

SCAN

Vol 17 No 4 November 1998

Curriculum Support Directorate



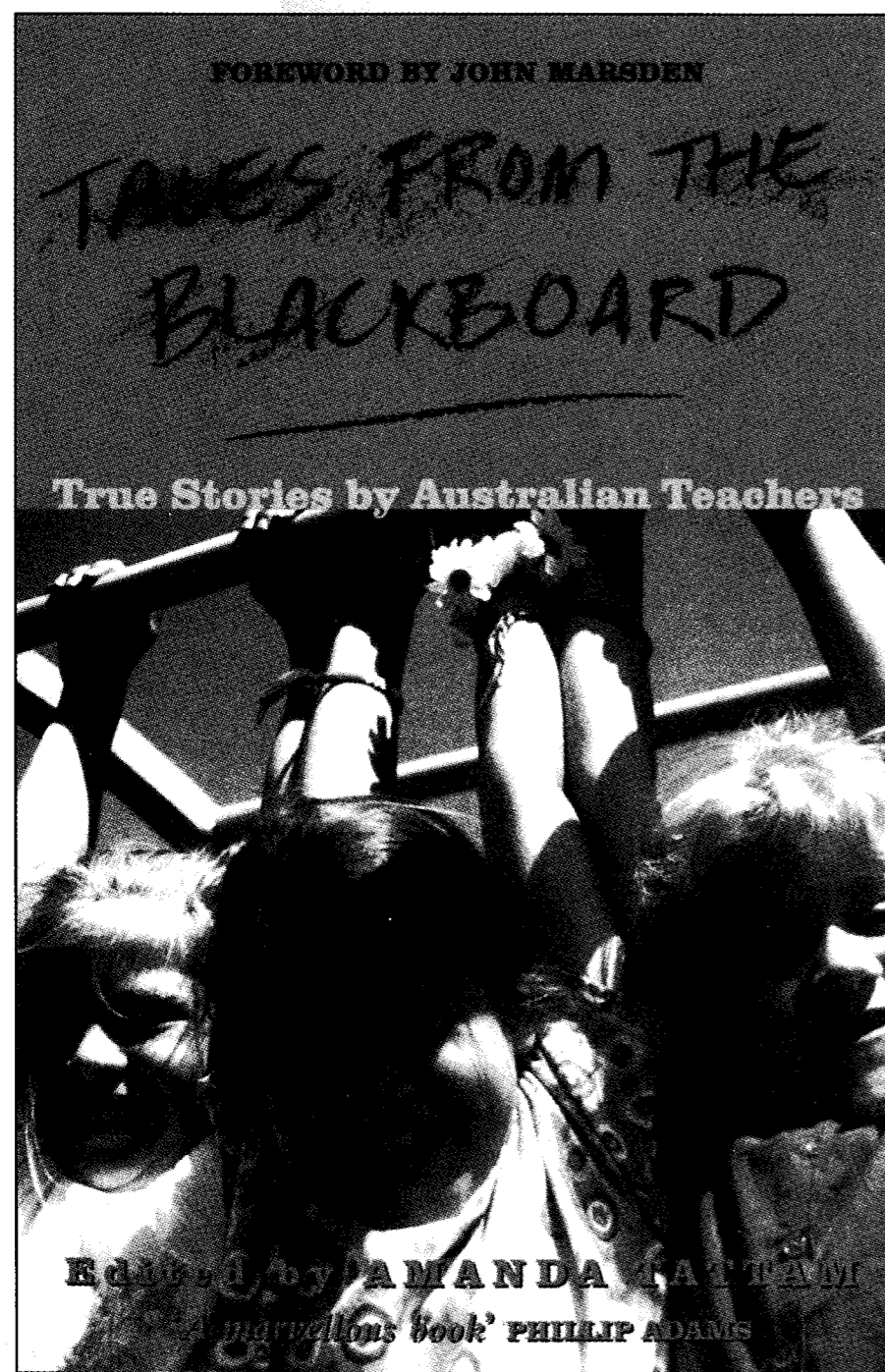
- book raps, email and information literacy
- cooperative learning and the teacher-librarian
- outcomes for author visits
- students as authentic researchers



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SCAN

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From the Editor



I can now inform you that a year at *Scan* really does go by just as quickly as in a school library. It has been a stimulating and rewarding year for me, and I hope that the changes we have made to *Scan*, most in response to readers' suggestions, are meeting with your approval.

All subscribers should have received a 1999 renewal form towards the end of Term 3. This was in response to many requests, as some schools close off budgets early to prepare for the annual financial roll over. However, please remember that *Scan* subscriptions are for a calendar year; this issue finishes up your current subscription and the renewal form covers the four issues for next year.

Traditionally, the last issue of the year contains cumulative indexes to the resource reviews, making it easier to locate particular items across the four issues. This time we have added an extra page, an Internet site title index. We have also been able to include **four additional pages** for articles, which has only been possible because of the support of our advertisers.

Thank you to Kate Chauncy for our feature article on author Libby Gleeson. Libby's visit to the Southern Highlands of New South Wales was made possible by the networking and collaboration skills of staff at several small schools, and they are to be congratulated. Kate's article discusses how such literary events can be made an intrinsic part of the whole school plan.

I must also thank the prolific Lorraine Bruce for agreeing to write another article for us, this time on the important issue of how teacher-librarians can help to instigate change in their schools through leadership and professional development. Behind the scenes, Lorraine has been updating the concept map of *Scan*'s contents for the unit. This ongoing evaluation exercise gives a 'snapshot' of how *Scan* has addressed Agenda '98 priorities; literacy; technology; and information literacy. Although Lorraine is off to the United States next year, and we wish her all the best, we also hope to keep her busy with *Scan* activities.

Many teachers and teacher-librarians are seeking new and exciting ways to integrate the Internet with teaching and learning. In this issue, we present two articles about book raps. Jane Carr and Wendy Chapman offer stimulating teaching tips, and share their successes. We have noticed that few New South Wales schools participate in book raps; it will be interesting to see if Jane and Wendy's articles inspire more schools to do so.

Thank you to all our contributors, readers and advertisers, and also the resource publishers who supply books to be catalogued and reviewed. Your ongoing support of *Scan* is very much appreciated and we hope you will join us again in 1999. Have a great summer break.

Ian McLean

Currents

SCISWEB AND SCISCD IN 1999

The statewide subscription to SCISWeb and SCISCD drawn from schools' global budgets will continue in 1999. The price will be held at the 1998 level and the substantial 46% discount will continue as a result of the statewide subscription. The response from schools is overwhelmingly positive, with the most recent phone calls seeking an assurance that the subscription will continue exactly as it had in 1998.

There will be one change to the subscription. Schools were notified at the end of 1997 that *Rapid retrospective* would only be available for one further year (1998). *Rapid retrospective* will not be available in 1999. The very small number of schools still using it in 1998 will need to have made plans to move to the new products next year.

As we have all become more skilled in the use of the products the enormous flexibility in the way they can be used has become evident. The *Using SCISWeb and SCISCD in school libraries* pages on the DET Web site have provided opportunities for teacher-librarians to raise issues and make suggestions for the ways in which the products can be used.

An issue that comes up in nearly all the District meetings is that of **Backup**. The Web site suggests a number of ways in which schools can approach the issue to ensure that the **Backup** process does not disrupt the library educational program. From the *Network for education* home page, follow the path **Staff**, then **Training and Development**, then **Initiatives**, then **Your say!**, then **List of topics**. Both the **FAQs** and the discussion board **Your say!** suggest a variety of approaches to the issue.

Curriculum Support Directorate and Training and Development Directorate are currently collaborating on the development of a training package on the use of the products. The package will cover the use of SCISWeb for downloading of records and basic searching on the **WEB OPAC**. The package will be flexible enough to accommodate individual use, and use by a facilitator with small groups such as a District network meeting. Teacher-librarians could assume the role of workshop leader at a District network meeting.

PRIVACY ISSUES AND OASIS LIBRARY

OASIS Library data is an important educational tool. However, it also contains data which is highly confidential as it includes information on staff and students, such as names and addresses, and borrowing and reading habits. It is not information which should be given or sent to anyone outside the school without consultation and discussion with the Principal. Assurances need to be sought and investigated to ensure the confidentiality and safety of data.

AGENDA '99

As the Library and Information Literacy team begins the process of planning for 1999 the unit will take its lead from the Agenda '99 priorities. They will form the basis of the support to teaching and learning programs provided by the unit including resource reviewing; *Scan* contents; SCIS cataloguing records; work with other units within Curriculum Support and other Directorates including Training and Development. As the school and school library begin to plan educational programs for 1999, system priorities need to be incorporated.

TRAINING AND DEVELOPMENT FOR UNTRAINED TEACHER-LIBRARIANS

During my visits to District network meetings, a number of untrained teacher-librarians have talked to me about upgrading their qualifications through tertiary study. Training and Development Directorate offer a sponsorship program for such study. A number of different universities are accredited, and the sponsorship offers both relief days and some financial support. As Jenny Scheffers, a recent graduate, states in her article in *Scan* (Vol 17 no 3 1998), "My outlook and experience has been greatly enriched... The benefits of study are not only personal; they flow directly onto the whole school community." The sponsorship program will be advertised in the *Personnel Bulletin* at the beginning of Term 4. I hope that many of the people I have met in Districts will avail themselves of the program.

As this is the last *Scan* for the year I wish everyone best wishes for the rest of 1998, and I look forward to hearing from all of you in 1999.

Michelle Ellis is Senior Curriculum Adviser, Library and Information Literacy



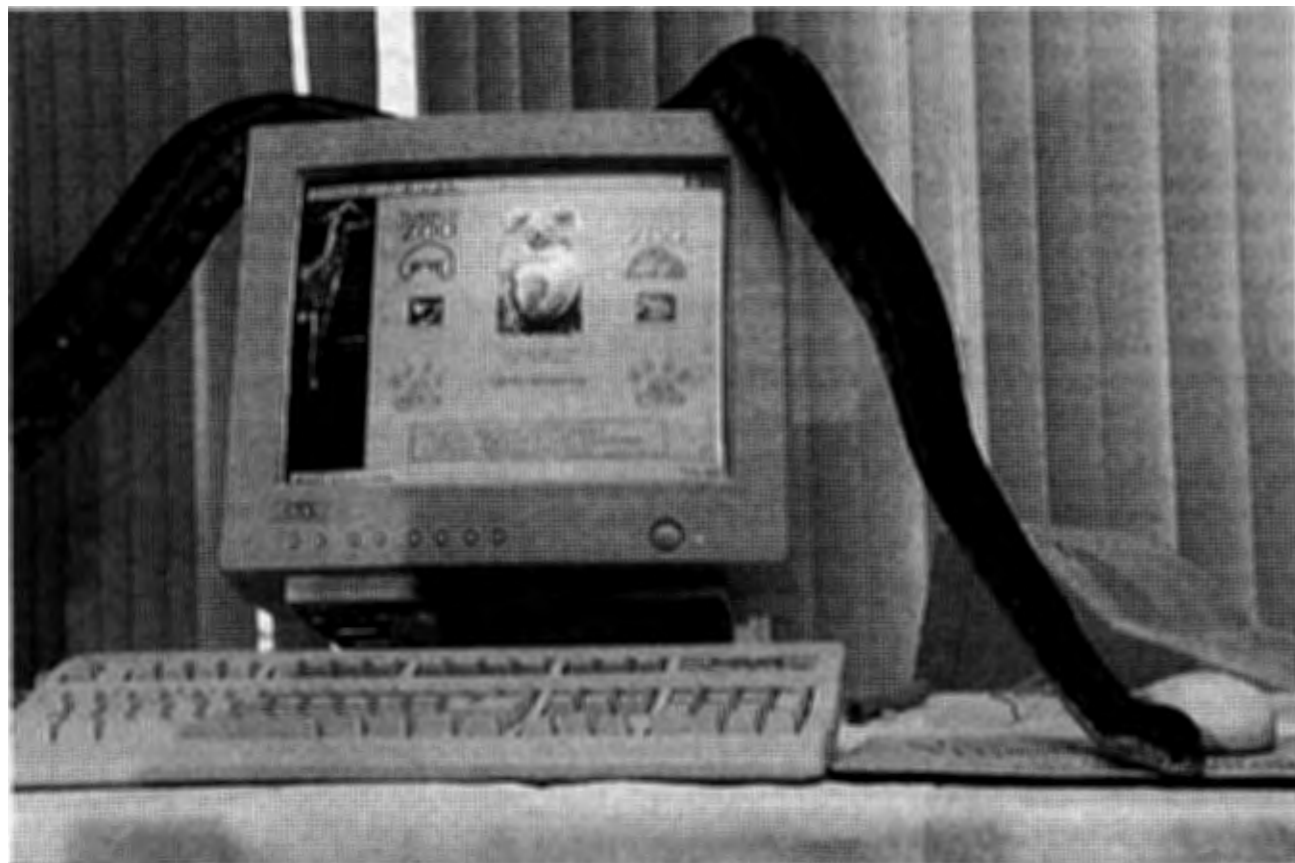
Zoos' Web site is a big hit for schools



How does one find out the average mass of an elephant?! Taronga and Western Plains Zoos recently uploaded a new Internet site on the World Wide Web, which promises to be an exciting information source for use in schools. Both Zoo Education Centres are a part of Curriculum Support Directorate. **Simon Duffy** is an Education Project Officer, Taronga Zoo.

The Zoological Parks Board of New South Wales' Web site is just the place to find out how much an elephant weighs... or the length of a giraffe's neck. Students all over the world are browsing the zoos' site and posing questions, from the simple to the Webmaster's current favourite: "How many times can a tiger mate in one day?!"

These are the types of questions which zoos and teacher-librarians are asked often by students, and the answers are not easily found in school library books. However, the answers to these specific animal questions can be found on the new Web site, *Welcome to Zoological Parks Board of New South Wales* at: <http://www.zoo.nsw.gov.au/>



Taronga Zoo and Western Plains Zoo are now as close as your school's Internet computer.



A comprehensive information source

The site was launched on 1st June this year and is very user friendly. The information on the site is provided by the staff of both Taronga Zoo and Western Plains Zoo, based on their comprehensive wildlife knowledge and first hand experience. Students can choose from one of the many sections to find that specific piece of information, and the answers to many animal and environmental questions. The sections include: **Education; Animals; Plants; Environment; Conservation; Sponsorship; What's New;** and much more.

There is also information about: the zoos' research and conservation work; Platypus Project; endangered species breeding programs; and the Australian Marine Mammal Research Centre.

Interactive bulletin board

If visitors to the site cannot find the answer to a particular question, messages can be left on the Web site's Chat Club by clicking the **Chat room** hypertext link. The Chat Club is an interactive bulletin board where queries can be addressed by a Zoo Education Officer. It is also a valuable resource for teacher-librarians, teachers and students, as questions and comments are read and answered daily.

The Chat Club also provides the excellent opportunity for classes to book a *live chat* session with a Zoo Education Officer. These sessions can focus on particular themes, or units of work, that the students are studying in class. This service will be especially useful for classes who have visited the zoos' Education Centres and need to learn more about the animals they saw. Themes for the live chat sessions can range from endangered species to classification, Australian animals, conservation and primates. Children can also learn about the role of the modern zoo. To book one of these live chat sessions, just leave a message in the **Chat room**. These sessions are available between 2.00 - 3.00 pm, Monday to Friday.

Wild ways of learning

Education is one of the main roles of a modern zoo. Taronga and Western Plains Zoos' Education Centres provide over 100000 students each year with an educational experience. They provide a centre for the study of animals and the environment, teaching students about important environmental issues. Both zoos are specially equipped with stimulating classrooms where formal edu-

cation takes place using live animals and biofacts to make lessons come alive.

The Web site allows teachers to plan effectively an excursion to either zoo. Entry prices, information on the latest work being done by conservation teams, maps, animal presentations and new exhibits are available online. Before visiting the zoo, teachers can explore the **Education** section to find a list of teaching resources which can be utilised when planning a unit of work. Topics available include: *Endangered now... extinct forever; Rather remarkable rainforests; Primates; Animal classification; Animal adaptations; Animals under threat;* and *Enclosure design*.

The Zoo library

Through the new Web site, teachers and teacher-librarians in schools are also connected to the zoos' library. Taronga and Western Plains Zoos share a specialised library system that has access to over 3000 books, and subscribes to a variety of wildlife and zoological journals. The library is full of specific animal information and the Zoos' librarian is more than willing to find answers to any questions. This library is also an excellent resource to utilise when you are deciding on which animal texts would be appropriate for your school library, and which Internet sites are useful for students. Questions to the zoos' librarian can be left as a message in the **Chat room**.

Other online services

Taronga and Western Plains Zoos coordinate many state wide competitions for children, such as the **Readers Digest Writing Competition** and the **Banner competition**. These contests attract over 2000 entries, with the winning entries displayed on the zoos' Web site. It is very exciting and motivating for children to see their work displayed on the World Wide Web.

As a way of cementing interschool relationships, and promoting New South Wales zoos at the same time, classes can choose to **Send a postcard** to email buddies all over the world using the interactive facility on the site.

Welcome to Zoological Parks Board of New South Wales is updated regularly with new happenings, animal births and new exhibits at both Taronga and Western Plains Zoos. ■

Libby Gleeson visits the Southern Highlands



Katharine Chauncy is the teacher-librarian at two small schools, Sutton Forest Public School and Bundanoon Public School, in the Southern Highlands of New South Wales. As a part of both schools' literacy through literature programs, children's author Libby Gleeson was invited to be a guest speaker. Collaboration with other local teacher-librarians and support networks made possible a fuller itinerary, which maximised the impact of Libby's journey for all concerned.

Promoting children's literature and, in particular, Australian children's literature, is a part of the teacher-librarian's job description which is close to many hearts. Having an author visit scheduled, well in advance, onto the whole school plan for the year can be the catalyst for meaningful literature based units of work. Cooperatively planned and programmed between classroom teachers and the teacher-librarian, such a visit goes beyond the traditional 'author study', becoming a fully integrated, real life learning experience for the community, with a very rewarding finale. It is also an opportunity for the teacher-librarian to take a leadership role: as organiser and educator.

Selecting a guest

This is the second year I have organised an author visit for the two small schools in which I work. In 1997 we thoroughly enjoyed a visit by Richard Tulloch, who 'performed' many of his stories to the delight of all students from Kindergarten to Year 6, and for the teachers as well. This year, one week prior to the primary school library's 'Big Event' for the year, Children's Book Week, we were privileged to have Libby Gleeson as our special guest. Although the visit was arranged long before the 1998 Children's Book Council of Australia Awards Shortlist was announced, we were thrilled when Libby's book, *Queen of the universe* was nominated in the Book of the Year for Younger Readers category; thrilled for Libby and thrilled for us. What serendipity for a little school community such as ours. The students had already enjoyed *Hannah plus one*, the winner of this category in 1997, and many also remembered her award winning picture book *Where's mum?* Making the shortlist again in 1998 made Libby even more famous and well known in the children's lives.

Management issues

Small rural schools, by their nature, depend heavily on collaboration to reduce the effects of their isolation.

Teaching staff K-6 quickly learn the benefits of coordinating efforts to create successful whole school experiences. It therefore becomes necessary to identify a potential guest whose body of work encompasses examples of: picture books; short stories or short easy fiction; and more demanding novels for the older students. Libby Gleeson was an outstanding example of the ideal guest author.

Networking between schools is another essential management strategy for making author visits feasible, reducing the travelling distances for the guest and the costs involved. I involved a number of other teacher-librarians in the area, and two local support groups: SHELTA (Southern Highlands Educators, Librarians and Teachers Association) and SHARE (Southern Highlands Association of Reading Enthusiasts).

Together, and in consultation with our guest, we planned two full days of appointments for Libby, including a dinner and professional development session for adults during the first evening. This way, accommodation costs did not have to be borne by individual schools, and Libby's travelling expenses were shared.

It is a lot to expect of an author that they speak to a group of students (age range: five to twelve years) in one session, then leap into their car to dash another twenty-odd kilometres to the next school and two more sessions! I am sure that some would not have been as keen about our proposed program. However, Libby was not fazed by her quest, and genuinely seemed to enjoy the different settings, and casts of characters, confronting her in the tight time frame.

The night out was a bonus, and would have been extremely difficult for a small, individual school to coordinate. Libby was a fabulous after-dinner speaker, extolling the importance and virtues of both teacher-librarians and school libraries! Libby Gleeson has gone on record as saying that, if our profession was ever in danger of being made obsolete, Libby and her writer colleagues "would be out in the streets waving placards" to support our cause!



*Children's author Libby Gleeson shares her picture book *Big Dog* with students in the New South Wales Southern Highlands.*

Preparing the students

Prior to Libby's visit to Sutton Forest and Bundanoon, K-6 students in both schools were made very familiar with her work. Firstly, a display of Libby's published writings was set up in each library, after borrowing from neighbouring schools and the public library (or purchasing) any missing titles in the Gleeson collection.

Infants students were read each picture book during library sessions; older students read the picture books in small groups with their teachers, or in the Library, employing literature circle strategies. Many primary classes enjoyed a serial reading of *Skating on sand*, the first novel in the Hannah series. Novels were also read independently in the classroom, or during library sessions, with many comparisons identified and discussed both orally and in written activities.

Queen of the universe was turned into a readers' theatre production by some classes, with polished performances scheduled during Book Week. Biographical notes on Libby Gleeson were used for dictagloss (see note) and keyword activities. A series of questions for the author was also compiled, and frequently added to, as each class read a new title.

Enter the author...

Libby arrived at school, armed with a teacher type basket of "interesting looking stuff" and was obviously prepared for any situation. One always worries that the excitement level of the children will affect their listening skills, but they sat mesmerised by their speaker and remembered their good manners and appropriate behaviour.

The students were enthralled with the examples of Armin Greder's original artwork for her picture books, which included storyboards and rough sketches. Libby also shared some 'getting started' ideas from her notebooks, which have since inspired young writers.

There was time for the students at each session to ask both pre formulated and spur of the moment questions, which were patiently answered by Libby as if they had never been asked before. A big hit for all was the sneak preview, read aloud by Libby, of a chapter from the next Hannah title, *Hannah and the tomorrow room*, not due for release until next year... but I am not sharing any secrets.

We finished up with photographs and autographs, and many students lingered for that important "just one more" piece of information. The sessions passed so quickly, and our visitor had to move on through the busy schedule we had set for her.

Dictagloss

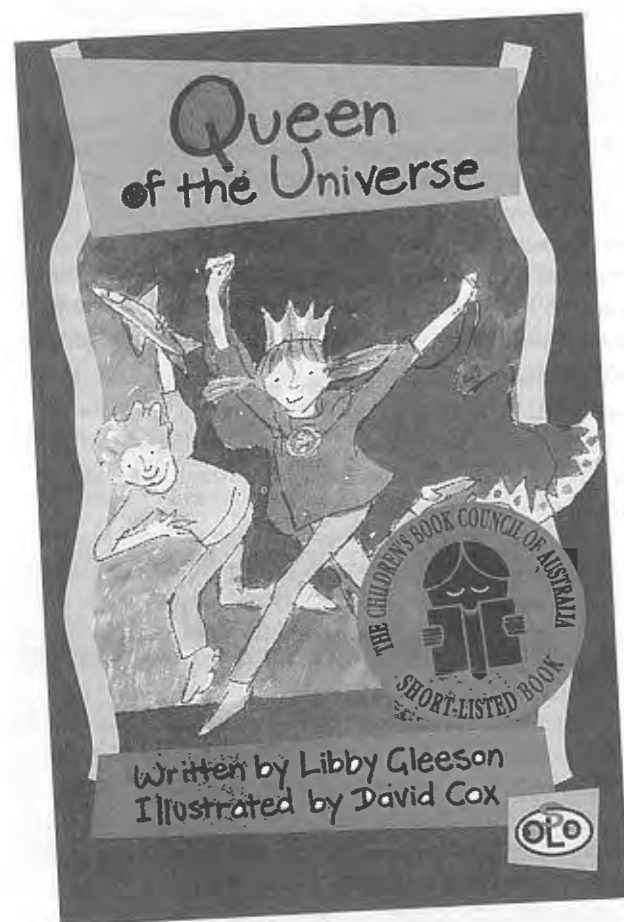
A dictagloss is a type of dictation. The teacher reads aloud a passage or a poem from a literary or factual text at a normal pace. The students make notes, writing down only the keywords or phrases. The teacher then rereads the passage or poem. In groups, the students reconstruct the passage as they heard it. They are concerned with reconstructing the meaning, taking into account the semantic and grammatical levels. The students' versions may then be compared with the original version.

Achieving outcomes

The day was a great success in so many ways. Syllabus outcomes were most certainly achieved (see *Table 1*) but, just as importantly, there were other, less definable, less assessable outcomes of an author visit, which offered real benefits and provided reading motivation to our students. Books by Libby Gleeson in both school libraries, now proudly bearing the author's signature, have long reservation queues on *OASIS*. They are only sighted long enough on the Returns trolley to be sent out to the next student. Requests are constantly made for "more books like *Queen of the universe* and *Big dog*", and students keep asking, "When we can read that new Hannah book?" and "Who is coming next year?"

Teachers have requested "another author study" for next term. Reading and literature, and the learning experiences emanating from the school's library, are being seen as important, enjoyable and worthwhile. Perhaps next time we could investigate a prolific non fiction author, or an illustrator?

Apart from all this, having an author to school for a visit is fun and, having been involved in each of Libby's four sessions in one day, I can honestly say that, as an educator, I learned something new and valuable about writing and literature at each one. Many of these have already been put into practice at both schools.



Queen of the universe by Libby Gleeson. Illustrated by David Cox. Copyright © 1997. Permission granted by the publisher, Omnibus Books.

Table 1.

Outcomes for author visits: some English K-6 indicators and information skills

[from *English K-6 syllabus*, 1998; see article in *Scan* 17(2), pp 15-18]

Early Stage One:

- Uses relevant questions to ask for specific information (*Defining*)
- Asks for books or other reading material to be read (*Locating*).

Stage One:

- Listens to a variety of speakers and responds with questions and comments that are relevant to the topic (*Locating*)
- Assesses the role of visual images accompanying written text, eg providing additional information / introducing new information (*Locating*).

Stage Two:

- Conducts brief interviews to obtain information (*Locating*)
- Seeks an explanation or more information from a speaker (*Locating*)
- Identifies key words and phrases (*Selecting*)
- Distinguishes between fact and opinion (*Selecting*)
- Discusses the ways different groups of people are represented in texts; identifies stereotypes (*Selecting*).

Stage Three:

- Recognises when an opinion is being offered as opposed to fact (*Selecting*)
- Reflects critically on the effectiveness of writing (*Assessing*).

BOOKS BY LIBBY GLEESON

Picture books:

- The princess and the perfect dish*, Scholastic, 1995
- Hurry up!*, Nelson, 1994
- Walking to school*, Nelson, 1994
- Sleep time*, Ashton Scholastic, 1993
- Mum goes to work*, Ashton Scholastic, 1992
- Uncle David*, Ashton Scholastic, 1992
- Big dog*, Ashton Scholastic, 1991
- One Sunday*, Angus & Robertson, 1988

Younger readers:

- Hannah and the tomorrow room*, Penguin (forthcoming)
- Queen of the universe*, Omnibus, 1997
- Hannah plus one*, Penguin, 1996
- Skating on sand*, Viking, 1994

Older readers:

- Refuge*, Penguin, 1998
- Love me, love me not*, Penguin, 1994
- Dodger*, Turton & Chambers, 1990
- I am Susannah*, Angus & Robertson, 1987
- Eleanor, Elizabeth*, Angus & Robertson, 1984 ■

For a rapping good time.



oz-TeacherNet runs many Internet curriculum projects for incorporating into schools' teaching and learning programs, and interactive Book Raps are becoming a firm favourite in many schools. Jane Carr is an Education Adviser, Learning Technology, for Education Queensland. Jane is currently organising the book rap for the picture book *An apology to bilbies* by Rob Atherton.

We all love books. For many educators, reading stories to children is the best part of the school day. If you could show children that people all over the world enjoy the same books, and love to read too, then wouldn't that be a valuable exercise?

oz-TeacherNet's book rap projects on the Internet are online discussions about a particular book, conducted via electronic mail (email). All a class needs to participate in a book rap is: access to email; a love of books; and a willingness to share thoughts and feelings with classes throughout Australia and overseas.

There is always a range of books to choose from each term, suitable for children from five to eighteen years of age. A book rap will last four weeks, although many teachers and teacher-librarians will plan and program their classes' participation to be a part of a much larger unit of work.

Getting started

All that is required is to go to the *oz-TeacherNet projects* home page (hosted by The Rite Group, Faculty of Education, Queensland University of Technology), choose the book you and your students would like to

'rap' about, and then join that email listserv.

After the participants have introduced themselves, the book rap coordinator posts (via email) one 'rap point' each week. These are questions about the book, designed to challenge students to think about the story, its characters, plot etc. The questions have been developed to encourage higher order thinking skills. For example, "What would happen if ..."

Student outcomes and indicators

Many teachers and teacher-librarians use the rap points to collaboratively plan, program and teach thematic writing activities and information skills, according to appropriate levels of student outcomes. For example, a student may demonstrate the following indicators:

Early Stage 1

- Retells information gained from texts (*Selecting*)
- Contributes to joint construction of texts (*Organising*)
- Dictates a range of text types for adults to write (*Presenting*).

The questions have been developed to encourage higher order thinking skills.

Stage 1

- Brainstorms in class or small groups to cluster or categorise ideas (*Selecting*)
- Uses pro formas to scaffold text, and word processors to create texts (*Organising; Presenting*)
- Has modelled how to select and organise information before writing (*Organising*).

Stage 2

- Acts as a reporter for a discussion group, summarising main points (*Selecting*)
- Makes some inferences about ideas implicit in a text (*Selecting*)
- Uses computers to draft and edit writing (*Organising*).

Stage 3

- Uses email and Internet sources to request and receive information (*Locating*)
- Recognises when opinion is offered, as opposed to fact (*Selecting*)
- Uses related diagrams, charts, maps, graphs and illustrations to present information (*Presenting*).
[from *English K-6 syllabus, 1998*; see article in *Scan 17(2)*, pp 15-18]

The rap goes on...

In each school, after gathering together the students' responses to that week's particular rap point, the answers are typed up into an email message and posted back to the list. Your schools' messages, and those of all other participants, are available for perusal and further response. The procedure continues until the rap 'wraps'.

You can imagine the enthusiasm generated as classes check for new email messages - even every day if desired. Printing out the ones of interest to you and your students makes possible the opportunity for students to re-read the messages, even when there is limited access to the Internet computer. The print-outs can be placed on a display board, with a map showing where all the other 'rappers' live. The possibilities for related visual arts, drama, science and HSIE learning activities are endless.

You can imagine the enthusiasm generated as classes check for new email messages.

An apology to bilbies

In October of this year, Jane Carr instigated a book rap for middle and upper primary students, focusing on the Australian picture book *An apology to bilbies: (with good grace)* by Rob Atherton.

Rob was the Senior Research Officer involved in the National Parks and Wildlife's Queensland Bilby Project. His main duties were to study species of concern, such as rainforest possums, tree kangaroos and the bilby. Rob spent many years in the Northern Queensland rainforests, and in the Diamantina Shire (also known as 'bilby country'). He loved bilbies, calling them "the little gentlemen of the inland desert".

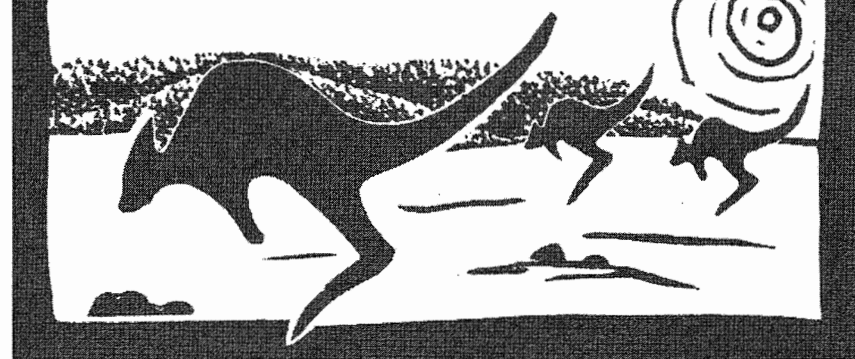
Rob Atherton originally wrote his tale for Jane's Year 6 class, at Boronia Heights State School, a few years ago. The story remained one of the students' favourite 'read it again' stories. When Rob died last year, Jane arranged to have the story published in his memory. *An apology to bilbies*, and a companion teaching kit called *Australia's endangered mammals*, became a collaborative school team effort. The illustrator of the book, artist Gayle Kutuzov, is a Year 7 teacher at the school, as is the narrator on the kit's CD-ROM, Steve Schuhmacher. The CD-ROM master was even set up and 'burnt' by one of the students.

To support first time book rappers, and the experienced ones, Jane Carr

created a *Bilby book rap* Web site on the Internet that includes: the rap points; factual information about bilbies; details on the book and teaching kit; related resources about conservation; the **Walpiri's quest** travel buddy project; and Jane's recommended links to endangered animal sites on the World Wide Web. There are also classroom activities for teachers and teacher-librarians to adopt or adapt, useful for programming a whole unit on the environment.

During the book rap, guest experts were invited to come online and answer student questions. These included: Jeff Short, a CSIRO research scientist; Kaye Kessing, illustrator of *Easter bilby* by Ali Garnett; and Ann Jelinek, a representative of the Endangered Species Program. Gayle Kutuzov was also available throughout the rap to help teachers and classes who were feeling artistic and wanting to try their hand at linocut printing, the medium Gayle used to illustrate Rob Atherton's story.

Teachers from all over Australia, plus several schools from England and South Africa, signed up their schools in the *Bilby book rap*. By responding to the rap points, and sharing their knowledge of local endangered animals, all participants were able to get a global understanding of the plight of many species, whilst sharing a love of books.



Book rapping at home!

Now that so many homes have Internet access, many parents and their children are discovering *oz-TeacherNet's* book raps too, and join the rap as a family unit. Here is a family's email message from the recently completed book rap on *The jolly postman*:

We have a big map of Australia, plus a smaller map of the world, on our kitchen wall and we have been putting up stickers to mark the location of all *The jolly postman* rappers. So far, there are 31 stickers on our maps! We have one problem: we can't find Myponga marked on our map of Australia. Can your class

give us some more information to help us work out where you are?

This is the first book rap we have done and we chose *The jolly postman book rap* because we have enjoyed reading *The jolly pocket postman* ever since Keegan was in preschool. This is the first time we have read the original version of *The jolly postman* and we are enjoying doing the book rap while we read it.

A question for Emma and Esther at the National Archives: would it be okay for Keegan to design a stamp and send it to you by mail? We will need your postal address please.

Bye for now,
Keegan and his Mum.

Illustrations courtesy of Gayle Kutuzov © 1998

REFERENCES

Atherton, R. & Kutuzov, G., *An apology to bilbies: (with good grace)*. Jane Carr, 1998.

Australia's endangered mammals (kit). Jane Carr, 1998.

Bilby book rap supporting home page (online), including links to **All about bilbies** and the **Walpiri's quest** group travel buddy project at: <http://www.schools.ash.org.au/bilbyrap>

Book rap - An apology to bilbies (online) at: <http://rite.ed.qut.edu.au/oz-teachernet/projects/book-rap/apology.html>

English K-6 syllabus. NSW Board of Studies, 1998.

Garnett, A. & Kessing, K., *Easter bilby*. Anti-Rabbit Research Foundation of Australia, 1994

oz-TeacherNet projects (online) with links to many Internet based curriculum projects at: <http://rite.ed.qut.edu.au/oz-teachernet/projects/projects.html>

The Rite group - Faculty of Education QUT (online) at: <http://rite.ed.qut.edu.au/>

Roche, M., 'English K-6: outcomes, indicators and information skills', *Scan 17(2)* May 1998, pp 15-18. ■

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Literacy through book raps for Years K-2



In this article, teacher-librarian **Wendy Chapman** outlines how Internet book raps are used with infants classes at Wollondilly Public School to enhance and extend the teaching of literacy.

J. David Cooper, in his online article *Literacy, literature and learning for life*, argues strongly that schools must "broaden their concept of literacy" so children will experience "communicating through technology" as well as through more traditional media. "Literacy must be viewed as the ability of individuals to communicate effectively in the real world. This must involve... preparing students for the Communication Age. Broadening the concept of literacy means that schools much broaden the type and scope of activities that they provide under the heading of literacy learning."

What used to be defined as "the ability of individuals to read and write" (Smith, 1965) has now become a much more complex issue, with prominent educators suggesting there are seven or possibly eight different literacies.

Planning a whole-school approach to literacy (1997), a publication produced to support the implementation of the State Literacy Strategy, states that "effective literacy recognises the variety of ways in which literacy is relevant to the daily lives of people within diverse social and cultural contexts". Children, and indeed adults, are constantly moving into "different situations or specialised areas of learning", and experiencing "new technologies". All of us "are continually required to adapt and extend our knowledge and literacy skills" so that we can "understand and use language appropriately".

The book rap experience

The previous *Scan* article, and earlier ones such as 'Bridge to Terabithia book rap' (in *Scan* vol 16 no 4), have described the procedures involved in book rapping. Archives of recent book raps can be found at the *1998 book rap info page* on the World Wide Web at: <http://rite.ed.qut.edu.au/oz-teachernet/projects/book-rap/br.html> by scrolling to the link **Student book rap email list archives: past and present**.

Each book rap experience is unique. Among the factors that contribute to the 'flavour' of a book rap are:

- The nature of the book chosen (eg fiction or non fiction; its structure; its message)
- The nature of the rap points, as designed by the rap coordinator
- The variety of schools participating (and the individuals contributing to the responses)
- The teachers' guiding and extending of the rappers' experiences 'behind the scenes'.

As teaching and learning experiences, K-2 book raps have assisted in the achievement of numerous English K-6 student outcomes (see Table 1).

Table 1

ENGLISH K-6 LEARNING OUTCOMES

Talking and Listening outcomes

- TES1.1 Communicates with peers and known adults in informal situations and structured activities dealing briefly with familiar topics
- TS1.1 Communicates with an increasing range of people for a variety of purposes on both familiar and introduced topics in spontaneous and structured classroom activities.

Reading outcomes

- RES1.5 Demonstrates developing reading skills to read short, predictable written texts on familiar topics
- RES1.7 Demonstrates an emerging awareness that written and visual texts convey meaning and recognises that there are different kinds of texts that serve different purposes
- RSI.7 Understands that texts are constructed by people and identifies ways in which texts differ according to their purpose, audience and subject matter
- RSI.8 Identifies the text structure and basic grammatical features of a limited range of text types.

Writing outcomes

- WES1.9 Engages in writing texts with the intention of conveying an idea or message
- WS1.9 Plans, reviews and produces a small range of simple literary and factual texts for a variety of purposes on familiar topics for known readers
- WS1.10 Produces texts using the basic grammatical features and punctuation conventions of the text type
- WES1.13 Recognises some different purposes for writing and that own texts differ in various ways
- WES1.14 Recognises overall text structure and basic grammatical features of simple texts and some conventions of written language.

Early Stage 1 and Stage 1 indicators for these outcomes are listed on pages 20, 22, and 24 of the *English K-6 syllabus*. Many of them are evident in the course of a book rap.

- Recognise the protocols and etiquette of email messages, and the reasons for them (eg including accurate subject lines)
- Interact with other students, both geographically and culturally distant, thereby extending their understanding of differences and developing appreciation for diversity
- Examine literature closely to discover different ways of responding to text, and viewpoints of other people
- Engage in cross curricular activities, thereby enjoying the integration of learning processes across several key learning areas.

Book raps provide a perfect opportunity for effective collaborative planning, programming and teaching.

Book raps, information skills and technology

Book raps have also contributed to additional skills for our students, which underpin Cooper's broadened concept of literacy as mentioned earlier.

While participating in book raps, our K-2 students:

- Participate in group processes and contribute to team efforts with collaborative problem solving opportunities
- Use information skills to **locate** other rappers on their 'rap maps', using indexes and atlases
- Use information skills (**selecting; organising; presenting**) to discuss factual rap points, and issues arising from them
- Develop increasing familiarity with technology (eg sending and receiving email), acquiring skills in context of need, thus empowering learning and demonstrating that technology is a tool

How book raps have worked for us

This year, students from each of Wollondilly Public School's seven K-2 classes have participated in book raps via the Internet. Each of the six book raps we have participated in this year was developed to its own organisational structure within the school. One of the advantages of the book rap concept is that there is opportunity for participants to tailor their involvement to suit the needs of particular students and teachers.

A key component of my role as teacher-librarian, I believe, is to seek out ways I can actively support teachers and their learning programs. With this agenda, I keep a watchful eye on the online *1998 Book rap calendar* for new raps to be advertised, and then I invite teachers to participate in forthcoming opportunities. Interest has spread throughout the school, often via overheard snippets of enthusiastic staffroom conversation – and yet another teacher's curiosity is piqued!



Year 1 book rappers at Wollondilly Public School using their rap maps to locate other participating schools.

In our school's experience, book raps provide a perfect opportunity for effective collaborative planning, programming and teaching (CPPT), whereby learning is enhanced and specified outcomes are achieved through a team approach between teacher-librarian, class teachers and students. Through CPPT, I am kept aware of current class units and teachers' working styles, and these factors assist me when matching rap invitations to particular classes.

Flexibility and variety

The next step is to clarify just how a particular book rap could best contribute to current learning outcomes. Sometimes I work closely with the class teacher throughout the project, assisting with rap responses and information processes that arise. At other times, teachers have requested for me to work with a small extension group, independent of current class thematic units. On occasions, I have simply been the intermediary, receiving and sending rap messages with class Rap Reps each day, leaving teachers to integrate the activities as they wish.

During Term 1, some of our K-2 classes were working on the English unit *Australians write*. The *Wilfred Gordon MacDonald Partridge book rap* became a pivotal aspect of this unit and provided many opportunities for literacy development. The teacher-librarian's role in this rap was to: subscribe our school to the listserv; assist the Rap Reps with daily access to their incoming mail; print out the email messages; and support different class activities emanating from the rap points.

One of these classes used incoming email messages as invaluable reading material and, on occasion, they became samples for editing practice when spelling and syntax were incorrect. This experience of using relevant, real life examples of text for modelling the editing process greatly enhanced learning. It also ensured that students checked their class responses very carefully before sending them out. The teacher was delighted with the experience, and used her creative, professional talent to make the most of other learning opportunities that emerged. The book rap really invigorated her students about literacy and she remarked, "There was so much more we could have done, if only we'd had time!"

Travel buddies: extending the book rap experience

Term 2 saw the commencement of the *Teddy bear rap*. While not tied to one specific book, this rap was advertised specifically as suited to Kindergarten and Year 1 classes. With adequate prior warning, both Kindergarten classes elected to base their term's work on teddy bears, using the rap as a key unit stimulus. On her curriculum mapping data sheet, one of these teachers described this initiative as "a very productive unit, especially in achieving talking, listening and writing outcomes". Another teacher included in her unit an investigation of real bears, and information skills were introduced to these young students through the use of video and CD-ROM resources.

After initially alerting the teachers to this particular book rap prospect, my role was to: explain book rap procedures; receive and send email (I supported them with technology on their steep learning curve); and assist with teaching and learning activities as requested.

At the conclusion of this rap, schools were invited to exchange their classroom teddy with another school, using the 'travel buddies' concept, another of *oz-TeacherNet's* Internet projects (see the online *Travel buddies - home page*). Wollondilly's two bears were 'snail mailed' interstate - one to Perth in Western Australia and the other to Innisfail in Queensland, carrying with them the students' teddy bear stories and photo albums of procedural texts, which had been created as the classes observed their teddies being knitted by a school clerical assistant, step by step. There were also photographs of the school's Teddy Bears' Picnic outing.

The library profile has been enhanced by its role in initiating and supporting new learning opportunities.

Both classes were thrilled when, in return, they received Snowy from Innisfail and Honey Bear from Perth, complete with stories, photos and diaries from their respective classes. The travel buddies project, as an extension of the book rap, provided a significant bonus for professional development, as we were able to note the different approaches to literacy learning and teaching, and gather new ideas for subsequent units.

Real world literacy

When Year 1 teachers at Wollondilly expressed a need to provide some extension work for a group of their able readers, *The bad tempered ladybird book rap* was an excellent stimulus. This time, I met with these enthusiastic rappers each day in the library. Together we located other rappers on our rap maps, read the rap points, and crafted our own group responses. The students worked as a group to send and received the email messages, and also maintained their rap folders. At the conclusion of this rap, the students also completed a self-evaluation rap reflection sheet, which was included in their portfolios as a reminder of the great work they had completed.

As one of the rap points asked participants to describe their daily timetable, we decided to graph some of the school times of the book rap schools across Australia using a computer. When a South African school happened to mention a creature of which we had never heard in one of their responses, the students conducted their own information skills process to find out more. When parts of Victoria had experienced severe flooding, Merrissa, one of the Year 1 rappers, heard a news report which mentioned Bairnsdale. She checked her rap map, pointed out to me that a Bairnsdale school was rapping

with us, and asked if we could email them expressing our concern. This we did, and we were delighted to receive a 'thank you' message from the Principal the next day. If I had ever worried that rap information was beyond infants students' understanding, this experience confirmed for me the inherent power within what Cooper refers to as "real world literacy".

Book rapping in the library

When an enterprising Year 2 student brought a live turtle to school, it launched one class into a spontaneous investigation of turtles and tortoises, eventually evolving into a unit of work. The announcement of the *Yakkinn the swamp tortoise book rap*, just days later, was serendipity at its best.

Although the class teacher expressed reluctance - or was it apprehension? - to be involved, my previous experiences had convinced me of the educational value of this book rap. Therefore, I offered to take a small group of her students and work with them on the rap each day in the library. This method was very successful, and the students maintained their own 'Rap records' (folders of their book rap work) which complemented the class work. Reporting their experiences back to their classmates allowed others to benefit from the rappers' newly-learned field knowledge.



Downloading email and saving it to disk is a simply learned procedure.

Book rapping in the classroom

At the beginning of Term 3, *The jolly postman book rap* was announced, and a Year 2 teacher responded to the invitation to participate. Up until this point, classes had been sending two Rap Reps to the library each day to connect to the Internet, and download, file and print their email messages. I was concerned that other students' interaction with the Netscape browser itself was too limited. I was also uncomfortable about the reams of paper being consumed by printing out of so many email messages.

As our school is not yet networked, a solution was found by saving mail to disk. Now, when classes want to participate in a book rap, I simply load Netscape onto their classroom computers, and provide a simple text procedure for accessing mail from a floppy disk. The students

can now read their mail in their classrooms *offline*, and are thus becoming more familiar with Internet browser layouts at the same time.

Authentic literacy learning experiences

In our experience, book raps have brought benefits far beyond their literacy merit. The library profile has been enhanced by its role in initiating and supporting new learning opportunities. More importantly, the teacher-librarian has been able to demonstrate, in a new context, her desire to work collaboratively with teachers to stimulate learning.

The book rap experiences described in this article, together with the active and practical support of the school library, has encouraged several teachers at this school to plan further collaborative learning activities with me. Others have commented that book rapping has been a wonderful professional development exercise, giving them unexpected insights into other teachers' approaches, and a new purpose for learning about the Internet and the integration of technology into the curriculum.

A special mention must be made of our principal, Phil Irvine, who allocates extra time to the library from the school budget, thus nurturing these programs. I also pay tribute to the fine members of the teaching staff at Wollondilly Public School, who have actively grasped these new opportunities, and courageously extended their own horizons. Without their conscientious support, book raps could not have contributed so powerfully to the learning programs at our school.

In Cooper's words, approaches to literacy must "combine a variety of resources and activities" to allow students to have many different types of "authentic literacy learning experiences" (Cooper 1993). Internet book raps provide an excellent context for such experiences. They open doors to much student and professional teaching and learning.

REFERENCES

- 1998 book rap info page (online) at:
<http://rite.ed.qut.edu.au/oz-teachernet/projects/book-rap/br.html>
- Australians write*. English K-6 teaching unit level 2. Curriculum Directorate, NSW Department of School Education, 1994.
- Chapman, W., 'Bridge to Terabithia book rap', *Scan* 16 (4) November 1997, pp 20-21.
- Cooper, J. D., *Literacy: helping children construct meaning* (2nd ed.), Houghton Mifflin, 1993.
- Cooper, J.D., 'Literacy, literature, and learning for life', *Reading Center: literacy, literature, and learning for life* (online) at:
<http://www.eduplace.com/rdg/res/literacy.html>
- English K-6 syllabus*. NSW Board of Studies, 1998.
- Planning a whole-school approach to literacy: incorporating the Year 7 English Language and Literacy Assessment (ELLA) results*. NSW Department of School Education, 1997, p 7.
- oz-TeacherNet projects* (online) at:
<http://rite.ed.qut.edu.au/oz-teachernet/projects/projects.html>
- Smith, N.B., *American reading instruction*. International Reading Association, 1965.
- Travel buddies - home page* (online) at:
<http://rite.ed.qut.edu.au/oz-teachernet/projects/travel-buddies/travel-buddies.html> ■

Literacy through literature: a collaborative unit for Year 7



Toni Moodie is the teacher-librarian at Walcha Central School, a remote K-12 school on the northern tablelands of New South Wales. **Marlene Gates** is an English teacher at the school. Together, Toni and Marlene have developed a successful literature program to improve the reading attitudes and literacy skills of their Year 7 students.

The town of Walcha is about an hour's drive from each of two major inland cities in New South Wales. Although the school library at Walcha Central has over 12000 resource items, and there is also small branch of the Central Northern Library nearby, it is rare that students entering Year 7 claim reading books to be a favourite leisure activity. Sport, watching television and hiring movies on videocassette usually rate more highly than reading for pleasure.

Consequently, over recent years a cooperative effort by the Year 7 English teacher, the teacher-librarian and the Support Teacher Learning Difficulties, developed *R.A.G.E.: Read and get enjoyment!*, a literacy through literature unit of work to encourage students to:

- enjoy reading
- read regularly and widely
- respond in greater depth to literature
- improve their verbal and written literacy skills
- use information skills in context.

Preparation

The school library is booked up for every Year 7 English period for the duration of the unit. This works out to be a combination of single and double periods totalling 240 minutes a week. As most students previously attended the primary department of the school, they are accustomed to the library and its various locations. However, this time allows the teacher-librarian to familiarise students from smaller feeder schools or those who are new to the area.

For this reason, we like to timetable this unit towards the beginning of the school year. In the time leading up to the start of the unit, the class teacher promotes how the unit will work and the staff's expectations of the students. Within the time frame of the unit, the students are required to read and respond to a total of six books, including:

- a picture book
- a novel by an Australian author
- a fantasy or science fiction narrative
- a book set pre 1970
- two other books, either fiction or non fiction.

Each student is given a Manila folder, a reading log pro forma and an assessment sheet. Specific worksheets are prepared, and distributed as needed during the unit.

Parents are informed of this component, and are invited to join in the weekly book sharing sessions.

Beginning the unit

At the commencement of the unit, and once a week throughout the term, the teacher-librarian focuses on a particular genre of children's literature and presents an excerpt of a typical example to the class. In the case of picture books, the whole book is shared, and we are careful to select something that will appeal to the more sophisticated interests of secondary students. Gary Crew and Steven Woolman's *The watertower*, Rod Clement's *Just another ordinary day*, and Toby Riddle's *The great escape from City Zoo*, have proven to be highly successful picture books for use with Stage 4 students.

Following the shared reading, a class discussion ensues in which we brainstorm the features of the particular text type. While students are required to read an example from each category of their reading log over the course of the unit, there is no compulsion for them to correspond this reading with the shared example of the week. However, most students elect to do so, and the freedom to choose helps them to define the types of literature available and make comparisons.

Lists of subject headings, keywords and recommended authors are located near the *OASIS enquiry* terminals. Agnes Nieuwenhuizen's *Good books for teenagers* and its companion volume, together with the review sections from recent issues of periodicals (such as *Scan*, *Magpies* and *Literature Base*) are made available to the students to help them to make their selections.

Responses to reading

Throughout the unit, students are encouraged to see reading as enjoyable, and not a chore. They learn to discriminate and form their own tastes. In small groups, we discuss and advocate the rejection of books they find too difficult or too boring, hoping to avoid the "I've read 20 pages and I don't want to waste my time!" syndrome. Thus the program can be tailored to suit individual needs and allow freedom of choice, whilst ensuring that stu-



Sharing picture books: Teacher-librarian Toni Moodie with Year 7 students.

dents do not get 'stuck' in *Sweet Valley High* or R.L. Stine mode for the whole term.

The final few minutes of the weekly shared book sessions are set aside for students to record their reflections in their reading logs. This same pro forma is used for reading completed at home. The students write about each of the books they read, and also note their personal responses. The three staff members are available to discuss the students' writing with them during this time.

A teacher-student conference takes place for each student whenever a book is finished, and the teacher signs a recording sheet. This provides an ongoing diary of the students' work and progress.

Specific worksheets which allow creative responses, provide language activities and pose questions to assess the students' understanding of particular books are then completed. Some examples are suggested in Table 1. The activities are intended to be suggestions only; students are also encouraged to develop their own tasks, discussing alternatives with a teacher. Often, the students are far more original and imaginative in their suggestions!

It is exciting to experience the students: verbalising and writing about their reading; selecting and organising their information; and responding imaginatively to literature. The teachers share in the evaluation of this work, and use the opportunity to model reading in small groups wherever possible.

Presenting and assessing

Based on the concept of the literature circle (see *Scan* vol 16 no 3), students are divided into three groups (one per

The final few minutes of the weekly shared book sessions are set aside for students to record their reflections in their reading logs.

staff member) to share their book with their peers. For three or four minutes each, individual students can either read from the book or discuss their reflections. Group members then question the presenter about the book.

Initially, the questions tend to be of the "Did you like the book?" type, but we guide the students towards asking more incisive questions. They very quickly grasp the idea and are soon asking "Did you find the main character to be convincing? Why or why not?"

Considerable time is spent discussing how the tasks are to be assessed. It is essential that the assessment criteria is shared with the students prior to them engaging in written and drawn responses. The program allows for ongoing peer assessment, teacher assessment and self assessment of the students. The culmination of this is a formal evaluation of the students' own written work, their contributions to book sharing sessions and presentation circles, and the unit as a whole. The students gauge how well they have met the intended outcomes.

School merit awards and peer-nominated awards are given out weekly, with the students becoming increasingly discriminating by raising their standards for the granting of these awards as the term progresses.

The future

The staff team is constantly refining this unit by incorporating: student suggestions; new modes of information technology; and teaching and management ideas from *Scan* articles. Next year, we intend to feature books from *oz-TeacherNet's* online *Book rap calendar* in the weekly book sharing, which will definitely broaden the scope of our students' audience for their presentations. Another student suggestion under consideration is the potential to utilise *ICQ*, an efficient online communication facility which would enable Walcha Central students to chat with Year 7 students in other schools about literature.

There is also scope to extend the program to include the range of factual text types. The pro forma for non fiction could require students to determine which text types have been used (ie recount; procedure; report; explanation; exposition; discussion), and then comment on the appropriateness of the author's choices. As many of our students who read for pleasure select narrative fiction every time, this option would be an excellent way to broaden Year 7's reading experiences.

Table 1.

YEAR 7 R.A.G.E ACTIVITIES (read and get enjoyment!)

Note to teachers and teacher-librarians:

Ensure that students will be able to achieve success. The activities listed below imply a whole lot of *knowledge, skills* and *understandings* that educators will need to teach their students, to prepare them to respond to these tasks. Furthermore, the types of tasks will depend on the type of text that the students read. Consideration should also be given as to how these tasks are to be *assessed*. The assessment criteria should be *shared with the students* prior to engaging in a task. Also, will each task have a similar weighting? What reading, writing, talking, listening, drawing or viewing will students need to engage in to complete these tasks?

CREATIVE RESPONSE ACTIVITIES

Discuss with your teachers an appropriate activity to suit the book you have read and then complete one of the following:

- Draw the room lived in by the main character. Make sure you include appropriate furniture, sporting equipment, books, or anything else the character needed or used. Label your diagram and add brief explanation boxes.
- Design a poster advertising the book as a film. Include a cast list of appropriate actors to star in the film.
- Draw a map of the town or country in which the story was set.
- Make a passport for a character in the book, and include visa and entry stamps.
- Construct a crossword, or other word puzzle, using words from the book.
- Add a character to the narrative. Describe that character and his/her role in the story.
- Construct a storyboard of the novel.

LANGUAGE ACTIVITIES

Discuss with your teachers an appropriate activity to suit the book you have read and then complete one of the following:

- Rewrite the ending of the novel from a different viewpoint.
- Recount an incident from the novel in play or poetry form.
- Draw a sociogram of the main characters in the story.
- Construct a character profile of a character in the story. Include as many details as you can.
- Write a newspaper report on an event/incident from the novel.
- Script a dialogue between two characters.
- Write a letter to the author, or to a friend, about the book, or from one character to another.
- Add another chapter to the novel, maintaining the narrative style of the author.

The parents who have participated in the program are very supportive, and have relished the chance to share their own favourite titles. Often, they sign up as external borrowers of the school library.

Generally, the students have found the unit to be very enjoyable. After the predictable aversion to the book sharing sessions, they begin to appreciate the opportunity to communicate their ideas, and to sample books they may not normally have considered of value. They certainly become more regular in their borrowing habits after the unit, another important indicator to us that our anticipated outcomes are being achieved by most students. It is satisfying to know that our Year 7 students are now more willing to list reading amongst their list of recreational activities.

REFERENCES

1998 book rap calendar (online) at:

<http://rite.ed.qut.edu.au/oz-teachernet/projects/book-rap/calendar.html>

Chapman, W., 'Bridge to Terabithia book rap', *Scan* 16 (4) November 1997, pp 20-21.

Fitzgerald, L., 'Literature circles: linking literature and information literacy', *Scan* 16(3) August, 1997, pp 17-20.

ICQ - world's largest Internet online communication network (online) at:

<http://www.mirabilis.com/>

Nieuwenhuizen, A., *Good books for teenagers*. Mandarin, 1992.
Nieuwenhuizen, A., *More good books for teenagers*. Mandarin, 1995. ■

Achieving literacy outcomes through cooperative learning groups



Cooperative student learning is a popular teaching and management strategy. Working in small groups, students have many opportunities to improve their oracy skills. Kay Byrne, Assistant Principal Primary at Caringbah Public School, has always worked closely with the teacher-librarian at her previous schools, and was eager to build upon her successes at Punchbowl Public School, where cooperative learning groups have become an intrinsic part of the whole school plan.

Cooperative learning is an effective way of increasing opportunities for students to achieve outcomes in talking and listening, and to develop essential social skills. Through collaborative planning, programming and teaching with the teacher-librarian and other support staff, teachers can select, design, or re-design tasks which encourage oracy, and are able to be completed in small groups or teams.

In contrast to the traditional 'chalk and talk' classroom, students in my Year 6 class at Caringbah Public School complete an increasing number of their daily teaching and learning activities in clusters of four students. What makes cooperative learning groups so exciting and successful as a method of teaching and learning is that *one quarter* of my class is producing oral language at any one time.

Cooperative learning groups can be used by: individual classroom teachers; release from face-to-face (RFF) teachers; support teachers; and casual staff. In my experience, this strategy is especially successful in team teaching situations with teacher-librarians. Ideally, cooperative learning can be implemented across the grades as a whole school initiative, and supported by a social skills program.

A whole school approach

I first encountered K-6 cooperative learning at Punchbowl Public

School, a large Sydney school with a high percentage of non English speaking background (NESB) students. The school has a strong commitment to improving teaching and learning through innovative K-6 changes to teaching practice. Most importantly, the strategies used are designed to permeate Punchbowl's K-6 school plan, going beyond initial funding, to become intrinsic elements of school life.

As Assistant Principal Infants, I led the school's Disadvantaged Schools Program (DSP) Reading/Writing Committee. An ongoing parent participation program (see *Scan* vol 14 no 1) was supplemented with *Reading/writing together*, a three year implementation of factual writing K-6. I invited the teacher-librarian to be involved with the committee, and he became a crucial member of our planning team. Collaborative planning, programming and teaching (CPPT) was made an integral component of our implementation strategy. Later, the school's Quality Assurance evaluation indicated the need for a change of focus. It was the teacher-librarian who moved over to the new Talking and Listening Committee. He brought to their planning sessions a unique K-6 overview, derived from working with so many grade programs. The teacher-librarian also: presented sessions about information skills at staff development days; modelled teaching practice using cooperative learning groups; and was involved in baseline data collection.

Effective talking and listening

In the first year of this module, Punchbowl's staff was introduced to the concept of cooperative learning groups. Emphasis on team building activities, to improve students' social skills so that they could interact more effectively, maximised opportunities for effective talking and listening. In the following year, we worked in grade groups to embed talking and listening outcomes and indicators into a selection of existing school based science units. Pre tests, post tests and learning activities were developed to suit the nature of the cooperative learning model and available resources, again with encouraging success.

It was an enervating experience to observe and monitor our teachers learning together, embracing new teaching methods, and building upon the solid base of previous years' work as their teaching skills adapted yet again. While some class teachers embraced the concept of cooperative learning faster than others, we soon discovered that involving the teacher-librarian and other support staff made this teaching style easier to introduce.

"Please move into your groups" was soon all that was needed to be said to get a whole class swiftly on task and working, whether they were in the classroom, the library or elsewhere. When the material supporting the State Literacy Strategy, and drafts of

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Students may commence studies either in first or second semester each year.

Graduates are eligible for full professional membership of the Australian Library Information Association (ALIA).

For further information and enrolment forms please contact Kay Noble on (08) 9370 6344, fax: (08) 9370 6624, email: k.noble@cowan.edu.au

Applications for Semester 1, 1999 Close 30 October 1998. Details are also available on the internet <http://www.cowan.edu.au>

EDITH COWAN UNIVERSITY
PERTH WESTERN AUSTRALIA

English K-6 syllabus, began to arrive in the school, the staff was pleased to note that we were well prepared for the future.

A new beginning

The State Literacy Strategy emphasises "the need for teachers to be to be explicit and systematic" (Hutton & O'Dowd, 1998). Arriving at Caringbah Public School, I found a dedicated staff eager to refocus on the implications of the Literacy Strategy and *English K-6 syllabus*.

The students in my new Year 6 class were using oracy at high levels of achievement. I needed to develop a teaching and learning program that provided explicit scaffolds in reading and writing, yet would also extend the students' existing skills and talents. Once again, cooperative learning groups proved to be highly effective.

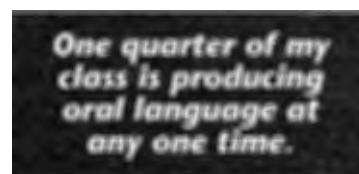
An existing school commitment to an annual public speaking contest complemented this strategy and, by working closely with Caringbah's teacher-librarian, Leonie Stannard, I am certainly off to a good start. The two of us have also begun sharing our successes with other staff, both formally during professional development days, and informally in the staffroom and at grade programming sessions.

Extending and enhancing oracy skills

Mostly, cooperative student learning activities are designed for groups which are heterogenous; one high achiever, several middle achievers and one low achiever per team is the norm. Heterogenous groups produce the greatest opportunities for peer tutoring and support, and they do make classroom management easier than other types of cooperative learning. Alternatively, depending on particular tasks, the class can be divided into random groups or interest teams.

At Caringbah, I first used heterogenous group learning for a unit on *Natural disasters*, which lent itself towards developing the text type of explanation. "An explanation is a piece of writing that tells readers

how and why things happen" (Christie et al, 1992). The objective was to design structured tasks that allowed one quarter of my class to produce oral language at any one time. Oral explanations and joint construction activities were explored during the unit, leading to the independent construction of an explanation, *How does a volcano erupt?* (see example) and public speaking presentations.



The unit also emphasised aspects of visual literacy (drawing, labelling, and interpreting explanatory diagrams) during the group activities. To quote Steve Moline, also known as children's author David Drew, "to provide a complete literacy program, we need to include opportunities to draw information as well as to write it" (Moline, 1995).

Roles in cooperative learning

Each member of a cooperative learning group has a title describing his or her function within the team. Individual teachers can tailor the terms and responsibilities to suit their own teaching styles. The roles are rotated so that all students experience each responsibility (when appropriate).

Generally, I use the following roles within each group:

- **Reader:** Reads the activity's instructions to the team and keeps everyone 'on task'. Although this is usually a leadership role by proxy, it does not always have to be filled by a 'good reader'. Many tasks will offer excellent opportunities to rotate less able readers into this role. These days I use media related labels, and the term **Director** suits this position.
- **Recorder:** Records all ideas and decisions of the group. Also known as the **Scribe**.
- **Reporter:** Towards the end of a session, reports the group's findings: to other teams; the teacher; or the whole class. Currently, I use the term **Presenter**.

- **Encourager:** Positively, but quietly, praises the efforts and ideas of the other team members. My new class balked at this title, so we renamed the position **Contributor**, in keeping with the news media theme.

Should any group have additional members, a **Gatekeeper** makes sure that all members are participating. A **Checker** ensures agreement is reached, or checks for understanding. Currently, I assign extra members as other **Contributors**.

Scaffolds to support learning

The *Natural disasters* unit was introduced via several reading activities based on an article about Cyclone Tracy in a *Young Australia* reading scheme textbook.

All unfamiliar tasks, which I had programmed for later use in group sessions, were modelled to the whole class using the topic of cyclones. This was to ensure that the students would be supported during their learning and that success was achievable for each group. These tasks included: reassembling a jigsaw of explanation paragraphs; matching labels to a diagram of a cyclone on the overhead projector; and searching *Encarta* CD-ROM for famous natural disasters. A joint construction on how cyclones are formed was also developed, and displayed (and read often).

The above mentioned activities were then repeated, but this time the students worked in their cooperative groups and the topic was volcanoes. Field knowledge and note taking, much of it gathered from the library, enabled all members of the groups to contribute (ie to talk and to listen).

Incorporating technology

Each cooperative learning group of four to five students rotated through the library so that they could have some experience with the Internet. The teacher-librarian's brief was to help students to build up their field knowledge on volcanoes, through structured exploration of reference resources about the destruction of Pompeii. An appropriate Internet Web site called *Pompeii: unraveling*

TITLE

How does a volcano erupt?

PHENOMENON IDENTIFICATION

Briefly introduces phenomenon

A volcano is an eruption of melted metals and gases caused by plate movement under the Earth's crust.

EXPLANATION SEQUENCE

One step at a time

1.

Before eruption, a volcano can bulge out about 100 metres. There are sometimes small earthquakes before the eruption. The lava inside is filled with gases such as carbon dioxide, hydrogen, carbon monoxide, and sulphur dioxide.

2.

Then the volcanic eruption starts with a blast. The lava blasts out of the chimney of the cone. Lava can get up to a temperature of 2100 degrees F. The lava runs down the side of the volcano.

3.

After the eruption, the core will be spewing out gases for a long time. The lava that ran down the side of the cone will harden, making the cone bigger. The volcano will have changed shape completely.

by A. B.

A sample of independent construction of an explanation by a Year 6 student at Caringbah Public School. This work was the culminating activity for the unit, and was invaluable for evaluation and student assessment. (NB The white labels are not part of the child's work.)

ancient mysteries included some motivating animations and supposed 'eyewitness' accounts on the eruption of Mount Vesuvius.

It was discovered that many of the students had never before typed a URL, or used a hypertext link, so numerous design and content aspects of this recommended Pompeii site were used, rather than spending the lesson with the students looking for other, perhaps less effective, Internet sites via search engines. In the smaller groups, it was also a good opportunity to demonstrate note taking skills (for later use back in the classroom) and to discuss the implications of plagiarism.

Eventually, the teams also used library sessions to create three dimensional, labelled, models of volcanoes, including several which 'erupted' bicarbonate of soda! Personal reactions to the Pompeii first person narratives they had read together were recorded in five line 'lantern poems', a poetry form simi-

lar to cinquains. This consolidated much information from their research, encouraged synthesis, and removed the opportunity to regurgitate plagiarised facts.

The future

So far, my experiences with cooperative learning groups at Caringbah have been extremely encouraging. I am grateful to the teams of dedicated teachers at both Punchbowl and Caringbah schools for their support, in particular the Reading/Writing Committee and Oracy Committee members at Punchbowl.

In a class top heavy with boys, it has been rewarding to make use of strategies that: are gender equitable; develop social skills; address essential talking and listening outcomes; and reinforce a sense of community. In a short time, I feel I have achieved much, and I look forward to future collaborative opportunities with my teaching colleagues.

REFERENCES

- Christie, F., et al, *Exploring explanations about natural disasters. Student book level 2*. Harcourt Brace Jovanovich, 1992, p 2.
- DSC oracy program: co-operative learning [participants' manual]*. Presented by Robyn Rankin, NSW Disadvantaged Schools Component, 1996.
- English K-6 syllabus*. NSW Board of Studies, 1998.
- "Fury on the wind", *Danger!* (Young Australia Level 14), Thomas Nelson, 1983, pp 67-73.
- Hutton, P. & O'Dowd, M., "Text types for teacher-librarians", *Scan* 17(1) 1998, p 13.
- McLean, I., "Putting parents in the picture at Punchbowl Primary School" in *Scan* 14(1) 1995.
- Moline, S., *I see what you mean: children at work with visual information*. Longman Australia, 1995, p 1.
- Pompeii: unraveling ancient mysteries* (online) at: http://www.hbschool.com/justforkids/socialstudies/grade_6/unit_04/pompeii/index.html ■

Our series of Internet reviews continues. Sites for a range of Key Learning Areas are included in each edition of *Scan* to help maintain currency, and ensure teachers from each KLA are provided with helpful information to support technology in learning. Sites are listed alphabetically by title. Those reviews which note links to other sites, especially as a major part of the site, will require additional exploration time by teachers to verify specific curriculum applications relevant to their classes. The **USER LEVEL** descriptor, **Professional**, is a pertinent reminder of such issues. Please note that changes happen daily on the Internet. Sites come and go. We cannot guarantee that the following sites are permanent or are structured as they were when they were reviewed. These and other Internet site reviews appear on the DET site <<http://www.dse.nsw.edu.au>>. Site reviews for a number of HSC syllabuses are also available on HSC On-Line <<http://hsc.csu.edu.au>>.

1998 book rap - info page.

<http://rite.ed.qut.edu.au/oz-teachernet/projects/book-rap/br.html>

For the uninitiated, book raps are discussions about scheduled books and their authors conducted between individuals, or classes, using email and live chat sessions. This site is aimed at teachers and teacher-librarians who would like to be involved in book raps but are unsure where to start. The site includes sections on current and future books being discussed, and how to participate in book raps as a coordinator. The steps necessary to begin running a book rap as a coordinator are well set out and would be easy, yet exciting, to implement. Information on what other teachers have been working on with book raps is featured in an archive section. N. Paull

USER LEVEL: Professional
KLA: English
SYLLABUS: English K-6; English 7-10
SCIS SUBJECTS: Authors; Criticism; Literary style
KEYWORDS: Author; book rap
PUBLISHER: RITE Group, Queensland University of Technology
REVIEW DATE: 10/9/98

Archi-Tech Services home page.

<http://home.hotlinks.net.au/arch/>

Archi-Tech Services provide information for the Australian architect by being an online showcase for all types of products. It shows a comprehensive **Product directory** organised: alphabetically; by **Product**; **Company**; and by **Brand** name. Listings of **Industry organisations** could also provide some excellent contacts for project development. Users are able to drill down to individual product descriptions. The products range from **Metal polishes** to **Venetians & blinds**. Information is up to date and comprehensive. Contact information for all companies is included. Visitors to the site can request brochures and further information online. P. Thompson

USER LEVEL: Stage 4 Stage 5 Stage 6
KLA: TAS
SYLLABUS: Design & Technology 7-10; 2U Design & Technology; 2U Industrial Technology; Technical Drawing 7-10

SCIS SUBJECTS: Architects; Architecture
KEYWORDS: Architect; architecture
PUBLISHER: Archi-Tech Services, Australia
REVIEW DATE: 4/9/98
EVAL: Highly recommended

Australia Street - introduction.

<http://www.australiast.uts.edu.au>

A snapshot of a small number of houses and of the people who have made them home, this site offers slices of Australian culture and identity. Each address links to: Aboriginal history; **Demographics** of the area; and other background information. Sound bites give the user a sense of intimacy with the person whose home is being explored. Time is needed to explore each of the addresses. Click onto **Archive** for an interesting look at relevant information on a variety of aspects of society and culture. The site is currently limited and is not representative of multicultural Australia. There are plans for further development, including an additional Aboriginal perspective. This site is interactive, allowing for personal input in **Your Street** and the discussion site. C. Preston

USER LEVEL: Stage 3 Stage 4 Stage 5 Stage 6 Professional
KLA: HSIE
SYLLABUS: History 7-10; HSIE K-6; Geography 7-10; 2U Society & Culture; Studies in Society 7-10

SCIS SUBJECTS: Australia - social life and customs; National characteristics - Australia
KEYWORDS: Australia; demography
PUBLISHER: University of Technology / Australian Museum, Sydney
REVIEW DATE: 2/9/98

Australian Department of Foreign Affairs and Trade.

<http://www.dfat.gov.au>

This site is excellent for those teachers and students studying trade and business with the Asian Pacific Rim countries. Some of the most beneficial material is found in the geographic section which includes the **Country fact sheets** library and **Economies at a glance**. These are very good for students trying to get up to date statistics on a range of countries. The **East Asia analytical unit**, located in the services section provides good analytical articles and refer-

ences related to trade issues and business in some specific Asian nations. Government trade policy and policy speeches are also listed. K. Jackson

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: HSIE
SYLLABUS: 3U Business Studies; 2U/3U Economics; Geography 7-10; History 7-10

SCIS SUBJECTS: Asia - Economic conditions; Australia. Department of Foreign Affairs and Trade; Pacific Region - Economic conditions

KEYWORDS: Foreign affairs; trade
PUBLISHER: Australian Government
REVIEW DATE: 31/8/98
EVAL: Highly recommended

The Block Island School home page.

<http://www.bi.k12.ri.us/>

Many schools have interesting Web sites and the Block Island K-12 school of 126 students is one of these. A feature of the site is the online individualised career and education plan which is based on the premise that students need to plan their education by creating a plan beginning in Year 9. The form guides them through the decision making process and helps clarify their thinking. In addition the site has many links to sites featuring: study skills; gifted and talented resources; parent resources; and social and environmental awareness. These links may prove worthy of further investigation by teachers. Unlike most school sites it does not feature students' work, but it is constantly developing. A. Soutter

USER LEVEL: Stage 3 Stage 4 Stage 5 Stage 6 Community Professional
KLA: HSIE; PDHPE; VOC ED
SYLLABUS: HSIE K-6; PDHPE 7-10; 2U PDHPE
SCIS SUBJECTS: Study methods; vocational guidance
KEYWORDS: Career guidance; study skills
AUTHOR: DILLON, Dennis
REVIEW DATE: 9/9/98
EVAL: Highly recommended

BodyQuest.

<http://library.advanced.org/10348/>

Developed by students and winning third place in the 1997 ThinkQuest competition, this site is an enjoyable way to learn about the human body. Designed for the eleven to sixteen age group, it provides information on a number of different body systems. Users may **Search** for information through the **Alphabetical index** (body parts); **Categorical index** (body systems); or click and zoom on a particular system. The site also hosts an exciting **JavaBody viewer applet**, which allows users to take slices through a virtual human which are then displayed in colour. Users are able to download all of this site to a local disk for quick offline access. J. A. Robinson

USER LEVEL: Stage 4 Stage 5 Stage 6
KLA: PDHPE; Science
SYLLABUS: 2U Biology; 2U General Science; PDHPE 7-10; 2U PDHPE; Science 7-10; 2U Science for Life

SCIS SUBJECTS: Physiology
KEYWORDS: Body systems
PUBLISHER: Advanced Network & Services, New York

AUTHOR: CHOU, Joshua; KOU, Charles; THISTLETHWAITE, Alistair
REVIEW DATE: 31/8/98
EVAL: Highly recommended

Bushranger site home page.

<http://wwwcream.une.edu.au/OtherSites/Bushrangers/HOME.HTM>

Starting out with a contents page, this well organised site goes beyond merely giving background information on bushrangers. It deals with why men and women relinquished whatever social rights and privileges they had to become bushrangers. The profiles, haunts, and quotes of bushrangers are explored, as are bushrangers who appear in poetry and song. Students have the option of emailing questions to an expert in the field, and teachers can investigate the classroom activities and bibliography. This extensive site would be a rewarding source of information for a unit of work on bushrangers. N. Paull

USER LEVEL: Stage 3 Stage 4
KLA: HSIE
SYLLABUS: History 7-10; HSIE K-6
SCIS SUBJECTS: Bushrangers
KEYWORDS: Bushrangers
AUTHOR: ORR, Hazel K.
REVIEW DATE: 10/9/98
EVAL: Highly recommended

Cadbury - Yowie.

<http://www.cadbury.com.au/yowie>

Collectors of Yowie toys are the main target for this commercial site, but it makes an effort to provide more educationally useful information. Six Australian habitats are each represented by a Yowie character, with information provided on that habitat and its characteristic fauna. An interactive game asks users to answer questions about each habitat to 'save' the Yowies. A section for teachers offers reproducible lesson plans on habitat, fauna and environmental protection, which could be adapted for use in primary classrooms. The site is potentially useful, but some teachers may be reluctant to use material so obviously produced by a confectionery manufacturer. W. Smith

USER LEVEL: Early Stage 1 Stage 1 Stage 2 Stage 3
KLA: HSIE; ST
SYLLABUS: HSIE K-6; Science & Technology K-6
SCIS SUBJECTS: Animals, Australian; Environmental protection
KEYWORDS: Australian animals; environment; habitat; Yowies
PUBLISHER: Cadbury, Victoria, Australia
REVIEW DATE: 8/9/98

Canegrowers home page.

<http://www.farmwide.com.au/nff/canegrowers/cane.htm>

For students studying the cane growing industry this site is a must. Information is available online from the *Cane industry information handbook*, covering topics such as: industry logistics and reviews; export earnings; deregulation processes; and the Sugar Industry Act. This information is text based, so it is very quick to view. There are links to *Australian canegrower* magazine, and online **Media releases** about environmental issues. **Smut**, on this site, refers to the sugarcane smut disease. Although the focus is on the Queensland cane industry, there is some reference

to NSW. Updates are frequent, so information is very relevant. K. Heap

USER LEVEL: Stage 5 Stage 6
KLA: TAS
SYLLABUS: Agriculture 7-10; 2U/3U Agriculture
SCIS SUBJECTS: Sugar industry - Australia
KEYWORDS: Cane sugar; industry
PUBLISHER: Canegrowers Association, QLD
REVIEW DATE: 8/9/98

CCER home page.

<http://www.ccer.ggl.ruu.nl/ccer/>

A browser to support frames is necessary to view this extensive Egyptology homepage. Eight sections provide a diverse approach to studying Ancient Egypt, ranging from traditional texts and museums through to computer aided study techniques. The skill level of the user and the computer technology available are important for this site. The easily accessed **Egyptology list and database** offers **The complete hieroglyphica**, which lists 4700 hieroglyphs. **Experimental corner** provides downloadable videos. The **FTP - corner** offers a complete list of software necessary for computer aided Egyptology. A number of amusing perceptions of Egypt can be found in **Check out this funny stuff**. There is a lot of valuable information at this one site. C. Dorbis

USER LEVEL: Stage 3 Stage 4 Stage 5 Stage 6
 Professional
KLA: HSIE
SYLLABUS: 2U/3U Ancient History; History 7-10;
 HSIE K-6
SCIS SUBJECTS: Egypt - History - to 332 B.C.
KEYWORDS: Egyptology
PUBLISHER: Utrecht University, The Netherlands
REVIEW DATE: 2/9/98

Chemical comics.

<http://www.uky.edu/~holler/periodic/periodic.html>

An art gallery of comic book cartoons hyperlinked to almost every chemical element in the periodic table has been created at this site. Users are presented with a standard periodic table and have the ability to click on an element to see a list of comic book pages involving that element. Thumbnails can then be expanded to see the full comic book page. There are also external links for information about each element but time is required to verify curriculum relevance. The properties of some of the elements in the comics can be used as a basis for class discussion. J. A. Robinson

USER LEVEL: Stage 5 Stage 6 Professional
KLA: Science
SYLLABUS: 2U Chemistry; Science 7-10
SCIS SUBJECTS: Chemical elements; Periodic law
KEYWORDS: Periodic table
PUBLISHER: Department of Chemistry, University of Kentucky, KY
AUTHOR: HOLLER, F. James; SELEGUE, John P.
REVIEW DATE: 31/8/98
EVAL: Highly recommended

Chimera Gallery.

<http://www.uow.edu.au/crearts/chimera/>

Chimera is the experimental student Web space of The Faculty of Creative Arts, The University of Wollongong. This interdisciplinary student project has been developed as an outlet through which students and staff can exhibit

and contribute to the World Wide Web. There is a constantly changing schedule of exhibits, in the areas of sound, writing, theatre, visual arts and new media. The presentation of all exhibits varies according to the chosen theme, genre of the work, and the individual curator of each exhibit. As well as an archive of past Web projects, there are links to local projects on the Web initiated within the faculty or in the Wollongong area. M. Beare

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U/3U Visual Arts
SCIS SUBJECTS: Art; Australia - Galleries and museums
KEYWORDS: Chimera Gallery; University of Wollongong
PUBLISHER: University of Wollongong
REVIEW DATE: 8/9/98

Cold war international history project (CWIHP).

<http://cwihip.si.edu/default.htm>

A virtual library; **Discussion group** (requires a username); **Frequently asked questions**; and a **CWIHP bulletin** are available at this site. The **CWIHP virtual library** allows the user to search archival materials in a number of ways: **Keywords**, **Keywords/Subject**; **Keywords/Year**; **Bulletin issue**, **Geographic subject**; **Collection**; and **Subject**. Once a topic has been selected, there is a choice of a wide range of relevant documents for study. The resources here are extensive, and most students will require some direction to use them effectively. This is an enormous site. Before attempting to navigate it is helpful to select the **Frequently asked questions**, which includes guidelines for using the Web site and conducting a search. R. McDowall

USER LEVEL: Stage 6 Professional
KLA: HSIE
SYLLABUS: 2U/3U Modern History;
 2U People & Events
SCIS SUBJECTS: Cold war
KEYWORDS: Cold war; history; international
PUBLISHER: Woodrow Wilson International Center for Scholars, Washington
REVIEW DATE: 2/9/98

Common errors in English.

<http://www.wsu.edu/~brians/errors/index.html>

An alphabetical list of common misspellings and confused words are easily accessed here. Examples include **accept/except**; **cite/site/sight**; **definate** (sic); **who's/whose**; **woman/women**; **writting** (sic). Very simple explanations, examples, rules and corrections are given on the site to assist with understanding how and why the correct usage occurs. The author can be contacted with suggestions for additions. There is a link to the **Curricular resources in English as a second language** page which provides a list of sites which teachers can investigate to determine curriculum relevance. This site becomes a self help tool, if the error has been noticed in the first instance. K. Underhill

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: English
SYLLABUS: English 7-10, 2U/3U English
SCIS SUBJECTS: English language - Spelling; English language - Usage
KEYWORDS: English; errors; language; spelling
PUBLISHER: Washington State University
AUTHOR: BRIANS, Paul
REVIEW DATE: 7/9/98

The cuckoo Clark - author Margaret Clark on the Web.

<http://www.newwebcity.com/cuckoo/clark.htm>

Each section of this site is accessible from the home page as well as from every section. Separate sections are devoted to: the *Mango Street* series; *Hair raisers* series; teen books; and what Clark terms **Special books**, written from her experiences as a drug and alcohol worker. Lists of titles are accompanied by a brief synopsis of each book, with some scanned book cover graphics. Readers are encouraged to write to the author, by post or email, and a list of FAQs gives honest answers to many questions about the writer's life. Simply designed, this site may offer student readers useful and interesting information about a popular author. W. Smith

USER LEVEL: Stage 3 Stage 4 Stage 5
KLA: English
SYLLABUS: English K-6; English 7-10
SCIS SUBJECTS: Authors, Australian; Children's literature; Writing (authorship)
KEYWORDS: Authors; horror; writing
AUTHOR: CLARK, Margaret
REVIEW DATE: 8/9/98

Cultural survival.

<http://www.cs.org>

Concerned with the rights of indigenous people world wide, this site contains anthropological material useful for cross cultural studies for the opening section of the society and culture course. **Active voices**, an online journal, contains educational materials that promote tolerance and understanding of other cultures and respect for indigenous people. The articles have relevance for the 3 unit course as well as the 2 unit course. **Links to related sites** gives access to women's issues; countries around the world studied in 3 unit; and **Web Wombat online newspapers**. Time may be required to verify the curriculum relevance of these links. C. Preston

USER LEVEL: Stage 5 Stage 6 Professional
KLA: HSIE
SYLLABUS: Asian Social Studies 7-10; 2U/3U Society & Culture; Studies in Society 7-10
SCIS SUBJECTS: Anthropology; Human rights; Indigenous peoples; Women
KEYWORDS: Cultural; indigenous
PUBLISHER: Cultural Survival Inc., Cambridge, USA
REVIEW DATE: 2/9/98

DIVA.

<http://www.arts.monash.edu.au/visarts/diva/diva.html>

Digital images from the visual arts library at Monash University form the content of this site. It contains a general overview of Australian art and architecture, and more detailed surveys of Australian painters, sculptors, photographers, performance artists and architects. Other focus areas are Aboriginal art and film, television and video. A gardens and landscape design survey features the French Impressionist painter Claude Monet's garden at Giverny in France. An excellent text, which provides an account of each artist's concerns and practice, accompanies the images. Because the site provides access to a wide ranging

survey of recent Australian art, it is a valuable resource for senior visual arts students. M. Beare

USER LEVEL: Stage 6 Professional
KLA: CA
SYLLABUS: 2U/3U Visual Arts
SCIS SUBJECTS: Art, Australian; Landscape architecture
KEYWORDS: Architecture; Australian art and artists; Monet; performance art
PUBLISHER: Monash University, VIC
REVIEW DATE: 8/9/98
EVAL: Highly recommended

Dr. Hawass - The plateau - official Website of Dr Zahi Hawass - main gate.

<http://guardians.net/hawass/index.htm>

Several aspects of the ancient history preliminary and HSC courses are addressed here. Dr. Hawass's **Press releases**; **Recent interview transcripts**; and site conservation plans are available. What better way to develop students' understanding of current archaeological issues, preservation techniques and problems associated with conservation than to study such up to date material? The site includes information about: the reigns of **Khufu** and **Menkoure** (Kings & pyramids); the **Site management & tourism** impact on places like Abu Simbel and the Valley of the Kings; and the restoration of the Sphinx (**Saving the secrets of the sands**). There is little pictorial evidence but the relevance of the text makes this a unique and valuable site. This site is updated regularly. J. Kempthorne

USER LEVEL: Stage 6
KLA: HSIE
SYLLABUS: 2U/3U Ancient History; 2U Personalities & Their Times
SCIS SUBJECTS: Egypt - History; Hawass, Zahi; Pyramids
KEYWORDS: Egyptian pyramids
AUTHOR: BAYUK, Andrew; HAWASS, Zahi
REVIEW DATE: 2/9/98

Elders Limited.

<http://www.elders.com.au/>

The Elders Australia site is a source of information that is relevant to all agriculture students. The site provides information on current wool and livestock prices. The prices are presented in a format that would be easy to adapt for student use. The **Bush telegraph** is an interactive bulletin board containing questions and replies from farmers and interested parties, and comments about industry problems. **Bush resources** are useful links, including climatic information (**Australian weather**) in which satellite images are displayed. There is also access to a variety of agriculture links which teachers would need to investigate to determine curriculum relevance. K. Heap

USER LEVEL: Stage 5 Stage 6
KLA: TAS
SYLLABUS: Agriculture 7-10; 2U/3U Agriculture
SCIS SUBJECTS: Pastoral industry - Australia
KEYWORDS: Livestock; price; wool
PUBLISHER: Elders Limited
REVIEW DATE: 8/9/98

For the Juniors homepage.<http://www.abc.net.au/juniors/default.htm>

Teachers who utilise the popular ABC television broadcast, *For the juniors*, should bookmark this site. It provides student outcomes and teacher support material for upcoming shows. Key concepts in the series deal with the environment, health and safety. The comprehensive support material gives specific instructions for teachers to follow before and after each show, and includes excellent activities that are easy to follow, appropriate for the intended audience, and manageable in their scope. N. Paull

USER LEVEL: Stage 1 Stage 2 Professional
KLA: HSIE; PDHPE
SYLLABUS: HSIE K-6; PDHPE K-6
SCIS SUBJECTS: Environment - Study and teaching; Health - Study and teaching
KEYWORDS: Environment; health; safety
PUBLISHER: Australian Broadcasting Corporation
REVIEW DATE: 10/9/98
EVAL: Highly recommended

Free lesson plans from Broderbund.<http://www.broder.com:80/education/school/lessons.html>

As the title implies, Broderbund's site incorporates lesson plans for many of the company's most popular CD-ROMs such as *Arthur's birthday*, *The print shop*, and *The logical journey of the Zoombinis*. The emphasis is on ideas that can be easily translated into the classroom and are suitable for a wide range of students. The lesson plans are broad in scope, yet offer another dimension to using these programs in the classroom setting. They usually contain blackline masters or project templates and could be used as follow up or extension activities to the CD-ROMs themselves. N. Paull

USER LEVEL: Stage 1 Stage 2 Stage 3 Stage 4 Stage 5
KLA: CA; English; HSIE; LOTE; Mathematics; Science; ST; TAS
SCIS SUBJECTS: Computer-assisted instruction; Computers in education
KEYWORDS: Computers; lesson plans
PUBLISHER: Broderbund, USA
REVIEW DATE: 10/9/98

Freshwater ecology.http://www.yvw.com.au/schools/enviro_schools.htm

Yarra Valley Water has provided an extensive Website that would supplement any water ecology program. Part of a much larger Website, this site provides information about basic ecology, pond life, life cycles, and investigation ideas. The **Freshwater ecology** page provides information on food webs and photosynthesis. The **Pond research** pages provide information on how to conduct research, equipment required (even DIY instructions), and safety issues. Another highlight is that many pages provide support and reinforcement questions, with answers located on another page. The language is appropriate for upper primary students and has reference to scientific terms and names. S. Taylor

USER LEVEL: Stage 3 Stage 4
KLA: HSIE; Science; ST
SYLLABUS: HSIE K-6; Science & Technology K-6; Science 7-10
SCIS SUBJECTS: Freshwater ecology; Life cycles (biology)
KEYWORDS: Freshwater; life cycles; Yarra

PUBLISHER: Yarra Valley Water, Victoria, Australia
REVIEW DATE: 8/9/98
EVAL: Highly recommended

Greenpeace Australia - home page.<http://www.greenpeace.org.au/>

Australian and international environmental issues are treated from a conservationist viewpoint at this attractive and well organised site. Topics include: case studies, including the plight of the blue finned tuna; climatic change; forest depletion; and toxins, such as PVC. Greenpeace's charter and history are also presented. There are suggestions as to how problems may be solved and the action that Greenpeace is taking. **Press releases** report on current environmental problems and there is monitoring of the Homebush Bay Olympic site. Links are given to other environmental sites that may reward teachers who investigate these further. S. Leslie

USER LEVEL: Stage 3 Stage 4 Stage 5 Stage 6
KLA: HSIE; Science; ST
SYLLABUS: Geography 7-10; 2U Geography; HSIE K-6; Science & Technology K-6; Science 7-10; 2U Science

SCIS SUBJECTS: Environment; Pollution
KEYWORDS: Environment; pollution
PUBLISHER: Greenpeace Australia
REVIEW DATE: 7/9/98

The Henry Moore Foundation.<http://www.henry-moore-fdn.co.uk/hmf/>

The emphasis within this site, at the present, is to mark the centenary of Henry Moore's birth. It covers a diverse cross section of his work and links to other sites, but time may be required to verify curriculum relevance. There is a short but concise **Biography** and **Chronology** of his life. **Works on view** has thumbnails that are expandable to a much larger size than most books. An **Exhibition and events** section has basic information of past and present exhibitions with some links to other sculpture based sites. There is also a list of **Selected publications**, including catalogues for sale. A. Whyte

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U/3U Visual Arts
SCIS SUBJECTS: Moore, Henry; Sculpture, modern - 20th century
KEYWORDS: Henry Moore
PUBLISHER: Henry Moore Foundation, UK
REVIEW DATE: 4/9/98

How to sharpen a knife.<http://gpvec.unl.edu/public/files/feedlot/sharp1.htm>

More than the sharpening of knives, this site gives comprehensive, well-explained information about the science and practice of producing an edge on a tool. The diagrams from the site are of a very high quality. Step by step instructions lead the user through the whole process of grinding and honing, including the correct use of a steel and its purpose in removing defects, rather than being used as a sharpening tool. This site is directly applicable to chisels and planes and would provide valuable assistance to teachers maintaining workshop equipment. Sharpening angles are included for reference. The author explains how the system will sharpen tools to be used as scalpels. P. Thompson

USER LEVEL: Stage 5 Stage 6 Professional
KLA: TAS
SYLLABUS: 2U Industrial Technology; Technics 7-10

SCIS SUBJECTS: Sharpening of tools
KEYWORDS: Sharpening; tools
PUBLISHER: Great Plains Veterinary Educational Center, USA
AUTHOR: GRIFFIN, Dee
REVIEW DATE: 4/9/98
EVAL: Highly recommended

In Motion magazine - a multicultural, online U.S. publication about democracy.<http://www.inmotionmagazine.com/>

Easily navigated, this site gives **Links around the world** which includes **The Web of culture**, ideal for cross cultural communications as it provides a comprehensive coverage of international body language and gestures. **Religions and belief systems** would be useful for studies of religion as well as the religion and belief depth study for society and culture. **Global eyes** covers globalisation and indigenous rights in the Pacific region and there is wider international coverage through **Regions**. This site offers articles on many of the concepts of the social inequality, prejudice and discrimination for society and culture, however, most of the affirmative action material is American based. C. Preston

USER LEVEL: Stage 6 Professional
KLA: HSIE
SYLLABUS: 2U Society & Culture; 2U Studies of Religion
SCIS SUBJECTS: Civil rights; Immigration and emigration; Racism; Religion; Social justice
KEYWORDS: Democracy; multicultural; religion
PUBLISHER: NPC Productions, San Diego, CA
AUTHOR: PAGET-CLARKE, Nic
REVIEW DATE: 2/9/98

Index to passages from WLGR. (Women's life in Greece and Rome).<http://www.uky.edu/ArtsSciences/Classics/wlgr/wlgr-index.html>

A series of primary source documents, these provide information related to women in the Greek and Roman worlds. Sources are taken from ancient Roman laws; **Philosophers**; writers; histories and legal papyri. They are an excellent collection of information for students and teachers regarding Roman society. The sources date from the eighth century BC to the fourth century AD and reflect the changes in women's status over the centuries. The site is easy to navigate and provides links to **Diotima**. This allows access to other sources on Greek and Roman women, but time may be required to verify curriculum relevance. R. McDowall

USER LEVEL: Stage 6 Professional
KLA: HSIE
SYLLABUS: 2U/3U Ancient History; 2U Personalities & Their Times
SCIS SUBJECTS: Greece - History; Rome - History
KEYWORDS: Greek; Roman; Women
PUBLISHER: University of Kentucky, USA
AUTHOR: FANT, Maureen B.; LEFKOWITZ, Mary R.
REVIEW DATE: 2/9/98

"inQuiry Almanack" - spotlighting simple machines.<http://www.fi.edu/qa97/spotlight3/spotlight3.html>

Part of a larger site from a monthly online magazine, this particular site succinctly explains how simple machines work. By matching diagrams with age appropriate language, students will better understand how inclined planes, levers, wedges, wheels and axles, screws, and pulleys make work easier. Hypertext links are available for those students who want additional information on each machine. Students are encouraged to think about creative ways that two or more machines can be worked together to form compound machines. Additional links to supplementary Websites could be investigated by teachers to ascertain curriculum relevance. N. Paull

USER LEVEL: Stage 2 Stage 3
KLA: ST
SYLLABUS: Science & Technology K-6
SCIS SUBJECTS: Machinery; Physics
KEYWORDS: Levers; pulleys; screws; simple machines; wedges; wheels
PUBLISHER: Franklin Institute Science Museum, Philadelphia
REVIEW DATE: 10/9/98

Jacket magazine homepage.<http://www.jacket.zip.com.au/>

Jacket is a free Internet quarterly magazine which includes poetry, interviews, reviews and articles about new writing from many English speaking countries. Edited by the well known Australian poet, John Tranter, this site offers a great range of reading and discussion material that has been written specifically for the magazine, or comes from sources that would be difficult to obtain. There are many links to other contemporary sites that could be investigated for curriculum relevance, including those with specific comments about Tranter's own work. One of these is a long interview (about 30 printed pages, including photographs) that gives an insight to Tranter's life and writing. K. Underhill

USER LEVEL: Stage 6 Professional
KLA: English
SYLLABUS: 3U English
SCIS SUBJECTS: Literature - Collections; Poetry
KEYWORDS: Literature; poetry
PUBLISHER: Jacket, Sydney
AUTHOR: TRANTER, John
REVIEW DATE: 7/9/98

Juggling information service.<http://www.juggling.org/>

The information in this site will inform the user of the physical aspects of juggling. It would also be useful for the beginning juggler as well as the professional performer. Under **Juggling help**, there are text based lessons on how to juggle with: balls; clubs; rings; and torches. This is supplemented by a large number of video clips of jugglers at work. The extensive table of contents contains: contacts for juggling services from Australia and the world; links to printed materials, catalogues, books on juggling (**Juggling in the media**); and other resources. The search engine (**Search JIS**) for archived juggling information would be particularly useful for students researching this area. C. O'Rourke

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Drama 7-10; 2U Drama
SCIS SUBJECTS: Juggling
KEYWORDS: Juggling
PUBLISHER: Juggling Information Service, Indiana University
AUTHOR: BAKALOR, Barry
REVIEW DATE: 2/9/98

KIDiddles (TM) - Mojo's Musical Mouseum.

<http://www.kididdles.com/mouseum/index.html>

Ever wondered where to find those missing lyrics to a favourite children's song? This site features the lyrics to children's songs that are not the subject of copyright. The songs are indexed by title and by subject. If you know just a few lyrics, you can try the search engine, and if you have no idea at all then there is a help site. Also featured is a song of the week; links to related sites that could be further investigated by teachers; and a **Good buys** section which has all the information on the latest happenings in children's music. Although a North American site there is some Australian content, including a link to The Wiggles' home page. N. Paull

USER LEVEL: Stage 1 Stage 2 Stage 3 Professional
KLA: CA
SYLLABUS: Music K-6
SCIS SUBJECTS: Singing; Songs
KEYWORDS: Lyrics; songs
PUBLISHER: KiDiddles, Canada
REVIEW DATE: 10/9/98

Kids.

http://www.forest.nsw.gov.au/f_kids.htm

Part of the State Forests of NSW home page, this site has been designed for both teachers and students. Students can follow two cartoon characters on a journey that leads them through a forest, encountering feral animals, and problems that need investigation. The background information available to teachers on forests and their management would be a welcome addition when preparing units of work on the forest environment and working with wood. Details of Field Studies Centres and the programs they run are also available. The site encourages teachers to use blackline masters which have been prepared by State Forests, but unfortunately these aren't available on the site, but via mail. N. Paull

USER LEVEL: Stage 3 Stage 4
KLA: HSIE; Science; ST; TAS
SYLLABUS: Design and Technology 7-10; Geography 7-10; HSIE K-6; Science & Technology K-6; Science 7-10
SCIS SUBJECTS: Forests and forestry
KEYWORDS: Feral animals; forests; timber products
PUBLISHER: State Forests of NSW, Sydney
REVIEW DATE: 10/9/98

Learn physics today!

<http://library.advanced.org/10796/>

A high quality, interactive physics learning tool developed by students, this won fifth place in the 1997 ThinkQuest competition. Via interactive problems using Java applets, the user is able to explore concepts starting from **Basic skills** through to: **Motion in two dimensions; Projectile**

and periodic motion; Waves; Sound; Light; and Electric forces. Users are invited to perform calculations online and check their answers. An online calculator is available for use. At the end of each section is an interactive quiz. The site is highly suitable for many topics in the preliminary and HSC courses. J. A. Robinson

USER LEVEL: Stage 6
KLA: Science
SYLLABUS: 2U Physics
SCIS SUBJECTS: Physics
KEYWORDS: Physics
PUBLISHER: Advanced Network & Services, New York
AUTHOR: JUDEZ, Hector; KU CHO, Hyun; OENOKI, Kazushi; OENOKI, Keiji
REVIEW DATE: 3/9/98
EVAL: Highly recommended

Marche mondiale.

<http://www2.club.ch/webc151/globalmarch/>

The readings contained on this French language site deal with child exploitation in the workplace and the Global March Against Child Labour (Marche Mondiale Contre le Travail des Enfants.) Starting with the present situation of exploited children in the world, background information is given on the march and actions taken by the UN. This is followed by poems written by children who were exploited themselves (*écrivain en herbe*). One can also read Victor Hugo's *Les contemporains*. There are also some easier readings in French such as *Roman feuilleton* and considerable reading comprehension material suitable for 2 unit and 3 unit students. A chat page in French, English or in Spanish is also available. K. Nowacki

USER LEVEL: Stage 6
KLA: LOTE
SYLLABUS: 2U/3U French
SCIS SUBJECT: Child abuse; French language
KEYWORDS: Child labour; French
PUBLISHER: Marche Mondiale, Switzerland
REVIEW DATE: 11/9/98

Measurements converter.

<http://www.niceeasy.com.au/Converter.html>

Area; Capacity; Circular; Length; Pressure; Speed; Temperature; Time; Volume; and Weight are all easy to convert by visiting this site. Once saved this site can be used offline. With comprehensive metric and imperial calculations, a user simply enters their measurement into one of the fields, clicks in another, and the site then displays the equivalent in all the available units. **Length** for example includes: kilometre; metre; decimetre; centimetre; millimetre; league mile; furlong; chain; rod; yard; foot; and inch. Old Russian; typographical; astronomical; and nautical lengths are also displayed. The accuracy is amazing and would prove useful for many engineering design applications. P. Thompson

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: TAS
SYLLABUS: Design & Technology 7-10; 2U Design & Technology; 2U Engineering Science; 2U Industrial Technology; Technics 7-10
SCIS SUBJECTS: Measurement
KEYWORDS: Conversion; measurement

PUBLISHER: Nice & Easy Multimedia Pty Ltd, Australia
AUTHOR: GERSHTEIN, Sergey
REVIEW DATE: 4/9/98
EVAL: Highly recommended

Mother Goose rebus rhymes - Enchanted Learning Software.

<http://www.EnchantedLearning.com/Rhymes.html>

Here is a site that teachers can incorporate into lesson plans and activities for young students. Preschool students will enjoy looking up their favourite nursery rhymes and seeing if they can recognise some words. As the site's title implies it incorporates rebus, or picture, clues to help beginning readers. Kindergarten students and others who are learning to read will enjoy attempting to read, or reading, these familiar favourites. The site is easily navigated for its intended audience. Included are several links to other sites at this user level that teachers could investigate to determine curriculum relevance. N. Paull

USER LEVEL: Early Stage 1 Stage 1
KLA: English
SYLLABUS: English K-6
SCIS SUBJECTS: Nursery rhymes
KEYWORDS: Mother Goose; nursery rhymes
PUBLISHER: Enchanted Learning Software, USA.
REVIEW DATE: 10/9/98

The mysteries of space and time.

<http://library.advanced.org/12523/>

Developed by students as part of the 1997 ThinkQuest competition, this site won second place. It allows the inquisitive student to learn about some of the mysteries, ideas, and theories associated with stellar objects. These include: secrets of distant suns; black holes; and stellar anomalies in space and time. Frame and non frame versions are available, with extensive use of Java applets. An interactive virtual **Lab** allows the user to create a star and watch it die. They can also add stars to a virtual universe and watch it grow and change over a period of time. This site is highly suitable for physics elective 5: astronomy and 2U General Science. J. A. Robinson

USER LEVEL: Stage 6
KLA: Science
SYLLABUS: 2U General Science; 2U Physics
SCIS SUBJECTS: Astrophysics
KEYWORDS: Space; time
PUBLISHER: Advanced Network & Services, New York
AUTHOR: DOVE, Edwin; HAMANN, Garret; KOHLER, Tobias
REVIEW DATE: 3/9/98
EVAL: Highly recommended

National Council on Economic Education.

<http://www.nationalcouncil.org>

A lot of information is available on this site to help teachers integrate the Internet into their economics teaching. **Economics America** provides information on economics education in the USA, including curriculum issues. **EconEdLink** includes **Cyberteach** which has ideas for **Building an economics lesson** and a **Sample general economics lesson**. The **Economics international** section has **Web links** to universities, international organisations and

businesses. These can supply up to date information on economic concepts as well as useful teaching resources that can be integrated from K-12, but time may be required to verify curriculum relevance. There is good support for economics syllabus options. K. Jackson

USER LEVEL: Stage 5 Stage 6 Professional
KLA: HSIE
SYLLABUS: 2U/3U Business Studies; 2U/3U Economics
SCIS SUBJECTS: Economics - Study and teaching; United States - economic conditions
KEYWORDS: Economics
PUBLISHER: National Council on Economic Education, New York
REVIEW DATE: 31/8/98
EVALUATION: Highly recommended

The National Museum of Women in the Arts.

<http://www.nmwa.org/index.htm>

For those investigating the involvement of women in the arts, this is a useful site. The museum, although based in Washington DC, has an international perspective and covers all disciplines within the subject area. Within the **Permanent collection**, the periods covered are from **The Renaissance** to the present day. There are thumbnails of most pictures and some downloadable videos related to the museum and its collection. The **Library & research centre** is contactable for further information. The **Museum shop** has mail order **Books, Gifts and Jewellery**. A. Whyte

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U/3U Visual Arts
SCIS SUBJECTS: Artists; Arts; Women
KEYWORDS: Arts; women
PUBLISHER: The National Museum of Women in the Arts, Washington
REVIEW DATE: 4/9/98

Oceans alive.

<http://www.abc.net.au/oceans/alive.htm>

A companion to the *Year of the ocean* site, this encompassing site features the biodiversity of Australian marine life and ways to preserve our oceans. Content includes: an interactive map to log whale sightings; Australia's top marine diversity sites; facts about oceans and marine life; a search engine; links to schools with online sites that feature a marine content; and a question and answer section. The site has been designed to expand in the future and host online schools marine projects. The breadth and scope of this well designed site would make it ideal as an integral component of any research unit on Australian marine life. N. Paull

USER LEVEL: Stage 3 Stage 4 Stage 5
KLA: HSIE; Science; ST
SYLLABUS: Geography 7-10; HSIE K-6; Science & Technology K-6; Science 7-10
SCIS SUBJECTS: Marine biology; Marine ecology
KEYWORDS: Marine animals; marine plants; oceans
PUBLISHER: Australian Broadcasting Corporation
REVIEW DATE: 10/9/98
EVAL: Highly recommended

Periodic table:Webelements.<http://www.shef.ac.uk/chemistry/web-elements/>

Users are presented with a coloured periodic table on this site. Clicking on an element will provide the user with a number of options, including **History; Uses; Key data; Electronegativities; Bond enthalpies; Lattice energies; Atom radii; Reduction potentials; Crystal structure; Bulk properties; Thermal properties; Radioisotopes; Electronic configuration; Valence shell radii; Ionization enthalpies; Electron affinities; Effective nuclear charges; Biology; and Geology.** Such data is supplemented by appropriate graphs, diagrams and tables and is very easy to navigate. Users may also access a frameless interface and a printable periodic table. J. A. Robinson

USER LEVEL: Stage 5 Stage 6**KLA:** Science**SYLLABUS:** 2U Chemistry; 2U General Science; 2U Geology; Science 7-10**SCIS SUBJECTS:** Chemical elements; Periodic law**KEYWORDS:** Elements; periodic table**PUBLISHER:** University of Sheffield, UK**AUTHOR:** WINTER, Mark**REVIEW DATE:** 1/9/98**pH tutorial launch pad.**<http://www.science.ubc.ca/~chem/tutorials/pH/launch.html>

Notes and self directed exercises at this site are designed to help students with the fundamental concepts of acid base chemistry. Since the level of instruction is aimed at first year university students with no prior knowledge of acid base chemistry, the content is suitable for consolidation or revision by HSC students. The site is organised into 18 separate sections with an online quiz for each section. It covers the entire content of chemistry core topic 10, acids and bases. The section on **Biological applications of pH** is appropriate for elective 3, biological chemistry. There is also a useful online glossary (ABC). Users may download the tutorial package to use offline. J. A. Robinson

USER LEVEL: Stage 6**KLA:** Science**SYLLABUS:** 2U Chemistry**SCIS SUBJECTS:** Chemistry**KEYWORDS:** pH; science**PUBLISHER:** Department of Chemistry, University of British Columbia**AUTHOR:** HERRING, Geoff**REVIEW DATE:** 1/9/98**EVAL:** Highly recommended**The physics applet collection.**<http://jersey.uoregon.edu/vlab/>

Effective use of Javascript is used to create a variety of interactive applets to demonstrate a range of physics concepts. These include: **Mechanics; projectile motion; gravitation; momentum; Astrophysics; Thermodynamics; and Energy and Environment.** The site contains helpful hints on running some of these applets. For each applet featured, the user has a choice to access the **Raw applet link** or to a **Link to applet embedded in example HTML lesson plan.** Each applet is supplied with technical details, and some have additional documentation. In running these applets users choose values for the parameters and then see the

motion or graph generated. It is useful for many topics in preliminary and HSC courses. J. A. Robinson

USER LEVEL: Stage 6**KLA:** Science**SYLLABUS:** 2U General Science; 2U Physics; 2U Science for Life**SCIS SUBJECTS:** Physics**KEYWORDS:** Physics**PUBLISHER:** University of Oregon**AUTHOR:** BOTHUN, Greg; MCGREW, Amy; RUSSELL, Sean**REVIEW DATE:** 3/9/98**EVAL:** Highly recommended**Playwriting seminars introduction.**<http://www.vcu.edu/artweb/playwriting/>

Providing practical advice for budding playwrights, this site is a readable guide to this art form. The author examines a number of key elements including: **Structure; exposition; narrative techniques; character development; Subtext; and climax.** Interlaced with this advice are numerous quotes from prominent playwrights and excerpts from contemporary plays which are used to illustrate the author's ideas. A useful inclusion is an examination of the difference between **Film** and stage writing and a section on the one act play. This site will be very useful for students' attempting to write their own scripts for the stage. Navigation is a little disjointed, but the information is presented in a concise and accessible manner. C. O'Rourke

USER LEVEL: Stage 5 Stage 6**KLA:** CA**SYLLABUS:** 2U Drama**SCIS SUBJECTS:** Script writing**KEYWORDS:** Playwriting**PUBLISHER:** Virginia Commonwealth University, USA**AUTHOR:** TOSCAN, Richard**REVIEW DATE:** 2/9/98**Premiers pas sur la plage "chat".**<http://www.momes.net/endirect/index.html>

French teachers with a keen class of technology minded students will find this page useful. Through this page, students and teachers can conduct a live chat session with French students in France. The page gives details on how to proceed, with an updated weekly program with exact times when the chat can take place. After subscribing to the program and choosing the topic of discussion, you can start a free chat from your own site. An exciting page for a live chat in French where students can develop their French with students in France or in French speaking countries. Teachers would need to be aware of Child Protection issues when using this site. K. Nowacki

USER LEVEL: Stage 3**KLA:** HSIE**SYLLABUS:** HSIE K-6**SCIS SUBJECT:** French language text**KEYWORDS:** French**PUBLISHER:** Premier pas sur l'Internet, France**REVIEW DATE:** 21/9/98**Safety on the farm.**http://www.wt.com.au/~dohswa/d_pubs/farmsafe/index_fs.htm

An extensive site that is relevant to the junior and senior agriculture syllabuses, this provides information on twenty-four topics covering all aspects of farm safety. These include: **Operating a tractor; Tractor maintenance; Farm noise; Handling sheep; Handling cattle; Hay baling; and Dairy farms.** There are also main sections explaining the legal aspects of farm safety (**Your legal duties**) and **Managing farm safety.** The information is very easy to read and is supported with diagrams where appropriate. Teachers will find it useful as the information is approved, for copying and use in class, as long as the source is acknowledged. K. Heap

USER LEVEL: Stage 5 Stage 6 Professional**KLA:** TAS**SYLLABUS:** Agriculture 7-10; 2U/3U Agriculture**SCIS SUBJECTS:** Farms - Safety measures**KEYWORDS:** Farms; safety**PUBLISHER:** WorkSafe Western Australia**REVIEW DATE:** 8/9/98**Southern Districts Visual Arts Network home page.**<http://www.shoal.net.au/~van/>

Southern Districts Visual Arts Network (VAN) is the professional organisation of visual arts teachers in the south coast region of NSW. Their site includes information on coming events and activities as well as photos and links to visual arts sites. Of particular interest to students are the **Links, Resources and Camp** pages. The **Links** page contains an extensive list of site reviews which would require further investigation. A well illustrated study guide to a recommended area of study from the HSC, developed by teachers in the VAN, can be found on the **Resources** page. The site has many photographs of VAN's activities such as the annual HSC camp for students and the VAN teachers' conference. M. Beare

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional**KLA:** CA**SYLLABUS:** Visual Arts 7-10; 2U/3U Visual Arts**SCIS SUBJECTS:** Art; Art - Study and teaching**KEYWORDS:** Art resources; art teaching; Southern

Districts Visual Arts Network; VAN

PUBLISHER: Southern Districts Visual Arts Network, NSW**REVIEW DATE:** 8/9/98**EVAL:** Highly recommended**Teacher Magazine.**<http://www.edweek.org/tm/tm.htm>

An American monthly online magazine, this site has many articles of interest to Australian primary and secondary teachers. Each issue has five sections: **Features, Current events, Research, Comment, Books and Departments.** In addition, one can browse the **Archives, Special reports, Daily news** and obtain resources for lessons. There is always an article on behaviour management and at least one on a curriculum area. Features include a monthly account of an issue confronted by a teacher. This month deals with alleviating the shock that a class feels when a classmate is arrested for a violent crime. There is a great

deal of relevant information in this well constructed site. A. Soutter

USER LEVEL: Community Professional**SCIS SUBJECTS:** Classroom management; Education**KEYWORDS:** Behaviour; curriculum; teacher**PUBLISHER:** Editorial Projects in Education, USA**REVIEW DATE:** 9/9/98**EVAL:** Highly recommended**Threatened species network index.**<http://nccnsw.org.au/member/tsn/>

Although not an extensive list, a valuable feature of this site is information on a selection of Australian threatened plants and animals. Information on each species is well covered. Included on the site is: general information about threatened species; media releases on environmental issues; a glossary of biological and environmental terms; and ideas on how the individual can assist in conservation. There is a facility to search for specific terms, both within this site and others from the Nature Conservation Council of NSW. Links to other environmental sites, which may have curriculum relevance, would need further exploration by teachers. S. Leslie

USER LEVEL: Stage 3 Stage 4 Stage 5**KLA:** HSIE; Science; ST**SYLLABUS:** Geography 7-10; HSIE K-6; Science & Technology K-6; Science 7-10**SCIS SUBJECTS:** Animals-Australia; Environment; Wildlife conservation**KEYWORDS:** Conservation; environment**PUBLISHER:** Nature Conservation Council of NSW**REVIEW DATE:** 7/9/98**Understanding our planet through chemistry.**<http://minerals.cr.usgs.gov/gips/aai-home.htm>

U.S. Geological Survey have created an informative site which shows how chemists and geologists use analytical chemistry to: determine **How old is the earth**; show that an extraterrestrial body collided with the earth in **Disaster from space**; predict volcanic eruptions; observe **Global change in the geologic past**; and document damage by **Acid rain** and pollution of the Earth's surface. There is also a thorough description of the use of chemistry in the understanding of geologic processes; the environment; pollution and its prevention; plus the mapping of the chemistry of the earth. This site is suitable for chemistry elective 4, chemistry and the environment. J. A. Robinson

USER LEVEL: Stage 5 Stage 6**KLA:** Science**SYLLABUS:** 2U Chemistry; 2U Geology; Science 7-10**SCIS SUBJECTS:** Earth sciences; Pollution**KEYWORDS:** Chemistry; minerals; planet**PUBLISHER:** US Department of the Interior, US Geological Survey**AUTHOR:** TAGGART Jr., Joseph E**REVIEW DATE:** 1/9/98**EVAL:** Highly recommended**The Vietnam war Internet project.**<http://www.lbjlib.utexas.edu/shwv/shwvhome.html>

Offering a wide range of accounts and a depth of information, this site offers a multi-perspective view of the war which divided countries. It contains extensive

Resources lists; **Articles** from academics and interested parties; **Documents** including orders and government papers; military **Units**; Society of History Vietnam War; and memoirs and personal **Narratives**. Students can find much to augment their studies. The **Images** are largely donated by Americans involved in the war. The narratives and memoirs give primary evidence not commonly found. An Australian section has been added, but is not extensive. Links specific to Vietnam are comprehensive, but time may be required to verify curriculum relevance. C. Dorbis

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: HSIE

SYLLABUS: History 7-10; 2U/3U Unit Modern History

SCIS SUBJECTS: Vietnam war, 1961 - 1975

KEYWORDS: Vietnam war

PUBLISHER: Lyndon Baines Johnson Library, University of Texas

AUTHOR: TEGTMEIER, John

REVIEW DATE: 2/9/98

Virtual Galápagos.

<http://www.terraquest.com/galapagos/>

This site provides an interactive means to explore the: history; geology; and natural history of the Galápagos Islands. **History** includes a description of Charles Darwin's visit and links to his book *The voyage of the Beagle*. **Issues** discusses current conservation issues such as **Introduced species** and tourism. **Wildlife** explains the theory of **Evolution** and how it was developed by Darwin and others. Information is also included on: Darwin's finches; giant tortoises; land lizards; marine iguanas; and sea mammals. This site is relevant to the core 2U biology topic, genetics and evolution. J. Morgan

USER LEVEL: Stage 5 Stage 6 Professional

KLA: Science

SYLLABUS: 2U Biology; Science 7-10

SCIS SUBJECTS: Animals - Galapagos Islands; Galapagos Islands

KEYWORDS: Galápagos

PUBLISHER: Terraquest, USA

REVIEW DATE: 1/9/98

The water cycle.

http://www.yvw.com.au/schools/cycle_1.htm

Studying cycles? Then visit the Yarra Valley Water Website for a comprehensive look at the water cycle. This site opens with a flow diagram of the water cycle covering topics such as **Precipitation**, **Condensation**, and the **Role of the sun**. The instructions are simple, requiring students to click on the flow diagram with corresponding information appearing in the lower frame. As this site is framed (divided into two sections) some adjusting of the frame divisions may be needed. The language is appropriate for middle to upper primary, with occasional terms needing further explanation. The animated graphics used to explain evaporation and transpiration provide fantastic visual support to the process being explained. S. Taylor

USER LEVEL: Stage 2 Stage 3 Stage 4

KLA: HSIE; Science; ST

SYLLABUS: HSIE K-6; Science & Technology K-6; Science 7-10

SCIS SUBJECTS: Water cycle

KEYWORDS: Water cycle; Yarra

PUBLISHER: Yarra Valley Water, VIC

REVIEW DATE: 8/9/98

Welcome to Zoological Parks Board of New South Wales.

<http://www.zoo.nsw.gov.au>

Coverage of both Taronga and Western Plains Zoos is provided at this extensive, well designed and easily navigated site. Information about Western Plains Zoo is not as comprehensive as for Taronga Zoo. Specific information, including photographs, is provided for 21 individual animals, as well as about animal families, sponsorship programs and employment opportunities at both zoos. Programs for environmental protection (eg **What do they do with all the zoo doo?**) are described and practical information, including maps, entrance prices and opening times, will prove useful for teachers organising excursions. The site includes the comprehensive **Australian shark attack file**. This would be a helpful site for pre and post excursion use by teachers and students. W. Smith

USER LEVEL: Stage 2 Stage 3

KLA: ST

SYLLABUS: Science & technology K-6

SCIS SUBJECTS: Animals; Taronga Park Zoo; Western Plains Zoo; Zoos

KEYWORDS: Animals; zoo

PUBLISHER: The Zoological Parks Board of New South Wales

REVIEW DATE: 7/9/98

Internet reviewers for this issue were:

Michael Beare, Shoalhaven High

Chris Dorbis, SEO1, Aboriginal Studies

Karen Heap, Muirfield Technology High

Kim Jackson, Kingsgrove High School

Judith Kempthorne, Cranebrook High School

Suzanne Leslie, Lindfield Primary

Rosemary McDowall, MacKellar Girls' High School

Judy Morgan, Sefton High School

Kanitha Nowacki, Open High School

Chris O'Rourke, Bathurst High

Nigel Paull, South Grafton Primary

Christine Preston, secondary teacher

Wendy Smith, Tamworth Primary School

Alison Soutter, Project Officer, Student Services

Jenny (JA) Robinson, Byron Bay High

Simon Taylor, primary teacher

Peter Thompson, Bossley Park High

Kerry Underhill, MacKellar Girls' High

Anthony Whyte, Westport Technology High ■

Internet site reviewers, especially primary, urgently needed. Email: Colleen.Foley@det.nsw.edu.au

Isolated no longer: Internet solutions at Moree Technology High School

Moree Technology High School has 500 students from Years 7 through to Year 12, of whom 17% identify as Aboriginal. Teacher-librarian Jill Jones discusses some of the ways the school is incorporating computer technologies into teaching and learning, bridging some of the isolation that is experienced by this school community.



Although Moree Technology High School is approximately 800km north west of Sydney, the school offers a full range of subjects, has vocational programs, and uses Distance Education to access some courses. As in other country locations, the staff at Moree strives to ensure that our school's remoteness does not become an educational disadvantage. The students require current, relevant sources of information and many topics are a challenge to resource.

Difficulties can arise for students needing access to specialist information required for senior subjects; the range and quality of information from community sources may not be adequate. We are constantly aware of the social disadvantages that may be experienced by students who might have a decreased awareness of the degree of competition and available opportunities for the future. Isolated students may feel insecure when exposed to the wider environment. Since 1991, computers, and other associated technologies such as the Internet and electronic mail (email), have been a growing factor in overcoming some of the feelings of isolation experienced by students and staff. As an aid to teaching and learning, a whole school computer network has been established, which links three computer rooms, all staff rooms, the administration block and the library.

The Internet is now widely accepted as a major learning tool at the school, and it is rapidly becoming integrated into the curriculum to enhance both teaching and student learning.

Internet and email access, via the network, is available in all staff rooms using a local service provider, while student Internet access is via two computers (part of the *Computers in schools* project) connected to the Department of Education and Training's service provider. The student terminals are located in the library; this year it is planned to install a further ten computers in the library, each one capable of accessing the Internet.

Email access

All staff members at the school have a *Hotmail* address so that they can easily access their email from both home and school connections.

However, limited student access has meant that their present email use, for now at least, is restricted to:

- requests to Web site publishers for more information
- asking questions in sites such as *Oz kidz* and *AskERIC*
- emailing other classroom connections, which has been particularly useful for Aboriginal Studies students who study another cultural group
- exchange students communicating with distant family members.

Integrating the Internet

Since our first connection in October 1995, the Internet has not always been looked on favourably by all staff at the school. Technical problems, such as unreliable telephone lines, led to some initial frustration. Our Internet connection is charged at STD telephone rates (approximately

\$20 per hour) but this is subsidised by the Department.

Even so, some staff regarded the Internet as a time waster. Others expressed concern that students might be exposed to "sex sites and bomb sites", as sensationalised in numerous reports by the media. The staff's fears decreased as they became more familiar with the Internet and its possibilities. Through professional development, we worked to improve search tech-

As teacher-librarian, Internet coordinator and Computer Committee member, I promote the Internet as yet another research and communication tool.

niques, and promoted the use of refined search engines that permitted Boolean terms. Concerns regarding suitability of sites was overcome in several ways: the students' Internet computers are located in a prominent position in the Library; and Ozemail's use of filters protect students from offensive sites and news groups. Also, our students accept the *Moree Technology High School user's agreement*, which outlines areas of use and acceptable Internet behaviour.

Internet implications for the teacher-librarian

As teacher-librarian, Internet coordinator and Computer Committee member, I promote the Internet as

yet another research and communication tool. Although the Internet, or more precisely the World Wide Web, extends far beyond the walls of the school library, I aimed to merge it into the library collection in a similar way to books and CD-ROMs.

The Internet is 'another place' in the library to find information. It may be the first port of call, especially for current information such as daily news, weather, share market or stock

market reports, or for providing obscure information. Recent examples have included: designs for weather vanes, barbecues and guitars; the breeding of rare animals; and the cultivation of unusual crops.

At other times it is the last place students search. We do not have rules on who can use the Internet, or when. However, I do encourage the students to **define** what it is they want to know, brainstorm relevant

keywords and phrases, and **select** the best search engine for the task, before I log them onto the Internet.

The introduction of the Internet into teaching and learning has required me to spend more time with both students and staff, on a one-to-one and small group basis, and to develop in users the appropriate information skills to ensure successful searches. Staff and students have to be critically aware of the material

Students require structured exposure to the Internet. It is very tempting for them to "surf the Web" aimlessly.

THE INTERNET AND PROFESSIONAL DEVELOPMENT

Internet use by staff for professional development is growing, with several staff at Moree Technology High participating in online conferences. **Nicenet** is an Internet classroom Web site which I have used, along with other mentors, participants and coordinators in the NSW school based training program for teacher-librarians. This site facilitates easy online group communication. As a teacher-librarian, I also use listservs, such as **OZTL_NET**, for up to date discussions and information on current library issues. Examples of other educational listservs include *Voc Ed Coordinator Online (VECO)* and *Technology Education*.

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SAMPLE SEARCH: BARBECUES

The Internet was seen as a valuable research tool to provide a range of initial designs for barbecues, as part of a Year 12 student's major project in Design & Technology.

Initially, the student used a multi-index search engine, but had not considered keywords or phrases. Instead, he had chosen to search for the term most familiar to him: 'BBQ'. Instead of the designs and diagrams he had expected to locate, the most common returns were: recipes; condiments; sauces; real estate; and bars and restaurants to visit. When Australian search engines were tried, a high rate of hits was achieved, but these sites produced little more than a list of local barbecue suppliers and didn't answer the original query.

Following discussions with his colleagues and the teacher-librarian, it was realised that alternative keywords and spellings needed to be tried. These included: barbecue, barbeque; bar-b-q; barbecue design; brick barbecue; brickwork; fireplace; grill; charrill; and camp cooking. Terms from the building industry, outdoor recreation and hobbies were also useful search words.

The student's subsequent attempt at searching was very successful. Of the above keywords, 'grill' (the most common American term) gave the best hit rate of on-topic sites. The student found several unique sources of alternative barbeque designs to inspire his project, and even some practical hints for laying bricks and mixing mortar.

This sample search reinforced, for all of us, several factors that can empower users of the World Wide Web:

- Always have on hand a range of alternative search words
- Single words often return numerous hits, but will not necessarily answer the specific enquiry
- Compound (Boolean) search strategies are usually more efficient
- The Internet is international, so many cultural differences will be reflected in keywords, spellings and site content
- Save useful information; it may not be there tomorrow!

they are using in terms of: validity; authenticity; and quantity of information available online.

The Internet in teaching and learning

Staff members are encouraged to plan units of work collaboratively, with the teacher-librarian, particularly whenever research is involved. Searches of the Internet are made in advance, and relevant sites (including those reviewed favourably in issues of *Scan*) are bookmarked to make Internet research faster, and therefore accessible, to more students. A variety of search engines, including meta-indexes, are also bookmarked. These bookmarks are organised into appropriate topic folders (under key learning areas) for ease of use.

Internet projects and contests on a national level have been undertaken in recent years, including *Murder under the microscope*, an ecology mystery competition (see *Scan* vol 17 no 2, p26), and the Australian Stock Exchange's *Schools' sharemarket game*. These are interactive and encourage the students to research, select and collate information to solve problems based on real life situations.

Year 11 and 12 students are encouraged to visit Web sites such as *HSC on-line*, *Network for education*, *Board of Studies NSW* and *HECS* (about the Higher Education Contribution Scheme) as part of an ongoing study skills program. These sites have been developed to help students and staff find relevant, useful information which has been designed to target syllabus needs.

There are also tips on examination techniques and links to worthwhile sites.

Information skills and Internet use

There must be a continuum for developing the skills required for successful access of the Internet as a research tool.

Stage 4 students tend to have specific needs, such as searching for information on famous people, or particular animals or plants, and these needs are allied with an overall curiosity about the Web. Overly specific questions, however, often result in search information that is not immediately useable, highlighting the need for teachers to construct tasks with care. Sufficient time must be spent guiding students to define topics and select appropriate information. Students require structured exposure to the Internet. It is very tempting for them to 'surf the Web' aimlessly if their specific needs are not being met with positive results. By collaborating with teacher-librarians and other staff, teachers can develop activities which provide scaffolds for success.

Students in Stage 5 are not as concerned with finding a definitive response to their question on the Web itself. These students are beginning to refine their search techniques, and therefore tend to seek a wider variety of information, frequently as an intermediate part of developing their final responses. They will be ready to synthesise this information from a variety of sources.

Senior students (Stage 6) tend to search two particular types of information. Firstly, they are interested in

specific areas related to assessment tasks or topics in their subject work and, secondly, the students seek information concerning: study skills; past examination papers; Board of Studies information; and potential occupations and careers.

Within the school, the Internet at Moree Technology High School has proved to be a valuable addition to the library's resources. Speed of access, and the range of information available, have greatly enhanced teaching and student learning. Communication and professional development has been enhanced. The Internet is certainly providing a means of reducing the impact of isolation on our school.

Welcome to Network for education is at:
<http://www.dse.nsw.edu.au/>

OTHER ONLINE REFERENCES

Board of Studies NSW educational resources index at:
<http://www.boardofstudies.nsw.edu.au/>

HECS: your questions answered 1998 at:
<http://www.deetya.gov.au/divisions/hed/highered/pubs/hecs/98hecs1.htm>

Murder under the microscope at:
<http://www.microscope.aone.net.au/>

Nicenet at:
<http://www.nicenet.org/>

NSW HSC on-line home page at:
<http://www.hsc.csu.edu.au/>

Oz kidz internaut cyber centre at:
<http://www.ozkidz.gil.com.au/>

Schools' sharemarket game at:
<http://www.asx.com.au/E1000.htm>

Welcome to AskERIC at:
<http://eric.syr.edu/index.html> ■



Learning online with the Australian Broadcasting Corporation

*The education audience has always been a strong priority for the Australian Broadcasting Corporation, from the schools' radio singing programs of the forties and fifties through to today's **Behind the news** and educational television programming. In the 90s, the ABC also has a presence on the internet. Ian Vaile is the producer of Education Online, part of the ABC's Multimedia Unit.*

There is something very traditional about the Australian Broadcasting Corporation's move into online education via the World Wide Web. In a sense, *ABC online* is a continuation of the Corporation's educational mission, the medium might be new but the intention hasn't changed. Like the rest of the Corporation's output, *ABC online* is independent, commercial-free, unbiased and dedicated to providing a distinctively Australian voice.

Learn online

With over 38000 pages in the entire ABC Web site, finding the right ones for use in schools has been a challenge for teacher-librarians attempting to meet their users needs. Last year, the ABC established *Learn online* <<http://www.abc.net.au/learn>> to act as a central coordinating gateway for the ABC's educational material on the Internet.

Learn online is intended to make it easier for teachers, teacher-librarians, education administrators and students to find their way through the wealth of information. Online incarnations of popular educational TV programs are available, such as: *BTN (Behind the news)*; *Australians*, the five-minute documentary series; and *For the juniors*. There are also transcripts and details of other programs which can be readily used by educators.

The creation of an educational portfolio within *ABC online* has also been a catalyst for the generation of several Web-specific educational projects. For example, *Frontier education online* (indigenous issues), *ConCon* (the 1998 Constitutional Convention), *Oceans alive* (Biodiversity) and the forthcoming *Civics education gateway*. These projects aim to coordinate the ABC material available for a specific subject or issue, as well as generating original material available solely online.

Exploring a new medium

The challenge for the ABC has been to find the most appropriate ways to harness the new medium. The educational sector is one of the prime areas for multimedia and online development.

The most powerful aspect is the interactivity of the Web: the ability of users to actively become involved with the content in a manner impossible with TV or radio. For a broadcaster, that has profound implications, as the audience grows to demand much greater access to the programs, and to the people behind them. Another feature is global reach; our geographical audiences are no longer as well-defined.

The future?

As digital TV and audio gain acceptance, and as the online medium matures, the potential for the ABC to add value to its programs and projects is immense. There will be whole new patterns of TV and radio use emerging. Consider, for example, being able to view any program broadcast by the ABC whenever you want it, rather than being tied to schedules and tapes. All of the research and material created for TV or radio programs could be harnessed for the audience, rather than just the material that ends up in the finished program. Collaborative projects running between schools (all over the world, if desired) could call on parts of those programs at will. Guestbooks and mailing lists would enable students and educators to talk with other people using the same resources and to swap ideas.

It is an exciting time to be working in this medium, and an exciting time to be using it as well. We are at the beginning of a major transformation in the electronic media, a transformation which will change education and schooling as much as it changes broadcasting. The ABC intends to be a valued player in that future. ■

Management

The following two articles describe two very different resource centres for young people. In each situation, the library staff and the wider community have responded to the needs of a unique group of users...

Managing a specialist collection: Newtown High School of Performing Arts

Newtown High School of the Performing Arts (NHSPA) was formed, in part, by combining Newtown Boys High School with Petersham Girls High School in 1990. Students gain entry to the school by audition in dance, drama or music. There is a proportion of local area students. Teacher-librarian Andrew Barber serves on the coordinating committee of the Port Jackson District Teacher-Librarians Group. Andrew is also a long serving committee member of the ALIA School Libraries Section (NSW Group) and was its president during 1996.

Newtown High School of the Performing Arts (NHSPA) was initiated during the 1970s. The then State government continued its purchase of sites around the existing Newtown Boys High School and Newtown Public School, including the historic St Georges Hall building, a Newtown landmark which dates back to 1887.

The NHSPA library collection was initially formed from amalgamation and culling of the resources of two former secondary schools. All resources have been entered onto OASIS, including periodicals, equipment and computer software. Technically, a knowledge of performing arts is not essential to work here as a teacher-librarian. However, as with any specialised collection, an interest in the area of specialisation really helps, and working with the materials and teaching staff has certainly increased my knowledge of the disciplines.

How NHSPA's library is similar

This is the third school library in which I have worked. Most of the things we do here are much the same as in other schools. We run orientation programs and training in information skills. We use the *Periodicals* and *Acquisitions* modules of OASIS. Just as in other schools, the library staff have had to develop good relations with our suppliers.

Similarly, as in all schools, the library at NHSPA strives to support the curriculum that is taught in the school. We have all the regular English, Science, Human Society and Its Environment (HSIE) and other key learning area resources.

Each year, in conjunction with our school's Support Teacher Learning Difficulties and the HSIE and Science faculties, we run an information skills-rich unit with all the Year 7 classes. Some of the learning experiences we have trialed with them have now been rewritten for all years, and are applicable for use in all libraries. Our *Searching the Internet: a beginner's guide* is now used by students in all years and is appropriate for any Internet connected computers, not just those in the school.

How NHSPA's library is quite different

It is NHSPA's proximity to the Sydney city centre, and the students' ready access to other resources, that affects some of the decisions we make in the library. We are close to two major universities and a large TAFE institution. Sydney City Public Library is ten minutes away by train; the State Library of NSW is just two minutes further. Most of our students also commute to school by public transport and have ready, daily access to a huge range of public library material.

The staff deliberately widens the application of the school's educational programs to make them more universal. For example, our *Using a library catalogue: a beginner's guide* was made universal because Year 11 students had commented that they felt a little overwhelmed in the State Library.

The school's library collection has been developed to supplement the students' requirements with drama, music and dance materials. Drama and music are not necessarily difficult subjects to resource. Each has a fairly standard core collection, including reference material. Both subjects

**The ABC
established
Learn online
to act as
a central
coordinating
gateway.**

are taught widely in this state, so resources are quite easily obtained.

All the titles in the English HSC options are regularly ordered, but we also order all the titles in the drama options. An advantage of having good suppliers means that they track down the more obscure titles and lesser known publishers. For example, this year several new titles in the HSC drama courses did not have SCIS records and were not necessarily readily obtained.

The suppliers also recommend new resources, and one such supplier has been particularly helpful. When one of their customers, another school library, ordered a large collection of drama resources (on the recommendation of one of that school's staff who had returned from overseas), this supplier ordered in duplicate copies for us as a matter of routine. Similarly, other performing arts schools order the titles that we buy.

Dance is a more difficult subject to resource*. Dance periodicals do not seem to review many resources, and the titles that we do seek are often difficult to obtain and require ordering from overseas. However, our dance staff is very good at recommending titles.

Plays and screenplays

I did think of calling this section "Don't other schools buy screenplays?" The specialist nature of the school means that we tend to buy certain resources other schools do not. NHSPA buys a lot of play scripts, and most people would expect that of us. We also buy a lot of screenplays because our students read them.

*We would rather
resources 'died in action'
than remain in locked
cupboards.*

Because we use SCIS for cataloguing, we discovered that most screenplays do not have SCIS numbers. At first, we found this rather surprising. A very successful arrangement with the SCIS catalogues at Ryde was soon worked out whereby we send these "not matched" resources to be added to the SCIS database.

Donations of resources

Each school library I have been associated with has been offered donations. However, at NHSPA it is often quite extraordinary what people want to give us. The school actively seeks the donation of performing arts periodicals, especially if it is a large collection of back issues for a title.

We have received: entire sets of *Dance Australia*; long runs of *Theatre Australia* dating back to the very first issue; and whole collections of British ballet and theatre periodicals dating back to the mid 1950s. This material is impossible to acquire by other means. With the *Periodicals* module of *OASIS* all these items are easily catalogued, and can be located via *Enquiry*. And they are well used. The library's philosophy here is that we would rather resources 'died in action' than remain, sitting preciously, in locked cupboards.

People and organisations give us books. Thanks to one of our donors, the library has a whole shelf of Wagner criti-

* The Library and Information Literacy Unit is developing a bibliography of dance resources.

cism and opera biographies. A retired drama teacher presented us with her extensive collection of plays. Fort Street High School gave us an irreplaceable collection of dance books from the 1950s and 1960s. We never decline to accept donated resources because there are always some otherwise unobtainable treasures, for example: a long out-of-print book on Martha Graham; and a rare Eugene O'Neill play.

Theatre programs

Donors also keep offering us collections of professional theatre programs. As a collection, these items are an irreplaceable, historical resource about live theatre productions in this city and around the world. In many cases, especially recently, there has been a trend in theatre programs to feature critical analysis of works, including the directors' intentions.

The staff at the school feel that these resources provide an invaluable insight into works in performance. Theatre programs are catalogued using the same Dewey numbers as the play texts themselves. The library has a separate vertical file for programs and we have created a GMD called **Theatre Program** in *OASIS* so that they are immediately distinctive in *Enquiry*. As yet, we have not fully broached the subject of dance, music and opera programs.

The NHSPA archives

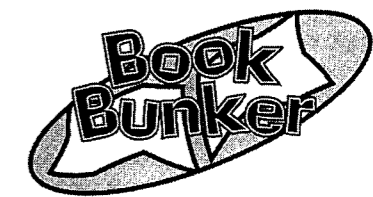
As in all schools, there is a certain obligation to keep archival records. When I came here there was an incredibly large backlog. While much of it belonged to the former schools, a lot of material has been generated over the years that the principal, quite rightly, wanted to preserve for posterity.

Most school concerts and performances have been videotaped. Most of these productions also have their own programs, posters and memorabilia. The school is fortunate to have had a couple of long term community volunteers, originally from the an organisation called Volunteering NSW, and it is they who have helped in the processing of these materials.

In 1997, one of our volunteers sat through three boxes of unsorted videotapes, found in storage in another area of the school, and matched them to the concert programs that she had sorted previously. Volunteer time has helped us with sorting and accessioning our collection of professional theatre programs. Our present volunteers are interested people working in an interesting school; neither of them has had any direct connection with the school as a family member or similar.

Services for a unique user group

Our students' proximity to the city centre and its resources has required that the school considers its users' needs and responds to them. This really affects some of the decisions we make. The coordination of ideas, skills, resources, and environment has led to the creation of an effective and appropriate library for the school's staff and students. ■



a library
with
a difference

Within The New Children's Hospital Westmead, an innovative library haven called Book Bunker has been created. This collection of current books, audio tapes and CD-ROMs for children is available to all young hospital patients and their care givers. Margo Pickworth, a relieving teacher-librarian at Penrith Public School, spent time at Book Bunker as part of her professional placement during Master of Education (Teacher Librarianship) post graduate studies.

Children in hospital often have their lives thrown into turmoil, separated from family and friends. Book Bunker enables them to continue with a normal part of living: to read and learn; enjoy a CD-ROM; listen to a story; or just meet and talk in an inviting place, away from the stresses of medial treatment.

Book Bunker has been made possible by the generosity of children's publisher Scholastic Australia and other sponsors, working through the Variety Club of Australia. The idea originated from a Scholastic staff member, also the father of a young heart patient, who realised the difficulties associated with providing enough books for children in the hospital setting. It has developed into much more than a collection of books.

State of the art information services

Since its planning stages, an emphasis has been on providing a state of the art library that responds to the needs of a unique clientele. Book Bunker offers sick children the very best that library and publishing industries have available.

The library automation software is *OASIS*, generously donated by the then-Technology Directorate of the NSW Department of School Education. Circulation procedures, although fully automated, have been designed to meet



Book Bunker: Interior designers turned an empty basement into a contemporary, dynamic library environment. Although there is an illusion of space, there are also cosy quiet nooks. The dimensions of wheelchairs and intravenous drips were important considerations for the designers to ensure equitable access for all. The centrepiece is the Mem Fox Storytelling Couch, named for the popular author of such memorable books as *Possum magic* and *Hattie and the fox*. Mem herself officially opened Book Bunker last August.

the special needs of a library working within a hospital environment. The *OASIS enquiry* facility is made available to the children via three workstations in the library itself. For bed bound children, a laptop on a mobile book trolley can be accessed. This is linked to the library via the hospital network.

There is also access to a large collection of CD-ROMs, stored on a fourteen CD-ROM stacker. These are networked to the workstations. Six listening posts, set into cosy furniture, allow young patients to listen to their favourite music and stories. Books in languages other than English, and large print books for sight-impaired children also make up the collection. Many major publishers donate current children's materials on a regular basis.

The library receives invaluable ongoing support from the Library and Information Literacy team of Curriculum Support Directorate. Cataloguing services are sponsored by the Curriculum Corporation. All resources are catalogued via *SCISWeb* and *SCISCD*.

A unique library

Book Bunker is staffed by dedicated teacher-librarians and clerical assistants, job sharing on a voluntary basis. They have been presented with many challenges in

adapting their professional skills and knowledge to this special environment. Vital, day to day message transmissions between librarians is through a daily communication book and regular meetings. The ongoing support of these volunteers ensures a very special library: the only one of its kind in Australia, and possibly the world.

A special 'issues' collection of resources is being established at Book Bunker, covering trauma and life-threatening conditions. This will be managed separately by a committee of medical and children's literature professionals, and used by staff for counselling and education.

Every day this unique library makes a difference for some special child and their family. A visit to Book Bunker can be a moving experience. If you wish to stop by and see it for yourself, please feel free to phone Book Bunker on (02) 9845 0808. ■

Would you like to become a volunteer helper at Book Bunker? Teacher-librarians or clerical assistants interested in contributing some time are most welcome. Please contact Debra Fowler, Public Relations Officer at The New Children's Hospital on (02) 9845 3584.

Managing change through training and development

Pennant Hills High School has a network of nearly 200 computers at various sites within the school's staffrooms, computer laboratories and the library. When the school's Training and Development Committee determined directions for its future planning, numerous opportunities were identified for the involvement of the school library in the professional development of teachers. Lorraine Bruce is a teacher-librarian at Pennant Hills High School and Cherrybrook Technology High School, Sydney.



Our teachers... recognise the library as a centre for training and development.

The dominant paradigm in information science at the present time is the user perspective (Dervin and Nilan, 1986). The dominant paradigm in education is student centred learning. Both focus on the learner or user at the centre of any planning. In this case, the learners were the teachers at Pennant Hills High School.

It is from this assumption that the school's current program of Training and Development emerged. Placing users, ie the teachers, at the centre of planning meant that the service that was to be developed would suit their needs.

Identifying needs

The first step was to identify the users' needs. Pennant Hills High School's extensive computer network, and the incorporation of information technology into all key learning areas, led to the Training and Development Committee identifying that there was a need for teachers to be able to use effectively the technology available to them.

Specific technology needs were identified from questions and interviews. These included:

- To identify which media types were appropriate for various information needs
- To use the Internet to locate relevant information
- To locate Internet addresses (URLs)
- To use Internet catalogues (search engines) effectively
- To use the various CD-ROM applications on the school's network, in particular newspaper and journal indexes and World Bank magazine
- To save information from CD-ROM and Internet sources, and re-use it in other applications, such as various word processing packages.

On site training and development

The committee realised that training individual teachers off site would not achieve the goal of empowering the majority of teachers to feel comfortable using the technology available within the school. An expensive outside program would have been out of context and not cost efficient. As the library was already established as the information centre in the school, it seemed logical to continue a program of professional development in partnership with the library. This need was also reflected in our 1998 *Library management plan*.

Budget and time considerations

Another early step was to determine a budget. Part of any technology plan should include not only hardware but financial resources for training users in the implementation of the technology. The Training and Development Committee targeted substantial funds in this area. It was decided to trial the program in a one day session to evaluate its worth, and then make further plans if necessary.

There was a need for teachers to be able to use effectively the technology available to them.

It was not the committee's original intention to hold these sessions in school time. However, from past experience, it was felt that training sessions after school were less likely to be as productive as sessions within the school day. Scheduling time during an otherwise regular day can have a number of benefits: the school is seen to be recognising the importance of a particular staff development activity; teachers released from their classes know that programmed lessons will be taught by competent casual teachers; and the training is both time and cost efficient.

The initial program

A half day program was developed, and this was to be repeated for a different group in the afternoon. Teachers were offered the chance to apply for the trial. This was filled immediately and a waiting list was started. Classroom teachers were to be released from their classes and five casual teachers were employed, allowing us to release six teachers and one ancillary per session. Other benefits of the small group sessions were that the teachers supported each others' learning, and individuals could be given maximum attention. This program cost the school approximately \$1000 for casual teachers but this

was minimal when compared to sending individuals off site to attend courses that may not be relevant for the technology available at Pennant Hills High School. The Principal and executive backed the decision of the committee and the trial began.

The outcome in terms of training and development was that, in one day, fourteen staff (seven in the morning and seven in the afternoon), could be trained to use the technology within the school. It was then possible to practise their new skills at any time during the school day, and there was support to answer their information needs. Learning was in context and relevant, as per the emphasis of the student centred paradigm.

Evaluation data was gathered and feedback to other staff members was positive. This was indicated by the influx of applications to the committee from other staff wishing to do the course. Another eight sessions (four days) followed and soon the whole staff was using the technology with confidence. Any follow up was informal and usually satisfied their needs.

Building on success

As the staff became more confident users of the technology, they also realised that they needed to fill gaps in their knowledge. They wanted to learn more. I, as teacher-librarian, was approached by the Training and Development Committee to develop a further program to be offered in Terms Three and Four.

The needs of this extension program were determined to be:

- Further tips and examples of advanced searches
- The use of *Power point*, for improved audiovisual presentations by staff
- The use of the data projector with the computers for classroom use.

This is likely to be run over five days using the same release program as originally described. The total cost for both sessions has been \$10000. However, 80 percent of staff at Pennant Hills High School can now state that they are confident users of the technology available at our school. They have overcome their reluctance to use the technology and they are now driving the agenda for more in school training and development programs.

Implications for the teacher-librarian

The outcomes of such a program identify the library as the crucial information and learning centre in a school. At Pennant Hills High School, this has been recognised for some time. Our teachers are increasing their usage of technology and they rely on the library as an important information source in the planning and writing of units. They recognise the library as a centre for training and development.

Teamwork is also central to the educational philosophy of Pennant Hills. Students and staff are working together to implement curriculum, using the most suitable informa-

tion sources, to satisfy the information need. It is vital that the teacher-librarian be a part of such team efforts.

If schools are to follow the current paradigm shift – putting users at the centre of the curriculum – then teachers need to feel confident to use their school's supporting technology. For some schools this may be a significant change. Teacher-librarians are well-placed to contribute their skills in leadership and information literacy, providing guidance in many areas of school life.

REFERENCES

- Bruce, L., 'Internet and curriculum: an integrated training and development programme for secondary teachers', *Scan* 16(1) 1997.
- Dervin, B. and Nilan, M., *Information needs and users: annual review of information science and technology*. Vol 21, 1986, pp 3-27.
- Information skills in the school*. NSW Department of Education. *Schools as learning communities: a discussion paper*. NSW Department of School Education, 1995. ■

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Videorecordings and SCIS

Anne Dowling is the Divisional Librarian for SCIS in New South Wales.

SCIS records for videorecordings follow the rules for cataloguing, set out in the *Anglo-American cataloguing rules* (1988 revision). The AACR lists the different locations from which the title of a videorecording can be taken and ranks the locations in order of preference. The order is:

- the item itself, ie the title from the title screen on the videorecording
- the container and its label
- accompanying material or other sources if the information is not available in either of the above places.

The SCIS cataloguers play all videos, and install all software, that we catalogue to locate the title on the item itself. This is the reason that we need the item itself to catalogue, rather than cataloguing from the container or accompanying material. If you are searching the WEB OPAC, the title on the videorecording is the first choice. Sometimes the titles from the other locations may be given an added entry, so they may appear on the WEB OPAC, but the title from the videorecording is still the first choice.

The ABC television programs *Many nations, one people* and *Pathways to Australian science* have both been supplied to us by the ABC. Records have been made for the whole of each series and each episode. For *Many nations, one people* the SCIS record for the whole series is 947354. It contains a contents note listing each episode. The first episode, *Family and kinship*, has a series entry of *Many nations, one people; episode 1*, and subject headings and a Dewey number for that episode.

The suffix, or book number, is made from the first three letters of the title of the episode. For that reason, the call number can be different for each episode of the videorecording, and different to the call number on the record for the whole series. The call number for the whole series of *Many nations, one people* is 305.89 MAN and for the episode *Language* it is 499 LAN.

Creating both a record for the series and records for each episode is one way of catering for the different ways teacher-librarians record and store these programs. The decision has been based on feedback from teacher-librarians, who agreed that one record for the series (with numerous subject headings and added title entries) is cumbersome. We would be interested to know if this decision is useful.

Contact the SCIS team at Ryde by fax at (02) 9886 7413. ■

RESEARCH
COLUMNS

4, 1998



Dr Ross J. Todd is Head of Department of Information Studies, University of Technology, Sydney.

It has been my privilege over the last three months to participate in three international activities that have spotlighted school libraries and teacher-librarians. The annual conference of the International Association for School Librarianship convened in Tel Aviv, Israel. A key feature for me was the International Research Forum, featuring research into many aspects of teacher-librarianship. In August, I attended the Information Seeking in Context conference held in Sheffield, UK. One of the key note addresses was presented by Professor Carol Kuhlthau, who directs the teacher-librarianship program at Rutgers University in New Jersey, USA. Many teacher-librarians in Australia would be familiar with her important research on the information search process. While the broad context of this conference focused on understanding how people seek and utilise information, a number of papers specifically focused on the information seeking behaviour, search strategies and cognitive processes of adolescents. The research abstract at the end of this column features one of the papers presented there. In September, as guest of the College of Library and Information Services at the University of Maryland in Washington DC, I participated in a visioning-for-the-future panel for education for teacher-librarianship.

Out of all of this, one thing is very clear to me. Teacher-librarians are part of a global network, and the exchange of ideas across this international arena is important for the vitality and longevity of the profession. Despite differences of cultures, ideologies, politics, educational systems and professional practices, there is a common commitment to: literacy; information literacy; the role of literature in learning and the social process; integrating information technology into learning; and issues surrounding the development of students as independent, lifelong learners. There is also a common quest to understand more of these issues from research agendas around the globe. Developments in information technology also mean that our students are global students, increasingly operating in classrooms that cut across cultural, linguistic and ideological boundaries. While we practice 'locally', our thinking arena must be 'global'. *Scan Research columns* is committed to bringing you both Australian and international research that continues to address these key aspects of our professional role.

Accordingly, in this issue, *Research columns* presents the work of Dr Carol Gordon, from Massachusetts USA, who is reporting on action research she undertook in Frankfurt, Germany. Readers of *Research*

columns have already met Dr Gordon. The abstract of her study "Is fish a vegetable?" appeared in *Scan* vol 16 no 3. Dr Gordon's specialities include teaching and assessment, library and information services, and teacher training. For twenty years, prior to founding Gordon Consulting, she held positions in public and private schools as a classroom teacher, teacher-librarian, coordinator of multicultural education, and director of information services. She has taught primary, middle and high school levels, as well as in adult education for high school completion, and as a visiting lecturer for undergraduate and graduate university courses. Her professional experience includes teaching and managing libraries in New York, Michigan and Massachusetts, and in Frankfurt, Germany. Dr Gordon holds a BA in literature, an MS in secondary education, an MLS in library science, and an Ed.D in curriculum and instruction. She is also a regular presenter at educational conferences and seminars, and has published several articles in the States and in international journals. In addition, she has consulted for several schools in Europe and Asia.

I recently met with Dr Gordon in her home at Centerville, Cape Cod. It was an engaging conversation. What emerged very clearly was that underpinning her role as a teacher-librarian meeting the daily challenges in the school, was the importance of working as a reflective practitioner, and engaging in careful analysis of learning needs to design and implement effective learning strategies. Her action research project focusing on students' and teachers' evaluation of an instructional process, as presented in this column, illustrates this important professional role. How the evaluation process was undertaken, the richness of the responses, and the responsive actions taken should provide teacher-librarians with many insights and strategies for working in their own schools.

STUDENTS AS
AUTHENTIC
RESEARCHERS:A NEW PRESCRIPTION FOR THE HIGH
SCHOOL RESEARCH ASSIGNMENT

Dr Carol A. Gordon

Introduction

What's wrong with the research assignment? The research assignment has become analogous to: "Take two aspirins and call me in the morning." It doesn't seem to do any harm and may even do some good. Educators adjust the dosage for older students: the length of the paper grows with the time allotted to the task, but the prescription is the same. It is universally accepted as a benign activity that allows teachers to attend to the 'real curriculum' while students get better at 'writing a research paper'. Teacher-librarians promote the assignment because they want students to get better at searching, retrieving and evaluating information. English teachers see it as an opportunity for sustained writing. Parents like it because it is good preparation for university. Everyone likes it because it gets students into the library and reading. So, what is wrong with research as it is traditionally taught in secondary schools? And what do students think?

The research assignment operates on the report level when student involvement is limited to information gathering, usually demonstrated by reading and taking notes. Reporting has masqueraded as researching for so long that the terms are used interchangeably. While 'doing a report' can be an appropriate fact finding exercise for short term assignments, it has been over-prescribed, eating up time for learning and practising the thinking skills required by authentic research. Students express dislike for research when, in fact, they dislike doing reports. A study of ninth graders revealed, "The student perception of doing research was writing a grammatically correct report that was well presented and provided other people's answers to someone else's question" (Gordon, 1996, p 32). Students expressed negative connotations for research: it was described as "one of the trials and tribulations of going to school". Research was seen as an addition to school work, and in competition with other assignments: "... we could actually be learning other things in math. We could be learning real things."

Bogus research assignments lead students to perceive library time as an extension of teacher and textbook dependent classroom paradigms. Implicit in the report assignment is an underestimation of what students can

do, sending a clear message to them that they are passive recipients. Influenced by authoritarian, top-down models of learning, students value what teachers say rather than what they discover for themselves. The reticence of teachers to take time for 'research' discredits library based research as a teaching strategy. Students accommodate teachers' low expectations with disappointing results. Even when there is no intent to copy 'word for word' many papers are the product of cutting and pasting information; they contain little creativity and virtually no discovery that has been tested, analysed and internalised by the learner. Easily subverted assignments, with requirements that can be bought for fifty dollars on the Internet, persist in an electronic age that offers an information and data rich environment.

Does 'doing research' have to be limited to highlighting photocopied text from books and magazine articles, and printing out from Internet sites or CD-ROMs? Can students successfully use primary research methods to collect their own data? What if research assignments distinguished between information and data, ie between other people's answers recorded in books and electronic sources, and evidence, or data, collected first hand by the student researcher? What if teachers became authentic researchers in order to evaluate such a unit and used their data to revise it?

What the literature tells us

The theoretical framework for this study is rooted in school library studies, information retrieval theory and educational research. In the model of the information search process, developed by Kuhlthau (1986), students moved from uncertainty to satisfaction or dissatisfaction with the way they have handled the search prior and subsequent to focus formulation. Both thoughts and feelings were considered as searchers advanced from seeking relevant information to seeking pertinent information. When applied to high school seniors, the stages indicated that information seeking was a complex learning process involving finding meaning (Kuhlthau, 1989). This constructivist approach is based in Kelly's (1963) theory of personal constructs. The function of a construct is to enable learners to anticipate events and predict outcomes, and behaviour is based on the predictions they make. When confronted by a vague new idea, either the system of constructs incorporates the idea or, if the idea cannot be assimilated, confusion results. Kelly speculated that the individual may choose to form a hypothesis which enables him/her to get on with the task or reject the hypothesis. Assessing the outcome of the undertaking and reconstructing are the final phases of the cycle of construction.

Models of information seeking evolved toward a problem-oriented school of thought that borrowed its approach from cognitive science. Belkin (1980) identi-

Table 1: The Research Plan

Research Questions	Data Collection Methods
How did students judge the unit? How would they change it?	Questionnaire administered by the teacher-librarian at the end of the unit. Observations of student behaviour, comments during unit.
How did teachers judge the unit? How would they change it?	Content analysis of students' papers: teachers graded for content/form and teacher-librarian graded appendices. Observations and questionnaire results were shared in a meeting attended by English teachers of Grade 10, teacher-librarian, and Principal.

fied an anomalous state of knowledge (ASK) in which there were gaps in the user's knowledge about the problem and what the user needs to know to solve the problem. The expression of an information need was a statement of what the user did not know (Belkin, Oddy, & Brooks, 1982). Belkin (1980) traced the user's movement from an anomalous state to one of specificity and described a scale of levels that represent the user's ability to articulate an information need.

Ausubel (1963) provided cognitive learning theory for the study. In order for meaningful learning to occur, new information must be linked to pre-existing knowledge. This led to the distinction between rote learning which is verbatim, involving externally dictated stimulus response associations and reception-discovery learning, which requires the association of new learning material with what the learner already knows (Ausubel, Novak & Hanesian, 1978).

Testing a new prescription: students as authentic researchers

The setting for the study was Frankfurt International School in Germany, an independent school serving employees of multinational corporations and government agencies as well as German families. The school has an enrolment of over 1600 students on three campuses. The high school, located on the largest of these, enrolls over 400 students from more than 50 countries in the world. Most students in Years 11 and 12 complete the International Baccalaureate, and this requires an Extended Essay of 4000 words. Teachers wanted to target analytical methods to improve exam scores and Extended Essays, and identified working with students in Grade 10 as the starting point for this preparation.

The context of the research project was a research unit designed by the teacher-librarian in collaboration with Grade 10 English teachers. The unit focused on developing students as authentic researchers, competent in: defining researchable questions; collecting and analysing

primary data; and drawing conclusions. As part of this process, students participated in an advisory class once every six school days and the teacher-librarian taught a series of nine pivotal lessons focusing on the authentic research process. These included: question formulation; hypothesis generation; methods of collecting data, both qualitative and quantitative; data analysis; use of evidence; and making conclusions. As part of the learning process, students were required to submit two proposals outlining their study. They visited the library eight times to gather information. English teachers provided class time for the writing process, providing research guidance, including peer editing of rough drafts.

Teachers, as action researchers seeking to evaluate the learning process of students, applied similar questions to design their study. The questions they formulated were: 1. What are the major questions of our investigation? 2. How can we refine the questions to collect data? 3. How can we collect data for each question? 4. How can we collaborate to analyse the data? 5. What conclusions will inform revision of the unit? Against this backdrop, the action research focused on two questions: Was the Grade 10 authentic research project successful? How could we do it better? These questions were refined and data collection methods were developed as shown in Table 1.

Findings

How did students and teachers judge the unit? What changes would they make? After the final drafts were submitted, 65 students completed an eighteen item questionnaire. Items 1-12 used a Likert Rating Scale of 1-5, with 1 indicating strong disagreement and 5 indicating strong agreement. Items 13-18 required extended written answers.

Table 2 summarises the data. The first five columns display student responses. A 1-5 Likert Scale is problematic because the 3 rating is difficult to interpret, so the number of responses for each item for ratings of 1, 2, 4, and 5 were added to determine N, or the number in the

sample. Scores for ratings of 1 and 2 were added to determine the number of respondents who disagreed; scores for ratings of 4 and 5 were added to determine the number of responses which agreed. The percentage of those who disagreed and those who agreed was calculated and reported in the last two columns. These calculations help to identify trends in the data and are used in the analysis that follows. Data from items 13-18, which elicited written comments from respondents, along with data collected during the meeting with teachers, are used to triangulate the data in order to provide additional evidence for conclusions drawn, and/or to provide explanations for these conclusions.

Timelines, which students were required to generate, were considered reasonable by 63% of respondents: the project began in February and ended in April. Advisory class was scheduled once a cycle with two holidays weeks intervening. When asked what they would change to improve the project, 25% of respondents suggested more time. This indicates many students did not have the same perception of instructional time as teachers, who thought too much class time was used and that the project needed to be shortened and intensified. With the elimination of the advisory sessions next year, all lessons will take place in English classes. Teachers were concerned about what would be eliminated from the English curriculum to make time for the research assignment. Data about timelines was expanded by the questions, "Do you think it was worth the class time allotted?"

Why?" While 92% of respondents said the project was worth the class time, two thirds of that group stated that allotting class time gave them the time to ask questions and get help. A typical comment was, "We got guidance during the lessons which was very valuable". This was substantiated by the frequently written response, "I could get help when I needed it". Teachers, however, did not agree that class time was as well used for writing as it could have been. They concluded that class time for writing must be focused, with a product expected at the end of each period.

Data for items 2 and 3 of Table 2 indicate that students' perceptions of the clarity of instructions and availability of library resources were positive. Many student comments alluded to how precise and formal was the assignment. While students were positive about available resources, they did not respond as positively to feeling prepared for information searching, as shown in item 9 of Table 2. Many students had never used the Internet and required help after school. It was apparent during an inspection of bibliography charts midway through the unit that most students did not take full advantage of library resources and had to be directed to specific sources of information. Bibliographies in the research papers also indicated this. In the meeting, teachers discussed this issue and it was noted that teachers and their students need to become more familiar with databases available in the library through focused lessons and briefings. Data on grading (item 4) seems overwhelmingly

Table 2: Summary of Data

Questionnaire Items	1	2	3	4	5	NR*	% Disagree	% Agree
1. Timelines	4	11	24	21	4	1	37	63
2. Instructions	2	9	17	25	12	0	23	77
3. Library resources	5	7	17	25	11	0	25	75
4. Grading system	1	2	23	25	2	12	10	90
5. Bibliography charts	4	8	11	21	21	0	22	78
6. Keywords	9	10	23	15	6	2	48	52
7. Proposals	5	7	23	21	9	0	29	71
8. Research question	3	1	11	20	20	0	7	93
9. Information	2	17	12	29	4	1	37	63
10. Help	2	2	17	23	21	0	8	92
11. Data collection	3	10	27	21	4	0	34	66
12. Analysis	3	12	20	28	2	0	33	67

1 = Disagree — 5 = Agree

N = 65 for ratings 1-5

N varies for each item in calculating percentage for disagree/agree since responses for ratings 1 and 2 and responses for 4 and 5 comprise N.

*NR = No response

positive. However, it was agreed that the rubric, or assessment criteria, should be reviewed more thoroughly with students at the beginning of the unit.

Students were asked to respond to statements about support materials. While 52% of respondents agreed that keywords (item 6) were helpful, teachers thought vocabulary and concepts are prerequisites to writing commentary and that keywords need more emphasis. Item 5 reports a positive reaction to bibliography charts (item 7): 78% agreed or strongly agreed that they were useful. All completed papers included bibliographies.

Only 71% thought writing the proposals was helpful (item 7) while 93% agreed that formulating a research question was helpful (item 8). One student wrote, "Personally I would have wanted to read a lot more than what I did before I thought of a research question. It would have been a lot easier than changing it five times". This revealing comment illustrates the purpose of the proposals and that the respondent learned, albeit the hard way, that research is recursive. Teachers agreed that time spent on background reading was critical in helping students to focus and that some students realised too late into the unit that they should have read more.

Data collection and analysis (items 11 and 12) were not rated as favourably as formulating a research question, with about two thirds of students rating these methods as helpful. Teachers noted that this was the most difficult aspect of the assignment for students. A common problem was the incorporation of uncited material that was not directly linked to the research question or to a method of analysis. Teachers agreed to address this concern next year.

Content analysis of the written responses in the questionnaire identified important issues. A word analysis of responses to the question, "How was this research assignment different from what you have done in the past?" revealed that the following words were used most often: "longer"; "more depth"; "more detailed"; "more demanding". Although comments mentioned precise instructions, format and regulation, students revealed that they felt more independent. "In the past I was given full instructions on the essay. Now I had to do it by myself." When asked what the best aspect of the project was, one student wrote, "That we stood on our own two feet!" Comments also reflected an appreciation of the distinction between reporting and research: "I never did proper research before"; "It was the first real serious research I have done"; and "It was much longer and more difficult than previous papers. It was also much more interesting and more fun as well".

An important indicator of success is student recognition of the distinction between reporting and researching, and their references to "serious research" in the questionnaire. The written comments were overwhelmingly positive: "As a whole, this was a good experience in learning

how to do a research project and essay"; "I thought it was a worthy experience"; and "I enjoyed the research very much".

The principal and teacher-librarian noted that parent feedback was positive; they expressed appreciation for the quality of the assignment and thought the project developed skills students would need in International Baccalaureate studies.

Guidelines mentioned in 39% of the responses included advisory classes and the "paperwork" that was required in the papers' appendices. Four respondents wrote that the journals were "unnecessary". There were indications in students' comments, however, that organisation and time management were the most important factors in feeling better prepared for the Extended Essay. This suggests the emphasis on process and support materials were helpful. Furthermore, responses to the questionnaire items related to support materials (keywords, bibliography charts, proposals and research questions) did not indicate a negative trend (see Table 2). Many comments referred to the various forms or papers that were used in the unit to structure the process for students, followed by comments about fear of losing them and the time it took to assemble them in the appendix of the paper. Adverse student input about the support materials probably arose from logistics rather than the content of the materials. Ten students were not able to attend advisory sessions because of schedule conflicts. One of them commented, "People not taking Advisory ended up in the dust of the mob".

Teachers decided the following changes would be their priorities for next year:

1. Identify project as a Grade 10 assignment rather than practice for the Extended Essay.
2. Provide focused class time for writing.
3. Re-word assessment descriptors.
4. Make time for the Grade 10 research paper in the English curriculum.
5. Revise section on citation in the style sheet provided to students
6. Consolidate support materials into a booklet to be distributed to:
 - a. students to eliminate individual handouts and simplify organisation tasks;
 - b. faculty who are teaching or advising student essays.
7. Provide time for student practice with peer editing prior to the project.
8. Offer teachers briefing sessions, inservices, ongoing training or more support for library resources and access, and research techniques for qualitative studies.

Implications for teacher-librarians

The underlying purpose of this study was to collect data that contributed to the reflective practice of classroom teachers and teacher-librarians who design and implement research assignments. It illustrates that not only is such investigation necessary to challenge a range of assumptions teachers and students make about research assignments, but it also shows that such action research investigations are easy to do.

Based on the overwhelmingly positive reactions of students, it is strongly indicated that a new dimension to the research assignment that challenges students to become authentic researchers is desirable. The researcher concludes that the consensus of students and teachers was that the assignment was a good preparation for the Extended Essay. Students' responses showed a positive trend in attitudes toward the support materials and recommendations for changes generally involved refinement of the project rather than revision. Structure for student efforts provided by support materials, help when they need it, and sufficient time to do the work emerge as primary student concerns. Complicating the issue of time is the differences in perceptions between students and teachers.

Another important implication for practitioners is the training that is essential, not only in existing library resources, but in the use of qualitative research methods. Such training offers the obvious reward of equipping educators with the tools and expertise they need to help students, but also equips them for their own action research that will inform their practice as they model the research process for students. This collaboration of students-as-researchers and teachers-as-researchers is a powerful paradigm for raising instructional quality to a new level of sophistication.

BIBLIOGRAPHY

- Ausubel, D. P., *The psychology of meaningful verbal learning*. New York: Grune and Stratton, 1963.
- Ausubel, D. P., Novak, J. D., & Hanesian, H., *Educational psychology: a cognitive view* (2nd ed.). New York: Holt, Rhinehart & Winston, 1978.
- Belkin, N. J., 'Anomalous state of knowledge as a basis for information retrieval.' *The Canadian Journal of Information Science*, 5, 1980, pp 133-143.
- Belkin, N. J., Oddy, R. N., & Brooks, H. M., 'ASK for information retrieval.' *The Journal of Documentation*, 38, 1982, pp 61-71.
- Gordon, C., 'Is fish a vegetable?: a qualitative study of a ninth grade research project.' *School Library Media Quarterly*, 25(1), 1996, pp 27-33.
- Kelly, G. A., *A theory of personality: the psychology of personal constructs*. New York: Norton, 1963.

Kuhlthau, C. C., 'Information search process: a summary of research and implications for school library media programs.' *School Library Media Quarterly*, 18(1), 1989, pp 19-25.

Abstract

LIMBERG, Louise. 'Three conceptions of information seeking and use.' Paper presented at the *Information Seeking in Context 1998 Conference, Sheffield, England, 13-15th August, 1998.* (Manuscript available from Ross Todd.)

This is an insightful paper that presents and discusses some major findings investigating the interaction between school students' information seeking and learning outcomes. The research was based on a sample of 25 senior high school students (aged 18-19 years) in a school in Sweden undertaking an independent research assignment. It used a phenomenographic approach, a research methodology that seeks to unpack the differences in people's understanding of, and thinking about, phenomena and processes, and how these might change over a period of time. Interviews and structured observations were used to collect the data.

The findings identified three distinct conceptions amongst the students of what information seeking was all about, and each of these conceptions had impact on: the search process; selection/rejection of information; extent of use of information sources; and the nature and quality of the product. The three conceptions were: fact finding to find the 'right' answer to the question; balancing information in order to choose right (when enough information was found on particular viewpoint as opposed to another, then the viewpoint with the most information was accepted as the personal standpoint); and information seeking, which was seen to be about scrutinising and analysing information to develop an understanding of a topic.

These findings raise important implications for classroom teachers and teacher-librarians. Understanding the mental models that students have of research is critical if students are to be guided through the research process and become independent and constructive researchers. Equally important is the careful tracking of students in the search process and intervening to ensure appropriate learning outcomes. ■

HAYES, Sarah

Sound city: a guided tour for beginner readers.

Walker, 1998
ISBN 0744532973

[428]

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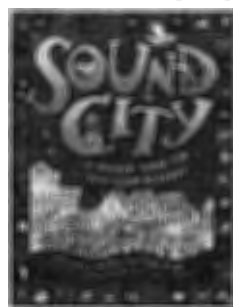
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Wayland, 1997

Attractively presented, with colourful child centred photographs and clear diagrams and line drawings, each volume in this series guides the student reader through a series of enjoyable and exciting experiments and activities exploring significant physical and natural phenomena. The text is lively and instructive, with information clearly separated from instructions for experiments.

Answers, to questions posed throughout the text, are provided at the end. An informative glossary, a simple index, and a reference list which features CD-ROMS, are also included. Although of UK origin, the series could be useful for Australian students, particularly in a study of procedural and explanatory text types. L. Ward



USER LEVEL: Stage 3

KLA: Science

SYLLABUS: Science & Technology K-6

AVAIL: \$29.95 each

Titles in this series are:

Electricity SCIS 938075

Light SCIS 938071

Magnetism SCIS 938066

Rocks and soils SCIS 938445

Sound SCIS 938076

Weather SCIS 938354

Chemistry laboratory manual for senior secondary school.

Longman, 1998

ISBN 0733901662

[540.78]

Although produced by the Science Teachers Association of Western Australia, this clearly set out textbook contains many of the mandatory practical experiences incorporated in the current NSW chemistry syllabus. The experiments are not presented in a fixed teaching order, and may be selected to fit in with any teaching program. Features of the manual are: the introductory skills section demonstrating various laboratory techniques; clear scientific diagrams; and suggestions for incorporation of technology into the school laboratory. There is a strong focus on laboratory safety. The inclusion of the development of skills in planning, conducting investigations, processing data, and evaluating, makes this an extremely useful resource. N. Johnston

USER LEVEL: Stage 6 Professional

KLA: Science

SYLLABUS: 2U Chemistry

AVAIL: Paper \$18.95

SCIS 923981

FOWKE, Bob

What they don't tell you about planet earth.

Hodder Children's, 1998

ISBN 0340713291

[550]

Unusual facts and theories about the history and structure of the earth are presented here in an informal, conversational style. Numerous cartoon style line drawings illustrate and highlight key points in the text while adding to the humorous presentation. An imaginary geologist, Glacier Flint, presents summaries of chapters which cover many topics in geology and physical geography. The presentation of information in small sections makes the book suitable for browsing, and young readers attracted by its informal approach and humorous manner may acquire information in a painless and enjoyable way. J. Anderson

USER LEVEL: Stage 3 Stage 4

KLA: ST

SYLLABUS: Science & Technology K-6

AVAIL: Paper \$10.95

SCIS 937984

Oceans. [kit]

Two-Can Publishing, 1997 (Interfact)

ISBN 1854344889

[551.46]

One of the titles promoted as 'the book and disk that work together', this kit consists of a 48 page spiral bound book and a CD-ROM, attached to the cover in a hard plastic pouch. An overview of the disk's seven segments, and instructions for its use, are included in the book. The predominantly factual book features high standards of presentation: colourful illustrations; table of contents; index; glossary; and a quiz page. This is not always matched by the CD-ROM, which has limited animation, often confusing

navigation and some poor quality sound effects. **Shark attack**, a quiz segment, has incorrect spelling in an answer. **Something fishy**, involving the labelling of a diagram, is frustrating because information explaining the terms cannot be accessed until all labels are correctly positioned. However, **Creature feature** is excellent, wherein picture choices to answer questions are given immediate feedback and terminology is explained. L. Sepetauc

Minimum requirements

Macintosh: 68020; System 7.0; 4MB RAM

Windows 95/Windows 3.1: 386; 4MB RAM

USER LEVEL: Stage 2 Stage 3

KLA: ST; HSIE

SYLLABUS: HSIE K-6; Science & Technology K-6

AVAIL: \$19.95 The Learning Journey SCIS 920804

HOOPER, Meredith

The drop in my drink: the story of water on our planet.

Frances Lincoln, 1999

ISBN 0711211825

[553.7]

How is it that a single drop of water can have been part of the water cycle on the planet for a long time, and undergone changes in state and location? Using clear yet almost lyrical text and luminous colour illustrations by Chris Coady, this resource describes the cyclic journey of water. Enthusiasm for the subject is conveyed most effectively. The text is lengthy, yet well framed by the vivid illustrations. The concluding pages provide an illustration of the water cycle which encapsulates the preceding text. Picture book format is well used to communicate a sense of wonder about water, and lead the reader to a strong environmental message on water conservation. J. Buckley

USER LEVEL: Stage 2 Stage 3

KLA: HSIE; ST

SYLLABUS: HSIE K-6; Science & Technology K-6

AVAIL: Paper \$16.95 Peribo

SCIS 949357

HEFFERNAN, D. A.

The Australian biology dictionary.

Addison Wesley Longman, 1997

ISBN 058280936

[574.03]

Primarily written for Stage 6 students studying biology, and with more than four thousand entries, this is a great first comprehensive Australian dictionary of biology, using an Australian perspective with Australian examples. Clear and accessible language and up-to-date entries reflect recent changes in biology. Included are the latest advances in genetics, immunology and biotechnology, and medical terms of particular interest to students. Words from other scientific disciplines are also included where they are important to the understanding of biology. Many entries are supported by clear and well presented diagrams. This resource is an essential requirement in the biology classroom and the school library. J. A. Robinson

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional

KLA: Science

SYLLABUS: Science 7-10; 2U Biology; 2U General Science; 2U Science for Life

AVAIL: Paper \$19.95

EVAL: Highly recommended

SCIS 911964

Exploring land habitats. [computer software]

Wayland Multimedia, 1997

ISBN 0750295023

[574.5]

Clicking on the main menu of this CD-ROM allows students to explore and interact with the landscape, climate,

ecosystems, animals and people from a variety of habitats worldwide, including Australia. The habitats are centred on: forests; grasslands; mountains; rivers and lakes; deserts; and cities. The program highlights the interdependence that animals and people have with their various habitats. Concise definitions and text are used, but may be insufficient for some users. Other features include: simple activities; videos; maps; a glossary and index; and built-in links to Web sites, which require exploration to verify curriculum relevance. Navigation is good, with icons at the bottom of each page, although searching is done by scrolling through the index. This resource is useful for an introduction to the topic, however students would need to consult other resources to gather indepth information. N. Paull

Minimum requirements

Macintosh: LC 475; System 7; 8MB RAM; double speed CD-ROM drive

Windows 3.1/95: 486DX; 8MB RAM; double speed CD-ROM drive; 256 colours

USER LEVEL: Stage 2 Stage 3 Stage 4

KLA: HSIE

SYLLABUS: Geography 7-10; HSIE K-6

AVAIL: \$89.95 each VEA

SCIS 921929

Also available in this series:

Exploring water habitats

SCIS 921927

ROC, Margaret & HAWKE, Kath

Australian habitats. [series]

Macmillan Education Australia, 1998

Concisely written text balanced with maps, clearly labelled photographs and illustrations, **Did You Know?** boxes and flow charts are features of this series. Topics are introduced on a worldwide basis, then each specific ecosystem is examined, followed by treatment of Australian areas. Traditional Aboriginal lands, the exploration and impact of Europeans and Australia's National Parks and World Heritage Areas are well covered. The series provides a set of excellent resources for the upper primary classroom for whole class shared reading sessions and small group work. The well mixed presentation of information ensures that the needs of all students, from the efficient to the less able reader, are met. K. Chauncy

USER LEVEL: Stage 3 Stage 4

KLA: English; HSIE; ST

SYLLABUS: English K-6; HSIE K-6; Science & Technology K-6

AVAIL: \$19.95 each

EVAL: Highly recommended

Titles in this series are:

Coastal regions SCIS 929670

Deserts SCIS 929667

Grasslands SCIS 929662

Rainforests SCIS 929657

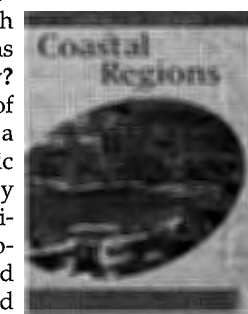
Temperate forests SCIS 929664

Wetlands SCIS 929666

Australian guide to... [series]

Gould League of Victoria, 1998

Visually appealing and packed with information relevant to Australia, this series provides students with resources to help them discover the natural world around them. Students researching the seashore or pond life will value the colour-



ful photographs, diagrams and written information on exploring specific habitats, contained in short, easily read, jargon free paragraphs. Useful information about specific animals is provided. Details are provided on: what is needed to search the identified area; what is likely to be found; and what dangers are likely to be met. An excellent resource for students, these books could also prove invaluable to teachers planning excursions. S. Blackwell.

USER LEVEL: Stage 1 Stage 2 Stage 3

AVAIL: \$12.95 each

KLA: HSIE; ST

SYLLABUS: HSIE K-6; Science & Technology K-6

EVAL: Highly recommended

Titles in the series are:

Australian guide to pondlife SCIS 931811

Australian guide to seashores SCIS 931808

Plant analysis: an interpretation manual.

/edited by D.J. Reuter & J.B. Robinson. 2nd ed.

CSIRO Australia, 1997

ISBN 0643059385 [580]

For students studying senior agriculture, this comprehensive book, is an invaluable resource, as it covers many aspects of plant production including: plant analysis; nutrient deficiency and toxicity; and guidelines for collecting, handling, and analysing plant material. Of particular interest are the later chapters which specify guidelines for diagnosing nutrient deficiencies in agronomic crops, pastures, vegetable crops, ornamentals, fruits and forestry. Much of the layout is in the form of tables. The language used would be a little difficult in some places for students to understand but it is well referenced and the tabular information is well supported. K. Heap

USER LEVEL: Stage 6 Professional

KLA: TAS

SYLLABUS: 2U/3U Agriculture

AVAIL: \$89.95 SCIS 924866

ROYSTON, Angela

Life cycle of a... [series]

Heinemann Library, 1998

Young readers of this visually appealing series are introduced to life cycles in the plant and animal world. Each book begins with the classification of the nominated plant or animal. It then progresses through the stages of its growth, supported by excellent illustrations and large, well spaced text, enabling independent student use. Useful features include alternating yellow and white pages and a continuous frieze, showing stages of the life cycle, running across the bottom of each double page opening, reinforcing the aim of the series. The life cycle is also depicted in a series of photographs at the end. A useful fact file and glossary are included. J. Quirk



USER LEVEL: Stage 1 Stage 2

KLA: HSIE; ST

SYLLABUS: HSIE K-6; Science & Technology K-6

AVAIL: \$22.95 each

EVAL: Highly recommended

Titles in this series are:

Broad bean SCIS 933605

Frog SCIS 933603

Guinea pig SCIS 933600

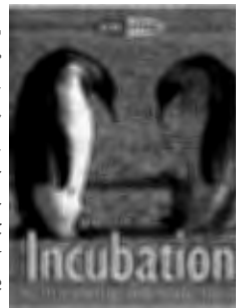
Kangaroo SCIS 933604

WOOLLEY, Marilyn & PIGDON, Keith

Animal patterns. [series]

Macmillan, 1998

The six books in this series aim to show the links between behaviour and characteristics of various animals, and the strategies that different species use for survival. This aim is achieved through the use of excellent coloured photographs, tables, diagrams, and illustrations. The print is large and the text written in lay terms accessible to children who are beginning to locate information independently. The series focuses chiefly on native Australian animals, drawing comparisons with non native animals where necessary. Facts on every page are intended to stimulate student curiosity, and to encourage them to investigate further. S. Rasiaiah



USER LEVEL: Stage 2 Stage 3

KLA: ST

SYLLABUS: Science & Technology K-6

AVAIL: \$19.95 each

EVAL: Highly recommended

Titles in this series are:

Food SCIS 929152

Homes SCIS 929679

Incubation SCIS 929155

Lifetimes SCIS 929676

Movement SCIS 929157

Survival SCIS 929681

KEYT, Terry

Dangerous Australian... [series]

Macmillan, 1998

The dangerous aspects of Australian flora and fauna are explored in this series. Each title follows a similar format with a general introduction to the topic, followed by more detailed information. Pages are clearly laid out and the text is easy to read, with useful features for students beginning to read independently for information. Illustrations include coloured photographs, diagrams and maps indicating the region of Australia where each particular dangerous plant or animal occurs. A section on first aid provides basic advice including information needed when calling emergency services. Key terms are bolded in the text, and included in a glossary. S. Blackwell



USER LEVEL: Stage 2 Stage 3 Stage 4

KLA: HSIE; ST

SYLLABUS: HSIE K-6; Science & Technology K-6;

Science 7-10

AVAIL: \$19.95 each

Titles in the series are:

Dangerous Australian crocodiles SCIS 929711

Dangerous Australian insects SCIS 929713

Dangerous Australian marine animals SCIS 929712

Dangerous Australian plants SCIS 929708

Dangerous Australian snakes SCIS 929710

Dangerous Australian spiders SCIS 929716

Insects: little creatures in a big world. [computer software]

CSIRO Australia, 1997

ISBN 0643060456 [595.7]

A CD-ROM resource for students or teachers researching insects, this provides information on over 600 types of insects, sorted by groups. Quizzes, insect sounds, tips on collecting insects, and information on the heroes and villains of the insect world are easily accessed. From the *Insect hut* the user can zoom in on a country to discover insects particular to that country. One drawback is the overly Australian voice used when representing Australia. Students will have little difficulty navigating through the levels from an icon bar at the bottom of the screen. Photographs as well as diagrams provide interest. S. Blackwell

Minimum requirements

Macintosh: 68040; System 7.1; 4MB RAM

Windows 3.1/95 or NT: 486; 8MB RAM

USER LEVEL: Stage 2 Stage 3 Stage 4

KLA: HSIE; ST, Science

SYLLABUS: HSIE K-6; Science & Technology K-6;

Science 7-10

AVAIL: \$69.95 CSIRO SCIS 911039

KAKU, Michio

Visions: how science will revolutionize the twenty first century.

Oxford University Press, 1998

ISBN 0198500866 [601]

By following a spellbinding narrative of the most significant and far reaching scientific revolutions in the separate, but interlinked, fields of computing and artificial intelligence, biogenetics and quantum physics, the reader of this work is guided through the author's compelling vision of the science of the next century. Such visions of the future are based on the author's well researched documentation of the pioneering efforts by theoreticians, and current groundbreaking research. The premise is that, using today's knowledge, we can confidently predict the direction of science through the next century. The author's lucid style makes the account easily readable. J. A. Robinson

USER LEVEL: Stage 5 Stage 6 Professional

KLA: Science; TAS

SYLLABUS: 2U Applied Studies; 2U Computing

Studies; Science 7-10; 2U Biology;

2U Chemistry; 2U General Science;

2U Physics; 2U Science for Life;

3U/4U Science

AVAIL: \$59.95

EVAL: Highly recommended SCIS 938243

BIRO, George

What killed Jane Austen? and other medical mysteries, marvels and mayhem.

HarperCollins, 1998

ISBN 0732259584 [610.9]

The intriguing demise of Jane Austen is just one of the memorable stories featured in this collection of bizarre, whimsical and ghoulish essays. Off-beat, quirky clinical facts are presented in an interesting and informative manner. The focus is on royalty, quacks, warfare, eccentrics and pioneers, with some astonishing tales of discoveries, disasters, diseases, addictions and obsessions. The essays, which are a compilation of sections written for medical newspapers and broadcasts for ABC radio, provide a useful resource for the

study of health, disease, forensic science, or historical figures. J. A. Robinson

USER LEVEL: Stage 4 Stage 5 Stage 6

KLA: HSIE; PDHPE; Science; ST

SYLLABUS: History 7-10; 2U Modern History; PDHPE 7-10; Science 7-10; 2U Biology; 2U General Science; 2U Science for Life

AVAIL: Paper \$16.95

EVAL: Highly recommended SCIS 931303

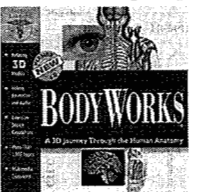
BodyWorks 6.0: a 3D journey through the human anatomy. [computer software]

TLC Properties, 1997

ISBN none

[611]

Over 80 high resolution three dimensional models of body parts are the main feature of this CD-ROM. They may be rotated, with various sections highlighted and named. Other valuable aspects include: videos of the major systems; video lectures; printed and verbal information; a hypertext glossary; and multiple choice quizzes. It is easy to move around the program. A toolbar at the top of the screen gives access to body parts and systems, and health issues. There is an index and a facility for word and phrase searches (with a phonetic option available). Topics can be investigated via broad to specific information. The screen layout may be rearranged and saved. It is possible to print text and graphics and use bookmarks. Human reproduction topics can be censored during installation. Internet links provide current medical information and an extensive list of associated sites, although exploration time is required to verify curriculum relevance. There is some use of imperial measurements in this program. S. Leslie



Minimum requirements

Windows 3.1/95: 486DX; 8MB RAM; 12MB disk space; 256 colours

USER LEVEL: Stage 3 Stage 4

KLA: HSIE; Science; ST

SYLLABUS: HSIE K-6; Science K-6; Science 7-10

AVAIL: \$69.95 Roadshow SCIS 934478

ARNOLD, Nick

Disgusting digestion.

Scholastic Children's, 1998 (Horrible science)

ISBN 0590198092 [612.3]

Promoted as "science with the squishy bits left in", this delightful book is bursting with a wealth of horrible information about the functioning of the human body. This easily readable and enjoyable book employs fantastic fact files, curious quizzes, teacher tests and crazy cartoons to impart information about urine, nausea, and bodily gases. This is a great resource for browsing and research projects, or for teachers to use to enthuse students who are attracted to this aspect of human biology and bodily functions. J. A. Robinson

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional

KLA: Science

SYLLABUS: Science 7-10; 2U Biology; 2U General

Science; 2U Science for Life

AVAIL: Paper \$9.95

EVAL: Highly recommended SCIS 940492

POWELL, Jillian

Health matters. [series]

Wayland, 1997

The aim of this series is to give students clear, factual information about a variety of health issues. Each book explores

its topic in an interesting way, with small amounts of text supplemented by colour photographs, simple diagrams and magnified images. Motivating questions, such as why socks are sometimes smelly, and which fast foods are the healthiest to eat, would ensure an attentive audience amongst primary students. Information boxes highlight rules and facts, and suggested learning activities are scattered throughout. Each book has a glossary of easy to understand definitions, further reading and an index. This series, undoubtedly, would be an oft used resource.



USER LEVEL: Stage 1 Stage 2 Stage 3

KLA: PDHPE
SYLLABUS: PDHPE K-6
AVAIL: \$26.95 each

Titles in this series are:

Exercise and your health SCIS 917715
Food and your health SCIS 914797
Hygiene and your health SCIS 914800

HOLLINS, Martin

Materials.

BBC Educational, 1994 (BBC fact finders)
ISBN 0563396555 [620.1]

Designed to introduce children to the world of materials, this is a useful science resource. Each natural or manufactured material is identified in clear headings at the beginning of each double page of information. Photographs and illustrations accompany each description. The origins, properties and uses of materials, such as clay, cement, ceramics, glass, natural fibres, wood, paper, metals, fossil fuels, oil, rubber, plastics and fabrics, are included. Little mention is made of environmental issues, except in one section on the recycling of waste paper. This book is a concise summary, useful for research and the introduction of this particular topic. B. Roberts

USER LEVEL: Stage 1 Stage 2 Stage 3

KLA: ST
SYLLABUS: Science & Technology K-6
AVAIL: \$10.00
EVAL: Highly recommended SCIS 927785

Materials. [videorecording]

BBC Education 1997 (Primary science plus) (76 min.)
ISBN none [620.1]

Accompanied by teacher's notes with curriculum links and student activities, this set of two excellent videos features an investigative approach, interwoven with a simple storyline. Many aspects and uses of materials are explored. Two likeable characters, Sarah and the alien XP, host the four episodes (two per tape), looking at natural and manufactured materials, such as gold, clay, wool and synthetics, in *Types of materials*. In volume 2, *Changes in materials*, emphasis is placed on the effects of heating and cooling, and changes that are reversible and not reversible. Practical experiments and visits to factories and laboratories are included. B. Roberts

USER LEVEL: Stage 1 Stage 2 Stage 3

KLA: ST
SYLLABUS: Science & Technology K-6
AVAIL: \$138.00 (free 48p. book accompanies set of two only) or \$69.00 each

EVAL: Highly recommended SCIS 928434

DALEY, Michael

Amazing sun fun activities.

Learning Triangle, 1998
ISBN 0070151776 [621.4707]

Harnessing the sun's energy is the focus of this book. An experimental approach is used in leading students to discover: the relationship between the sun and earth; the value of sunlight as an inexhaustible energy source; and ways in which the sun's energy can be used to help us today. A collection of solar projects genuinely involves the student in investigatory science and discovery learning, through projects which are simple enough for children to enjoy managing them. Informal sketches, with yellow shading, in addition to simple diagrams, effectively support the clear text. The US origin means that measurements are not metric, and some terminology may be unfamiliar to Australian students. L. Ward

USER LEVEL: Stage 2 Stage 3

KLA: ST
SYLLABUS: Science & Technology K-6
AVAIL: Paper \$26.95 SCIS 921253

BURSZTYNSKI, Sue

Starwalkers: explorers of the unknown.

Omnibus, 1998 (Extraordinary)
ISBN 1862913420 [629.45]

Zappy layout, accessible text, attention to detail and enthusiastic prose make this series both eye catching and informative. In short chapters, the author: explains the symbolism of the space race between the USA and USSR; describes the early space flights, notable disasters and the development of space technology; gives the reader a realistic idea of what it is like to be an astronaut; and offers advice on becoming part of future space exploration. Much of the appeal lies in the detail, such as the answer to the vexing question of how to go to the toilet in space. The clearly presented information is supplemented by glossary, timeline, bibliography and index. M. Lobban

USER LEVEL: Stage 3 Stage 4 Stage 5

KLA: HSIE
SYLLABUS: HSIE K-6; History 7-10
AVAIL: Paper \$9.95 SCIS 928451

Also in this series:

Cleopatra: last queen of Egypt SCIS 928482

Sustainable agriculture: managing our land for the future. [videorecording]

Classroom Video, 1997 (25 min.)
ISBN none [631]

A brief but thorough introduction to sustainable agriculture is the topic of this video. There are nine short sections, supported by interviews. Aspects of environmental impacts, and possible solutions to the potential threats faced by Australian agriculture, are discussed through four case studies: backyard gardens; city farms; whole farm planning; and communities and land care. Students are given an insight into measures being undertaken to promote sustainable agriculture. The video is accompanied by a student worksheet (which contains references to useful Internet sites), and comprehensive teacher's notes containing suggestions for class activities and assignments, making this product a useful classroom resource. K. Heap

USER LEVEL: Stage 5 Stage 6

KLA: Science; TAS

SYLLABUS: Agriculture 7-10; 2U/3U Agriculture; Science 7-10

AVAIL: \$85.00 SCIS 921166

The stockman's handbook.

/ compiled by Roger Kaus, John Lapworth and Peter Carroll. 6th ed. Department of Primary Industries, 1997 (Information series)
ISBN 0724267018 [636.2]

Students requiring a general overview of animal husbandry techniques, particularly those related to beef cattle, will find this book of interest. Aspects covered in the main sections include: **Beef cattle management**; **Livestock regulations**; **Health**; and **Marketing**. The discussions about diseases and livestock regulations regarding cattle are specific to Queensland, but chemical treatments used are applicable to all states. The text is well supported by tables, black and white photographs, and hand drawn diagrams. Although written for beef property managers and stockmen, students studying animal production would find this book useful as it gives them a good overview to the livestock industry. K. Heap

USER LEVEL: Stage 5 Stage 6

KLA: Science; TAS
SYLLABUS: Agriculture 7-10; 2U/3U Agriculture
AVAIL: Paper \$20.00 SCIS 918221

THOMAS, Ann

Food. [series]

Macmillan, 1998 (Macmillan young library)

Food, glorious food, in all its manifestations, is the focus of this series of information books. All aspects of each food group are covered, from production through to processing and preparation for consumption. Each book in the series deals with a particular food group, giving a balanced overview of the nutritional role of each, and clearly stating that variety and moderation are integral to health. Eye catching colour photographs and drawings illustrate each page, providing a visual focus to complement and extend the information given in the text. Of particular interest and value is the inclusion of a number of multicultural and indigenous foods. N. Chaffey



USER LEVEL: Stage 2 Stage 3

KLA: HSIE; PDHPE; ST
SYLLABUS: HSIE K-6; PDHPE K-6; Science & Technology K-6
AVAIL: \$16.95 each
EVAL: Highly recommended

Titles in this series are:

Breads, grains and rice SCIS 933839
Dairy products SCIS 934635
Fruits SCIS 933892
Meat and fish SCIS 933883
Sugars, fats and oils SCIS 933887
Vegetables SCIS 933901

Do you have an idea for a future Scan article?

**Contact Ian McLean at
(02) 9886 7501**

SMITH, K.L.C., EGAN-O'REILLY, D., & BRIGGS, M.J.

Branding strategies for agribusiness enterprises: an East Asian perspective.

Department of Primary Industries, 1997 (Information series)
ISBN 0724267239 [658.8]

Agribusiness is becoming increasingly important in agriculture today, and information on the marketing process has become more relevant. This book covers the export side of marketing, in particular, the effect of 'branding' on international marketing, ie the creation of appropriate names and appealing logos to help in the recognition and promoting of products. Well known products are used as examples and in depth case studies are provided. There is also an explanation of the market situations in Japan, Taiwan and Thailand. Primarily a text based book, it is easy to read and well referenced. Senior 2 unit Agriculture students should find this book particularly useful. K. Heap

USER LEVEL: Stage 5 Stage 6

KLA: Science; TAS
SYLLABUS: Agriculture 7-10; 2U/3U Agriculture; Science 7-10
AVAIL: Paper \$55.00 SCIS 918212

BAHN, Paul G.

The Cambridge illustrated history of prehistoric art.

Cambridge University Press, 1998 (Cambridge illustrated histories)
ISBN 0521454735 [709.01]

In a richly illustrated volume the author surveys prehistoric art in all its forms: cave and rock art; body art; objects and sculptures. He then considers some of the enduring themes such as sex and portraiture, discusses possible symbolism, and describes the role of science in dating and analysing prehistoric art. The book concludes with a section on current threats and future prospects for this most fragile and mysterious body of work. There is a major emphasis on Australian art and this is further enhanced by its placement in a global context. Both the quantity and outstanding quality of illustration make this an inspiring as well as informative resource. M. Lobban



USER LEVEL: Stage 5 Stage 6

KLA: CA; HSIE
SYLLABUS: 2U Aboriginal Studies; 2U/3U Visual Arts
AVAIL: \$64.95
EVAL: Highly recommended SCIS 930762

GIRARD-GESLAN, Maud [and others]

Art of Southeast Asia.

Abrams, 1998
ISBN 0810919958 [709.59]

As a reference book, this large volume of essays is comprehensive. Authored by six specialists in the field of Southeast Asian art, the chapters document arts practice within cultural and historic contexts in Burma, Thailand, Vietnam, Cambodia and Indonesia. Specifically commissioned photographs supporting the text provide fresh images of sculpture, painting, decorative arts and architecture. While the language and structure of each essay is different, clear sub-

headings guide the reader through the text. Appendices include small scale black and white photographs providing additional visual documentation, and a glossary and bibliography. This is a valuable source book for senior arts students. D. Wauchop

USER LEVEL: Stage 6 Professional
KLA: CA; HSIE
SYLLABUS: Visual Arts 7-10; 2U/3U Visual Arts
AVAIL: \$350.00 Thames & Hudson SCIS 948074

HUTCHERSON, Gillian
Gong-Wapitja: women and art from Yirrkala, Northeast Arnhem Land.

Aboriginal Studies Press, 1998
 ISBN 0855753153 [709.94]

A collaborative project, designed to show the depth of this nation's culture, was developed between the women of Yirrkala in north-east Arnhem Land and the author of this well designed book. The misunderstandings (based on the findings of early male anthropologists) of male and female roles in Aboriginal societies are exposed through the stories of these woman as portrayed through their art. Through an exposition over time, interwoven with the Dreaming and personal experiences, the art reflects the adaptability and cultural interchanges that these women and their ancestors have experienced. This is an important story, in the ever-shifting sands of Reconciliation, which helps all Australians to understand the complexities and diversity of Aboriginal cultural expressions. C. Dorbis

USER LEVEL: Stage 4 Stage 5 Stage 6 Professional
KLA: CA; HSIE
SYLLABUS: Aboriginal Studies 7-10; 2U Aboriginal Studies; Visual Arts 7-10; 2U/3U Visual Arts
AVAIL: Paper \$39.95 Peribo
EVAL: Highly recommended SCIS 949418

Viewpoints: visual arts case studies.
 /edited by Anne Bamford. Heinemann, 1998
 ISBN 0858599732 [709.94]

The value of a multi-layered approach in case studies is that students may organise their own explorations of art from various aspects. A theme such as women in art could be traced, or a medium such as photography looked at historically, with reference to any number of themes. The method used here is to focus in an in depth way on an artist, and then to look at that artist's work critically and contextually. The fact that works are created as a product of a particular time, and reflect historical influences, is recognised. This is a valuable resource for senior students. K. Ashley



USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: 2U/3U Visual Arts
AVAIL: Paper \$28.95
EVAL: Highly recommended SCIS 931762

REES, Vaughan
Art-i-facts. Book 2: an exploration of ideas in drawing.
 McGraw-Hill, 1998
 ISBN 0074704958 [741.076]

Designed to prompt students to explore a variety of techniques, materials and approaches to common themes, this book also leaves plenty of room for the teacher to contribute, with additional practical activities. Students are led through a range of techniques, from the simple to the more complex. Intended outcomes are stated at the beginning of each chapter. The whole is profusely illustrated in colour, using examples from many significant artists. A strong emphasis on being able to use appropriate terms, and to recognise one's own process in images from contemporary artists, while having fun doing so, permeates through the book. K. Ashley

USER LEVEL: Stage 3 Stage 4 Stage 5 Stage 6
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U Visual Arts
AVAIL: Paper \$36.95
EVAL: Highly recommended SCIS 927359

BOGLE, Michael
Design in Australia: 1880 - 1970.
 Craftsman, 1998
 ISBN 9057034611 [745.4]

A well researched investigation into the history of Australian design, from the period of accelerated technological change to 1970, is strongly presented in this book. It covers the areas of decorative, industrial and applied arts, acknowledging the social, political, psychological and economic factors that drive the design process. We see the beginning of this history in the master and apprentice relationships of the late 1800s, and its reliance on European traditions. This quickly changes, and a strong emphasis on Australian themes emerges in the early 1900s. This is an excellent reference for all senior students of design. K. Ashley

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA; TAS
SYLLABUS: 2U/3U Design & Technology; 2U/3U Visual Arts
AVAIL: \$80.00 SCIS 931315

DIBBS, Kristen
Machine embroidery: inspirations from Australian artists.
 Fairfax, 1998
 ISBN 1863433309 [746.44]

The superb presentation of this volume and the focus on Australian design and craft will provide an incentive for young craftspeople to develop and improve their skills. Annemieke Mein will be the best known of the artists, but all demonstrate an exquisite sense of design and a commitment to excellence which cannot fail to excite the aspirations of the reader. Large full colour photographs exhibit the finished work, but the strength of the book is in the artists' detailed descriptions of the techniques and materials used. A blend of traditional and innovative techniques will ensure that the book holds appeal for the novice and the experienced, young and old. M. Steinberger

USER LEVEL: Stage 5 Stage 6
KLA: CA; TAS
SYLLABUS: Visual Arts 7-10; 2U Visual Arts; 2U Textiles & Design
AVAIL: Paper \$24.98 SCIS 936244

CUMMING, Robert
Great artists.
 Dorling Kindersley, 1998 (DK annotated guides)
 ISBN 075130445X [750.1]
 A strikingly attractive presentation of twenty or more artists and their works, this large format book spans the period,

over 500 years, from the Limbourg brothers to Jackson Pollock. Large, handsomely presented examples are analysed, with the emphasis predominantly on the creator's style and technique. The artists' lives and the time in which each lived attract a brief, general comment. Symbolic and representational elements in the paintings are highlighted by specific reference to their importance in historical or social terms. At times, these aspects are given greater importance than artistic principles. Students would enjoy the bite sized pieces of information as much as looking at the art works. K. Ashley

USER LEVEL: Stage 2 Stage 3 Stage 4 Stage 5 Stage 6
KLA: CA
SYLLABUS: Visual Arts K-6; Visual Arts 7-10; 2U/3U Visual Arts
AVAIL: \$39.95 SCIS 937475

GAUGUIN, Paul
Gauguin by himself.
 /edited by Belinda Thompson. Little Brown, 1998
 ISBN 0316643920 [759.4]

The study of Gauguin's works is essential to an understanding of modern art. In this book, 237 works (mainly paintings) are displayed in wonderful colour reproductions, complemented by excerpts from his letters which reveal his thoughts on life, his works and the art of the time. The combination gives insight into this artist, especially for senior visual arts students, who will appreciate his writings on art. The information is presented in four sections, representing the main periods of his artistic career, with a brief introduction summarising his achievements during each period. There is also a useful list of significant details about persons or galleries mentioned in the letters. M. Hamlyn.

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U/3U Visual Arts
AVAIL: Paper \$45.00 SCIS 937497

CURNOW, Wystan
Imants Tiller: the book of power.
 Craftsman, 1998
 ISBN 9057032716 [759.994]

Although we perceive Imants Tiller predominantly as a painter, this book reveals his initial interest in installation and conceptual work, as well as his parallel love of science and art. His appropriation of images and the 'recirculation' of these into new and powerful combinations has given him strong international success. This is an academic treatise on the development of Tiller's ideas behind *The book of power*. It is appropriate for the senior and tertiary level student who wishes to make an in depth study of the history of Tiller's development and influence. Numerous coloured plates richly complement the text. K. Ashley

USER LEVEL: Stage 6 Professional
KLA: CA
SYLLABUS: 3U Visual Arts
AVAIL: \$80.00 SCIS 928537

KLEPAC, Lou
Judy Cassab: portraits of artists and friends.
 Beagle, 1998
 ISBN 0947349235 [759.994]

Excerpts from personal diaries and high quality reproductions of portrait paintings provide a fascinating insight into the life and work of Judy Cassab. The introduction contextualises Cassab's work within the modernist tradition of portraiture. Text and images throughout illustrate Cassab's process, from choosing the pose and making sketches to the

'moments of highest concentration'. Cassab's poetic writings also provide a glimpse into her selection of subject matter beyond portraiture, her family life, her early impressions of Australia and anecdotes about the artist's world. Two subjects share their experience of sitting for Cassab. The significant collection of portraits is a gallery of Australian artists, writers, performers and political figures. D. Wauchop

USER LEVEL: Stage 5 Stage 6 Professional
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U Visual Arts
AVAIL: \$49.95 Peribo
EVAL: Highly recommended SCIS 948566

Rolling Stone: the complete covers 1967-1997.
 Abrams, 1998
 ISBN 0810937972 [782.42166]

Rock and movie fans and artists will be in their element with this comprehensive study of the covers of the influential magazine *Rolling Stone* in the thirty years since its foundation in 1967. Over 700 covers are represented in this hefty tome, the work of some key photographers and designers. Jagger, Rondstadt, Springsteen, the McCartneys, Baez, Madonna, Belushi, Elvis and hundreds more all appear, many of them several times. Changes in design style and printing techniques are highlighted. Commentary throughout ensures that this is more than just a fan magazine, although many will be frustrated by the lack of an index. The Seinfeld covers are magnificent! M. Steinberger

USER LEVEL: Stage 4 Stage 5 Stage 6
KLA: CA
SYLLABUS: Visual Arts 7-10; 2U Visual Arts
AVAIL: \$59.95 Thames & Hudson SCIS 938642

NEWMAN, Marjorie
Puzzle storybooks. [series]
 Walker, 1998

Designed to hone the powers of observation, these picture puzzle books entice the reader who enjoys interacting with the characters in a story. On every page there are mysteries to solve, mazes to unravel, and detailed directions to follow. The story threads through these activities, but is incidental to the books' main aim, which is to entertain the reader with the thrill of the chase. Reluctant readers may appreciate the format of these books with their lift the flap sections, lively and colourful illustrations, and text boxes. There is enough variety and humour to satisfy a junior audience, and frustration is avoided as solutions to the puzzles are provided. S. Rasaiah



USER LEVEL: Stage 1 Stage 2
KLA: English
AVAIL: \$19.95 each

Titles in the series include:
A brave knight to the rescue! SCIS 935201
Hornpipe's hunt for pirate gold SCIS 930355
Mystery of the monster party SCIS 937748
The wonderful journey of Cameron Cat SCIS 937734

Internet site reviewers, especially primary, urgently needed. Contact Colleen Foley: Colleen.Foley@det.nsw.edu.au

BENNETT, Geoffrey

The edge of the world: Tim Winton - author.

[videorecording]

Film Australia, 1997 (55 min.)

ISBN none

[A823]

One of Australia's best regarded authors is given stylish treatment in this engaging videorecording. The stunning photography, and commentary by actor Hugo Weaving, typify the high production values. Winton speaks eloquently of his connection with the landscape; he is seen in various West Australian locations, highlighting his affinity with sea and desert. For Winton these landscapes are not symbols of emptiness, but brimming with life, dynamic and changeable. Parallels with his writing may be detected. Spirituality is another focus, as he talks of what it is to be human. Substantial readings from several recent novels help illuminate Winton's themes and style. M. Steinberger

USER LEVEL: Stage 5 Stage 6

KLA: English

SYLLABUS: English 7-12

AVAIL: \$95.00

EVAL: Highly recommended SCIS 935896

The Hutchinson history library. [computer software]

Helicon, 1996

ISBN 1859861229

[909]

A handy summary of history topics is provided by this CD-ROM. Easy access is facilitated by the colour coding of areas, eg light green for **Ideas**; dark green for **Chronology**; and yellow for the **Book of days**. The trail facility allows the user to trace and reverse the research path. Some photographs, tables and quotations in the **Media** option provide interest and detail, while the **Quiz** option is challenging and enjoyable. This program does not provide detailed information but rather a brief overview and explanation of events, terms and people. It is a quick reference point for students of history. B. Hull

Minimum requirements:

Windows 3.1/95/NT: 486; 8MB RAM, 8MB hard disk; double speed CD ROM drive; 256 colours

USER LEVEL: Stage 3 Stage 4

KLA: HSIE

SYLLABUS: HSIE K-6; History 7-10

AVAIL: \$69.95 Scholastic SCIS 921890

National Geographic magazine. [computer software].

National Geographic Interactive, 1997

ISBN 0791126714

[909.8]

National Geographic magazine started publication in 1888 and most libraries have shelves of back copies attesting to its enduring popularity and usefulness. This set of 20 CD-ROMs contains the entire archive of the magazine from 1888 to 1996, including 9,480 articles, and 178,567 illustrations plus every advertisement. The magazines have been scanned a double page at a time, giving rise to some limitations in the use of the CD-ROM. It is not possible to print sections of text or single images, just double-page spreads or whole articles. The text is not able to be pasted into another application, as it is part of the scanned image of the page. Text in early articles is sepia and difficult to read and faint when printed. However, those concerns aside, indexing is exhaustive and the searching is excellent and can be extremely precise. The quality of the illustrations is very good. It is also possible to search just the advertisements, a fascinating barometer of social mores and attitudes. To load the whole

set of disks requires 100MB free hard disk, but also results in much faster searching and retrieval. The product was tested on Windows and Macintosh machines, with both Windows 95 and NT systems handling the software much better than the Macintosh. The potential for curriculum support is endless, and browsing irresistible. M. Lobban

Minimum requirements

Macintosh: 68030; System 7.5; 8MB RAM; 10MB hard disk; double speed CD-ROM drive; 256 colours

Windows 3.1/95/NT: 486; 8MB RAM; 10MB hard disk; DOS 6.0; double speed CD-ROM drive; VESA standard VGA; 256 colours

USER LEVEL: Stage 2 Stage 3 Stage 4 Stage 5 Stage 6

KLA: CA; English; HSIE; LOTE; PDHPE;

Science; ST; TAS

AVAIL: \$299.00 Scholastic

EVAL: Highly recommended SCIS 921005

COTTEE, Kay

First lady: a history-making solo voyage around the world.

Pan Macmillan, 1998 (Sun)

ISBN 072510760X

[910.4]

Rich in humour and action, this autobiographical account of how Kay Cottee sailed alone around the world presents a female role model of perseverance, positive thinking, goal-setting and achievement. Simply but graphically written, it shares with the reader every routine, challenge and life threatening experience in an exceptional endeavour. It has wide general appeal and varied relevance in the secondary curriculum, including: history units on women and great Australian achievers; examples of register and appropriate style in Contemporary English; and Option 6 of senior PDHPE relating to women in sport and the Australian sporting identity. H. Gordon

USER LEVEL: Stage 4 Stage 5 Stage 6

AVAIL: Paper \$22.95

KLA: English; HSIE; PDHPE

SYLLABUS: 2U Contemporary English; History 7-

10; 2U PDHPE

EVAL: Highly recommended SCIS 936012

ROYSTON, Angela

Maps and symbols.

Wayland, 1998 (Geography starts here!)

ISBN 0750219874

[912]

Appealing design features, colour photographs, labelled diagrams and judicious use of white space, combine to make this resource readily accessible to primary students. It also caters to a variety of learning styles. Many ideas for teaching and learning activities are suggested, as various attributes of maps are explained through comparison with students' everyday experiences. The range of aspects include: drawing a plan of a bedroom; the use of symbols, contour lines and scale; compass points; and a dinosaur fossil hunt using grid references. The section called **Map facts and figures** has fascinating trivia, thoughtfully collected together rather than sprinkled throughout in information boxes. I. McLean

USER LEVEL: Stage 2 Stage 3 Stage 4

KLA: HSIE; ST

SYLLABUS: HSIE K-6; Science & Technology K-6

AVAIL: \$29.95

EVAL: Highly recommended SCIS 935611

Blokes: stories from Australian lives.

/edited by B. R. Coffey. Fremantle Arts Centre Press, 1998

ISBN 1863682341

[920.71]

Many of the contributors to this volume were born early this century and experiences of rural life and of wartime are two significant themes that emerge in the excerpts from their autobiographical writings. It is disappointing that there is only one Aboriginal account, despite the material now available. Notable pieces include Fred Airey's **Escape from Singapore**, and others celebrating: physical courage; the ability to survive in adverse circumstances; and childhood experiences in a tough world. However, the quality of the writing is uneven, and the stories encompass a relatively narrow span with, for example, few urban pieces, leaving the reader with an incomplete picture of the true range of men's lives. J. Nisbet

USER LEVEL: Stage 4 Stage 5 Stage 6

KLA: HSIE

SYLLABUS: History 7-10

AVAIL: Paper \$14.95

SCIS 939212

DAVIES, Vivian

Egypt.

British Museum Press, 1998

ISBN 0714119113

[932]

Published to accompany an internationally produced television series, this is a beautifully produced text for browsing and specific research. The scholarly text and beautiful photographs work together effectively. The research, by two renowned, practising archaeologists, is up to the minute. It examines, for example, the most recent scientific techniques being used to conduct post-mortems of 4000 year-old mummified remains. These techniques permit the mummy to remain intact. This is a worthy resource which focuses on major aspects of ancient Egypt and Nubia, and describes some key archaeological sites. J. Donovan

USER LEVEL: Stage 6

KLA: HSIE

SYLLABUS: 2U Ancient History

AVAIL: \$49.95

SCIS 935953

The Persian wars: the storm from the east.

[videorecording]

Astarte Resources, 1997

ISBN none

[938]

Aimed at the senior ancient history curriculum, this title brings to life a topic for which there are very few other video resources available. The Persian wars are described with contemporary shots of ancient battle sites, computer graphics of battle tactics and lingering close ups of archaeological remains. The look and feel are astonishingly amateurish: narrator Ben Churcher seems to be giving a lesson in iambic pentameter as he stamps his fists to emphasise every plodding syllable of his live narration. However, the story itself remains thrilling and moving, and the other unseen narrator, and the actor reciting the primary sources, restore a dignity that Ben's Indiana Jones hat and leather jacket only diminish. J. Donovan

USER LEVEL: Stage 6

KLA: HSIE

SYLLABUS: 2U Ancient History

AVAIL: \$95.00 Astarte

SCIS 921903

LOCKYER, John

Lottie: Gallipoli nurse.

Reed, 1998

ISBN 1869489888

[940.4]

Based on the actual letters of a nurse aboard a New Zealand hospital ship sent to Gallipoli, this little picture book may bring home to many younger readers the realities of war in a way other media may not: Lottie's own words have an immediacy and reality missing from more formal accounts. New Zealand casualties on Gallipoli were horrendous, almost 90%. Even though she is based there, it is not until she receives, months later, a letter from her father in Auckland, that Lottie learns that her brother was amongst those killed. The illustrations seem rather too glamorous in style but the text is quite specific and moving. G. Spindler

USER LEVEL: Stage 2 Stage 3

KLA: HSIE

SYLLABUS: HSIE K-6

AVAIL: Paper \$11.95

SCIS 937349

OSBORNE, Elizabeth

Torres Strait Islander women and the Pacific War.

Aboriginal Studies Press, 1997

ISBN 0855753137

[940.53]

The histories of wars are often those of prominent events and personalities. This text is the story of people who have been ignored and or left out of these histories. The stories and oral traditions of the Torres Strait Islander women here are poignant. Osborne has demonstrated that cultural sensitivity and academic research are both possible in this extensive tome. Through snippets of information and oral histories, the little pieces of history are jig-sawed together, giving a picture of depth and courage against a background of government neglect, racism and historical changes. This is an important study of Australia's past, with a eye to Australia's future. C. Dorbis

USER LEVEL: Stage 6 Professional

KLA: HSIE

SYLLABUS: 2U Aboriginal Studies; 2U/3U Modern History

AVAIL: Paper \$29.95 Peribo

EVAL: Highly recommended SCIS 920132

UHR, Janet

Against the sun: the AIF in Malaysia, 1941-42.

Allen & Unwin, 1998

ISBN 186448540X

[940.54]

Controversial episodes of history are always difficult to deal with, and the Malaysian campaign 1941-42 is no exception. We know it had a disastrous outcome, yet the reminiscences of the diggers, the use of newly released documents and official histories give this interpretation a unique dignity. Without clear leadership, the men who were the 'lamb to the slaughter' showed the famous ANZAC spirit. The author explains that Australians were under prepared for jungle warfare, and were largely trapped into the campaign. The military leaders' confusion about how to deal with the Japanese is evident throughout the text. With excellent sources for follow up, it could be a worthwhile reference. C. Dorbis

USER LEVEL: Stage 6 Professional

KLA: HSIE

SYLLABUS: 2U/3U Modern History

AVAIL: \$29.95

EVAL: Highly recommended

extension material consisting of distortions, ellipses, and parabolas; and brain teasers exemplify the range of activities. A key, which indicates challenge level, intelligences emphasised and maths skills used, gives a clear guide for activity choice. Photocopiable masters and suggestions for lesson introductions are included. The book's United States origins are obvious in some language, and the whole is marred by careless proofreading and inconsistent adaptation for use in Australia. D. Doust

USER LEVEL: Professional
KLA: Mathematics
SYLLABUS: Mathematics K-6; Mathematics 7-10
AVAIL: Paper \$35.95 SCIS 939577

SMITH, Lesley
Measurement.

Emerald City, 1997 (Starting science; Classmasters)
ISBN 1876133252 [530.8]

These photocopiable blackline masters have been designed with the lower ability senior secondary student in mind, but they are also suitable for use with primary and Stage 4 students. Measurement exercises include 'hands on' activities for: length; mass; temperature; time; area; and volume. Worksheets are self contained, ideal for day relief teachers, or suitable for revising sequences of work and as stand alone activities. The worksheets develop skills in: following written instructions; processing information in diagrams, tables and graphs; and selecting appropriate measuring equipment. They are clearly set out with attractive diagrams and some challenging questions. N. Johnston

USER LEVEL: Professional
KLA: Science; ST
SYLLABUS: Science & Technology K-6; Science 7-10; 2U Science
AVAIL: Paper \$55.00 SCIS 920603

BARRS, Myra

Reading together parents' handbook.

Walker, 1998
ISBN 0744557089 [649]

Developed for parents as a companion text for Walker Book's *Reading Together* series, this compact text would prove a valuable resource for use with or without the series. The book's design, layout, visuals and content all work to make it a very successful resource for Australian contexts. The book makes simple but powerful statements which centre on children developing life-long reading behaviours. It is based on sound understandings about literacy development. Particular strengths are the use of colour photographs depicting a range of adults and children engaged in enjoyable and purposeful reading activities, and the effective technique of framing and answering common questions asked by parents. L. Rowles

USER LEVEL: Community
KLA: English
SYLLABUS: English K-6
AVAIL: Paper \$3.95 SCIS 937680

WHELAN, Heather
Art works.

Lands End, 1997
ISBN 1869597222 [707]

Underpinning this book is the belief that providing a wide range of different art techniques and activities for students

will ensure that all are able to achieve success and enjoyment in their art making. Working with string, chalk, tissue paper, or using marbling, collage or simple printing methods is not new, but teachers will welcome the brief, illustrated presentation of each procedure, the suggestions for display and extension work and the notes on assessment and evaluation. Such is the versatility of these techniques that, although designed for primary pupils, this serviceable collection could also be a source of ideas for students and teachers in the secondary school. J. Nisbet

USER LEVEL: Professional
KLA: CA
SYLLABUS: Visual Arts K-6; Visual Arts 7-10; 2U/3U Visual Arts
AVAIL: Paper \$29.95 SCIS 936888

SAXBY, Maurice

Offered to children: a history of Australian children's literature 1841-1941.

Scholastic, 1998
ISBN 1863887032 [820.9]

Rather than being a second edition of his authoritative 1969 *A history of Australian children's literature 1841-1941*, this present work represents both a revision and a complete rewriting and recasting of the content of that book. The material is organised both chronologically and thematically, thoughtfully tracing the development of writing for children in Australia, and always placing it within the wider social context in which it appeared. As usual, Saxby entertains and informs, presenting his formidable knowledge in modest and enthusiastic prose. A generous page layout, together with lively text supplemented by frequent quotations, illustrations and subheadings make this an extremely readable and enjoyable reference. M. Lobban

USER LEVEL: Community Professional
AVAIL: Paper \$59.95 SCIS 927827

SCATES, Bruce

A new Australia: citizenship, radicalism and the first republic.

Cambridge, 1997
ISBN 0521572967 [994.03]

The 1890s were a defining period in Australian history with some uncomfortable parallels to Australia a century later. The era stridently stamped a lasting mark on an emerging Australia, but while much written about, its complexity makes important new insights possible. After meticulous research, Scates traces the spectrum of nationalist and labour politics, focusing on the short-lived radicalist, anarchist and early feminist movements, with their serious early advocacy for a true republic. However, the new Australia was a vision largely unfulfilled, or at least minimised by mainstream political compromise. Scates produces a fascinating and very readable history of interest to more serious and academic historians and relevant to Civics and Citizenship. G. Spindler

USER LEVEL: Professional
KLA: HSIE
SYLLABUS: History 7-10; 2U/3U History
AVAIL: \$90.00 SCIS 930696



Who reviews?

Reviewers for *Scan* and the DET Web site are selected from teachers and teacher-librarians across the state. In this issue, they included the following:

Judith Anderson, North Sydney Primary
Kristin Ashley, VA, Newcastle High
Sally Blackwell, SO2, Computers in Schools
Bill Bowie, English, Dulwich High
Liz Bowring, secondary teacher-librarian
Sue Bremner, SEO2, Training & Development
Jill Buckley, SEO1, Training & Development
Nell Chaffey, Tamworth Primary
Katharine Chauncy, Sutton Forest Primary
Jenny Donovan, SEO1, Literacy Assessment
Chris Dorbis, SEO1, Aboriginal Studies
Diana Doust, STLD, Lismore High
Jan Eade, Turrumurra North Primary
Marion Hamlyn, Wollongong High
Jackie Hawkes, St Clair High
Karen Heap, Science/TAS, Muirfield Technology High
Bronwyn Hull, History/English, Queanbeyan High
Narelle Johnston, SEO1, Training & Development
Suzanne Leslie, Lindfield Primary
Marjorie Lobban, Peter Board High
Daniel Low, TAS, Epping Boys' High
Elizabeth Maxwell, Cherrybrook Technology High
Ian McLean, *Scan* editor
Rebecca Murray, Blacktown South Primary
Jennifer Nisbet, Sydney Secondary Distance Ed.
Nigel Paull, South Grafton Primary
Frances Plummer, SEO2, Training & Development
Jenny Quirk, Turrumurra Primary
Sally Rasaiah, Waitara Primary
Beverley Richardson, teacher-librarian/literature specialist
Barbara Roberts, Yamba Primary
Jenny (JA) Robinson, Science, Byron Bay High
Graeme Ross, AP, South Coogee Primary
Lorraine Rowles, Project Officer, Literacy
Lynne Sepetuac, St Clair Primary
Cathy Sly, English/Drama, Barrenjoey High
Wendy Smith, Tamworth Primary
Alison Soutter, Project Officer, Student Services
Bill Spence, SEO2, English
Graham Spindler, Parliamentary Education Liaison Officer
Margaret Steinberger, secondary teacher-librarian
Jenny Stratford, Literacy Consultant
Laurence Ward, DP, Carlton Primary
Jenny Watts, secondary teacher-librarian
Deidhre Wauchop, SEO1, Creative Arts

1998 Children's Book of the Year Awards

The winners were announced by the Children's Book Council of Australia on Friday 21st August.

Picture Book of the Year:

Winner: MORIMOTO, Junko. *The two bullies.* (A Mark Macleod book) Random House

Honour: McLEAN, Andrew (text Janet McLean). *Josh.* (A little ark book) Allen & Unwin

Honour: WHATLEY, Bruce (text Bruce Whatley & Rosie Smith). *Detective Donut and the wild goose chase.* HarperCollins

Book of the Year - Younger Readers:

Winner: FORRESTAL, Elaine. *Someone like me.* (Puffin) Penguin

Honour: HIRSH, Odo (illus Andrew McLean). *Antonio S and the mystery of Theodore Guzman.* (A little ark book) Allen & Unwin

Honour: WRIGHTSON, Patricia (illus David Cox). *Rattler's place.* (Aussie bites) Penguin

Book of the Year - Older Readers:

Winner: JINKS, Catherine. *Eye to eye.* (Puffin) Penguin

Honour: METZENTHEN, David. *Gilbert's ghost train.* Scholastic

Honour: WINTON, Tim. *Lockie Leonard, legend.* Pan Macmillan

Eve Pownall Award for Information Books:

Winner: NICHOLSON, John. *A home among the gum trees: the story of Australian houses.* Allen & Unwin

Honour: DOLAN, Beth. *Cathy Freeman.* (Young achievers) Heinemann

Honour: TOFT, Kim Michelle & SHEATHER, Allan. *One less fish.* (Jam roll) University of Queensland Press.

1998 David Unaipon Award

Ruth Hegarty is the 1998 winner of this national award for previously unpublished Aboriginal and Torres Strait Islander writers. Her manuscript, *Ruthie is that you?* will be published by Queensland University Press in 1999. The Highly Commended novel was *Jonathan's soul* by Howard Sumner. For further details, contact Vicki Hope or Sue Abbey on 07 3365 2403 (phone) or 07 3365 1988.

25th Braille and Talking Book Library Awards

These were announced in Melbourne on 20th August 1998. For the first time, awards were given in a Young Adult category, sponsored by Sanderson Computers.

Best Audio Book Award for Young Adult Readers:

ARONSON, Linda (narrator Caroline Lee). *Kelp: a comedy of love, seaweed and Rupert Murdoch*.

This title also picked up a Best Narrator Award for Caroline Lee.

Special Commendation:

STUART, Duncan (narrator David Tredinnick). *The whole of the moon*.

Shortlisted:

CASWELL, Brian & CHIEM, David Phu An (narrator Rebecca Macauley). *Only the heart*. SCIS 947341

MARSDEN, John (narrator Kate Hosking). *Burning for revenge*. SCIS 947346

METZETHEN, David (narrator Stephen Pease). *Gilbert's ghost train*. SCIS 947343

For more information:

Contact: Alison Forbes on 03 9867 6022 (phone) or 03 9820 1335 (fax).

Note: A selection of audio books from Louis Braille Books are reviewed in this issue of *Scan*. See pages 56, 57, 58 and 60.

1998 IASL/SIRS International Commendation Award

At the 27th Annual Conference of IASL (International Association of School Librarianship) held in July in Israel, this cash award was presented to Jill Johnson on behalf of the Australian School Library Association (ASLA - ACT) for the development of *Computers, research and students: a survival kit for teachers and parents*. The 'train the trainer' kit is primarily aimed at teacher-librarians presenting workshops for their school communities.

Specific purpose resource suppliers**Marcom Projects:**

The video series *Dancing* mentioned on page 31 of *Scan* vol 17 no 2 (May), is available in Australia from Marcom Projects. Many other educational dance resources are also available.

Web site: <http://www.marcom.com.au>

Contact: 07 3801 5600 (phone).

NSW Department of Education and Training Sales:

The Sales Section recently moved location. The new contact details are:

DET Sales Section, PO Box 564, Moorebank NSW 1875
Still available:

Information skills in the school is \$10.00 each (please quote product code 11203).

Handbook for school libraries (revised 1996) is available for \$25.00 (please quote code 11201).

Do not send payment in advance, but fax your order and you will receive an invoice.

Contact: 02 9822 7500 (phone) or 02 9822 7511 (fax).

OTEN Information Services

From 3rd August 1998, services previously offered by the former Department of School Education Library at Parramatta are now being provided by Open Training & Education Network (OTEN) Information Services at 51 Wentworth Road Strathfield.

Contact: 02 9715 8482 (reference services phone) or 02 9715 8292 (fax).

Internet services for teacher-librarians**Hot topics in Scan: supporting the Literacy Strategy**

Hot topics in Scan is now available on *Network for education*, the NSW Department of Education's Web site. This is an index to many past *Scan* articles about literacy and the State Literacy Strategy, with implications for teacher-librarians. The index is annotated with abstracts, and is a useful resource for locating relevant readings from *Scan* on ways to support literacy in schools. To find *Hot topics in Scan*, go to <http://www.dse.nsw.edu.au/> and follow this hypertext route from the home page: **Staff**, then **Curriculum Resources**, then **Publications**, then **Scan**. Also available at the same location is an updated version of *Hot topics in Scan: the Internet*.

Online discussion board

Also available on *Network for Education* is *Using SCISWeb and SCISCD in school libraries*, a joint initiative of Training and Development Directorate and the Library and Information Literacy team. This site has three sections: **SCIS Frequently Asked Questions (FAQs)** about using SCIS products with *OASIS library*; online articles and links in **Resources**; and **Your say!**, the moderated discussion board.

Teacher-librarians are encouraged to read the ongoing discussions, add their own suggestions or ask new questions. Recent topics addressed on the bulletin board include: selecting DDC 21 (Dewey Decimal Classification) or ADDC 13 (Abridged); compatibility of SCIS products with *Windows 98*; password entry; cataloguing videocassettes; and SCIS genre subject headings for fiction.

Using SCISWeb and SCISCD in school libraries can be accessed by going to <http://www.dse.nsw.edu.au/> and following this hypertext route: **Staff**, then **Training and Development**, then **Initiatives**, then **Your say!**, then **List of topics**.

OASIS Library - Common problems

A set of **Frequently asked questions (FAQs)** for teacher-librarians about *OASIS Library* (in PDF format) was recently uploaded to *Network for education*, the NSW Department of Education's Web site. To find *OASIS Library - Common problems*, go to <http://www.dse.nsw.edu.au/> and follow this hypertext route from the home page: **Staff**, then **Technology Advice**

and **Support**, then **OASIS and the Internet**, then **Library**. Messages on the site will also direct you on how to download and install the free software *Adobe acrobat reader* to enable your computer to view PDF files. At the same **OASIS and the Internet** location are useful FAQs for the **Internet**; and **OASIS Administration, Finance, Hardware and System Maintenance**, specially prepared for administrators, school assistants, teacher-librarians and technology coordinators in New South Wales DET schools.

PETA (Primary English Teaching Association)

Copies of *The 1998 PETA guide to the Children's Book Council shortlist* by Ann Hanzl; back issues of *PEN (Primary English Notes)*; and joining details for school and individual memberships of PETA are available by writing to: PO Box 3106, Marrickville, NSW, 2204.

Contact: 02 9565 1277 (phone) or 02 9565 1070 (fax)

Email: webmaster@peta.edu.au or primeng@peg.apc.org

PETA recently launched its own Web site at:

<http://www.peta.edu.au/>

Teacher-librarians' listserv

OZTL_NET is an electronic community (or listserv) supporting the professional needs of Australian teacher-librarians. It is administered by Lyn Hay of the Centre for Studies in Teacher Librarianship, Charles Sturt University. Full details on *OZTL_NET*, some **Netiquette guidelines**, and access to the *OZTL_NET* archives, are available from the *OZTL_NET home page* on the World Wide Web.

Subscribe to the listserv by sending an email message to: OZTL_NET-request@listserv.csu.edu.au

In the subject line, type the command **subscribe** but do not include any information in the message field, ie *leave it blank* and turn off your Internet signature if you have one. You will then receive an automated *OZTL_NET welcome message* and will be able to participate in the discussions.

Contact: Lyn Hay

Email: lhay@csu.edu.au

Conferences**ASLA XVI, biennial conference: Bytes, books and bollards by the bay: Information management for the third millennium:**

Date: 18th-21st January 1999

Venue: Deakin University Woolstores Campus, Geelong, Victoria

Contact: ASLA XVI Secretariat, phone 03 9428 4173 or fax 03 9427 8270

Email: slaw@netspace.net.au

Seventh Catholic Secondary Teacher-librarian conference:

Date: 20th & 21st August 1999

Venue: Mary MacKillop Place, North Sydney

Hosted by: Teacher-librarians of the Sydney diocese

Contact: Jane Cowman, phone 02 9662 4088 or fax 02 9663 5252.

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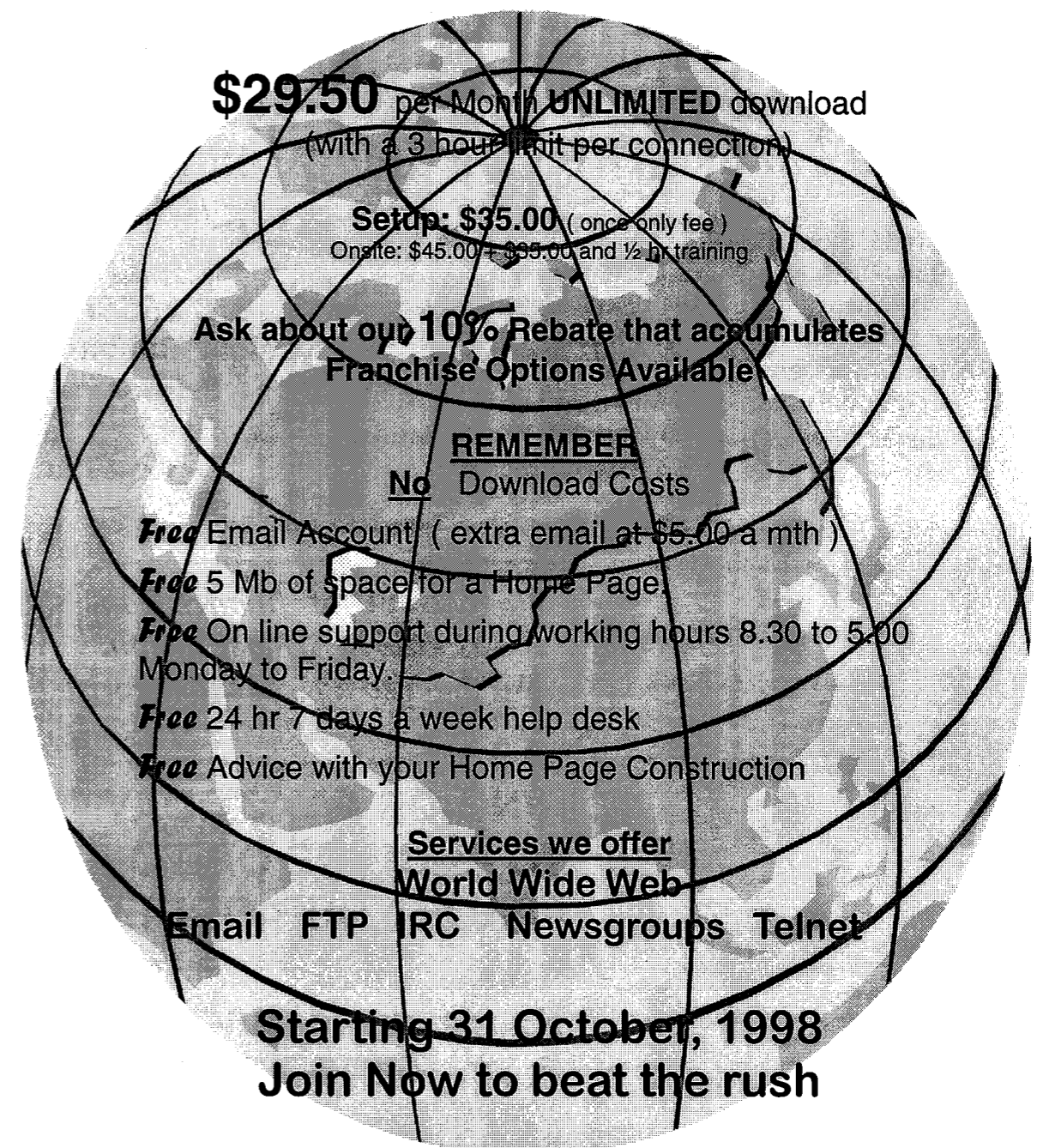
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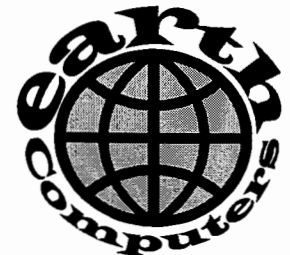
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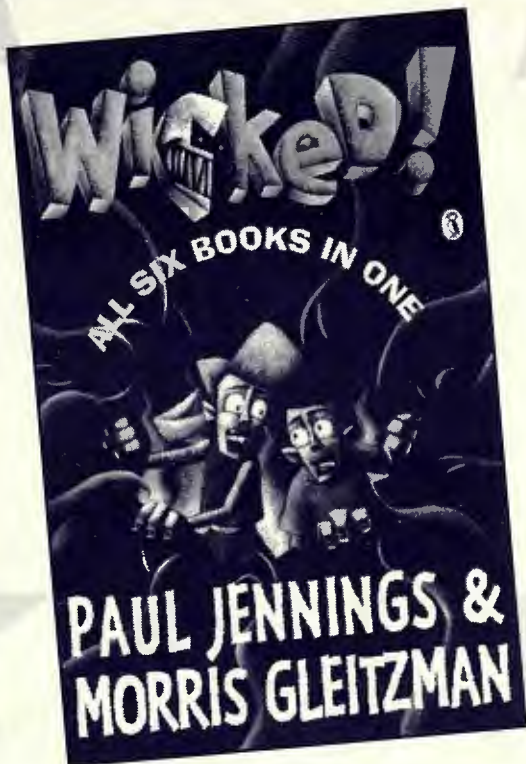
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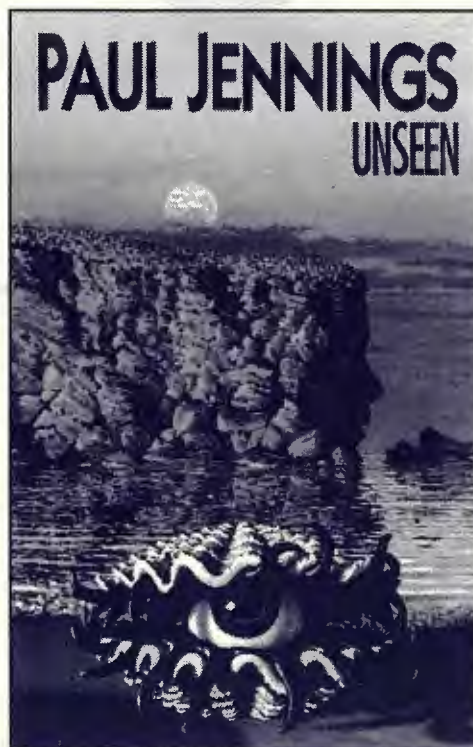
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