

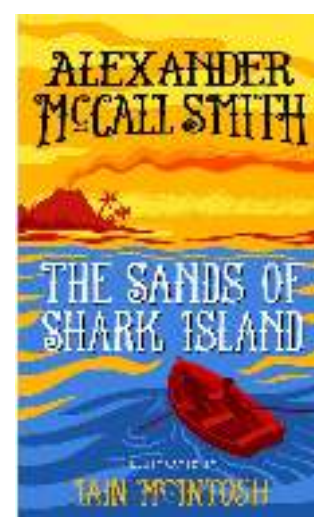
SCIS 1775044 Paper \$12.99

The Sands of Shark Island

McCALL SMITH, Alexander and
McINTOSH, Iain

BC, UK, 2016 (School Ship Tobermory
Adventure)

ISBN 9781780273945



School ship Tobermory is Caribbean bound with its company of students. Twins, Ben and Fee MacTavish, are back with all their friends and, unfortunately, also the three school bullies, who just cannot seem to be caught doing wrong. As with the previous

title, adventure is not far away with new skills to be learnt, sometimes at some risk, getting the better of modern day pirates and reuniting a father and son. Throughout the text, values such as friendship, loyalty and honesty are highlighted, as are ways to counter bullying behaviour, overcoming fears and learning from mistakes. Once again, the story is leisurely in pace, illustrated with some graphic novel pages. S. Morton

USER LEVEL: Stage 2 Stage 3

SCIS 1778532 \$22.99

Black Sunday

McHUGH, Evan

Scholastic Australia, NSW, 2016

ISBN 9781743627990



Allowing students to engage personally with texts by interpreting events and situations is an essential component of the NSW English K-10 Syllabus. This historic account of the mass rescue of swimmers at Bondi Beach on Sunday

6 February 1938 projects the reader into this unprecedented tragedy, documented by Nipper, a 12 year old aspiring lifesaver. Prior to this day, Nipper writes about his idyllic life and family in Bondi during the pre-war years, marred only by the remnants of the Great Depression and Nipper's run-ins with his teacher. Contrasting the time in which this Australian story is set with today's education and topography of the Eastern suburbs of Sydney should engender vigorous discussion within the classroom. As this diary story is written in the first person, readers are privy to the innermost thoughts of the protagonist. This style of writing engages its audience and makes this book ideal

for a study of how Australian English has become culturally unique over time. S. Rasaiah

USER LEVEL: Stage 2 Stage 3

KLA: English; HSIE

SYLLABUS: English K-10;
History K-10

SCIS 1768872 Paper \$16.99

Born to Sing

MORGAN, Sally and SMITH, Craig

Scholastic Australia, NSW, 2016

ISBN 9781742991511



The latest in first chapter books based on indigenous characters, this title follows a young girl, Maddie, her mother, Nancy, and nan, Ethel, as they travel to Shark Bay to see the whales. Maddie loves to sing and make up songs.

She identifies with whales which are also born to sing and she longs to experience whale watching. Along the journey, the family encounters disappointment in their travels, meets strangers who help them along their way, and forms new friendships with unexpected strangers. Written with short sentences

and succinct language, the story is driven through illustrated chapters. Encompassing real life situations, and with a satisfying ending, this style of novel attracts the newly independent reader and could be a valuable inclusion in a wide reading program. This could also be a great book to enjoy as a family and is a quick read. The text and illustrations are well presented and recognisable for young readers. S. Rasaiah

USER LEVEL: Stage 1
KLA: English
SYLLABUS: English K-10
SCIS 1767815 Paper \$12.99

The Tale of Rescue

ROSEN, Michael J.
 Candlewick Press, USA, 2015
 ISBN 9780763671679



When a father, mother and their 10 year old son are holidaying in the Appalachian Mountains, they are trapped in a horrific snowstorm. Unable to determine where they are in the whiteout, the panicked family seems destined to

perish in the freezing conditions. A cattle dog hears the father's desperate whistle and responds in the only way that he knows. Generations of his breed have been trained to herd and so the dog refuses to admit defeat. The bravery and tenacity of the dog and the description of the plight of the characters fascinates the reader of this illustrated novel. Delicate writing positions the reader outside the storm looking in on the rescue and willing the dog to succeed. The epilogue is almost unnecessary but serves to extend the narrative with the dog finally named and the boy's story beginning. This quality text shows students how theme, author's point of view and characters' perspectives can be revealed through figurative language and well structured situations. S. Rasaiah

USER LEVEL: Stage 3
KLA: English
SYLLABUS: English K-10
SCIS 1730083 \$19.99



A preview of 'The Tale of Rescue' by Chant, the cattle dog by hopewellsprings

Trouble and the Missing Cat

WHITTLE, Cate and KING, Stephen Michael
 Scholastic Australia, NSW, 2016
 (Trouble)

ISBN 9781742990774



Stephen Michael King's recognisable illustrations complement this mystery story about a flying dragon and a lost cat. Trouble, the giant green dragon who stole Georgia's house and wedged it between rocks in the mountains, flies the family to work and school. The disastrous landings in the school playground result in Trouble being banned from school. The neighbour's cat, Tibbles, goes missing and all eyes eventually turn to Trouble and his cave. Told through Georgia's voice, this accessible chapter book blurs the lines between reality and fantasy genres. The inclusion of a dragon into a story of school and family life makes this narrative unusual and intriguing. This format could encourage students to sustain their reading as they follow the protagonist's quest to understand Trouble's motives. S. Rasaiah

USER LEVEL: Stage 1
KLA: English
SYLLABUS: English K-10
SCIS 1761593 Paper \$9.99

fiction for older readers

Resources are arranged alphabetically by author. See also [eresources](#).

Some of these items are also suitable for upper primary students.

Elegy

ABBOTT, Jane
 Random House Australia, NSW, 2016
 ISBN 9780143781592

Elegy is defined as '...a poem of serious reflection, typically a lament for the dead', aptly describing the themes contained within this book. Michael and Cait have a history spanning centuries, punished to never die as a result of Cait opening Pandora's Box in a previous life,



unleashing evil upon the world. As star-crossed lovers, they are destined to continually meet through the ages in unhappy circumstances, such as Romeo and Juliet and Pyramus and Thisbe. While Michael, with extraordinary

powers, cannot remember his past, Cait remembers all and knows that each meeting will eventually lead to a catastrophic ending, her task to support and offer hope. Their current incarnation is in a small, isolated Australian farming community, where newcomer Jenny plays a pivotal role while trying to negotiate her own problems, including the gradual disintegration of her parents' marriage, being a target of peer prejudice and bullying, and her first love and sexual experience. Drinks spiked at a party, stalking, rumour mongering and violence all feature as forms of bullying and retaliation. Readers of this sophisticated novel are cautioned to expect some swearing, sex scenes and descriptions of violence. S. Morton

USER LEVEL: Stage 6

KLA: English

SYLLABUS: English Stage 6

SCIS 1778275 Paper \$19.99

Freedom Swimmer

CHIM, Wai

Allen & Unwin, NSW, 2016

ISBN 9781760113414



The author of this extraordinary tale of the Great Leap Forward, a dark period in Chinese history, offers insights into this bitter and difficult world through the eyes of Ming, a young man who loses his family to famine. The confrontation between

old ways of life on the land and the re-education of Communist Party members forms the basis of the narrative and it is through the friendship of Ming and Li that we become aware of the complex world created in China at the time. The search for escape by swimming through shark infested waters to the British colony of Hong King was a common one, but not often heard in the West. Readers will be struck by the harshness of life under Chairman Mao and the resilience of the people who dream of freedom. S. Pollard

USER LEVEL: Stage 4 Stage 5

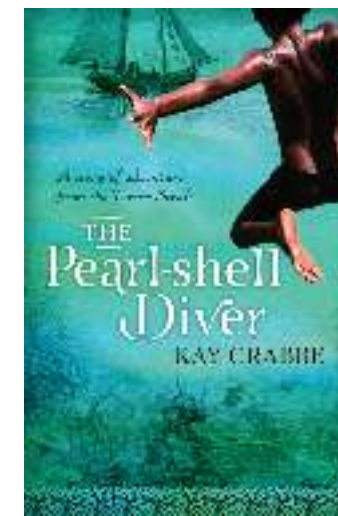
SCIS 1770818 Paper \$16.99

The Pearl-Shell Diver: a Story of Adventure from the Torres Strait

CRABBE, Kay

Allen & Unwin, NSW, 2016

ISBN 9781760290474



The time and setting of this novel, late nineteenth century in the Torres Strait, explores the pearl-shell industry, under threat from the 'winds of change'. Although 13 year old Sario longs to maintain the traditional lifestyle he

has always known on his isolated island home, intrusions by pearling operations and European and white traders are making this impossible. Sario is a well-realised character, caught in a vortex of change between two worlds. Long term diving has caused Sario's mother lung problems, and his sister has become deaf. Sario must find a way to earn money and keep his family together. The novel takes younger readers back in time to experiences of exploitation and the power of white traders in the Torres Strait. Racism and race politics are at play, reflecting the social, political and historical factors shaping the history

and culture of First Nations People in the Torres Strait Islands. Students may be inspired to inquire about this period in Australia's history which is rarely glimpsed or acknowledged. Aspects of Torres Strait Islander peoples' systems of trade and aquaculture as sea-faring people are revealed throughout this story. [Teaching notes](#) may assist teachers in the integration of this novel across the curriculum. S. Pollard

USER LEVEL: Stage 3 Stage 4 Stage 5

SCIS 1751220 Paper \$16.99

One Half from the East

HASHIMI, Nadia

HarperCollins, USA, 2016

ISBN 9780062572196



Set in modern day Afghanistan, this country's complexities are shown through 10 year old Obayda. The youngest of four girls, Obayda's father is a policeman and the family lives in comfortable circumstances in

Kabul until her father loses a leg in a

car bomb blast. Without any income, the family returns to the village of her father's family, totally reliant on family as the father retreats to his bedroom. Here they encounter a more restrictive culture. Boys are favoured, with freedoms denied to the girls, to the extent that families without any male children are considered unlucky and sometimes resort to the practice of *bacha posh* – dressing a daughter as a boy until puberty. Through Obayda's eyes, we see the turmoil created within as she becomes Obayd, the transition to acceptance, and even joy, with the assistance of another *bacha posh*. Their worlds come crashing apart when both are unwillingly forced to return to being female. An examination of character through gender and perspective may further readers' insights in understanding difference and diversity and build intercultural understanding. A discussion about this novel is available at [LibrisNotes](#). S. Morton

USER LEVEL: Stage 3 Stage 4

KLA: English

SYLLABUS: English K-10

SCIS 1774805 \$14.99



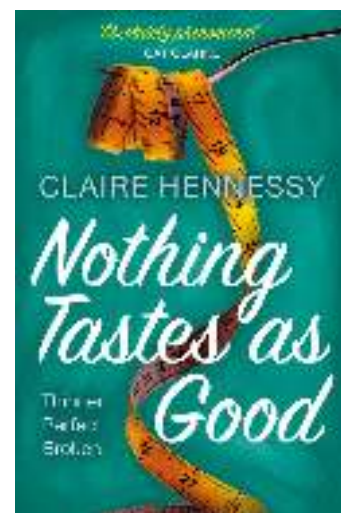
Page 100 - 'One Half from the East'
by Phoenix Book Company

Nothing Tastes as Good

HENNESSY, Claire

Hot Key, UK, 2016

ISBN 9781471405747



The cover of this novel about the sinister effects of anorexia features a tape measure and the words, 'thinner, perfect, broken'.

Annabel narrates the story as the ghost of a student who has died from heart failure

brought on by anorexia. Annabel still feels anger towards her little sister for having exposed her secret food tricks and her parents and psychologists for hospitalising her. Sent from the afterlife

to be a spirit guide for an overweight girl, Julia, Annabel uncovers a deeper reason for Julia's problems with food. As Annabel tries to influence Julia to refuse food, she eventually realises that anorexia is a sickness and that this is no longer about being in control, she has lost her only life forever. Readers feel a sense of helplessness for Annabel as she can never return to her family and friends and her grief at this realisation is heart-rending. Although sadness permeates this novel, there is a glimmer of hope for the characters touched by this disorder. Readers will discover some of the factors that can cause Anorexia Nervosa as they join Annabel and Julia's journey through adolescence, battling an abuse of trust, a self-harming fellow patient and their own feelings of worthlessness and revulsion. The [National Eating Disorders Collaboration](#) and [The Butterfly Foundation](#) provide information and support for anyone with eating disorders and body image issues. A. Soutter

USER LEVEL: Stage 6 Professional

KLA: PDHPE

SYLLABUS: PDHPE Stage 6

SCIS 1774550 Paper \$19.99

Quest of the Sunfish

McCONNOCHE, Mardi

Allen & Unwin, NSW, 2016
(Escape to the Moon Islands)

ISBN 9781760290917



Set in a technologically advanced future world, this gripping science fiction novel is the first in a trilogy. The characters have a will to survive in times of adversity, despite the bodies of power that have the ability to thwart

and destroy individual lives for their own gain. The protagonists, Will and Annalie, are protective of their father and are desperate to find him when he goes missing. It is quickly made clear that their father is on the run to escape the Admiralty for reasons that are slowly divulged to the characters and the reader throughout the course of the novel. It can also be surmised that the siblings have not been given the entire story and this is one element that ensures readers continue to search for answers. The novel also covers a drastic physical change in the world at the hand of humans which causes sea levels to permanently rise, ultimately

displacing a large proportion of people. It also forces the remainder of the demographic population into a new found poverty where they are forced to live in damp and mouldy houses. McConnochie has used the literary technique of foreshadowing in her novel, to represent a relatively sanitised version of the effects on the modern world of global warming and changing coastlines. This novel would best suit English students in Stage 5 who are focusing on narrative writing, constructing setting, and character development, as well as the role of power in a text. J. Duvall

USER LEVEL: Stage 5
KLA: English
SYLLABUS: English K-10
SCIS 1771072 Paper \$14.99

Elizabeth and Zenobia

MILLER, Jessica

Text Publishing Company, Vic, 2016

ISBN 9781925355031

Eccentric, energetic and enjoyable, this adventure novel focuses on the themes of family, friendship and the need to summon tenacious courage in order to stand up for the truth. Elizabeth, the main protagonist, is forced to live in old, mysterious Witheringe House, where her



father and Aunt grew up. Since Elizabeth's mother left her, Zenobia has become Elizabeth's best imaginary friend and her alter-ego. Through the fantastical elements and the abundant use of symbolism in this novel, readers are sure

to fall in love with the characters' traits and detective skills. Students studying character development and setting will find much to appreciate in this suspenseful narrative. J. Duvall

USER LEVEL: Stage 3 Stage 4
KLA: English
SYLLABUS: English K-10
SCIS 1771052 Paper \$16.99

The Legend Series [series]

PANCKRIDGE, Michael

Ford St, Vic, 2016

The re-launch of this series presents the first two books rebadged for a contemporary audience. [Michael Panckridge](#) encourages readers to discover these two books through reading a sample chapter, interviewing a character or via [teaching notes](#). The series promotes sportsmanship while



providing the reader with the background of each sport to increase understanding and proficiency. A quiz is included, prompting research and knowledge, while mathematical skills are enhanced with cumulative scoring statistics. This revised second edition of the series includes a bookmark with QR codes leading to quizzes and games. Fast paced with accessible language, the series will appeal to students needing support to sustain their reading. S. Morton

USER LEVEL: Stage 3 Stage 4
Paper \$14.95 each

Reviewed titles in this series:

Chasing the Break

SCIS 1778291

Against the Spin

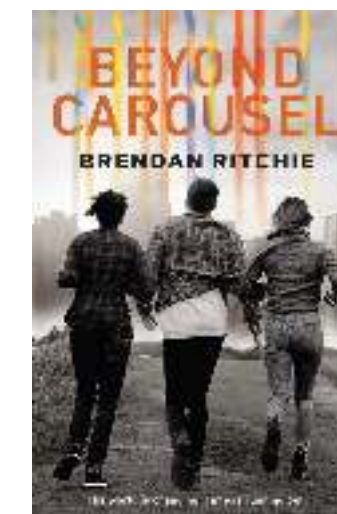
SCIS 1777665

Beyond Carousel

RITCHIE, Brendan

Freemantle Press, WA, 2016

ISBN 9781925164039



The fantasy sequel to 'Carousel' re-introduces Nox, Taylor and Lizzy, having escaped the Perth shopping centre in which they were trapped. As the friends attempt to discover what has happened in their world, Nox, who

finds himself left behind by the others, manages to meet someone who has an explanation about the Disappearance. The characters find each other once again in a rush to return to the world they knew. Fans of dystopian fiction will enjoy this engaging novel of survival. [Teaching notes](#) are also available from the publisher's website. S. Pollard

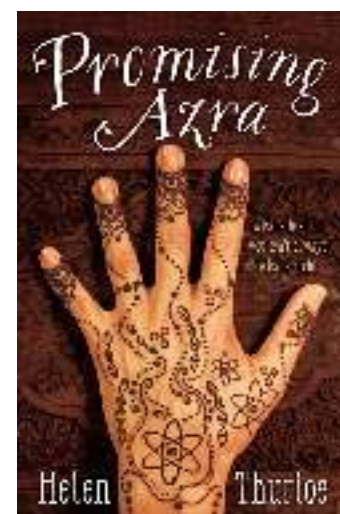
USER LEVEL: Stage 4 Stage 5
KLA: English
SYLLABUS: English K-10
SCIS 1774790 Paper \$19.99

Promising Azra

THURLOE, Helen

Allen & Unwin, NSW, 2016

ISBN 9781760113278



Azra, a 16 year old girl from a Pakistani background, is planning her future studying chemistry at university. The restrictions placed upon her are in stark contrast to the freedoms of her older brother Rashid. When it appears a

forced marriage in Pakistan is imminent, Azra faces a hard decision: to follow her parents' plan or her own. Both courses of action will have far-reaching ramifications. Themes of identity, citizenship, diversity, relationships, and females studying STEM subjects feature in this narrative. As a teacher and school counsellor were Azra's first contact for adult assistance, this story may resonate with other teachers and students who could benefit from advice at [My Blue Sky](#). An ABC radio podcast, '[Promising Azra' - When is arranged marriage akin to forced marriage?](#)' adds more to this subject. Links to other resources are included in the publisher's [teaching notes](#). S. Morton



USER LEVEL:

Stage 6

KLA:

HSIE

SYLLABUS:

Legal Studies Stage 6;
Society and Culture
Stage 6

SCIS 1768857

Paper \$19.99



'Promising Azra' - When is arranged marriage akin to forced marriage?' by Life Matters

Small Things

TREGONNING, Mel

Allen & Unwin, NSW, 2016

ISBN 9781742379791



An oversized boy's face on the cover of this revealing graphic novel has a sombre and dejected expression. Publishing this book was Mel Tregonning's family's homage to her as

Mel had grappled with mental illness and ultimately took her own life before completing the book. Shaun Tan finished the last three pages. A wordless book in shades of grey, we watch the boy as he moves through his daily experiences, in frames of varying sizes, each requiring detailed examination to determine what might be happening and how the events impact upon this child. His loneliness and anxiety are reflected in his school work, with each rejection and ridicule by others depicted as dark monsters eating at his body and spirit, growing in size and blackness until they are all-consuming. Help arrives when a sister notices his distress and confides that she, too, becomes anxious and encourages him to speak with his parents. Slowly but surely the darkness of his world begins to recede as he realises others also have monsters. S. Morton

USER LEVEL:

Stage 4 Stage 5

KLA:

English; PDHPE

SYLLABUS:

English K-10; PDHPE

SCIS 1770575

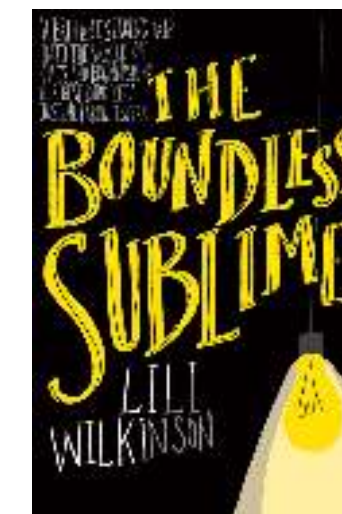
\$29.99

The Boundless Sublime

WILKINSON, Lili

Allen & Unwin, NSW, 2016

ISBN 9781760113360



Ruby, the protagonist of this confronting novel, is gradually drawn into a cult that promised her freedom but delivered cruelty and control. Parallel to the central theme is the resolution of Ruby's toxic grief for her younger

brother, who died as a result of her carelessness. The fragmentation of Ruby's home life leaves her vulnerable to the brainwashing of Zosimon, or Daddy, the leader of the sect, who welcomes her as a convert to the Institute of the Boundless Sublime. Ruby's romantic relationship with Fox, a strange and innocent boy, breaks the rules of the Institute and leads to a violent punishment. When Ruby is ultimately targeted by Daddy as his chosen concubine, she finds the strength to break free and seek restitution and justice for the others still bound by the power of their murderous leader. [Teaching notes](#) discuss these issues and some of the author's research

for this book can be found at [Let's talk about sects](#). A. Soutter

USER LEVEL: Stage 6

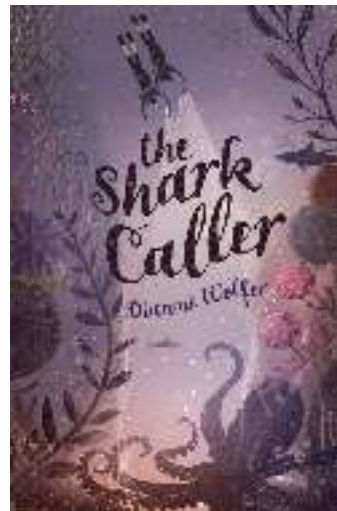
SCIS 1768862 Paper \$19.99

The Shark Caller

WOLFER, Dianne

Penguin Random House Australia, NSW, 2016

ISBN 9780143780557



Set in Papua New Guinea, this story reflects the tension between traditional and modern cultures. Izzy, the main protagonist, has a part Papua New Guinean heritage yet the fate of her clan in Papua New Guinea rests on

her shoulders. With the untimely death of her twin brother, Izzy is forced into an unexpected role as the last twin in the Shark Caller lineage. In order to save her people, Izzy catapults herself into a very dangerous traditional diving ritual usually reserved for males. The author comments on the clash of cultures through actions such as logging and how this has damaged the Papua New Guinean reef. Wolfer has shown how

the two cultures can support each other by prefacing every chapter with quotes from significant authors such as J. K. Rowling. This novel could work well for students studying the [English textual concepts](#) of Authority, Context, Point of View, Representation and Intertextuality. It also supports the cross curriculum priority of Sustainability, and the general capability of Ethical understanding. J. Duvall

USER LEVEL: Stage 3 Stage 4

KLA: English

SYLLABUS: English K-10

SCIS 1768744 Paper \$14.95

information, poetry and drama

Resources are in Dewey order.

Aliens, Ghosts and Vanishings: Strange and Possibly True Australian Stories

TARAKSON, Stella and MORDEN, Richard

Random House Australia, NSW, 2016 [001.94]

ISBN 9781925324969



additional sources. This feature follows

A compilation of bizarre short stories has been successfully separated into six categories in this unusual resource. Encouraging readers to enquire further, each section has 'Want more?' and ultimately, 'Want even more?' suggestions listing

the Kath Murdoch [Integrated Inquiry](#) model of building deep understanding through finding out and going further. 'Mysterious locations' includes Lassiter's Reef, 'Haunted places' explores Port Arthur and the Quarantine Station, and 'Bizarre disappearances' asks what could have caused the tragedy of Malaysian Airlines Flight 370? These significant aspects of Australia's past could be incorporated into the study of history using the key inquiry questions to spark students' curiosity. Teachers should vet the stories for contextual appropriateness and be aware that stories of paranormal events and mysticism may disturb some students. J. Duvall

USER LEVEL: Stage 3 Stage 4

KLA: HSIE

SYLLABUS: History K-10

SCIS 1778830 \$27.99

A Beginner's Guide to Coding



SCOTT, Marc and MARSTON, Mick
Bloomsbury, UK, 2016

ISBN 9781472928641 [005.13]

Clearly written, this colourful book introduces readers to the important skill of computer programming. Following



a discussion about the what and why of coding, the authors teach readers how to use the languages of the programs, [Scratch](#) and [Python](#). Once the basic rules of Scratch have been mastered,

the book extends the reader's coding skills by creating a computer game in Python. Addressing the vital role that programming plays in the real world, definitions of programming terms and operating systems are included at the conclusion of the book. **Find out more** leads readers to [Snap](#), [Touch Develop](#), [Pygame Zero](#), [Raspberry Pi](#) and [Codecademy](#) which should tempt beginner programmers further into the world of coding. S. Rasaiah

USER LEVEL: Stage 1 Stage 2
Stage 3 Stage 4

KLA: Science; SciTech; TAS

SYLLABUS: Information and Software Technology 7-10; Science K-10 (SciTech K-6)

SCIS 1776639 Paper \$18.99

Among Believers: A Pictorial Journey



OSBORNE, Christine
World Religions Photo Library, UK, 2016
ISBN 9780992324018 [200]



Eleven religions are documented through extraordinary photographs in this pictorial work. Selecting religious

photography that captures sensitive aspects of worship, the writer has included over 300 images featuring religious art, places of worship, rites of passage, festivals and food, religious education and sacred sites. The faiths of Christianity, Islam, Hinduism, Buddhism, Judaism and Sikhism are featured in this collection. A glossary of religious terms is provided to explain the italicised words used in each caption and brief introduction beneath the headings and subheadings. The realism in these pictures may enhance intercultural understanding and support culturally inclusive curriculum implementation and learning in the Studies of Religion Years 7-10 Syllabus and Studies of Religion Stage 6 Syllabus. S. Rasaiah

USER LEVEL: Stage 4 Stage 5
Stage 6

KLA: HSIE

SYLLABUS: Studies of Religion 7-10; Studies of Religion Stage 6

SCIS 1775347 Paper \$88.28; Kindle edition \$7.18

Forward March

MATTINGLEY, Christobel and KENNETT, David

Omnibus Books, SA, 2016

ISBN9781742990804 [355.1]



Commemoration of Anzac Day is depicted in this striking book, illustrated with poignancy and symbolism.

Using sparse and poetic descriptive language, the day and its impact, both

past and present, are portrayed with particular emphasis on the participants of the Boer War, World War I and World War II, and the Vietnam War. Those who remained at home and the roles of women are also referenced. Minimal text is counter balanced by the volume and

variety of the illustrations; sepia tones in general for the past, with more colour as time moves forward. The emphasis here is on reflection and appreciation rather than the glorification of war. This text supports the teaching of '[Community and Remembrance](#)' in the NSW History K-10 Syllabus. S. Morton

USER LEVEL: Stage 2

KLA: HSIE

SYLLABUS: History K-10

SCIS 1748056 \$24.99

Marijuana and Health



Edited by Justin Healey.

The Spinney Press, NSW, 2016
(Issues in Society 401)

ISBN 9781925339024 [362.29]



Students need clear information about marijuana and this resource book supplies a range of articles and related sources such as the [Alcohol and Drug Foundation](#), the [Medical Journal of Australia](#) and

the National Cannabis Prevention and Information Centre that set out the facts

based on research. Two chapters, 'How marijuana affects health' and 'Medicinal cannabis debate', are well referenced and backed by additional websites. 'Exploring issues' features worksheets, activities and multiple choice questions relating to the views expressed in this book. The arguments focusing on the effectiveness of cannabinoids and crude plant in the treatment of medical conditions in Chapter 2 could support a study of the impact of emerging new treatments on health care in personal development, health and physical education in Stage 6. A. Soutter

USER LEVEL: Stage 5 Stage 6
Community
Professional

KLA: PDHPE

SYLLABUS: PDHPE 7-10;
PDHPE Stage 6

SCIS 1762608 Paper \$26.00;
ebook \$26.00

Methamphetamine Use and Addiction



Edited by Justin Healey.

The Spinney Press, NSW, 2016
(Issues in Society 407)

ISBN 9781925339147 [362.29]

Exploring current Australian trends



in the use of the drug commonly known as 'ice', this publication incorporates reports into 'Trends in methamphetamine use', 'Health effects of methamphetamine use' and 'Tackling Australia's ice problem'. The

research in this book is thorough and confronting. The images, graphs and statistics concerning substance abuse back-up the alarming messages in the articles. This coverage may assist legal studies students who select 'Drug Use and the Law' as their contemporary law reform issue. Of particular interest in a study of drug use in personal development, health and physical education may be the eye-opening results of the impact of ice on a user's social wellbeing. S. Rasaiah

USER LEVEL: Stage 5 Stage 6
Community
Professional

KLA: HSIE; PDHPE

SYLLABUS: Legal Studies Stage 6;
PDHPE 7-10; PDHPE
Stage 6

SCIS 1773582 Paper \$26.00;
ebook \$26.00

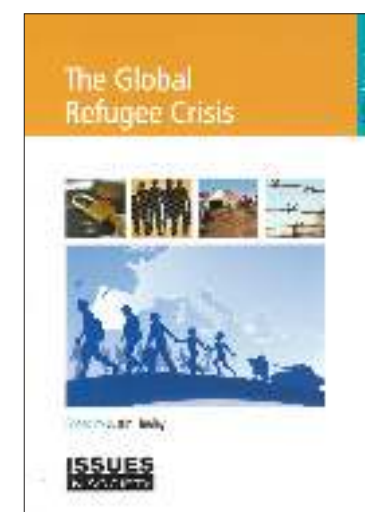
The Global Refugee Crisis



Edited by Justin Healey.

The Spinney Press, NSW, 2016
(Issues in Society 404)

ISBN 9781925339086 [362.87]



This edition of 'Issues in Society' provides valuable, current information from a wide range of credible sources. Chapters include 'Global refugee trends' and 'Australia's response to the refugee crisis',

accompanied by a glossary and 'Fast facts'. This publication would assist students' understanding of refugee migration, threats to cultural diversity, stereotypical views and prejudice, and the role and effectiveness of the United Nations High Commissioner for Refugees (UNHCR). S. Pollard

USER LEVEL: Stage 6

KLA: HSIE

SYLLABUS: Geography Stage 6;
Legal Studies Stage 6;
Modern History Stage 6;
Society and Culture
Stage 6

SCIS 1762615 Paper \$26.00;
ebook \$26.00

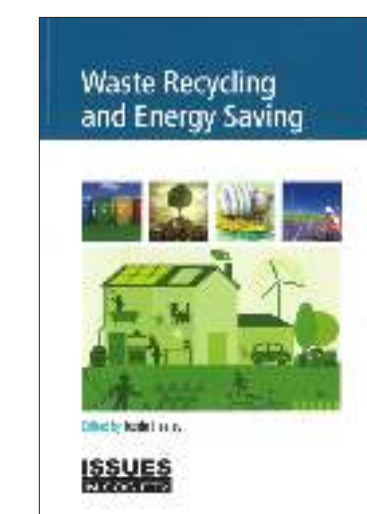
Waste Recycling and Energy Saving



Edited by Justin Healey.

The Spinney Press, NSW, 2016
(Issues in Society 403)

ISBN 9781925339062 [363.72]



Containing well-referenced, current Australian waste management and energy consumption statistics, this issue details explanations and suggested personal strategies for sustainable resource use, waste

reduction and energy conservation. Most suitable for upper secondary and tertiary students, the book is intended to develop skills in data interpretation and analysis when formulating evidence based claims. The strengths of this resource are the currency of the data, mainly from Australian government sources, the synthesis of data into graphic representations, and the comprehensive coverage of each topic. Also available as an ebook with active hyperlinks, this issue could support investigations into natural resource use in the geography Stage 6 preliminary course, 'Global Challenges', and energy

conservation in the science Stage 5 strand, 'Physical World'. G. Braiding

USER LEVEL: Stage 5 Stage 6
Professional

KLA: HSIE; science

SYLLABUS: Geography Stage 6;
Science K-10 (SciTech
K-6); Senior Science
Stage 6

SCIS 1762613 Paper \$26.00;
ebook \$26.00

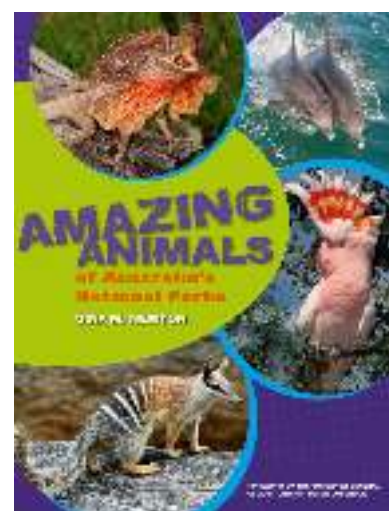
Amazing Animals of Australia's National Parks



NEWTON, Gina M.

NLA Publishing, ACT, 2016

ISBN 9780642278883 [591.994]



An ideal resource for the Stage 2 geography content area, '[The Earth's Environment](#)', and the Stage 2 and Stage 3 science strand, 'Living World', this appealing book shows the diversity

of Australian animals and their lifestyles. Organised by habitat and accompanied by a large thematic map, each animal

fact page answers the questions, 'What is it?', 'Where does it live?' and 'What's its life like?' The book covers all major Australian habitation. Its use of colour coding, symbols, distribution maps, high quality photographs and boxed facts models the effective use of geographical tools, particularly maps and visual representations, in communicating geographical information. Succinctly explaining the features of each habitat and how animals, including invertebrates, use vegetation and the natural environment, the book offers quality support for investigating the significance of, and interconnections within, Australian environments and for considering how national parks protect them. G. Braiding

USER LEVEL: Stage 2 Stage 3

KLA: HSIE; SciTech

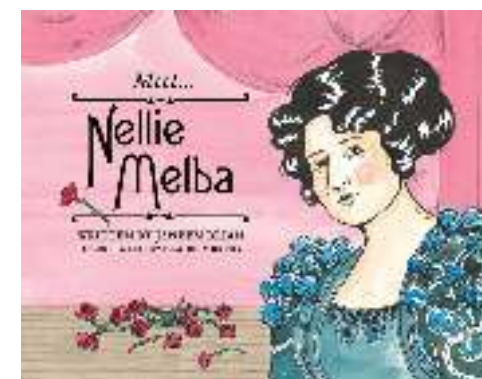
SYLLABUS: Geography K-10;
Science K-10
(SciTech K-6)

SCIS 1775510 Paper \$29.99

Meet Nellie Melba

BRIAN, Janeen and MURPHY, Claire
Random House Australia, NSW, 2016
(Meet 11)

ISBN 9780143780298 [782.1092]



Dame Nellie Melba, Australia's first classical music star, brought opera to Australians in the city and the

bush during the late nineteenth and early twentieth centuries. The biographical picture books in this series explore the way that significant Australians have shaped Australia's history and, as such, could support learning within the NSW History K-10 Syllabus. The timeline of Nellie Melba's life and career included in this book assists students to understand key historical concepts as they develop the skills of historical inquiry. The concepts of change and continuity in family life and social mores are exemplified in this story of a woman who overcame societal prejudice and conventions to further her passion for opera singing. [Teaching notes](#) can be found on the publisher's website.

M. Sutura

USER LEVEL: Stage 1 Stage 2
Stage 3

KLA: HSIE

SYLLABUS: History K-10

SCIS 1768353 \$24.99

Soccer

BLACKALL, Bernie

Sportzbooks, Vic, 2016 (Learn to Play)

ISBN 9781925552003 [796.334]



Targeted at beginning players and soccer enthusiasts, the information, illustrations and diagrams in this book explain the rules and skills of the game, combined with dramatic

photographs of Australian and international highlights. Giving equal prominence to male and female soccer players, facts regarding Australia's position in world sport and its international players are current to the beginning of the 2016 World Cup. One chapter is devoted to the game's history, with the majority of the book directed towards

the player and the mechanics of the game, including the field, clothing, rules, the referee's signals and the multitude of necessary skills such as ball control, passing, types of kicks, heading and defending. Appropriate stretching exercises conclude the book. Other titles covering tennis, netball, Australian Rules, athletics and softball are also available in this helpful series. S. Morton

USER LEVEL: Stage 2 Stage 3

KLA: PDHPE

SYLLABUS: PDHPE K-6

SCIS 1780666 \$29.95



Bernie Blackall by Pro Video Booth

YouTube Planning learning activities using YouTube videos embedded in 'Scan'? Note that a teacher log in is required to view YouTube videos in the NSW DoE online environment. Stage 6 students also have access.

Australia Illustrated

McCARTNEY, Tania

Exisle Publishing, NSW, 2016

ISBN 9781925335217 [994]



The whimsical images and text in this fascinating book offer the composer's take on what makes up the continent of Australia. In a myriad of symbolic pictures, a range

of iconic symbols represents all things Australian. Who knew the pie floater came from South Australia? A visually dense map of place names and images introduces each state and territory. Every page reveals rich detail rendered in a fresh, clean illustration style, and with a gentle sense of humour. Inviting exploration of the [English textual concepts](#) of Representation and Connotation, Imagery and Symbol, the text provides opportunities for students to explore the multiple layers of meaning in the illustrations and consider what choices they would have made to introduce others to our country and culture. P. Galloway

USER LEVEL: Early Stage 1 Stage 1
Stage 2 Stage 3

KLA: English; HSIE

SYLLABUS: English K-10;
Geography K-10

SCIS 1775516 \$29.99



Australia illustrated - trailer by Exislebooks

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