

# SCAN

Vol 18 No 1 February 1999

Curriculum Support Directorate

- reading the future: knowledge management
- mathematics and the teacher-librarian
- exploring rich assessment
- linking school libraries and the learning community



NEW SOUTH WALES  
DEPARTMENT  
OF EDUCATION  
AND TRAINING



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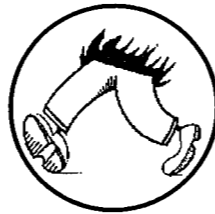
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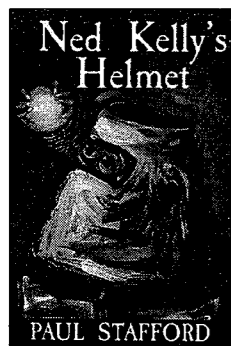
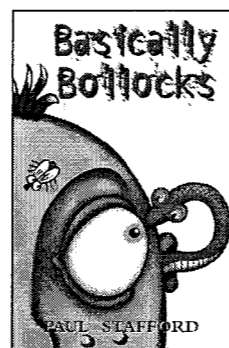
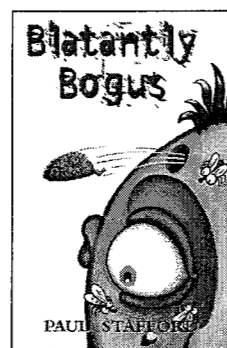


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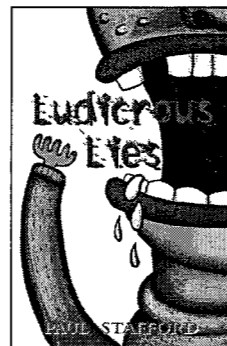
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## From the Editor



## Currents

Michelle Ellis is Senior Curriculum Adviser, Library and Information literacy



Welcome back to another busy year! Joining us are over 200 new subscribers; we hope that you will enjoy receiving, reading and using *Scan*. You can expect three more issues of *Scan* in 1999, due to arrive in schools in Week 4 of each term.

We urge you to circulate this journal amongst your colleagues. Many teacher-librarians have informed us that they regularly photocopy and distribute relevant articles and reviews to their Principal, school executive, information technology specialists, library clerical staff and classroom teachers. We are happy to encourage you to do so, as this is an effective and efficient way of keeping everyone abreast of the latest initiatives in information literacy. However, perhaps it is also time to consider that second subscription?

Feedback from *Scan*'s readership is always invaluable. The SCIS/*Scan* team is interested to receive comments about: the contents of *Scan*; which sections you find most useful; and any constructive criticism. Also, if your school has adopted (or adapted) teaching and learning ideas or management strategies from past issues of the journal, we would like to hear of your achievements. This information is also important for our own accountability, providing tangible evidence of *Scan*'s effectiveness as a resource selection aid, and as a valued source of professional reading for its audience.

Inside, amongst all the regular features, you will find a selection of reviews of new resources to support literacy, and some important articles about the ongoing implications of the State Literacy Strategy on the work of teacher-librarians. Special thanks to Judith Goudge for her highlighted article on how her school incorporates the NESTLÉ Write Around Australia competition into its literacy program. We also report on two exciting examples of teacher-librarian involvement in the key learning area of mathematics. Hopefully, many schools will decide to emulate these worthwhile and successful projects.

This issue begins a four part contribution by Frances Plummer, of the **Securing Their Future** team. Frances explains the concept of authentic, or 'rich', assessment tasks and, in particular, how these tasks are used to assess students for the School Certificate. We recommend this series to all teacher-librarians; authentic assessment is an important component of a systematic and explicit approach to planning and teaching.

Also, we present the first article in our new series, **Reading the Future**, in which *Scan* plays the role of educational futurist. What is happening out there in 'Development Land', and how can teacher-librarians best prepare themselves for the new millennium? This issue, Ross Todd explores the nature of knowledge management and what it implies for schools and school libraries. Please note the little **Reading the Future** icon; it will be your guide to the future of teacher-librarianship in each *Scan* as we approach the year 2000 and beyond. Enjoy!

Ian McLean

### Library management plans

By the time you read this issue of *Scan*, schools will be well and truly into their educational program for 1999. In the last few weeks of Term 4 1998, I received a number of calls from teacher-librarians wanting advice on developing a library management plan. Each of these phone calls reinforced the value of creating a library management plan. The process focuses thinking on the important aspects of the school library program. It helps to prioritise the work of the school library, and provides an evaluation tool for what is happening in the library. A library management plan can help teacher-librarians to sift through programs and services, and make decisions about what can be deleted, maintained, or expanded, particularly in the light of the Department and school agendas.

A number of the **Agenda 99** priorities are of particular relevance to the school library program:

- Focus on improving literacy and numeracy skills which are essential to successful learning.
- Give students and teachers better access to learning resources through new technologies.
- Increase professional development in priority areas.
- Expand the use of new technology in teaching and administration.
- Encourage staff, students and parents to participate in decision making.
- Assist positive participation by students from all backgrounds.

These priorities could become the basis for the school library management plan.

### A teacher-librarian Web site on Network for education

The *Using SCISWeb and SCISCD in school libraries* site on the departmental Web site proved to be a popular and informative site for teacher-librarians. After the initial series of questions and discussions relating specifically to the new SCIS products, other issues, from technology in teaching and learning to culling resources, began to be posted to the discussion board. Most of these questions were answered via email or through direct telephone contact rather than being posted to the *SCISWeb* discussion board. What this signalled, of course, was that teacher-librarians wanted an expanded and more comprehensive Web site.

In 1999, the initial Web site will be expanded to cover a much broader range of issues. The features of the previous site will be maintained, with the addition of new options and sections. After discussions with a number of district groups, a significant initiative will be the introduction of online district networks information. It is hoped that districts will post information on their executive, meetings, dates, venues, and programs to the teacher-librarian Web site. As with the previous site, the emphasis will be on the exchange of ideas and information. As soon as the URL and more information about the site is available, schools will be notified.

### Training and Development package for SCISWeb

Curriculum Support Directorate and Training and Development Directorate have collaborated on the development of a *SCISWeb* training package. The package is designed to be flexible in its application and can be used by individuals, small groups and/or large groups to facilitate use of *SCISWeb*. By the time *Scan* reaches schools, a number of district groups will have trialed the package, and any changes or additions will have been made. Information on the availability of the package will be conveyed to district networks as soon as possible. ■

From DET (Department of Education and Training)

*In 1999, Scan continues its series of articles about recent initiatives of the New South Wales Department of Education and Training. The aim is to enlighten teacher-librarians and suggest ways of incorporating these important initiatives into their collaborative role in teaching and learning.*



## Languages and literacy

*Languages Unit of Curriculum Support Directorate has developed a series of language-specific booklets to complement Teaching literacy in languages in Year 7, a document released in 1997 to support the State Literacy Strategy. Susi Steigler-Peters is Languages Consultant K-12.*

The languages classroom provides a rich environment for developing students' understandings of language as a system by drawing on comparative language analysis.

In languages classrooms, the students have many opportunities to compare and contrast languages through:

- analysis
- solving problems
- identifying patterns and detail, eg word order; spelling
- experimenting with grammatical structures
- thinking creatively
- applying logic
- deducing meaning.

These skills strengthen and extend metalinguistic awareness, resulting in a knowledge of literacy which is more explicit. In addition, these skills are transferable to other learning situations.

### What resources are available?

A series of high quality, language-specific booklets have been developed to complement the document *Teaching literacy in languages in Year 7*. The series includes support for Arabic, Chinese, French, German, Greek, Indonesian, Italian, Japanese and Spanish.

### What do they offer?

Key aspects of the series include:

- continued opportunities for students to improve their language skills
- the systematic and explicit teaching of literacy skills
- recognition of the close connection between learning another language and the development of literacy skills
- practical examples of ways to link languages learning with literacy development.

Although the series is intended for teachers of Year 7, the language and literacy links, as well as the teaching and learning strategies, have applicability across the K-12 continuum.

### Links between languages and literacy

The identification of explicit links with literacy will support the development of language programs. A collaborative approach to planning, programming and teaching between teachers, teacher-librarians and other support staff in schools will enhance opportunities for identifying these links.

The following list identifies just some of the skills that will enhance students' literacy development as they learn

another language. Literacy skills for the languages classroom may include:

- predicting the content of a text using headings, visual clues, known words and cognates
- using illustrations to confirm meaning
- comparing and contrasting English with the target language
- using a bilingual dictionary
- identifying grammatical patterns and features
- sequencing jumbled words, dialogue and pictures.

### Making the links explicit: languages activities with a literacy focus

Following is a sample of activities for developing skills in the target language. More are presented in the documents.

#### Recognising cognates

A cognate is a word which resembles, in meaning and in form, a word in a different language.

**Literacy link:** Using cognates to support languages learning and the development of literacy can be a useful tool for supporting the development of meaning and for making comparisons between languages.

#### Cloze

A cloze refers to a text from which words have been deleted. The reader is asked to fill in the spaces.

**Literacy link:** Students are compelled to use their understanding of language structures, grammar and context to make a meaningful attempt at identifying or locating the missing word or words.

These exercises slow down the reading and focus students' attention on the meaning of the text.

Selected examples are also available on *Network for education*, the Department of Education and Training's Web site. To find them, go to <http://www.dse.nsw.edu.au/> and follow this hypertext route from the home page: **Staff**, then **Curriculum Resources**, then **Publications**, then **Teaching literacy in languages in Year 7**.

### When will the booklets be available in schools?

A copy of the Indonesian, German, Spanish and Japanese documents has been issued to high schools and central schools offering a Year 7 or 8 program in those languages. In the coming weeks, the remaining documents will be distributed to schools. Samples from those documents will also be included online, on *Network for education*, as they become available. ■

## NEW Hospitality resources for secondary schools



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*An Introduction to the Hospitality Industry in Australia* is completely revised and updated to suit the new National Training Package for Hospitality courses. The new edition reflects the current state of the hospitality industry and presents a comprehensive overview of the various industry sectors.

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# Write Around Australia: a purpose for writing

feat  
ures

*NESTLÉ Write Around Australia is a creative writing program directed at senior primary students. It is an established part of Term One library sessions at Dundas Primary School, where teacher-librarian Judith Goudge encourages students to write for a purpose, and for enjoyment. By incorporating the competition into the whole school plan, Judith and her teaching colleagues are better able to provide opportunities for students to reflect on written texts, in order to enhance the quality of their own writing.*



Information about the *Write Around Australia* competition first came to my attention early in 1996. Today, *Write Around Australia* is the largest creative writing program for children in Australia, attracting 24 000 entries, and over 19 000 students attending writing workshops.

The particular appeal of this creative writing contest was the opportunity for many Year 5 and Year 6 students to be recognised for their writing *beyond* the school, at district level. Winners at this level can go on to state and national levels. The program is designed to allow students to work on their ideas with an Australian children's author in a workshop situation, before they submit a story for adjudication at zone level. Attending such workshops with well known authors was a great enticement for students to start writing.

## MANIPULATING LANGUAGE

It is important that students express themselves clearly when they are writing, but I was keen that they also have

opportunities to enjoy manipulating language to relate to their audience. The State Literacy Strategy emphasises "the need for teachers to be to be explicit and systematic" (Hutton & O'Dowd, 1998). Therefore, extracts from a wide selection of children's books, which lent themselves to reading aloud, were examined in library lessons. In planned activities, the students deconstructed these extracts and discussed them. This increasing awareness of the use of literary devices, and the importance of rhythm, choice of vocabulary and well planned text structure, introduced the students to a range of techniques for improving their writing.

Other stories and extracts were analysed for the ways in which professional writers create effects to elicit responses from the readers. As the students experimented, writing more involved stories, we saw tangible evidence of this increased understanding of narrative. The use of evaluative language in their own writing, creation of detailed descriptions, and elaboration of ideas, took on new significance for the students.

## SUCCESS STORIES

An interview with Robin Klein, in the video series *Storymakers*, wherein the author describes her craft as a writer, made quite an impact on the students. Klein's "need to write" every day, to satisfy her creative urge, was fascinating. She also admitted to her habit of observing and listening to people as she goes about her daily life, thus building a bank of ideas upon which she can draw when writing,

During 1997, publication in the mainstream media of a piece of writing by a student of this school brought hundreds of responses from members of the public, moved by the piece. The other students saw this as an example of "real writing". They experienced, first hand, the power which a writer has to evoke an emotional response from readers. Fortunately, there was *Write Around Australia*, which the students also perceived as "real writing".

*"For most, it was their first experience at a workshop with an author. The amount of enthusiasm and discussion generated led to a great writing lesson this morning."*

Paul Bland,  
Year 6 teacher, Modanville Primary School,  
Joanne Horniman workshop, Murwillumbah Library.

Highly motivated to emulate the success of their colleague, the students' enthusiasm carried over into their writing... with the students striving to reach out to their audience.

The publication of state and national winners in the *NESTLÉ Write Around Australia* story collections have also provided a wonderful resource for teaching and motivat-

ing. Students at Dundas have been absolutely fascinated by the mechanics of the winning stories, which are all quite different and of exceptional quality. Discussions of these stories often lead to a communal "Yes, I could do that" tone amongst the students.

## CLASS TEACHERS AS MENTORS

Each Term One, the teachers and I virtually saturate the students with stimuli and writing strategies during library lessons, with the actual writing being done in their own time. Class teachers are highly involved as mentors, who affirm the students' ideas or suggest avenues for experimentation.

Writing for the competition gives students the freedom to explore and extend themselves with a confidence built up through familiarity with modelled texts. Preparation for writing is wide ranging and explicit, very much a part of the teaching and learning program, and support for the students is ongoing.

## WRITING AND REWRITING

The competition's word limit of 500 words encourages students to consider what they write, to make every word count, and to ensure that every aspect of the story is important to the narrative as a whole.

In the latter part of the term, often during weekly library lessons, the students read their stories and invited peer comment. Reworking of quite large sections of stories is often undertaken as it becomes obvious that good stories can develop brilliance with reworking.

The benefits of reading stories aloud cannot be underestimated. The class teachers and I make ourselves available as often as possible during school days to listen. Students critically evaluate the effectiveness of their own writing during these conferences.

After devoting so many hours to writing, it is their feelings of ownership over their stories which enable students to refine expression or ideas with very little help.

## THE PROGRAM

*NESTLÉ Write Around Australia* is a national program coordinated by the State Library of New South Wales and hosted by public libraries in 50 metropolitan and regional zones across Australia. It was first piloted in Sydney in 1993. It is open to all Year 5 and Year 6 students in Australia (Years 6 and 7 in Queensland and Western Australia). The competition opens in March each year, and entries close in early May.

Creative writing workshops are an integral part of *Write Around Australia*. In addition to special workshops for the 1000 zone finalists, professional children's authors conduct creative writing classes for schools each July in the vicinity of the public libraries hosting the program. Class teachers can book their class into a workshop by contacting the host library where the workshops are being held.

Recently, it was announced that a past Victorian State Winner, Jing Jing Guo, will have her story published as a picture book by University of

Western Australia Press. *Grandpa's mask* will be illustrated by Di Wu, whose previous books have included Allan Baillie's *Rebel!* and *Old magic*.

Information on the 1999 program will be sent to all primary schools in February. *NESTLÉ Write Around Australia* also has a presence on the World Wide Web. Full details of the program, writers' tips, short biographies of participating children's authors and archives of winning student entries can be located at <<http://www.writearound.com.au/>>. Val Noake, the National Coordinator, can be contacted on (02) 9273 1680.

Main Photo (previous page): Allan Baillie and friends at Kempsey Shire Library.



Students using illustrations to inspire writing in a 'round table' activity.



### GETTING THE MOST OUT OF A CREATIVE WRITING WORKSHOP

The organisers of NESTLÉ Write Around Australia have found that the most stimulating and worthwhile workshop situations have been those where the students are already familiar with the work of the guest author. Prior knowledge provides a solid basis for students to ask more informed questions, promote more lively discussion and allow the author to discuss the writing process more easily with participants.

#### Before the workshop

- Provide students with some background on the author, using the **Stuff** link on the official NESTLÉ Write Around Australia Web site, publishers' blurbs in the author's books, or author profiles from such resources as: *Magpies*; *The story makers* series; or *The authors and illustrators scrapbook*.
- Introduce students to the author's work. Provide a reading list and have examples on hand.
- Create a display of the author and their books in the library or classroom.

- Serialise or read extracts of the author's books, discussing setting, plot and characters.
- Have class members dramatise a scene, or present an extract as readers' theatre.
- Brainstorm questions to ask the author.

#### AT THE WORKSHOP

- Take along copies of the author's books from the school library to have them autographed. Students might also have personal copies to be signed.
- Take the school camera to the workshop.
- Students should take pens and paper.

#### AFTER THE WORKSHOP

- Allow time to follow up ideas presented by the author. There won't have been time in the workshop to complete a story; the author may have given the students ideas to get started.
- Read other books by the author and discuss them.

"On the way back to school, the students all wanted to talk at the same time."

Wendi Scifleet,  
Teacher-librarian,  
Warilla Public School,  
Di Bates workshop,  
Shellharbour City Library.



Author Duncan Ball with students at Tennant Creek Public Library.

"Provided another opportunity to focus on text types and allowed students the chance to practise their skills in this regard."

Jane Hayes,  
Teacher-librarian,  
Eleebana Public School,  
John Larkin workshop, Lake Macquarie  
City Library.



Hazel Edwards and young writers at Gympie.

One student, a zone winner in 1997, stated that she enjoyed the program because she "was writing with a real purpose." There was no need to have the story assessed by anyone but herself because "... it was real writing".

### SHARING THE SUCCESSES

The evolution of Dundas Public School's successful participation in *Write Around Australia* demonstrates the benefits of incorporating such competitions into the whole school plan, and the library and class programs. All Year 5 and 6 students are involved in the activities and experiences which relate to writing, and the students are sup-

ported by both classroom teachers and the teacher-librarian as they write.

Over the last two years, most students of Years 5 and 6 have submitted entries, and enthusiasm for the project has been buoyed by the attendance at district workshops by a number of our students. Two students from this school have been selected as zone winners in the past. Not only are prizes (\$500 worth of books each) awarded personally to the zone winners, but an equivalent value of books were awarded to our school library. These books have been accessioned as collections, named in the winners' honour.

As 1998 drew to a close, with much excitement spilling over from the NSW state presentations of winners in the

November, our Year 4 students were already asking about *Write Around Australia* 1999. They have even located the story collection of 1998 state and national winners... on the Internet!

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*NESTLÉ Write around Australia story collection* [series], Nestlé Australia, 1994 - .  
*Storymakers. Part 1 Robin Klein*. [videorecording] Discovery. Film Australia, 1987. ■

"I took a cross section of children, not just talented writers. Every student enjoyed the workshop and was motivated to write. Great stimulus! A really positive experience for reluctant writers."

Mary-Lou Worthington,  
Year 6 teacher, Camden Public School,  
Allan Baillie workshop, Camden Library.

## The language of other subjects

Last year, in *Scan* (vol 17 no 3), the elements of a balanced reading program, and the implications for teacher-librarians in their support of the State Literacy Strategy initiatives, were discussed. In this article, Paul Hardage, Chief Education Officer English in the Curriculum Support Directorate, gives some background on the paradigm shift and what it means to language education.

We used to talk about 'literacy across the curriculum', as though language was merely one of many worthwhile 'perspectives' that teachers were obliged to include throughout their programs. Conscientious teachers accordingly wove threads of English through all the other subjects. Now, however, the paradigm has shifted to such an extent that we talk instead of the inherent language demands of those other subjects. The paradigm shift is there even in a little preposition. It is no longer language across the curriculum. We refer instead to the language of different subject disciplines.

### Language: a social phenomenon

Behind this change lies what can be called a social view of language, which in some places is called a functional view of language. At its heart is the understanding that language is a social phenomenon, a way of making meaning in various social, situational and academic contexts. This view, combined with a post-progressive emphasis on grammar and explicit teaching, enables teachers to deal comprehensively with how language works. This has implications for not only the teaching of English but also the teaching of other subject

disciplines, in both primary and secondary schools.

Its implications for primary teachers and teacher-librarians are great, because primary schools are preparing their students to meet the literacy demands of a range of subjects in secondary schools. This is one of the main insights of a middle years perspective on schooling.

In the 1980s the approach to language across the curriculum took a view of writing determined by the subject English. Relatively little attention was given to subject content or the particular literacy demands of subject disciplines themselves. In *Writing K-12*, for example, suggestions for writing in mathematics included posters, games, quizzes, advertisements, and "a letter to an imaginary friend living in another land or on another planet where they don't have prisms, describing these".

Suggestions for writing in geography included the following, accompanied by a map:

"As the real estate agent for Bishop's Bay Region, compose a *For Sale* advertisement for the luxury house. Your advertisement must emphasise the benefits of the house's location within the Bishop's Bay region."

This sort of activity reflected emerging practices in the teaching of English, ie providing copious writing activities in the belief that learning would accrue from practice. Behind this geography activity was an understanding that the real estate agent had a real life purpose for writing. There was also an implicit geographical purpose, which was to describe the land features.

What was missing, of course, was explicit teaching about persuasive writing and the features of visual and written language used in a *For Sale* advertisement.

### Text types and explicit teaching

The genre movement filled this gap by devising teaching strategies that modelled explicit teaching, based on the premise that using language in certain situations produced predictable discourses. It was believed that students should be equipped to understand and use these discourses, using a system of describing language that was more attuned to language as a social phenomenon.

For teaching purposes, the genre approach categorised the infinite variety of discourses into a finite number of socially determined genres, and modelled strategies for explicitly teaching about their struc-

tures and features. Thus, they would have addressed the *For Sale* advertisement 'genre'.

The great insight of modern linguistics is that language is a resource for making meaning. Because making meaning is socially driven, the variations in language are almost infinite, reflecting the diversity of social and cultural situations. Even an individual has to grapple with this diversity daily.

Language educators, however, are on the horns of this dilemma: how to capture this complexity and diversity, yet make it accessible to students as language apprentices. Text types or genres were originally devised as an attempt to resolve this dilemma, to reduce the almost infinite to something finite. The pitfall of being reductive was hard to avoid.

The genre movement was controversial because many teachers reacted against the tendency to be rigid and formulaic about genres. In some genre classrooms students were penalised for producing writing that did not conform to artificially imposed generic formulae. On the other hand, in some non-genre classrooms students were penalised for producing writing that did not conform to unspecified standards of writing.

Eventually, the genre approach became the orthodoxy in New South Wales, in the *English K-6 syllabus*. The term 'text types' was adopted because 'genre' carried unwanted connotations of controversy. As the result of attempts to institutionalise genres, families of texts are categorised as: **literary text types**, such as narrative, drama and poetry; and **factual text types**, such as discussion, explanation, exposition, information report, procedure, response, and recount. (See also Hutton & O'Dowd, *Scan* vol 17 no 1.)

### Text types and the secondary school

These genres have also been introduced to secondary teachers, because the grammar of text types provide the means to be explicit about what was hitherto implicit. Most primary and secondary educators appreciated the concept of text types because it was accessible and provided the means to fill the gaps left by implicit teaching practices.

Teachers and teacher-librarians also appreciated the instructional practices associated with text types, practices such as: scaffolding; guided reading; modelling; and building technical vocabulary. They also liked learning the discourse of a social view of language, with useful terms like **nominalisation** and **modality**.

The irony is that even secondary teachers of subjects other than English need further support in addressing the literacy demands of their own subject disciplines. This is an irony because these teachers are so immersed in the language of their subject disciplines that they do not necessarily find it easy to be explicit about that language. An informed teacher-librarian can assist these teachers by working collaboratively on programs in which the language features are determined by the purposes of texts. These purposes are determined by subject content and, moreover, dealing with the literacy demands of a subject enhances the delivery of its content.

### Avoiding the traps

The contested issues in literacy education, such as grammar, linguistics, spelling, oral language, writing, phonics and teaching reading, can make many teachers unsure of their own literacy teaching practice. Because it was so accessible, the concept of text types gave confidence about literacy to many educators, particularly teachers of subjects other than English.

However, the text types orthodoxy has a few snares, if we are not careful. These are the now well-known traps of the genre approach:

#### 1. Limiting language use

The wide acceptance of text types poses the risk of multiplying some of the problems of the genre approach, particularly the tendency to limit and constrain students' use of language. For example, students might be required to use the third person consistently in writing a report. A student could thus be penalised for using the second person, but teachers model this all the time, eg talking about "your digestive system".

Language is a social phenomenon, a way of making meaning in various social, situational and academic contexts.

#### 2. School text types

This raises the issue of the disparity between institutionalised text types and pedagogical discourses. It is common practice for teachers to make content personally relevant to students by using language features that are not consistent with the text types.

In some subject disciplines there are text types which are artificially constructed for school, but these text types sometimes only poorly reflect corresponding discourses in real life because their authentic social purposes have been denatured. As a result, their social purpose is not real, particularly when the only audience is the teacher. This also leads to ambiguities, of which 'report' might be an example. As an institutionalised text type it requires the use of present tense but in ordinary usage a report is in the past tense.

School text types are also a problem when they lead to the use of implicit assessment criteria and poor modelling. When assessing students' use of subject language, make it clear to them what sort of language you value and model it accordingly. If you require them in a report to use the third person consistently, then make this explicit. Similarly, if you are not inclined to give high marks for babyish language, then get rid of school text types and teaching practices that elicit it.

### 3. Ignoring real text types

The opposite kind of trap is failing to recognise and value text types that have not been institutionalised, as well as ignoring multigeneric texts (ie texts that combine features of different text types).

Most teachers of writing recognise that a creative approach to writing involves manipulating the classical features of text types. There is a danger that some teachers will not sufficiently value creativity, which often consists of violating the rules of text types.

### 4. Monotony

There is a danger that the language features of text types will be applied monotonously, without regard to variation in style, which is a feature of good English usage. An example of this is the insistence on nominalisations rather than verbs, too much of which is monotonous.

*Explicit teaching of text and language features helps all students to achieve greater sophistication of language and understanding.*

### Axioms of language teaching

So, being aware of the pitfalls listed above, the Literacy Strategy emphasises those aspects of teaching the language of other subjects that give us the strongest foundations. These are:

#### 1. Social purpose

In teaching the literacy demands of subject disciplines, our starting point should be the social purposes of texts. Text types are a means, not an end. They are merely convenient labels for some different ways in which language is used. The features of text types are determined by the writer or speaker's purpose. The text types themselves should not always be our starting point for teaching literacy, lest they limit the scope and range of language use.

#### 2. Explicit teaching

Explicit teaching of text and language features helps all students to achieve greater sophistication of language and understanding. Explicit teaching and explicit assessment criteria actually help students to achieve more independence and take more responsibility, because it gives them more control over their learning.

#### 3. Subject-specific language use

Different subjects use language in different ways. As subject specialists, secondary teachers are themselves immersed in this language, so they are encouraged to immerse students in the same language. Primary teachers, on the other hand, have the challenging task of modelling the language demands of different subjects.

Teachers should not withhold this language, and they should neither model 'baby' language nor encourage it in students.

We continue to emphasise the value of teaching subject-specific vocabulary. Avoiding this language has short-term benefits but ultimately doesn't work.

#### 4. Good language use

Teachers should encourage not only subject-specific language but also good language generally, including good models of texts for students to emulate. They should not construct or use texts that have artificially limited vocabulary and features, in the mistaken belief that such texts are more accessible for students in early stages of language development.

#### 5. High expectations

The influence of expectations is known to educators as the Pygmalion effect. That is, people will generally behave the way they are treated, fulfilling our expectations of them. The great art of teaching is to find the zone in which students are challenged, interested and engaged. Talking down to students and assuming that they are not capable of engaging will ensure that they never do engage.

#### 6. Grammar

Grammar is the analysis of subject-specific language patterns, features and conventions. It also understood as the basic, accessible and essential metalanguage that is useful for all teachers. We should therefore continue to teach students *about* reading, writing, talking and listening, as well as teach them *how* to read, write, talk and listen.

#### 7. Authentic texts

Effective, real, whole texts provide the best models of language use. All learning activities should, as far as possible, be designed around real texts. Authentic texts, both spoken and written, provide models for teaching students how language works to achieve particular purposes. We should not only provide real texts but also elicit them, that is, encourage students to create texts for real purposes, for audiences other than the teacher.

#### 8. Multigeneric texts

When students understand text types they should be encouraged to manipulate them. This includes effectively combining the features of different text types. Multigeneric text types should be valued and taught, because few texts in reality conform to any generalisation about genres. In fact, *most* real texts are like this; social purposes are varied.

#### 9. Explicit assessment

Teachers feel empowered by dealing with curriculum-based, explicit assessment criteria. The use of these marking criteria opens up literacy teaching for many teachers, complementing their holistic assessment practices. It involves recognising, for example, the importance of subject-verb agreement, teaching students how important it is, and teaching them how to get it consistently. We should continue to emphasise explicitness about assessment criteria. At the same time, we should have less emphasis on assessment criteria that are narrowly focussed on artificial features of text types.

### 10. Spoken language and reading

We should maintain an inclusive view of literacy, which includes reading, writing, oral language and critical literacy. There should be due emphasis on dealing with the reading demands of subject disciplines, which often involves subject-specific research techniques.

Where appropriate, we should also include more support for teachers on the differences between spoken language and written language and the implications of this.

### Using new ways with language

The content of subject disciplines differ from each other. Embedded in these differences are the different language demands that subject disciplines make. Engaging in these subject disciplines really involves learning and using new ways with language. It is like joining a new club. You can join up, pay your dues and attend all the meetings, but you will never really belong until you walk and talk like the other members.

This is why learning the language of other subjects is a matter of walking the walk and talking the talk. The

Literacy Strategy offers teacher-librarians, with their unique position in schools, knowledge of resources, and management skills, many opportunities to support their teaching colleagues in embracing these new ways with language.

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*We should maintain an inclusive view of literacy, which includes reading, writing, oral language and critical literacy.*

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# Rich assessment tasks: exploring quality assessment for the School Certificate

In programming syllabus outcomes, resource based teaching and learning units can be designed to develop information skills and information literacy for all students. During 1998, subject based assessment materials were published in English, mathematics and science to assist teachers of those subjects to implement the revised School Certificate Grading System. The materials were distributed to all secondary schools in New South Wales for English, mathematics and science faculties. Frances Plummer is a Senior Project Officer with the *Securing Their Future* Professional Development Team. In the following article, Frances explores some opportunities for teachers and teacher-librarians to collaboratively plan units of work which effectively integrate teaching, learning and assessment.



This article is the first in a series of four, to appear in *Scan* throughout 1999. The purpose of this introductory article is to begin exploring the elements of effective assessment. The role of the teacher-librarian is highlighted in the real context of teaching and learning practices, in particular, for the School Certificate. Follow-up articles will focus on:

- 'Collaborative task design', *Scan* vol 18 no 2
- 'Designing the scaffolding for rich assessment', *Scan* vol 18 no 3
- 'Taking the learning further', *Scan* vol 18 no 4.

## How has assessment for the School Certificate evolved?

In 1991, the Board of Studies introduced the School Certificate Grading System. Since then, School Certificate grades in courses other than English, mathematics and science have been awarded by schools on the basis of Course Performance Descriptors issued by the Board of Studies. Course Performance Descriptors for awarding a grade for the School Certificate are summary statements which describe student achievement at the end of Stage 5.

In 1998, Course Performance Descriptors in English, mathematics and science were developed by the Board of Studies to assist teachers award grades to their students in those courses. Students are now awarded grades A-E in all courses, based on school-based assessment of students' achievement, with reference to the Board of Studies' Course Performance Descriptors.

Also in 1998, the School Certificate Test replaced the School Certificate Reference Tests. Information on the

revised School Certificate can be found in *The School Certificate grading system: a guide for teachers* (Board of Studies NSW, 1998).

## What are the key elements of the School Certificate Grading System?

- Assessment for the School Certificate assesses what a student can do, knows and understands. This represents a shift in assessment practice where students were ranked and compared to each other.
- Student performance is matched to a set of Course Performance Descriptors based on evidence collected through assessment tasks and classroom activities.
- Student achievement at the end of Stage 5 is reported as a grade in all subjects.
- Students receive their own results of the English-Literacy and Mathematics tests.
- Moderated grades are no longer provided.

## What does this mean for teacher-librarians?

The collaborative planning relationships model integrates approaches to teaching, learning and assessment for units of work. Teacher-librarians are familiar with this practice. However, the new School Certificate Grading System suggests further implications for teacher-librarians in designing units to provide students with a range of opportunities to demonstrate achievement. These would include:

- knowing how to modify current tasks to maximise evidence of student achievement from that task, ie developing authentic, or 'rich', assessment tasks
- designing new tasks that provide students with a variety of methods of achieving the syllabus outcomes and objectives, ie incorporating information skills, cooperative learning activities, written reports and products, oral presentations
- applying the assessment criteria for peer and teacher judgments of student achievement
- developing scaffolds to assist teachers to design more effective tasks
- knowing that improving and refining tasks is an ongoing process
- understanding how assessment informs the design of units of work and programming.

## What is a rich assessment task?

Assessment tasks can be both formative and summative. They can also provide useful information for grading if the elements of rich task design are considered when constructing tasks. Assessment tasks are 'rich' if they provide assessment information across a range of course outcomes within one task, optimising students' expression of their learning. Rich assessment tasks then reduce the need for more assessment.

Rich assessment tasks:

- explicitly describe the expectations of the task to the learner
  - engage the learner
  - connect naturally with what has been taught
  - provide opportunities for all students to make a start
  - are learning activities
  - provide opportunities for students to demonstrate subject knowledge, skills and understandings
  - focus on the critical areas of learning within a subject
  - assist teachers to determine the specific help which students may require in content areas.
- (Further information can be found in *Securing their future: subject based assessment materials for the School Certificate in mathematics*, p 8.)

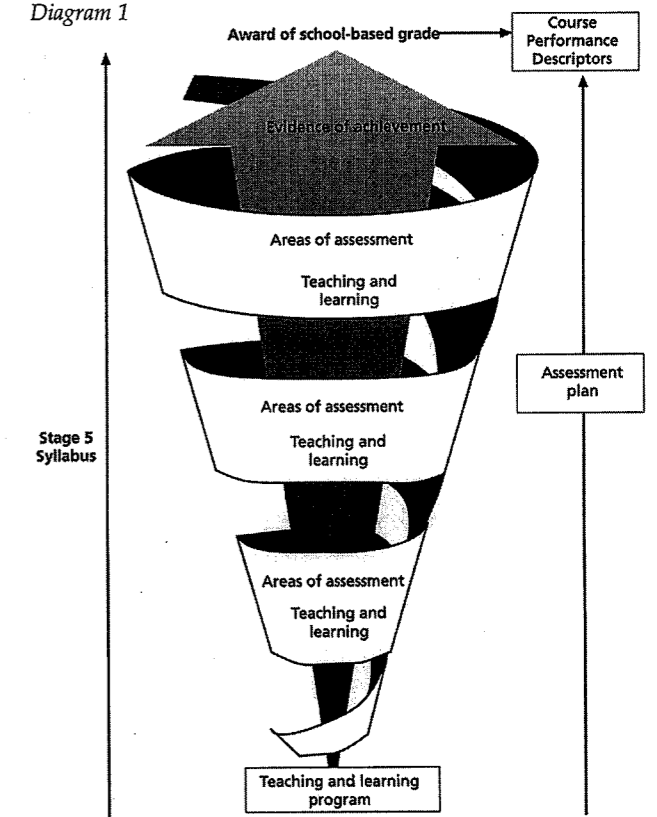
Teacher-librarians will recognise these elements as those they incorporate in designing units of work for resource based learning. Articles by Jackie Hawkes (*Scan* vol 17 no 2) and Lorraine Bruce & Owen Belling (*Scan* vol 17 no 3) highlight the application of these elements in the teacher-librarian's collaborative planning with teachers.

## Designing a rich assessment task

To provide evidence of student achievement, consideration needs to be given to the task design. If we believe assessing student achievement is an integral part of the teaching and learning cycle, we can use assessment to evaluate student progress (formative assessment) which informs our planning for the next phase in the teaching sequence. This spiral approach to programming is represented in Diagram 1.

During 1998, a range of professional development opportunities was made available to schools in English, mathematics and science. The materials provided to secondary schools describe the notion of developing rich assessment

Diagram 1



tasks. To identify what these resources look like, and to find out more about professional development support for secondary teachers, visit the *Securing their future* professional development Web site at: <http://www.tafe.nsw.edu.au/oten/future>

## Elements of authentic assessment

Assessment of this nature gathers all the information the teacher needs to determine the level of each student's achievement. It represents elements of authentic assessment by:

- assessing what is taught and learnt in a unit of work
- assessing what you have told the students you plan to assess
- matching the assessment criteria to the task
- communicating explicit assessment criteria to the student as part of the task
- accommodating the needs of different students to capture the full range of student performances.

## Resources

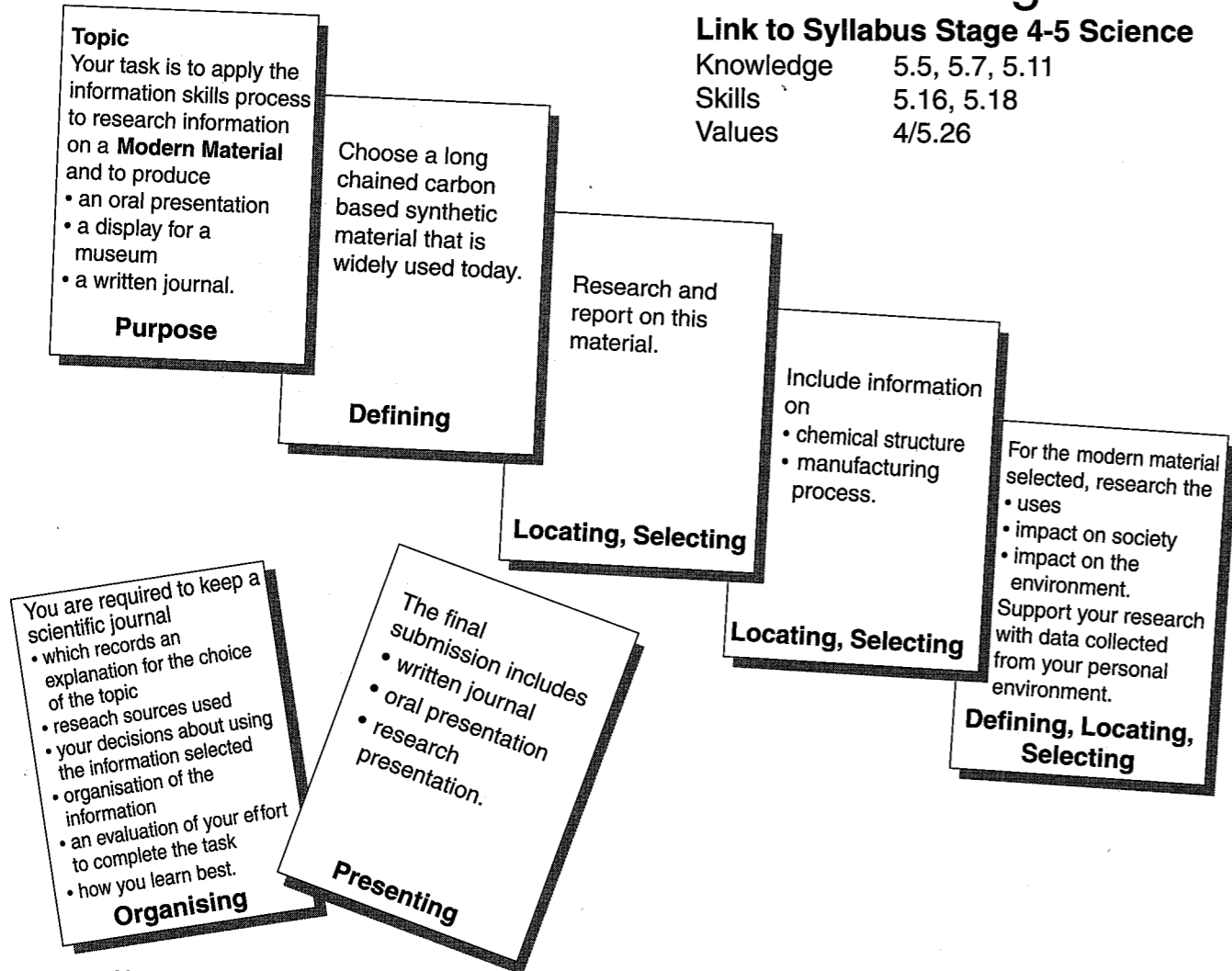
To support teachers in designing rich assessment tasks, and as part of the *Securing their future* strategy for implementing the revised School Certificate Grading System materials in English, mathematics and science were provided to all secondary schools in New South Wales.

These materials contain advice on:

- how to design rich assessment tasks
- sample assessment tasks from trial schools, which worked with academic mentors to develop tasks in their school context
- samples of student responses to the published tasks.

Diagram 2

# Modern Materials Research Assignment



## Link to Syllabus Stage 4-5 Science

Knowledge 5.5, 5.7, 5.11  
Skills 5.16, 5.18  
Values 4/5.26

Name:..... Class:.....

**Assessing:** Student achievement will be based on the following assessment criteria:

Assessment Criteria	low → high				
	<b>Information about modern material</b>	identify a modern material that has an impact on society	describe a modern material and its effects on society and the environment	describe at least two ways in which the use of a modern material has changed society and the environment	classify the impacts of the uses of a modern material on society and the environment
<b>Apply information skills process</b>	extract the relevant information about a modern material from a single resource	research information from two sources	select and summarise relevant information about a modern material from more than two types of sources	construct an appropriate presentation about a modern material, which blends information from a variety of sources	evaluate information, present a logical argument and identify future implications of the use of a modern material
<b>Presentation</b>	construct simple presentations about a modern material with guidance	construct simple presentations about a modern material without guidance	present simple information effectively	present complex information and simple arguments effectively about the impact of a modern material	explain why their method of presentation is the most effective way of communicating complex information and arguments about a modern material

## Models of rich assessment

The subject based assessment materials in English, mathematics and science provide models of rich assessment tasks. These materials were a joint project of: the Department of Education and Training; the Catholic Education Commission; the Association of Independent Schools; and the Board of Studies. The sample assessment tasks were developed by thirty trial schools across the three sectors.

The English and science tasks were based on existing syllabuses. Some tasks were drawn from current assessment practices and enriched to incorporate the elements of effective assessment. Others represented new ideas, for example *English snapshot 10: Reading visual and written texts/speaking in an interview* and *Science snapshot 7: Using a field study*.

Students in each of the trial schools completed the assessment tasks. Sample student responses were collected, annotated and published in the materials to describe the range of student achievement collected from the tasks.

The mathematics tasks were developed from the new Mathematics 7-10 syllabus, designed to draw upon a range of content objectives, and completed by students in the trial schools.

## The information skills process

Applying the information skills process of **defining, locating, selecting, organising, presenting, and assessing** to the development and/or modification of these tasks in your school context provides all students with enriched opportunities to demonstrate what they know and can do.

## Snapshots of rich assessment

### Science

This snapshot (Diagram 2) has been chosen to demonstrate how the activities in the *Securing their future* documents reflect opportunities for teacher-librarians and teachers to collaboratively plan integrated teaching, learning and assessment units. It represents a model, and suggests ways for modifying existing tasks, or for designing new tasks from existing and new syllabuses.

This task is the result of modifying **Task 8** (*Science materials*, p 61). The task design links the outcomes, from the new Stage 4 & 5 syllabus, to an investigation of a modern material through a research assignment. The links between this task and the new science syllabus are:

### Knowledge:

- 5.5 Analyses how current research might affect people's lives.
- 5.7 Relates properties of elements, compounds and mixtures to scientific models, theories and laws.
- 5.11 Analyses the impact of human resource use on the biosphere to evaluation methods of conserving, protecting and maintaining the earth's resource.

## Skills:

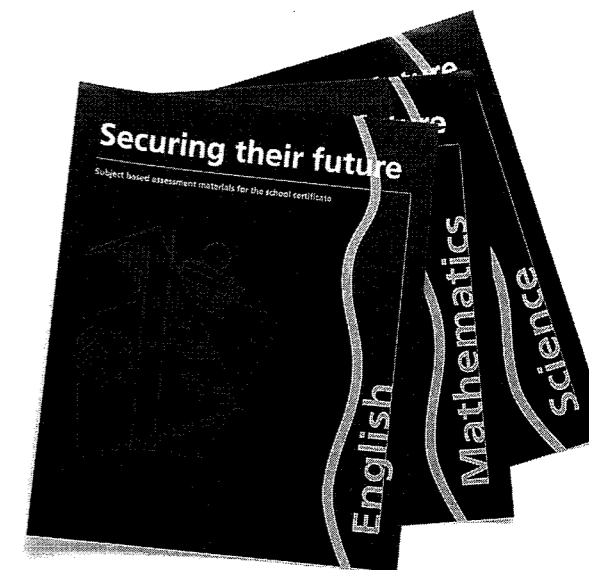
- 5.16 Accesses information from a wide variety of secondary sources.
- 5.18 Selects and uses appropriate forums of communication to present information to an audience.

## Values:

- 4/5.26 Recognises the role of science in providing information about issues being understood and in increasing an understanding of the world around them.

The research assignment features the following elements of 'rich' task design:

- addresses a range of outcomes in one task
- makes explicit the purpose of the task and the assessment criteria to be applied to the final products
- connects naturally with what has been taught
- engages the learners, while giving all students an opportunity to make a start
- provides choice and openness
- is, in itself, a worthwhile learning activity
- draws on previous and current learning experiences.



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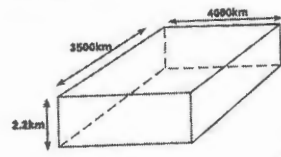
These tasks are built on stimulus material that could be collaboratively planned and collated. These types of tasks can be included in integrated units across key learning areas, or as starting points for further research by students. Students could use sources accessed through the library to create their own tasks in mathematics as part of a peer sharing activity (*Mathematics materials Section 2, Tasks 10, 18, 21*).

Name: \_\_\_\_\_

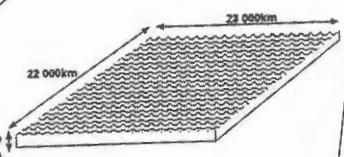
### 10. Greenhouse Effect and Antarctica

As the countries of the world consider the effects of global warming, one concern is that if the ice on Antarctica was to melt, world sea levels would rise, causing great destruction in low-lying countries.

The ice at Antarctica can be considered to be equivalent to a huge block of ice with the measurements 4000 km by 3500 km by 2.2 km as shown:



The oceans of the world can be thought of as equivalent to the area of a rectangle (22 000 km by 23 000 km).

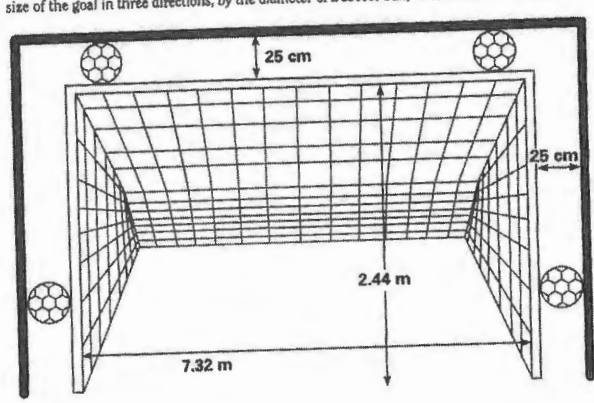


Use the information above to predict the average rise in sea levels that would be caused if the ice presently covering Antarctica was to melt. Please show all your working below:

Name: \_\_\_\_\_

### 18. Soccer Goals: How Big is Big Enough?

In an effort to increase the number of goals scored in soccer, it was proposed to increase the size of the goal in three directions, by the diameter of a soccer ball, as shown in the picture.



- What would be the percentage increase in the area of the soccer goal, if this recommendation were accepted?
- If this soccer goal was increased by this percentage, would you predict that the number of goals would also increase by the same percentage? Please explain your reasoning.

Name: \_\_\_\_\_

### 21. What Australians Eat and Drink

The information in the table below shows the amount of food and drink which Australians ate and drank on average in 1989 and 1995, for certain items:

Drink per person (Litres)	1989	1995
Beer	113.9	95.4
Wine	18.4	18.2
Soft drink	97.5	108.1
Milk	100.8	103.0
Tea (kg)	1.1	0.9
Coffee (kg)	2.0	2.2

Food per person (kg)	1989	1995
Red meat	85.1	72.9
Poultry	24.7	27.2
Butter	2.9	2.9
Cheese	8.8	9.7
Margarine	6.5	5.3

Write a brief newspaper article below (with heading), discussing the issues raised by these data, with possible explanations for the changes over time. Your article should be around 100 words.

Mathematics

Rubric scores	Summary/Description (Used for areas of assessment: Geometry, Number, Measurement and Trigonometry, Chance and Data, Algebra, Working Mathematically)	Grades and General Performance Descriptors (Awarded if the scores across a number of tasks over a range of assessment areas over time "balance out" around the score in a given row)
1	Task accomplished. Central mathematical ideas clearly demonstrated and understood. If appropriate, student has applied processes and skills to new situation. Appropriate plan. Clear communication of strategies and mathematics used. Shows ability to apply necessary skills to new situations.	<b>A: Excellent Achievement</b> The student has an extensive knowledge and understanding of the course content and can readily apply this knowledge. In addition, the student has achieved a high level of competence in the processes and skills of the course and can apply these skills to new situations.
2	Task accomplished, but there are minor flaws in diagrams, description, calculations or application of processes and skills to new situations. Reasonable plan. Communication or reasoning lacking to some extent. Some ability to apply necessary skills to new situations.	<b>B: High Level of Achievement</b> The student has a thorough knowledge of and understanding of the course content and competence in the processes and skills of the course. In addition, the student is able to apply this knowledge and skills to most new situations.
3	Substantial progress towards completing the task; indicative of understanding of relevant knowledge, concepts and skills; but some key ideas may be missing. Some evidence of planning; some communication of strategies and mathematics used.	<b>C: Substantial Achievement</b> The student has demonstrated attainment of the main knowledge and skills of the subject and has achieved a sound level of competence in the processes and skills of the course.
4	Attempt at the task shows some progress has been made; partial but limited grasp of the central mathematical ideas; reveals gaps in knowledge, conceptual understanding and/or relevant skills. Little evidence of effective strategies, communication or reasoning.	<b>D: Satisfactory Achievement</b> The student has demonstrated an acceptable level of knowledge and understanding of the course content and has achieved a basic level of competence in the processes and skills of the course.
5	Little progress or understanding evident, limited competence in processes and skills. Ineffective strategies, communication or reasoning.	<b>E: Elementary Achievement</b> The student has an elementary knowledge and understanding of the course content and has achieved limited competence in some of the processes and skills of the course.

8

This completed sample scoring rubric is based upon making a holistic judgment on a single piece of work, rather than assigning marks to small parts of the task and combining them. The left column describes levels of achievement for individual tasks in the areas of assessment in mathematics. Beside this column is a restatement of the grades and General Performance Descriptors for the School Certificate. ■

# Mathematics $\neq$ collaboration $\neq$ technology $\neq$ success

Many schools have chosen to locate their Internet connections in the library. This decision implies opportunities for teacher-librarians to collaborate with teachers in key learning areas not considered to be traditional 'library subjects'. In the Albury Education District, mathematics is bringing together students, educators and technology with exciting results. **Cynthia Maher** is teacher-librarian at Holbrook Public School, an eight-teacher school with 191 students. **Peter Graham** is a Year 6 teacher and the school's mathematics coordinator. **Brian Lannen** is Mathematics Consultant, Albury District. In this article, they report on the successes of the MEGA project in mathematics.



**A**t Holbrook Public School, three students from Peter Graham's Year 6 class took part in the MEGA project. These students' seemingly insatiable appetites for mathematics are being satisfied through a virtual classroom. MEGA, or Mathematics Extension Group Albury, was trialed in 1998 for 26 primary students from the Albury Education District schools of Holbrook, Talbingo, Mulwala, Walla Walla, Jugiong, Thurgoona, Tumut, Franklin, Glenroy and Khancoban Public Schools.

Although separated by as much as 300 kilometres, the students are united through information technology: a virtual classroom, linked by email; the *Albury District Internet users home page*; other sites on the World Wide Web; fax; and conventional mail services.

A staff representative from each school, and the district's mathematics consultant, collaborated to produce a variety of challenging extension assignments for the gifted and talented students, who are drawn from Years 4, 5 and 6. The nature of the assignments varied from one fortnight to the next, as they tended to be developed from the different teachers' areas of interest and expertise. In this way, the teachers also learned from each other and gained new ideas that could be adapted for the remainder of their class.

Some of the assignment topics had value in reinforcing skills from the *Mathematics K-6* syllabus, while others provided a lead in to High School mathematics, such as algebra. All of the activities utilised technology to some extent. Teacher-librarians, often a school's expert on matters pertaining to email procedures, the Internet, and information literacy, were able to play important supportive roles for the teachers and the students involved in the project.

## Meeting individual needs of students

The MEGA project was developed by teachers in response to the perceived needs of students in their schools. The standard mathematics curriculum is designed to meet the needs of all students, and teachers naturally assess and cater for the individual students in their class, even if the class contains students of a wide range of abilities.

Occasionally, there may be two or three students in a class who, due to their high interest and ability, require a particularly varied amount of challenging extension work. The MEGA project aims to bring these students together, allowing them opportunities to share their joy of mathematics with other, like-minded students. The students devoted several hours at home and school in order to resolve the assignments and investigations.

## MEGA program guidelines

The original plan for MEGA stated that:

- MEGA class enrolment be a maximum of three students per school (tolerance of one, but in such cases students would combine for project work so that no more than three assignments per school are submitted to the duty teacher for correction).
- Information about the program and the assignments may be made available to other schools, possibly via an Internet site.
- Assignment work should take approximately four hours over a fortnight to complete (one hour per week programmed school time and one hour per week homework).
- Time between the setting of an assignment and when reports are due to the teacher shall be two weeks.
- Any students requiring extension time beyond the two weeks (due to unusual circumstances) should negotiate such directly with the duty teacher.
- Assessment of assignment work shall be constructive and non competitive.
- Cooperative learning, both within and across the different school sites, is encouraged.

## Activities for a virtual class

The ten teachers and the district mathematics consultant took it in turns to be in charge of the virtual class. The 'teacher on duty' would set an assignment for the group. It was expected that one hour per week at school and one hour per week at home would be devoted to working on each assignment. The school time often required Internet access, although Internet access was not required during the home time.

Activities included:

- Outdoor maths
- Older mathematical terms
- Chance and data
- Graphs and spreadsheets
- Sporting tour (accessing sites on the Internet and using email to plan a tour of the local district.)
- Newspaper maths (predicting how many pages are in a newspaper from a single sheet.)
- Triangulation (calculating heights of trees, flagpoles or tall buildings, using different methods such as measuring shadows and angles of elevation.)
- Tower of Hanoi game (moving different sized discs according to a set of rules and extrapolating the pattern to see how many moves would be needed for five, six or more discs.)
- Interesting shapes (pentagons, cones and mystic roses, explored via accurate drawing and model making.)
- Perimeter and area problem (using a spreadsheet as a tool to explore the relationship between a constant perimeter and a changing area.)

*The students are united through information technology: a virtual classroom, linked by email.*

### Opportunities for achieving information literacy outcomes through mathematics:

- The first form of contact between the students involved in MEGA was short biographies about themselves, sent to other participants via email.
- All information gathered for a tour through the MEGA district came from the Internet and email. The students managed to locate: petrol prices in various New South Wales towns and cities; transport and accommodation costs; food expenses; and fees for tourist activities and entertainment.
- Mapping skills: Also for the tour around the district, students needed to know the exact location of each school, how to calculate distances from a map, and costs per kilometre. The precise use of atlases and maps was a requirement here.
- Information skills, dictionaries and encyclopaedias were used to research the local history of NSW towns, and investigate the origins of older mathematical terms, such as 'fathom', 'knot', 'gallon' and 'baker's dozen'. This information was then used to create pieces of writing in various text types (eg information reports and explanations).
- Graphing skills; following a procedure: The instructions for an experiment were interpreted, in which the effects of different paint colours of soft drink cans were measured by gauging the temperature of water, compiling results on a spreadsheet, then expressing them as computer generated line and bar graphs.



Tower of Hanoi

### Mathematics sharing day: a culmination

While the virtual classroom proved to be an effective way of linking the mathematical minds, the bonding went a step further, in November of last year, when the targeted students and their teachers came together at Holbrook Public School for **Maths Activity Day**, which allowed the students to meet face to face and share an itinerary of intriguing mathematical activities. This was a culmination of the year's achievements in mathematics, and successfully integrated other key learning areas such as human society and its environment (HSIE), creative arts and English.

Each of the teachers who had set assignments discussed the outcomes with the students. Other programmed items included: a variety of sports maths activities; a maths trail which wound through Holbrook's playground; and group construction of a three dimensional geodesic dome, which was large enough to hold a car. There was also time set aside for MEGA teachers to reflect on the project and plan for 1999, and opportunities for students to polish further their email and Internet skills.

### A day of activities

On the day, the students introduced themselves via interesting ice breaking activities, including a personal challenge test of 65 items, which featured lateral thinking puzzles such as:  $26 = L$  of the A;  $1001 = AN$ ; and  $1812 = O(T)$ . (Answers: 26 letters of the alphabet; 1001 Arabian nights; 1812 overture.) This activity demonstrated that numbers surround us in many everyday expressions.

An outdoor maths trail was set up, where the students were put into random groups of three using matching cards of numerals, Roman numerals and number sentences. Problems such as "How far is a stone's throw?" required that the teams collaborate with each other. It was up to each group to seek the advice and equipment needed to solve the puzzles.

Another challenge was to find groups of three trees which formed, exactly, equilateral and right angled triangles. This required knowledge of terms and good estimation of angles. Calculating the number of bricks in a wall was another challenge. The students were not allowed to count the bricks, but had to use their knowledge of the concepts of area and square centimetres to transfer their skills to use bricks as the unit of measurement.



MEGA students use a small model to construct a full size geodesic dome.

Measuring the distance in metres between two trees, in another activity, was particularly challenging because no formal measuring device was permitted.

Sports and mathematics was the theme of the next activity. Using tape measures and stopwatches, the students undertook different sporting activities and compared performances.

The afternoon was devoted to erecting a geodesic dome. The students had to make a three dimensional structure using dowels and joiners. They could follow a model but, otherwise, no instructions were available. Different coloured dowels indicated different lengths, and these had to be used in the same positions as in the model, or the construction would not work. Trial and error saw this to be true.

### Evaluating the MEGA project

While the students were actively involved with their dome construction, the participating teachers reviewed the year's program. The following strengths were noted:

- The students communicated with a common purpose in mind.
- Students often set challenges for each other, such as in the *Interesting shapes* activity, where, the challenge became "Who could get the most pentagons nesting inside one another on an A4 sized piece of paper?"
- All three content strands of mathematics were covered in the range of projects.
- There was a strong focus on the outcomes of the **Working mathematically** process strand.
- The district Web site is an effective way to share projects in an electronic form.
- The school library is a valuable source of information for projects of this nature.
- The teachers of the participating students were actively involved with setting and commenting on the projects, with many working collaboratively with colleagues such as the teacher-librarian.
- Many aspects of MEGA have exciting implications beyond schools' gifted and talented programs.

The students and staff gained much from the activity day, and MEGA as a whole. It is hoped to that this district will hold two such student days in 1999. The first is planned for early in the year, before project work commences, so that the students can meet, pass on information needed to communicate with each other by email, and develop friendships that would be useful for networking. A culminating activity day, similar to 1998's day, would reinforce the project work and student learning outcomes, and consolidate friendships.

### REFERENCES

Albury District Internet users home page (online) at:

<http://www.ozemail.com.au/~d0201ad1/>

Gould, P. 'Mathematics K-6: the outcomes addendum', *Scan* 17(3) August, 1998, p 4. ■

# Maths on the Net: making a difference

As Mathematics Consultant, Broken Hill District, Jan Cook was part of a team which initiated *Maths on the Net* to develop mathematical thinking through the use of technology, and to enhance communication between students in some of New South Wales' isolated school communities. These initiatives have inspired other districts to trial similar projects, such as MEGA.

**M**aths on the Net is a program which integrates technology, mathematics and problem solving, while enhancing communication between students and school communities. Key features of the program include: using the Internet to communicate between students and schools in real time; posing and solving open ended mathematics questions; developing cooperative skills through virtual teams; applying literacy skills in mathematics; and ongoing training and development of staff, students and communities.

## Outcomes in mathematics

Primary schools in the Deniliquin and Broken Hills districts of New South Wales were encouraged to adapt *Maths on the Net* into their whole school plan, using these identified outcomes:

- Networks are strengthened for isolated school communities.
- Whole school approach is used to think mathematically and solve problems.
- Students use mathematical problem solving skills to pose and solve problems.
- Students utilise mathematical problem solving skills in everyday situations.
- Students increase knowledge and understanding of contextual and situational language.
- Students, teachers and parents increase their technological skills.
- Students, teachers and parents understand the role of technology and use it for communication.

*Maths on the Net* was launched across the two districts at a Small Schools Curriculum Day. Activities on this day included: identifying student teams (peer teams across schools); practice sessions for student teams in problem solving; a teacher workshop; and a parent workshop.

The program was scheduled across two terms in 1997, beginning with students in Stage 2 and Stage 3 emailing questions to each other in district clusters. At first, this was more to practise the communication tool than to develop mathematical thinking. During the program, mathematics consultants provided open ended questions on the Internet, and also suggested print resources and Web sites to visit.

## A collaborative effort

The *Maths on the Net* Web site, which continues to support this program, was developed by Deniliquin District's technology adviser, Ian Large, and mathematics consultant Roger Dainton. Examples of the type of mathematical problems circulated amongst the schools can be seen at: <http://www.ozemail.com.au/~d0211dd1/MotN.html>

The volume of email between schools was easily monitored via a process of students 'carbon copying' their correspondence to district consultants. Very clearly, there was very regular contact between the school networks. This strategy also assisted consultants to assess the quality of questions and solutions being shared. It was encouraging to note that, although there was

evidence of students having sometimes received closed questions, these were subsequently 'opened up' by the recipients and an improved, open ended version of the question had been returned to the sender.

On a school level, classroom teachers found that the location of an Internet connection in the library sometimes led to new opportunities to collaborate with their teacher-librarian.

Many schools, and other districts, have continued to develop the concepts of the program throughout 1998. In the Albury District, for example, gifted and talented students across ten schools were targeted by the MEGA (Mathematics Extension Group Albury) project. (See previous article.)

## A positive response

Teachers were initially concerned that the program would take up more of their time. However, the way the *Maths on the Net* was structured, they were able to integrate it into regular lessons with a minimum of effort.

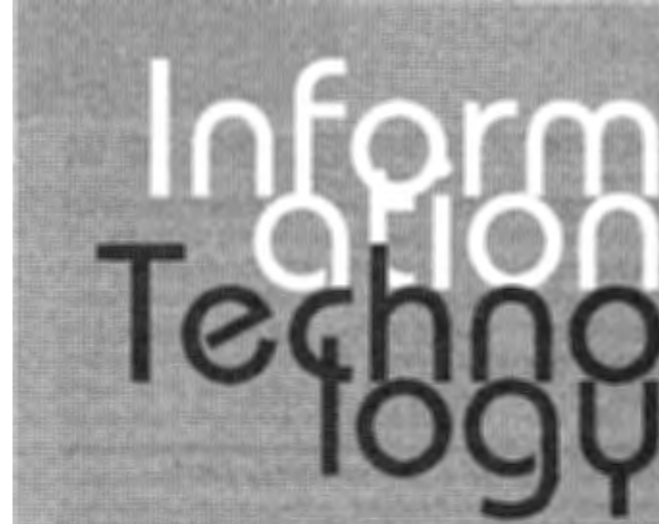
Both students and teachers were enthusiastic about:

- having a purpose for using available computer technology
- being given support to access available technology
- having a forum to contact peers in other schools.

Teachers were also positive about the improved mathematical outcomes for their students, and the collaborative experiences with teacher-librarians and other support staff. Many teachers, who had had previously expressed frustration about limited opportunities to develop problem solving strategies and undertake mathematical investigations in their classrooms, noted that *Maths on the Net* was supportive of teachers and students, and a good impetus to plan, program and teach a range of problem solving and other investigations in mathematics.

## REFERENCES

- Gould, P. 'Mathematics K-6: the outcomes addendum', *Scan* 17(3) August, 1998, p 4.  
*Maths on the Net* (online) at Deniliquin District Internet users:  
<http://www.ozemail.com.au/~d0211dd1/MotN.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>>.

## About Little Horus.

[http://www.horus.ics.org.eg/html/about\\_little\\_horus.html](http://www.horus.ics.org.eg/html/about_little_horus.html)

Little Horus is an endearing character who takes students on a tour of his country, Egypt. Part of the larger *Horus Web site* <<http://www.horus.ics.org.eg/>>, information included on Egyptian history makes it a very worthwhile starting point for Stage 4 students. **History** is useful for both primary and junior secondary students, with a number of relevant topics dealt with under **Pharaonic**; **Greco-Roman**; **Coptic**; and **Islamic** history. Each section is then broken down into further divisions relating to people and events. A welcome inclusion to this site is the equal attention paid to Egypt today: its culture; economy; leaders and places of interest. The data in each sub section is concise and uses age appropriate language. The information presented to students would enable them to complete units of work about Egypt's history or current events. R. McDowall, N. Paull

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6; History Stages 4-5  
**SCIS SUBJECTS:** Egypt  
**KEYWORDS:** Egypt; Egyptian history; Horus  
**PUBLISHER:** RITSEC, Egypt  
**REVIEW DATE:** 17/12/98

## All about computers - Olympic timing.

<http://school.discovery.com/fall97/programs/allaboutcomputers/olympictiming/>

The coming Sydney Olympics makes this well organised site very relevant. A simple tutorial structure provides questions; discussion topics; and activities to develop student understanding about the Olympics; and the use of computer technology to perfect timing of events. Easily navigated, the site provides guidance for teachers via a segment overview; and academic benchmarks. Whilst there are no graphic images to motivate students, literacy support is available via definitions supported with good quality *QuickTime* sound recordings. In addition, separate answers to focus questions; and suggested readings and resources that can be used to support the further research into the topic, are provided. D. Wilson

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**KLA:** HSIE; Science; ST; TAS  
**SYLLABUS:** Computing Studies 7-10; Design & Technology 7-10; HSIE K-6; History Stages 4-5; Science & Technology K-6; Science 7-10  
**SCIS SUBJECTS:** Computers; Computers in sports; Olympic games  
**KEYWORDS:** Computers; Olympic; timing;  
**PUBLISHER:** Discovery Communications, Inc, USA  
**REVIEW DATE:** 17/12/98

## Australian Copyright Council home page - online copyright information.

<http://www.copyright.org.au>

A site such as this is a gold mine of information on issues of copyright and should be bookmarked by everyone! It is possible to access newsletters, **Information sheets**, and books available relating to local and international copyright. Of particular interest to teachers are the **Information sheets** (which may be freely downloaded) on issues concerning: computer software; research and study; performances in schools; the Internet; and recording and showing television programs. Many of these have been updated recently and contain significant relevance for educational institutions, including in the syllabus areas of dance, drama, and music. This site is logically structured so that related materials and seminars are linked to specific content pages; it is a comprehensive and invaluable guide. E. Maxwell

**USER LEVEL:** Professional  
**KLA:** CA; English; HSIE; LOTE; Mathematics; PDHPE; Science; ST; TAS; VOC ED  
**SCIS SUBJECTS:** Authors and publishers; Copyright; Publishers and publishing  
**KEYWORDS:** Copyright; performances; publications  
**PUBLISHER:** Australian Copyright Council  
**REVIEW DATE:** 21/12/98  
**EVAL:** Highly recommended

## Australian Olympic Committee: primary school education kit.

<http://www.australian.olympic.org.au/educate/primary.html>

The official 2000 Sydney Olympics site for primary students is text based. It covers: Olympic history; spirit; and participation. Students access information on topics such

as: Paralympics; Women at the Olympics; the Ancient Olympic Games; Fairplay; Technology; Nutrition; and Australian Athlete profiles. Exploring these profiles presents a table which details the year of the games, names of Australian competitors, the sport and event, and the time or distance achieved. It covers all the games of the modern Olympics. The site appears to have been created in 1996 and not updated since. Sound reading skills are essential. L. Ward

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** HSIE; PDHPE; Science; ST  
**SYLLABUS:** HSIE K-6; History Stages 4-5; PDHPE K-6; Science 7-10; Science & Technology K-6  
**SCIS SUBJECTS:** Olympic Games  
**KEYWORDS:** Athletes; Olympic Games; paralympics; Sydney  
**PUBLISHER:** Australian Olympic Committee  
**REVIEW DATE:** 17/12/98

#### Australian rare and minority breeds association: title page.

<http://people.enternet.com.au/~cherylh/>

The aim of the Australian organisation administering this site is to preserve rare domestic livestock breeds. What is rare gives an insight into the animals in Australia where numbers are decreasing. Various breeds of Horses, Cattle, Sheep, Pigs, and Poultry are included. For each there is a brief history and a list of breed characteristics. This site is of interest to any students studying breeds of animals and is invaluable for the images it contains, as some of these are breeds students may never have seen. The site has relevance to environmental education. There are links to other rare breed sites, but exploration time is required to verify curriculum relevance. K. Heap

**USER LEVEL:** Stage 4 Stage 5  
**KLA:** TAS  
**SYLLABUS:** Agriculture 7-10  
**SCIS SUBJECTS:** Animal breeding; Livestock  
**KEYWORDS:** Australian breeds; rare  
**PUBLISHER:** The Australian Rare and Minority Breeds Association Inc, VIC, Australia  
**REVIEW DATE:** 17/12/98

#### Australian War Memorial.

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

Comprehensive historical information on Australian involvement in war and conflict, and details of the features of the Memorial, are included on this well developed Web site. Among the most pertinent features are: extensive image databases containing artworks and over 180 000 photographs; the Roll of Honour, which lists Australia's war dead in all conflicts, and other printed and written collections. Selecting **Australians at war**, then **Conflict** gives access to a brief history of each conflict; and contemporary photographs. **Frequently asked questions**, **This month in history**, and **Days of commemoration** are useful and interesting. Senior students could benefit from examining the **Journal** of current research on Australian military history and **Senior document study**. At the time of review, not all the links were complete. Visiting **Education and visitor's services** would be imperative for teachers planning an excursion. R. McDowall, N. Paull

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

**SYLLABUS:** HSIE K-6; History Stages 4-5; 2U/3U Modern History  
**SCIS SUBJECTS:** Australia - History, military; Australian War Memorial  
**KEYWORDS:** Australian War Memorial; military history; war  
**PUBLISHER:** Australian War Memorial, Canberra  
**REVIEW DATE:** 18/12/98  
**EVAL:** Highly recommended

#### Australian Wildlife feature story - Little penguin Eudyptula minor.

<http://www.australianwildlife.com.au/features/penguin.html>

A comprehensive site on the fairy penguin, this is accessed via Australian wildlife site front page <<http://australian-wildlife.com.au>>: choose the current Feature story, then select **Animal focus stories** under **Features** at the bottom. These pages provide basic facts on aspects such as: **Appearance; Distribution; Feeding; Lifestyle; Reproduction; Mortality; and Social system.** Information is text based, and clearly presented in point form and tables. It could be used as a basis for teaching how to expand notes into sentences. No images are available, though some may be found in the linked sites (listed after references), which would need to be verified for curriculum relevance. This easily navigated site provides a wealth of information. C. Burden

**USER LEVEL:** Stage 2 Stage 3  
**KLA:** ST  
**SYLLABUS:** Science & Technology K-6  
**SCIS SUBJECTS:** Penguins  
**KEYWORDS:** Australian wildlife; penguins  
**PUBLISHER:** Australian Wildlife  
**AUTHOR:** Dr Ann  
**REVIEW DATE:** 21/12/98

#### Bagheera.

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

Named after Kipling's fictional black panther, this site encourages an awareness of the growing global biodiversity crisis, and the threat of extinction faced by many species. Some of the topics covered include: global warming; animals in **Zoos and aquariums**; introduced species; pollution; and the causes of extinction. Providing more than background knowledge, the site's publishers encourage users to become involved in helping endangered species. Student activities involve: thinking skills; moral dilemmas; discovering alternative uses of scarce resources; and comparative studies. These activities could easily be adapted for classroom uses including debates, projects, and discussions, and environmental studies. N. Paull

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** HSIE  
**SYLLABUS:** Geography Stages 4-5; HSIE K-6  
**SCIS SUBJECTS:** Conservation of natural resources; Endangered species; Extinct animals  
**KEYWORDS:** Conservation; endangered species; extinct  
**PUBLISHER:** Bagheera, USA  
**REVIEW DATE:** 17/12/98

#### The behavior home page.

<http://www.state.ky.us/agencies/behav/homepage.html>

The subtitle of this site is *Working to make a difference for children who display challenging behaviour*. Its purpose is to share information and best practice amongst parents, teachers, and other professionals dealing with the range of behaviour problems encountered in school and community settings. It is the result of a collaboration between the Kentucky Department of Education and the UK Department of Special Education and Rehabilitation Counseling. The most useful part of the site is the set of behavioural interventions which range from school-wide management systems to specific classroom techniques. There are also discussion forums, and links to other behaviour and social skills resources, which would need further exploration. A. Soutter

**USER LEVEL:** Community Professional  
**SCIS SUBJECTS:** Behaviour modification  
**KEYWORDS:** Behaviour  
**PUBLISHER:** The University of Kentucky, USA  
**AUTHOR:** MEERS, Donna  
**REVIEW DATE:** 17/12/98

#### Bon voyage.

<http://edweb.sdsu.edu/courses/edtec596/project2/madagascar.html>

The scenario for this site is that the student has been appointed as the new ambassador to Madagascar. Students then have to answer a set of self directed project questions on Madagascar. The Internet becomes the sole supplier of information to answer the questions using the sites that have been vetted, then linked. By limiting students to use only the linked sites, the possibility of Internet information overload is avoided, and good potential for utilising the information skills framework is offered. Teachers who are new to the Internet would find this site a useful model for an easily initiated student centred project suitable for a number of subjects. N. Paull

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** HSIE  
**SYLLABUS:** Geography Stages 4-5; HSIE K-6  
**SCIS SUBJECTS:** Madagascar  
**KEYWORDS:** Internet; Madagascar  
**PUBLISHER:** San Diego State University, USA  
**AUTHOR:** Wixon, Rhonda  
**REVIEW DATE:** 17/12/98

#### Burke's backyard ch9 online index page.

<http://www.burkesbackyard.com.au/index.html>

Easy access to subjects such as conservation, pets, pet care, native animals and gardening, shown on the television program, is available at this attractive site. **Fact sheets** provides a complete listing of the topics from present and past shows. Clicking on the desired topic displays a simple, mostly brief, printable fact sheet. Where relevant, these contain: details for constructing items; prices; and the addresses of suppliers. Language used is fairly informal and easily understood. For students of agriculture this could prove to be a time saving resource. Online there is access to **Burke's backyard shop** and also the ability to subscribe to **Burke's backyard magazine**. New topics are constantly added. Information is relevant to environmental education. K. Heap

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6 Professional  
**KLA:** Science; ST; TAS  
**SYLLABUS:** Agriculture 7-10; 2U/3U Agriculture; Geography 7-10; Science & Technology K-6; Science 7-10  
**SCIS SUBJECTS:** Animals - Australia; Gardening; Pets  
**KEYWORDS:** Burke's Backyard; gardening  
**PUBLISHER:** Burke's Backyard, Willoughby, NSW  
**REVIEW DATE:** 17/12/98

#### Canned food information services inc.

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

A great site, this is relevant for pupils studying the food technology core strand: food manufacturing. The photographs and cartoon style flow charts bring this topic to life. It contains information on: the selection of raw materials; quality management (including government legislation); preservation; and recycling and the environment. Students could be asked to: investigate and reproduce the flow diagrams on a product of their choosing; complete a worksheet on the canning process; and/or describe the canning process. Use of this site is sure to create interest, and more student involvement than a textbook approach to the same material. Buttons make it easy to move from one topic to another within this site. J. Redfern

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** TAS  
**SYLLABUS:** Food technology 7-10; 2U Food Technology  
**KEYWORDS:** Canned food; food preservation  
**SCIS SUBJECTS:** Canning and preserving; Food industry; Food preservation  
**PUBLISHER:** Canned Food Information Service Inc, VICT, Australia  
**REVIEW DATE:** 17/12/98

#### Captain James Cook: the great ocean's greatest explorer.

<http://www.geocities.com/TheTropics/7557/>

The principal value of this (still incomplete) site lies in its extensive use of original material concerning Cook's Voyages, extracts from his and others' journals, and an eyewitness account of his death. An introductory essay and substantial accounts of each voyage are accompanied by many contemporary and near contemporary paintings, including portraits. Unfortunately, not all passages quoted are satisfactorily referenced. Links are provided to over thirty other sites, which contain useful and relevant related material, but would need further exploration by teachers. The presentation of information in large blocks of closely written, unrelieved text makes the site difficult for younger or less confident readers to use effectively. W. Smith

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6; History Stages 4-5  
**SCIS SUBJECTS:** Australia - Discovery and exploration; Cook, James; Discovery and exploration; Explorers; New Zealand - Discovery and exploration  
**KEYWORDS:** James Cook; Endeavour; exploration  
**PUBLISHER:** Michael Dickinson, Australia  
**DATE REVIEWED:** 17/12/98

**Chance and data in the news.**

<http://www.ni.com.au/mercury/mathguys/mercindx.htm>

For Stage 4 and 5 teachers implementing chance and data strands in mathematics, this site offers the opportunity to incorporate various statistics and data from the **Newspapers in education** articles in Tasmania's *Mercury* newspaper. The articles are grouped under news topics including: **Health; Social change; Gender issues; Politics; Sport; and Traffic.** A series of appropriate questions follows each article, and could form the basis for locally developed news units. The site was developed: by *The Mercury*; Tasmanian Department of Education; University of Tasmania; and the Australian Association of Mathematics Teachers. N. Paull

**USER LEVEL:** Professional

**KLA:** Mathematics

**SYLLABUS:** Mathematics 7-10

**SCIS SUBJECTS:** Mathematical statistics; Probabilities

**KEYWORDS:** Chance; mathematical statistics; probabilities

**PUBLISHER:** The Mercury, Hobart

**REVIEW DATE:** 17/12/98

**Children's literature - authors & illustrators - Fairrosa Cyber Library.**

<http://www.users.interport.net/~fairrosa/cl.authors.html>

Over 120 links to children's and young adult's authors and illustrators are contained on this helpful reference site. Although broadly based, the site does feature a predominance of North American authors. The links are extensive and would need to be further investigated by teachers. Grouped alphabetically, the entries include information provided by publishers, author's home pages (several of these are terrific), libraries, and unofficial sites. More than just a reference tool, this is an absorbing site that would be browsed by those with an interest of children's literature. N. Paull

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

**KLA:** English

**SYLLABUS:** English K-6; English 7-10

**SCIS SUBJECTS:** Authors; Illustrators

**KEYWORDS:** Authors; illustrators

**PUBLISHER:** Fairrosa Cyber Library, USA

**AUTHOR:** HSU FELDMAN, Roxanne

**REVIEW DATE:** 17/12/98

**Children's music Web.**

<http://www.childrensmusic.org/>

Australian and American children have listed their favourite artists, interviews are held, and questions answered by the artists on this enjoyable, interactive site for primary age children. At the message board children can chat with kindred music spirits, though Child Protection issues should be considered, and concert tours are advertised. **Pipsqueaks** offers lyrics to: camping songs; Australian and American folk songs; hymns; sea shanties from Europe and the United Kingdom; Disney song lyrics; and Gilbert and Sullivan operas. **Young composers** share their experiences and learn how to make their own radio program. **Music teaching ideas** in **Music education** provides some creative solutions. S. Zivanovic

**USER LEVEL:** Professional

**KLA:** CA

**SYLLABUS:** Music K-6

**SCIS SUBJECTS:** Composition (Music); Folk music; Music - Study and teaching; Television music

**KEYWORDS:** Composing, lyrics, music

**PUBLISHER:** Monty Harper, USA

**REVIEW DATE:** 21/12/98

**ClarisWorks tutorials.**

<http://users.desupernet.com/ohora/Clarisworkstutorials.html>

Under the headings: **Word processing; Features; Drawing; Database; and Spreadsheet**, there are over 60 links to help students and teachers get the most from *ClarisWorks*. The information is presented in clear, simple language, often from a teacher's perspective. This is not a user manual, but an attempt to demonstrate some useful techniques, or to provide solutions for some common problems. Teachers of computing studies could regard this as a resource for students and a source of lesson content. Some examples are: **Save As, save/translate your work; Tabs, alignment; Make your own border; Mail merging; and Integrating spreadsheet in your classroom.** G. Donaldson

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

**KLA:** TAS

**SYLLABUS:** Computing Studies 7-10; 2U Computing Studies

**SCIS SUBJECTS:** ClarisWorks; Computer programs - Study and teaching

**KEYWORDS:** *ClarisWorks*; database; drawing; spreadsheet; tutorials; word processing

**PUBLISHER:** Cindy O'Hora, USA

**REVIEW DATE:** 17/12/98

**Classroom discipline resources - secondary school educators net links.**

<http://7-12educators.tqn.com/msub49.htm>

Secondary teachers will find ideas to help with a wide variety of classroom management problems on this site. It contains 34 different documents, which cover a range of different approaches to discipline, from rewards and punishments, to choice theory. There are lists of suggestions which apply no matter which discipline plan is used, and a set of reminders about techniques which backfire. There is a useful form for parent notification of misbehaviour, ideas for school bus discipline, and a number of articles about class and school rules. One article provides a simple method of tracking the effects of the strategies used. Related sites which would need further exploration can be accessed from this site. A. Soutter

**USER LEVEL:** Community Professional

**SCIS SUBJECTS:** Behaviour modification

**KEYWORDS:** Classroom resources; discipline; secondary school educators

**PUBLISHER:** General Internet Inc. & The Mining Company, USA

**AUTHOR:** WALKER, Diane

**REVIEW DATE:** 17/12/98

**Corporate menu. (Purple moon: research highlights)**

[http://www.purple-moon.com/cb/laslink/pm?stat+corp+research\\_highlights](http://www.purple-moon.com/cb/laslink/pm?stat+corp+research_highlights)

Evolving from research established in 1993, discussion here targets parents and professionals interested in involving girls aged eight to twelve in technology based on their lives, interests and play patterns. Summaries are provided (detailed articles are available elsewhere in the home site) of the ways in which girls' play behaviour and attitudes to sport have changed the structure of electronic software, and negated previous conceptions that girls did not play computer games. The identification of the need to alter approaches from hierarchical to horizontal competitiveness has implications for gender equity strategies for teachers in addressing imbalances in the ways computer technology is implemented in schools. Extensive links do not all have educational relevance. E. Maxwell

**USER LEVEL:** Professional

**KLA:** CA; English; HSIE; LOTE; Mathematics; PDHPE; Science; ST; TAS; VOC ED

**SCIS SUBJECTS:** Computers in education; Computers - Social aspects; Educational technology; Women - Education

**KEYWORDS:** Child development; games; research

**PUBLISHER:** Purple Moon, USA

**REVIEW DATE:** 21/12/98

**Department of Immigration and Multicultural affairs citizenship education project.**

<http://www.immi.gov.au/citizen/index.html>

Designed specifically for Australian schools, this citizenship page covers a wide range of topics including multicultural issues, related to being Australian. The material is copyright free for Australian schools, with a section for teachers on how to use the site, requiring *Adobe Acrobat* for the PDF sheets. A good variety of teaching activities are present. Some of the issues dealt with are: **What is a citizen?; The First Australians; and Citizenship now and then.** These options are accessed from a pull down menu at the top of the page. A stimulating role play challenges students to actively seek solutions to roles; rights; and responsibilities of governments and citizens. A good overview of the three tiers of government makes this a valuable resource for civics education. C. Dorbis

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

**KLA:** HSIE

**SYLLABUS:** HSIE K-6, History Stages 4-5

**SCIS SUBJECTS:** Citizenship

**KEYWORDS:** Citizenship education; multicultural affairs; immigration

**PUBLISHER:** Department of Immigration and Multicultural Affairs, Australia

**REVIEW DATE:** 17/12/98

**EVAL:** Highly recommended

**EvolveIt.**

<http://www.cdle.edu/EvolveIt/>

A simulation designed to develop student understanding of the process of evolution is available here. The simulation is based on documented evolution of finches on the Galapagos Islands, exaggerated and simplified for educational purposes. Students are able to manipulate various

parameters, such as: variability; heritability; fitness; clutch size; beak size; and island size to investigate their effects on bird beak morphology. Technical notes and sample assignments are provided. This site will allow students to undertake a practical investigation of evolution in action, and is appropriate for use with the core topic, evolution, in 2 unit biology. J. Morgan

**USER LEVEL:** Stage 6 Professional

**KLA:** Science

**SYLLABUS:** 2U Biology

**SCIS SUBJECTS:** Biology; Evolution

**KEYWORDS:** Evolution; evolve; natural selection

**PUBLISHER:** California State University, USA

**REVIEW DATE:** 18/12/98

**EVAL:** Highly recommended

**Food Australia.**

<http://www.foodaust.com.au/fa.htm>

Site of the official publication of the Australian Institute of Food Science and Technology Incorporated, a moveable feast (changes monthly) of topics provides a wealth of valuable information for food technology teachers and students. It is particularly useful for: product development; food marketing; and innovations in the Australian food industry. **New product lines** describes new products and profiles, the market to which they are targeted, and any other outstanding features, such as packaging. Also updated monthly, **Features** should not be overlooked. Student tasks could include: justifying the development of one new product; identifying the different types of products; and writing design briefs. J. Redfern

**USER LEVEL:** Stage 5 Stage 6 Professional

**KLA:** TAS

**SYLLABUS:** Food technology 7-10; 2U Food Technology

**KEYWORDS:** Food Australia; food science; food technology

**SCIS SUBJECTS:** Food industry

**PUBLISHER:** Food Australia

**REVIEW DATE:** 17/12/98

**Frontier online.**

<http://www.abc.net.au/frontier/>

A professional, well designed site, this has been developed based on the ABC television series, *Frontier*, which examined the frontier wars between white Australians and Aboriginal Peoples. Included on the site are the contents of three forums: **Treaties; Personal responsibility; and Reconciliation**, which were originally conducted as a **Live panel**. Other inclusions are: a detailed **Background** on each of the *Frontier* episodes; an extensive **Glossary**; and a **Guestbook** where issues can be discussed. The **Education** section is current and contains well researched teacher and student information, including work sheets. There is an excellent list of **Resources**. This site is an excellent survey of opinion and information relating to Aboriginal post-invasion history and Reconciliation. B. Percival

**USER LEVEL:** Stage 4 Stage 5 Stage 6

**KLA:** HSIE

**SYLLABUS:** Aboriginal Studies 7-10; 2U Aboriginal Studies; 1U General Studies; HSIE K-6; History Stages 4-5; 3U Legal Studies; Studies in Society 7-10

**SCIS SUBJECTS:** Australia - Race relations



**KEYWORDS:** Aboriginal history; frontier; Reconciliation  
**PUBLISHER:** Australian Broadcasting Corporation  
**AUTHOR:** PRICE, Kaye  
**REVIEW DATE:** 17/12/98

### The great plant escape.

<http://www.urbanext.uiuc.edu/gpe/index.html>

Designed for Grades 4 and 5, but with possibilities for older and younger students, this clear, uncluttered, plant focused site offers six "cases", based on aspects of plant life, for students to solve. Goals are stated quite clearly for each case, and able students, individually or in small groups, would be able to work quite successfully through them, with minimal adult supervision and assistance. Student involvement is encouraged and rewarded, with emphasis on: planning; predicting; recording; and comparing results. Specific questions may be asked; replies come back via email. A separate section for teachers provides extensive lesson notes; background information; and extension ideas. Ideas can be printed out, and the activities completed offline. W. Smith

**USER LEVEL:** Stage 2 Stage 3  
**KLA:** ST  
**SYLLABUS:** Science & Technology K-6  
**SCIS SUBJECTS:** Plants  
**KEYWORDS:** Plants; gardening  
**PUBLISHER:** University of Illinois Extension Program, Urbana, Illinois, USA  
**REVIEW DATE:** 18/12/98  
**EVAL:** Highly recommended

### History B94: history of ancient Egypt — Piccione.

<http://www.library.nwu.edu/class/history/B94/>

While new material is not being added to this Web site, the many resources it contains are very worthwhile for students and teachers of ancient Egyptian society. Personalities & their times candidates will find the scholarly articles very challenging, but they are still a valuable teaching tool for that level. Chronology of Egyptian civilization; and Visuals and images utilized in class include primary sources; maps; diagrams; family trees; and photographs, which can be printed for more thorough study. These resources are from Old, Middle and New Kingdom Egypt, so they can be used to support the study of any of those societies and/or historical periods. R. McDowall

**USER LEVEL:** Stage 6 Professional  
**KLA:** HSIE  
**SYLLABUS:** 2U/3U Ancient History; 2U Personalities & their Times  
**SCIS SUBJECTS:** Egypt - History - to 332 B.C.  
**KEYWORDS:** Ancient Egypt; Egyptian history  
**PUBLISHER:** Schaffner Library, Northwestern University, USA  
**REVIEW DATE:** 17/12/98  
**EVAL:** Highly recommended

### Infoseek Sports: Olympic sites for children topics.

[http://www.infoseek.com/Topic/Sports/Olympics/1998\\_Winter\\_Olympics/For\\_kids/](http://www.infoseek.com/Topic/Sports/Olympics/1998_Winter_Olympics/For_kids/)

Although a link site to nine other Olympic sites for children, primary teachers will find the resources and unit

themes in *Children's Olympic literature* make this a useful site in its own right. Annotated lists of children's books relate themes such as pollution and waste to the Sydney 2000 games, making it relevant to environmental education. Readers' theatre uses Mem Fox's *Koala Lou*, where the koala trains for the Olympics in order to gain approval from her mother. Books by popular Australian authors describe growing up in Australia, Australian cooking, and an appreciation of Aboriginal culture. The site offers diverse potential for developing information skills. The best linked sites are: **CBS SportsLine Winter Olympics; KidZone; MidLink magazine's gallery of American Olympians; and Newton's apple: luge; while Sport! Science@The Exploratorium** has potential for science and technology. These support science and historical topics. S. Zivanovic

**USER LEVEL:** Professional  
**KLA:** English; PDHPE; ST  
**SYLLABUS:** English K-6; PDHPE K-6; Science & Technology K-6  
**SCIS SUBJECTS:** Children's literature; Olympic Games; Winter Sports  
**KEYWORDS:** Olympic Games; Sydney 2000; winter sports  
**PUBLISHER:** Infoseek Corporation, USA  
**REVIEW DATE:** 21/12/98  
**EVAL:** Highly recommended

### John Marsden.

<http://www.ozemail.com.au/~andrewf/john.html>

A drawcard for fans of John Marsden, this site is attractively and clearly presented. Seventeen scanned book covers act as hyperlinks to extracts (some incomplete) and previews. Readers' most frequently asked questions are answered; biographical details are shared; and the *Tomorrow* series is discussed. The Webbridged edition of *Cool school*, which allows students to choose their own adventure, will have great appeal. Emailing John Marsden is an option. It is a pity that previews are a duplication of dust jacket blurbs, and that the decorative graphics, used as a leitmotiv throughout the publisher's site, are not dynamic enough for this author. Although the framework is in place, much here is still under construction. D. Doust

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6  
**KLA:** English  
**SYLLABUS:** English K-6; English 7-10  
**SCIS SUBJECTS:** Authors, Australian; Children's literature, Australian; Marsden, John  
**KEYWORDS:** John Marsden  
**PUBLISHER:** Pan Macmillan, Australia  
**AUTHOR:** FARRELL, Andrew  
**REVIEW DATE:** 21/12/98

### KinderArt - Art education - free art lessons - Jarea Art Studio.

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

For teachers of Preschool, Stage 1, Stage 2, or Stage 3 students looking for something new to try in art, this site offers over 140 lesson plans in a number of mediums. The lesson plans: give clear instructions; detail the necessary materials needed; designate the appropriate grade and age levels; and often state objectives and picture the completed product. Teachers will find this site most rewarding when programming and planning art lessons involving textiles, sculpture, printmaking, sketching, and painting. Parents

with an interest in developing their child's potential in art could also be advised of the site's possibilities. N. Paull

**USER LEVEL:** Community Professional  
**KLA:** CA  
**SYLLABUS:** Visual Arts K-6  
**SCIS SUBJECTS:** Art - Study and teaching  
**KEYWORDS:** Art; painting; sculpture; textiles  
**PUBLISHER:** JAREA Art Studios, Canada  
**REVIEW DATE:** 17/12/98  
**EVAL:** Highly recommended

### Literary links: English as a second language.

<http://fb14.uni-mainz.de/litlink/esl/>

Good support for teachers of English as a second language (ESL) and secondary students learning English as a second language is found here. **Listening and speaking** (accessed via **The ESL home page**) is rather American in its subject matter and usage, but **Grammar and writing** (linked on the same page) is very thorough in its definitions. **Purdue online writing lab** offers composition advice, grammar help, and referrals to other information sources, and downloadable handouts on a wide range of topics. Daily updated news bulletins in various languages and possible lesson materials for teaching ESL students can be located, along with relevant children's literature resources. There is much for teachers to explore here. S. Zivanovic

**USER LEVEL:** Community Professional  
**KLA:** English; LOTE  
**SYLLABUS:** English 7-10  
**SCIS SUBJECTS:** English as a second language  
**KEYWORDS:** English language - Study and teaching  
**PUBLISHER:** Dept. of English, Johannes Gutenberg University Mainz, Germany  
**REVIEW DATE:** 21/12/98

### Lonely Planet - destinations. (Indonesia)

<http://www.lonelyplanet.com/dest/dest.htm>

Choose the preferred destination from the map of world by selecting **Asia** as the region and **Indonesia** as the country. Clear, uncluttered maps of Indonesia as a whole, and separate maps of **Java; Bali; Lombok, and Sumatra**, are presented, together with a small selection of beautiful slides and interesting information concerning travel arrangements and attractions. All the information is in English. Other icons lead to advertisements for the complete **Lonely Planet guides**; other publications; and recent **Travellers' reports** on Indonesia, which are generally unverified. The latter are a great source of fresh ideas for content in 2U traveller abroad writing skills. Excellent reference material for all Indonesian students is provided. K. Anstis

**USER LEVEL:** Stage 2 Stage 3 Stage 4 Stage 5 Stage 6  
**KLA:** Community  
**SYLLABUS:** LOTE  
**SCIS SUBJECTS:** Indonesian K-6; Indonesian K-10; 2U/2U Z Indonesian  
**KEYWORDS:** Destinations; Indonesia; Lonely Planet; travel  
**PUBLISHER:** Lonely Planet Publications, Australia  
**REVIEW DATE:** 17/12/98

### Math Forum - Suzanne Alejandre: tessellations.

<http://forum.swarthmore.edu/sum95/suzanne/tess.intro.html>

Teachers who wish to integrate computers into the topic of tessellations will find this an excellent resource. The front page provides links to tutorials for: *Claris works; Geometers sketchpad; HyperCard; Hyperstudio; PC Paintbrush*; and *Logo writer*. Each of these provides easy to follow step by step instructions that allow students to create simple tessellations. There are also sections for using a **Straight edge and compass**, and pages dealing with the definitions and the theory of tessellations. The notes are clear and concise to allow for printing. There are additional links to more difficult aspects of the topic. G. Donaldson

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**KLA:** Mathematics  
**SYLLABUS:** Mathematics K-6; Mathematics 7-8; Mathematics 9-10  
**SCIS SUBJECTS:** Mathematics - Study and teaching; Tessellations (Mathematics)  
**KEYWORDS:** Math forum; math; tessellations  
**PUBLISHER:** Math Forum: National Science Foundation, Swarthmore College, USA  
**AUTHOR:** ALEJANDRE, Suzanne  
**REVIEW DATE:** 17/12/98

### Measurement in sport - key text.

<http://www.science.org.au/nova/033/033key.htm>

Having trouble relating mathematics to the real world? Then visit this Web site, supported by the Australian Academy of Science, where sport is used as the medium for exploring measurement. Topics such as: **How measurement is used in sport; Units of measurement; and Measuring devices**; are all consistent with the K-6 mathematics curriculum. Students can learn more on each topic by selecting **Box**, which takes them to **Activities** and a **Glossary**. This site is appropriate for students in Stage 3, and teachers may find the **Activities** worthwhile. The site is primarily text based, and its reference to the 2000 Olympics may help motivate students. S. Taylor

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** HSIE; Mathematics; Science  
**SYLLABUS:** HSIE K-6; Mathematics K-6; Science 7-10  
**SCIS SUBJECTS:** Measurement; Sports  
**KEYWORDS:** Mathematics; measurement; Olympics; sport  
**PUBLISHER:** Australian Academy of Science, Canberra, ACT  
**REVIEW DATE:** 18/12/98

### NSW police service on-line.

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

Valuable and useful information for teachers and students is offered here. **History** of the police service gives a wide range of facts and figures about police; crime; and policing. There is advice on **Crime prevention; Community policing** and reporting of crime; and information on campaigns such as **Domestic violence; Crime stoppers; Operation Noah; and Operation paradox**. Clear explanations of police and government initiatives, such as young offenders; and knives legislation, are provided. For those interested in a career in the police force there is information for the recruitment of police officers and volunteers. The site

contains a good collection of succinct fact sheets on a variety of topics. W. Gleeson

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** HSIE; VOC ED  
**SYLLABUS:** Commerce 7-10; 1U General Studies; 2U Legal Studies; 2U/3U Life Management Studies; 2U Society & Culture  
**SCIS SUBJECTS:** Crime prevention; Police  
**KEYWORDS:** Domestic violence; courts; crime; law; NSW police  
**PUBLISHER:** NSW Police Service, NSW  
**REVIEW DATE:** 18/12/98  
**EVAL:** Highly recommended

### OzKidz literature.

<http://www.ozkidz.gil.com.au/ozlit.html>

A cornucopia of Australian children's literature, this site contains: **Children's Book Council** information; and **Ms Lit**, an online enthusiast who answers children's questions and discusses novels. Overseas authors are encouraged to link Web sites. This definitive Australian children's literature site contains links to: illustrators; children's poetry; folk and fairy tales; showcased authors; Internet discussion groups; **Story resources on WWW** (eg. Readers' theatre, first chapters of award winning books, puppetry, a place for children to publish in **Storybook Park**, exemplary lessons in **ERIC clearinghouse**); and literary news. Exploration time is required to verify curriculum relevance of external links. **Vandergrift children's literature page** offers strategies for engaging children with literature. This is a rewarding source for librarians and English teachers. S. Zivanovic

**USER LEVEL:** Professional  
**KLA:** English  
**SYLLABUS:** English K-6; English 7-10  
**SCIS SUBJECTS:** Authors, Australian; Children's literature  
**KEYWORDS:** Authors; awards; fiction; literature  
**PUBLISHER:** Children's Book Council, Australia  
**REVIEW DATE:** 21/12/98  
**EVAL:** Highly recommended

### Paris monuments and maps.

[http://www.w3i.com/eng/ville\\_paris/paris\\_direct.htm](http://www.w3i.com/eng/ville_paris/paris_direct.htm)

Part of a large site from Excite Travel, this page offers excellent graphics and photographs of Paris. One can look at a map of Paris, and at different areas of Paris, including: **Champs; Elysees; Montmartre;** and **Louvre**. Users can also view famous monuments in Paris, such as: **Sacre Coeur; Notre Dame;** and **The Eiffel Tower**. Teachers could use this page to support their lessons about Paris, and print out photographs of famous sites and landscapes of Paris. Each graphic on these simply presented pages is accompanied by brief text information in English. A French version is also available. K. Nowacki

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**KLA:** LOTE  
**SYLLABUS:** French 7-10; 2U Z French; 2U French  
**SCIS SUBJECTS:** France - Historic buildings, sites, etc; French language - Study and teaching  
**KEYWORDS:** Maps; monuments; Paris  
**PUBLISHER:** Excite/W3I, France  
**REVIEW DATE:** 21/12/98

### The Queensland Museum explorer. (Meet some spooky spiders)

<http://www.qmuseum.qld.gov.au/nature/arachnids/arachnidswelcome.html>

Studying spiders and want your students to classify or group them? This Web site is ideal for classifying spiders, even if it is limited to those found in Queensland. Searching for an unknown spider is easy: users simply select **What spider is that?** and identify it by habitat; nest; or the presence of an egg sac. Further classification is made via black and white sketches. After clicking on the desired spider, a page containing specific, easily read information is loaded, enabling students to use this simple classification process to identify many common spiders. Particular attention is paid to the easily recognisable red back spider, including: its background; how to treat a bite; and its life cycle. S. Taylor

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**KLA:** HSIE; Mathematics; Science; ST  
**SYLLABUS:** HSIE K-6; Mathematics K-6; Science & Technology K-6; Science 7-10  
**SCIS SUBJECTS:** Spiders  
**KEYWORDS:** Arachnids; Queensland Museum; red-back; spiders  
**PUBLISHER:** The Queensland Museum, Australia  
**REVIEW DATE:** 18/12/98

### Rings of passion | Website index - sorted by artist.

<http://cgi.pbs.org/ringsofpassion/siteindex/index.html>

Part of the cultural activities for the Atlanta Olympic Games, hence the rings in the title, this site takes a thematic approach to art related to various passions or emotions, namely: **Love; Awe; Triumph; Joy; and Anguish**. Each is cross referenced within the site. It is international in scope, covering various periods from the Renaissance to the present. Artists are represented by a thumbnail example of their work, expandable, with details of selected sections. **Curate** allows the user to create and write about how they would set up the exhibition, encouraging critical thought and interaction. **Dialogs** contains topics on writing about and expressing responses to art works, with examples from site users. A. Whyte

**USER LEVEL:** Stage 5 Stage 6 Professional  
**KLA:** CA  
**SYLLABUS:** Visual Arts 7-10; 2U Visual Arts  
**SCIS SUBJECTS:** Art and society; Olympic Games  
**KEYWORDS:** Art; passion; emotion; Olympic Games  
**PUBLISHER:** Public Broadcasting Service, USA  
**REVIEW DATE:** 21/12/98

### The Robert Frost Web page.

<http://pronews.pro-net.co.uk/home/catalyst/RF/rfcover.html>

A very valuable aspect of this site is the collection of lengthy interviews with Frost, taken from New England newspapers from early this century. There are six interviews, enthusiastically recommended by the author, who is gathering further examples. The writers have taken a journey to meet Frost, describe his appearance and surroundings, and have recorded their conversations with him. The conversations affirm the content his poems in relation to his settings, philosophies, regard for people, and his views on writing poetry. These would be useful

resources to use during the entire unit study of Frost, encouraging student response and exploration of Frost's work. The rest of the site is amateurish but an exchange of ideas is welcomed. J. Whyte

**USER LEVEL:** Stage 6 Professional  
**KLA:** English  
**SYLLABUS:** 2U General English; 2U Related English  
**SCIS SUBJECTS:** English poetry; Frost, Robert  
**KEYWORDS:** English poetry; Robert Frost  
**PUBLISHER:** Jay Michalowski & Tim Kroemer, UK  
**REVIEW DATE:** 21/12/98

### Sanitarium health food company.

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

A great site for most HSC topics, this contains up to date, relevant information. **Our story** gives a profile of the company including: product base; employment; export markets; and corporate vision. **School project material** provides information on manufacturing for a number of different products at both primary and secondary levels. One of its links, **The story of Sanitarium TVP**, contains a flow diagram which is particularly worthwhile. **Product information** has a marketing/product development slant and provides detailed ingredient lists. **The Vegetarian recipes** are also helpful, and the **Latest news** link, at the time of review, detailed the logistics and costs involved in the contamination hoax. J. Redfern

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** TAS  
**SYLLABUS:** Food Technology 7-10; 2U Food Technology  
**KEYWORDS:** Food; health food; nutrition; Sanitarium  
**SCIS SUBJECTS:** Food industry  
**PUBLISHER:** The Sanitarium Health Food Company, Australia  
**REVIEW DATE:** 17/12/98

### Spices page.

<http://discover-jakarta.com/spices/spices.html>

Presented here are lively, brief introductions in English, to topics relating to a variety of aspects of life in Jakarta, such as: cooking; **A brief history;** clove cigarettes; and **Customs**. A few items of relevant Indonesian vocabulary are explained in each section, usually accompanied by at least one photograph, sometimes two, per topic. In **Speak Indonesian**, there is a brief audio lesson, which is very clear and simply presents the key numbers, and a few phrases and adjectives relevant to shopping. The material is very basic for 2U students; readily accessible to beginning Z students; and ideal for junior students. K. Anstis

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6  
**KLA:** Community  
**SYLLABUS:** LOTE  
**SCIS SUBJECTS:** Indonesian K-6; Indonesian K-10; 2U/2U Z Indonesian  
**KEYWORDS:** Indonesia - Social life and customs; Indonesian language - Study and teaching; Indonesian language text; Culture; Jakarta; spices  
**PUBLISHER:** Pacific Century E Media, Jakarta, Indonesia (sponsored by Jakarta City Government Tourism Office)  
**REVIEW DATE:** 17/12/98

### Spiders home page - lessons covering spider characteristics, prey, life cycle, enemies, habitat.

<http://www.sedl.org/scimath/pasopartners/spiders/spiderhome.html>

Are your students interested in arachnids or are they afraid of them? The content of this Web site is designed to help children appreciate the place spiders have in the world, and will lessen the fear of spiders caused by misunderstandings. This well presented, text rich site provides educators with seven detailed lessons including possible materials and a **List of activities**. A simple diagram and a grid are given. Outcomes are included for mathematics, science, and languages. Students in stage 1, 2 and 3 will be interested and motivated by the activities, such as the **Spider vivarium**. Overall, this site is well worth a look for something a little different. S. Taylor

**USER LEVEL:** Professional  
**KLA:** HSIE; Mathematics; Languages; ST  
**SYLLABUS:** HSIE K-6; Languages K-6; Mathematics K-6; Science & Technology K-6  
**SCIS SUBJECTS:** Spiders - Study and teaching  
**KEYWORDS:** Arachnids; spiders  
**PUBLISHER:** Southwest Educational Development Laboratory (SEDL), USA  
**REVIEW DATE:** 17/12/98

### Suzanne Alejandre: spreadsheet lessons.

<http://forum.swarthmore.edu/alejandre/spreadsheet.html>

The home page here provides direct links to lessons for students on creating graphs from spreadsheet data. The step by step instructions and screen captures are based on **ClarisWorks**, and take students from opening a new spreadsheet, through to creating charts and modifying their appearance. The twelve lessons are grouped under: **Bar graphs; Pie charts; Pictograms;** and **Other graphs**. This last section deals with linear and exponential functions. The instructions are consistent and easy to follow. There are notes directing students to think about what they have created, and to produce word processed reports. There are additional links to extensive materials on geometry. G. Donaldson

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6  
**KLA:** Mathematics; TAS  
**SYLLABUS:** Computing Studies 7-10; 2U Computing Studies; Mathematics K-6; Mathematics 7-8; Mathematics 9-10; 2U/3U Mathematics  
**SCIS SUBJECTS:** Graphs; Mathematics - Study and teaching  
**KEYWORDS:** Charts; graphs; Math Forum; spreadsheets  
**PUBLISHER:** Math Forum: National Science Foundation, Swarthmore College, USA  
**AUTHOR:** ALEJANDRE, Suzanne  
**REVIEW DATE:** 17/12/98

### Symbols of Australia.

[http://www.fed.gov.au/n\\_emblems.htm](http://www.fed.gov.au/n_emblems.htm)

Providing information and fact sheets on **National symbols; Symbols of Australia;** the **National Anthem;** and **State and territorial symbols**, this is a homepage that will interest a range of students. **Adobe Acrobat** is needed for the PDF fact sheets. These may be better if downloaded by the teacher, to save time and confusion for those less techni-

cally minded. It has good graphics for the **Flags**; flora; and fauna symbols; and three versions of **Australia's national anthem**, including a Wiggles' version, which needs audio software (provided as a download). Students can use this as part of a study on Australian identity. It is relevant to Civics and Citizenship. C. Dorbis

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

**KLA:** HSIE

**SYLLABUS:** HSIE K-6; History 7-10

**SCIS SUBJECTS:** Australia - Social life and customs;  
Flags - Australia

**KEYWORDS:** Australia; citizenship; civics; government; national symbols

**PUBLISHER:** Australian Federal Government

**REVIEW DATE:** 18/12/98

**EVAL:** Highly recommended

### *Tales of wonder.*

<http://darsie.ucdavis.edu/tales>

In fourteen sections, this easily navigated, text only site presents tales from several countries (**England; China, India, Russia, Scotland, Japan, Ireland**), regions (**Africa, Middle East, Central Asia, Scandinavia, Siberia, Central Europe**) and one culture (**Native American**). The site contains unfamiliar and unusual tales, many originally published in collections which are out of print or difficult to obtain. Provenance or publication details are provided for all tales, as well as links to other folk and fairy tale sites, which would need further exploration by teachers. While the site's lack of graphics means it will have little immediate appeal for children, it may be useful to teachers searching for unusual stories which might be unavailable from other sources. W. Smith

**USER LEVEL:** Professional

**KLA:** English; HSIE

**SYLLABUS:** English K-6; HSIE K-6

**SCIS SUBJECTS:** Folklore

**KEYWORDS:** Fairy tales; folk tales; folklore; stories

**PUBLISHER:** Richard Darsie

**REVIEW DATE:** 18/12/98

### *Technology and education via the World Wide Web.*

<http://ecep.usl.edu>

The many ideas on projects, business and marketing links, and current educational materials developed for vocational and technical schools presented at this site are transferable to many school programs. The most useful link is to the **Energy Conservation Enhancement Project**, which offers lesson plans to introduce energy conservation in curriculum contexts. There are specific plans for the different trades (automotive technician, carpentry, diesel mechanics, drafting, and design technology); and the English and mathematics links enable literacy integration strategies to be effectively developed. The content is not culture specific and hence provides useful discussion material for students at this level. E. Maxwell

**USER LEVEL:** Professional

**KLA:** TAS; VOC ED

**SYLLABUS:** Design & Technology 7-10; 2U Design & Technology; Technics 7-10

**SCIS SUBJECTS:** Energy conservation; Technical education; Vocational education

**KEYWORDS:** Education; energy; conservation; lesson plans; technology

**PUBLISHER:** Department of Energy Resources,  
University of Southwestern Louisiana,  
USA

**REVIEW DATE:** 21/12/98

### *Titanic.*

<http://www.titanic.eb.com/>

A special exhibit from Britannica, this site contains interesting primary and secondary source material. A brief history is provided with a number of keywords linked to further research notes. One can then select **Enter the exhibit**, and view photographs and documents with an accompanying explanation. The site is extremely easy to navigate and the material would be very accessible to junior secondary students. The information presented would make an excellent starting point for an optional case study for Stage 4, or for 2 Unit modern history or 2 Unit people and events students who are completing the preliminary modern history course. R. McDowall

**USER LEVEL:** Stage 4 Stage 6 Professional

**KLA:** HSIE

**SYLLABUS:** History Stages 4-5; 2U Modern History;  
2U People & Events

**SCIS SUBJECTS:** Titanic (Ship)

**KEYWORDS:** Britannica online; Titanic

**PUBLISHER:** Encyclopedia Britannica

**REVIEW DATE:** 17/12/98

**EVAL:** Highly recommended

### *Virology down under.*

<http://www.uq.edu.au/vdu/index.html>

Mainly text information about viruses, with hypertext links to additional detail, is presented at this site. **Virology** defines the properties and classification of viruses, and provides information about the pathology of a range of viruses, including dengue, influenza, mumps and herpes. **Immunology** gives general information on this topic, including a discussion on antigens, antibodies and the immune response. Vaccination schedules are also included. **Gene therapy** gives general information on the topic, and details on cystic fibrosis are included. This site provides clear, succinct information for the disease core topic of 2 unit biology. J. Morgan

**USER LEVEL:** Stage 6 Professional

**KLA:** Science

**SYLLABUS:** 2U Biology

**SCIS SUBJECTS:** Biology; Immunity; Viruses

**KEYWORDS:** disease; immunology; virology

**PUBLISHER:** University of Queensland, Australia

**AUTHOR:** MACKAY, Ian

**REVIEW DATE:** 17/12/98

### *Virtual Antarctica introduction.*

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

Appearances in this site are deceiving. A simply presented menu leads via numerous links to a wealth of information on almost every topic investigated on Antarctica. Students travel on a virtual journey, which traces a 1995 expedition. There are: accounts kept in the ship's log; expedition details, including maps of stations and territories; equipment requirements (including clothing); history (Antarctic Treaty and other chronological events); science (of the

fauna and other environments); ecological information (ozone depletion, global warming, and krill harvesting); and links to other Antarctic Web sites, which need to be verified for curriculum relevance. Presentation and navigation are designed for students, and therefore require little adult intervention. E. Maxwell

**USER LEVEL:** Stage 3 Stage 4 Stage 5

**KLA:** HSIE; Science; ST; TAS

**SYLLABUS:** Geography Stages 4-5; History Stages 4-5; HSIE K-6; Science 7-10; Science & Technology K-6

**SCIS SUBJECTS:** Antarctica

**KEYWORDS:** Antarctica

**PUBLISHER:** TerraQuest, USA (joint adventure of Mountain Travel-Sobek & WorldTravel Partners)

**REVIEW DATE:** 21/12/98

**EVAL:** Highly recommended

### *Virtual creatures, Stanford University.*

<http://www.med.stanford.edu/creatures/>

The main benefit of this site is that it provides an alternative to animal dissections. The site presents high resolution, three dimensional visualisations of the internal anatomy of organisms. Currently only **Virtual frog** is available, but more creatures are gradually being developed. **Frog island (3D)** provides additional information about the habitats; ecology; and anatomy of frogs. Sample teaching units also offer suggestions for how to incorporate the site into lessons. This site is particularly relevant to the core topics mammals and their requirements, and plant and animal adaptations in the 2 Unit biology course. J. Morgan

**USER LEVEL:** Stage 6 Professional

**KLA:** Science

**SYLLABUS:** 2 U Biology

**SCIS SUBJECTS:** Anatomy; Biology

**KEYWORDS:** Adaptations; anatomy

**PUBLISHER:** Stanford University, California, USA

**REVIEW DATE:** 18/12/98

### *Welcome to the Museum of Antiquities.*

<http://www.ncl.ac.uk/~nantig>

Ancient civilisations and prehistoric ages are successfully presented here in a way young students will find fascinating. Through a **Virtual tour of the temple to the Roman god Mithras**, god of soldiers and traders, a video takes the viewer over the site while the text describes the rituals and beliefs. **Stone Age** explodes some myths these people, provides a cartoon **Timeline** for children to place events in sequence, and poses a **Food quiz** about the diet of the hunters and gatherers. Reading age and interest level are well suited to primary students, with much of the site illustrated in cartoon format and brief text summaries. Archaeological objects are showcased and changed each month, and the site provides information for schools and scholars about the work of the Museum. S. Zivanovic

**USER LEVEL:** Stage 3 Stage 4 Professional

**KLA:** HSIE

**SYLLABUS:** HSIE K-6; History Stages 4-5

**SCIS SUBJECTS:** Mythology, Roman; Prehistoric peoples; Rome - Antiquities

**KEYWORDS:** Antiquities; history, museum; prehistory; Roman gods

**PUBLISHER:** University of Newcastle upon Tyne, UK

**EVAL:** Highly recommended

**REVIEW DATE:** 21/12/98

### *Welcome to the planets.*

<http://pds.jpl.nasa.gov/planets/>

This large collection of images serves as a wonderful overview of planetary exploration for anyone studying the solar system. The stunning graphics have been carefully selected from NASA's planetary exploration program. They are in thumbnail form but may be selected for a much larger view. The site also provides information about the spacecraft from which the images were acquired, along with information about each planet. Students will appreciate the glossary, which is accessed by clicking on unfamiliar terms. The site is mirrored at Curtin University of Technology and images can be more quickly accessed via <http://www.curtin.edu.au/mirror/planets/>.

G. Fitzgerald

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

**KLA:** Science; ST

**SYLLABUS:** Science & Technology K-6; Science 7-10;  
2U Science

**SCIS SUBJECTS:** Planets; Solar System; Space -  
Exploration

**KEYWORDS:** Exploration; planets; space; spacecraft

**PUBLISHER:** Planetary Data System, NASA, USA

**REVIEW DATE:** 21/12/98

### *The world of puppets.*

<http://www.itdc.sbcss.k12.ca.us/curriculum/puppetry.html>

The importance of traditional puppetry to a country's culture is explored through this site. Background information detailing pictures, construction methods, history, music (including sound files), and aspects of performance are presented for: Bunraku puppetry from Japan; water puppetry from Vietnam; and the shadow puppetry of Java and Bali. These additional links to associated sites would need further investigation by teachers. Teachers are well catered for with: useful teaching notes; thorough definitions of terminology; lists of resources available in book form or on the Internet; and an achievable sequence of interesting lessons aimed at students in Stage 1, Stage 2 and Stage 3. N. Paull

**USER LEVEL:** Professional

**KLA:** CA; English; HSIE

**SYLLABUS:** Creative Arts K-6; English K-6;  
HSIE K-6

**SCIS SUBJECTS:** Puppets and puppet shows; Shadow  
pantomimes

**KEYWORDS:** Puppetry; puppets

**PUBLISHER:** Educational Media and Technology,  
USA

**REVIEW DATE:** 17/12/98

### *Xpeditions @ nationalgeographic.com.*

<http://www.nationalgeographic.com/xpeditions/main.html>

An attractive resource to support geography is offered by this site. It presents: a world **Atlas** which can be viewed and printed from 1800 different perspectives; idea exchange **Forums**; a bank of teaching and learning activities; and a virtual **Xpedition hall**. This accesses: thematic maps through the world viewer; a variety of map styles and viewpoints through the global projector; and remem-

bered brain maps through the mental mapper; before moving deeper inside to six display galleries. Here users can reach expeditions like number seventeen (click the pointer for VI), The dig, where Darwin's theory of evolution is explained, with reference to a 1.6 million year old skeleton, simply illustrated with hypertext links to additional information. This site provides opportunities for effective experiential learning, though navigation can be awkward. L. Ward

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

**KLA:** HSIE; ST

**SYLLABUS:** Geography Stages 4-5; HSIE K-6; History Stages 4-5; Science & Technology K-6

**SCIS SUBJECTS:** Atlases; Geography

**KEYWORDS:** Atlas; geography; mapping; National Geographic

**PUBLISHER:** National Geographic Society, USA

**REVIEW DATE:** 17/12/98

### *The\*young\*writers\*club.*

<http://www.cs.bilkent.edu.tr/~david/derya/ywc.html>

While it offers other facilities (vocabulary extension, member badges, keypals, advice on creating a home page), the principal purpose of this site is for the publication of young writers' work. Contributors, who must follow a set of eight simple rules, range in age from six to seventeen years. Special sections publish fiction; non-fiction; and poetry; competitions and suggested topics encourage those who need fresh ideas, and members are free to comment, in a public forum, on others' work. The sites' moderator reserves the right to refuse any submission. This could be a useful site for young writers eager for publication, especially those who seek an audience beyond the classroom. It could offer support for particular literacy strategies. W. Smith

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

**KLA:** English

**SYLLABUS:** English K-6; English 7-10

**SCIS SUBJECTS:** Writing (Authorship)

**KEYWORDS:** Writing

**PUBLISHER:** Derya Davenport, Bilkent University, Turkey

**REVIEW DATE:** 17/12/98

### *Zoom dinosaur.*

<http://www.zoomdinosaurs.com>

<http://www.enchantedlearning.com/subjects/dinosaurs/>

A comprehensive and well set out Web unit awaits students and teachers here, as a range of information and resources is supplied, making it well suited to develop a program utilising the information skills process. Topics include: **All about dinosaurs; Anatomy and behaviour; Classification; Fossils; Classroom activities; and Dino fun**, which links to **Games; puzzles; and quizzes**. The text is appropriate to all primary aged students, while the colourful, animated graphics will be motivational. Teachers will be able to utilise: the **Classroom Activities** (for most KLAs); the **Dino fact sheets** (totalling 84 from Stages 1 to 3); and **24 Dinosaur info sheets**. Teachers and students could also be directed to **How to write a great dinosaur report** with its detailed writing ideas. This site is well worth visiting. S. Taylor

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

**KLA:** CA; English; HSIE; Mathematics; ST

**SYLLABUS:** Creative Arts K-6; English K-6; HSIE K-6; Mathematics K-6; Science & Technology K-6

**SCIS SUBJECTS:** Dinosaurs

**KEYWORDS:** Dinosaurs; education; fossils

**PUBLISHER:** Enchanted Learning Software, USA

**AUTHOR:** COL, Jeananda

**REVIEW DATE:** 17/12/98

**EVAL:** Highly recommended

### **Internet reviewers for this issue were:**

Karen Anstis, Open High School  
Carolyn Burden, Blairmont Primary  
Greg Donaldson, Westport Technology High/TILT  
Chris Dorbis, SEO1, Civics & Citizenship  
Dianne Doust, STLD, Lismore High  
Greg Fitzgerald, Bundeena Primary  
Wayne Gleeson, HSIE, Liverpool Girls High  
Karen Heap, Muirfield Technology High  
Liz Maxwell, Cherrybrook Technology High  
Rosemary McDowall, MacKellar Girls' High  
Judy Morgan, Sefton High  
Kanitha Nowacki, Open High School  
Nigel Paull, South Grafton Primary  
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Simon Taylor, Wakool Primary  
Laurence Ward, Carlton Primary  
Anthony Whyte, Westport Technology High  
Judy Whyte, Port Macquarie High  
Danny Wilson, Mudgee High  
Sherida Zivanovic, Technology Adviser ■

### **HOW DO YOU USE SCAN?**

The SCIS/*Scan* team would like to hear how you use *Scan* in your school.

Have you adopted or adapted ideas or strategies from recent issues of *Scan* into your school program? Which articles did you find to be particularly inspirational for your school's future directions?

Just a short paragraph will do. Please let us know by 31<sup>st</sup> March. Contact the editor at:

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*Two submissions will be chosen at random to receive a poster of The Paw illustrated by Terry Denton, and autographed by The Paw's creator, children's author Natalie Jane Prior.*

# Information Technology

## Muswellbrook South Public School: linking technology to literacy

*HyperStudio is a software package which can provide an exciting electronic medium for students to explore, make discoveries and experiment with publishing possibilities.*

*Phyllis Khan, teacher-librarian at Muswellbrook South Public School, has worked collaboratively with teachers to develop some successful links between technology and literacy. During 1998, Rod McKeough and Philip Debenham shared the responsibilities of teaching a Year 4/5/6 class, in addition to providing literacy support through computing for thirteen classes, Years 2-6. Phyllis, Rod and Philip also jointly hold the position of Computer Contact Person at the school.*



Once upon a time there was a teacher-librarian who knew very little about computers. Neither did she suspect that a steep learning curve awaited her. Luckily, amongst all the teachers at her school, there were two technocrats and they thought they knew computers inside out. Little did they suspect that a steep learning curve awaited them, too. Somehow, these three individuals would find a common bond as Muswellbrook South Public School's computer contact people. Together, they would confront the concepts and challenges of information literacy.

### **In the beginning...**

During 1996, it became evident to the Principal, Diane Nightingale, that Muswellbrook South, one of the larger primary schools in the area, needed to address the ratio of students to computers. There was a need perceived: to give our school's staff and students suitable access to modern classroom equipment. We strongly believed that the whole school community would benefit as a result, because past experience had shown us that whenever the students become keen on some aspect of

learning, so the parents become interested and involved. We expected that this would be the case with a shift of emphasis to computer education; if we could combine technology with literacy, we would be creating a highly stimulating teaching and learning environment.

As a consequence, it was also time to refocus on the skills and knowledge required to utilise such resources. We realised that competency with technology had to be developed in our pupils and staff to complement any purchase of new computer hardware and software.

Following the first roll-out of computers, by the then-Department of School Education, we had sufficient numbers of computers to provide one PC per classroom, with software relevant to the users. Over time, and through coworker support, teachers were gradually demonstrating greater understanding of the application of computers in classrooms, and students were using computers more regularly. There was also a reported increase in computer purchases by families. However, we recognised that information literacy outcomes, and equity of access to the latest technologies could still be improved.

### **The next chapter... and a fresh angle**

Muswellbrook South Public School addressed this challenge by electing to channel much of its annual funding into State Literacy Strategy priorities, with a clear focus on information literacy. We embarked on an innovative program to improve literacy through computing. The idea was quite bold; we were about to bring our whole school community into line, technologically, in a very short space of time.

Funding was granted! Now, what computers would we buy? What programs should we run? Had we ever used laptops? What else would we need? How would we make these decisions, and how would we make them effectively?

After a diligent search on the part of our Principal, some school sites where networks were in use were located. We were particularly interested in those schools using a variety of software and hardware to enhance the development of their students' literacy levels. We visited these establishments, in order to gain confidence in making some of the decisions facing us. It was during these visits that

we observed *HyperStudio* in action, in tandem with a scanner and a digital camera, all managed competently by students in Year 6. It seemed to be exactly what we required.

### What is HyperStudio?

*HyperStudio* is a software package which provides an exciting, electronic medium, through which children can explore, discover and experiment with publishing possibilities. Users may create: interactive presentations; personal journals; caricatures and other graphics; and even educational games that come complete with questions, answers, sound effects and methods of keeping score. Each of these productions involves the development of a series of frames, or 'stacks' as they are called in the program.

The package is accompanied by:

- a CD-ROM for each licensed site (We purchased a license for 28 sites to cater for the laptops and PCs throughout the school. Each CD-ROM provides 200MB of clip art and clip sounds that may be used in the stack during development, and over 100MB of sample stacks to show what can be done with *HyperStudio*.)
- hardcopies of tutorials and references for the program
- tutorials and reference books for *HyperLOGO*, the scripting language used in *HyperStudio* (The program can be utilised without a deep knowledge of this part of the package; it is an option that we have not yet applied, but this aspect has potential for teaching the basics of computer programming.)

The Internet is certainly proving to be an interesting way to report to parents.

*HyperStudio* is compatible with PC or Macintosh, but it is necessary to have one of the CD-ROMs on hand for each computer in operation if you intend to access the clip art or sounds that are available. If creating

#### FROM THE STUDENTS

"On *HyperStudio* you can get one to ten pages (stack) of a white square in which you can put one colour or two colours, or as many as you can as long as it is in an enclosed area. You can put buttons to other cards, do the observations, different pictures or just writing. *HyperStudio* is great for projects, reports, or just to play around with." Neville, Year 6

#### FROM THE STUDENTS

"During the time that I used *HyperStudio*, Mr D. and Mr McKeough asked us to do many things. Firstly they asked us to design a stack of cards with different links to other cards, with sounds, colours, clippings and writing. While doing a school project for Mr McKeough, some students used *HyperStudio* for publishing and presented it to the class on the projector. Mr D. also asked us to design a home page with links to other facts about the school on it. I think that *HyperStudio* is an exciting program." Lauren, Year 5

your own graphics and sounds, the CD-ROM is not required beyond the original installation.

### Supporting students and teachers

The *HyperStudio* program is simple to load and, once users become familiar with the commands, is easy to navigate. Students already familiar with basic computer skills, such as competence with a mouse or touchpad, familiarity with a keyboard, and knowledge of *Windows*-type screen layouts, are at an advantage. These skills can also be taught progressively, and independently of *HyperStudio*, using a keyboard program and a variety of games and problem solving applications.

Children absorb technological skills as readily as butter soaks into a crumpet; it takes the teachers a little longer. However, having available dedicated teacher experts, competent with *HyperStudio* and other electronic equipment, proved to be a great teaching and learning strategy. These experts worked collaboratively in the classroom with the class teacher, but were also on hand for the planning, programming and evaluating stages.

Our teachers soon progressed from various states of nervous reluctance, to being able to set up the computer laboratory, and use the *HyperStudio* software, with competence. They also received lots of encouragement from their students. Nothing beats a little positive reinforcement.

The first *HyperStudio* activities attempted by each grade were designed to introduce the range of applications of the program. The teachers and students explored keyboard activities; adding graphics; scanning photographs; moving buttons onscreen; and creating cartoons. The more successful lessons were those in which teachers used *HyperStudio* as a means of achieving outcomes from their class programs.

### Rapid developments

Early in 1997, fifteen laptop computers were purchased by the school, providing us with a portable computer laboratory. It meant that, for the first time at our school, all pupils in a class could be paired to participate in literacy development using computers during the same lesson period. *HyperStudio*, *Ultrakey* and numerous other software programs that were already in use throughout the school, were compatible with the laptops.

This was also a logical approach for overcoming our school's lack of spare teaching spaces. Being unable to set up a permanent lab actually worked to our advantage. To make our mobile lab a truly efficient learning tool, we also created a mobile teaching role for Phil Debenham. When teachers booked the lab, they were getting access to fifteen laptops - and Phil.

During our next round of planning sessions, the computer committee worked to further extend the existing

computer literacy program. The purchase of: a scanner; digital camera; compact disk writer; and access to the Internet on a network; were included. This new equipment was set up in the school library (now more like a multimedia centre). Throughout 1998, this decision has enabled ease of access, either for individuals or small student groups, to technology and support beyond what was being accomplished in their classrooms.

New funding arrangements have enabled two teachers to share a class, extending further the roles of the computer contact people. Philip has now been joined by Rod McKeough and, with this combined force, student publishing has taken on a whole new meaning for every student in Years 2-6. For instance, options for computer publishing has now been extended to include photographic and CD-ROM publishing. The contents of student-published materials now move around on the monitor screen, and the students' illustrations and photographic images even sing songs!

### Developing curriculum links

Since we began this program, all students in Years 2-6 have had access to our multimedia centre's digital camera, Internet terminal, scanner and *HyperStudio*, and have successfully created an interactive presentation appropriate to their own level.

In recent months, Years 2 and 3 have explored the visual arts potential suggested by the *HyperStudio* program, such as the manipulation of cartoons and other graphic images, and provided accompanying text in the form of labels and short narratives.

Pairs of Year 4 students collaborated on a pictorial tourist brochure about the school itself, as an introduction to parents and visitors, describing the buildings and layout, and the year's special programs and events. This activity also involved explicit deconstruction of professional travel pamphlets, to determine just what are the successful features of a well designed brochure.

Students in Year 5 researched Australian fauna, leading to the multimedia publication of an information report on their chosen mammal, monotreme or bird. This work was an extension of the students' experiences with more formal ways of preparing their writing in this text type.

The Year 6 students combined the researching of a country of the world with public speaking, producing a multimedia project which they presented to their class, via computer screen and the spoken word.

### No end in sight

The steep learning curve mentioned earlier has been replaced by an image more akin to climbing, hand over fist, up a rope in the wind! Many new things are being learned by all of us every day. The possibilities seem endless. Teachers, students and parents are settling into a more regular learning pattern, and are displaying greater competence with the technology.

This is an accomplishment, but is certainly not the end; there is much to be refined and much to be achieved. For example, students in Year 2 found *HyperStudio* to be a

great challenge. However, the maturity gained by Year 3 certainly made a difference to the manipulative skills the students could demonstrate.

As last year came to a close, the staff at Muswellbrook South realised that the apex of our learning has yet to be reached. Internet publishing has just been established at the school, and we have begun to apply to this new phenomenon, our broad range of information literacy skills, honed over a number of years, and then polished with *HyperStudio*. Through the Internet, our supportive general community now has access to samples of our children's work, on a regular basis, in the comfort of their own homes. This is not to mention the fact that this material is also available to the world at large! The Internet is certainly proving to be an interesting way to report to parents.

Whenever the students become keen on some aspect of learning, so the parents become interested and involved.

In 1999, maintaining our momentum is the next challenge. Information literacy skills take time to impart and develop, and practice is necessary for consolidation of any knowledge or skill base. We have already witnessed the successes possible when teachers and students are willing to alternate in the teaching and learning roles, and are keen to try more.

Our overall goal has been to extend the literacy skills of our students by using the multiple faces of technology as a tool. We are proud of our achievements thus far. Along the way, we have also been required to think differently, for there are so many issues to consider: hardware and software capabilities and compatibilities; prior experiences of the users; mobility of equipment; limitations of physical space; educational inertia (that tendency for some things to stay the same, no matter what!); and collegial support; to name just a few.

Each of these elements impinge on the others, so our progress in teaching and learning with technology and literacy has seen numerous highs and lows, although we have noticed these becoming more stable with time and experience, so this has been very satisfying.

Technology at our school is not an end in itself. Its usefulness is as a tool for extending the literacy skills of staff and pupils. It is fun, it is challenging, and it can be exciting. The great value of *HyperStudio* to us was that this one element knitted together the overall web of our whole school literacy program.

### REFERENCES

*HyperStudio: software for a mediacentric world* [computer software], Roger Wagner, 1998. ■

## Linking the learning community or How to get 200 stakeholders to hear 'The Message'?



In this age of technology, teacher-librarians cannot be truly effective when operating in isolation. Our success within the learning community depends on the development of solid partnerships, particularly with such key players as principals, technology coordinators and parents. The committee of Queanbeyan District's Libraries Education Network (LEN) responded to this need by hosting a successful forum for these key players last September, entitled *Information technology: linking the learning community*.

### Some background

To begin, let us cast our minds back to April 1997, when a similar challenge confronted the LEN group (see *Scan* vol 16 no 2). Our response then was to put together a one day conference called *Leaders, learning and libraries: our future*. This day included keynote speakers and a large choice of workshops, providing for over 100 school principals and teacher-librarians. The success of this conference cemented LEN as an active and viable network within the Queanbeyan District.

Riding on the unexpected success of this day, we were content to turn on the cruise control and revert to our normal, but frantic, lives back in schools. However, lurking in Queanbeyan District Office is an energetic and efficient Training and Development Coordinator named Jeni Page. Jeni is highly supportive of library programs and teacher-librarians. The members of LEN appreciate Jeni's guidance and we have learnt to recognise the value of pushing forward. Jeni could never be accused of letting the grass grow under her feet;

nor was she prepared to let it grow under ours! Before we knew it, the LEN committee was assuming the organisation of another professional development day for our area.

### Garnering support: information literacy in context

The positive response to our first venture, particularly from school principals, inspired us to further the notion of promoting partnerships within our learning community. It also captured the attention of one Principal in particular, John Ford from Yass Primary School, a firm believer in the concept of school libraries underpinning all learning. The fact that he is married to a teacher-librarian didn't go unno-

*Teacher-librarians can be leaders within their learning communities.*

ticed either. With those two criteria to his credit, we invited John to become part of LEN. After all, here was a principal who shared our beliefs and convictions. Here was a school principal who, as President of the Queanbeyan District Primary Principal's Council, had clout and credibility! We now had an effective bridge between teacher-librarians and district principals.

With John's enthusiasm for trawling a bigger net for a bigger catch, there seemed no better way to further the learning partnership than by selecting a topic of paramount importance across the learning community: information technology. While this is a catch phrase of the nineties, our quest

as teacher-librarians was to promote the function of information technology (also known as IT) as a tool for supporting information literacy. In other words, we were advocating 'the bigger picture'.

### Partners in learning

Teacher-librarians' successes as members of the learning community depend on developing solid partnerships with several key players: principals, technology-coordinators, and parents. LEN's task was to ensure that all of the forum's participants formed a new awareness of our common responsibility. Often each player has come to the table with his/her own agenda. One of our outcomes for the day was to enable the melding of those agendas into a shared vision, hence our title for the day, *Information technology: linking the learning community*.

### The challenge

We realised that we were committing ourselves to a big task. How to meet this challenge in one day? We decided that a series of keynote addresses would allow a maximum number of participants to hear powerful, provocative speakers, while avoiding the audience fragmentation that sometimes occurs with small workshops. It seemed important for all members of a school's learning community to hear the same message in order to pool their learning and promote discussion. This would empower each school team take the vision further.

### Organising the day

The venue chosen was the James O. Fairfax Theatre at the National Gallery in Canberra, which allowed us to seat 250 and offered excellent, modern facilities for presenters and participants. It wasn't difficult to entice schools to send delegates to this venue.

An important factor contributing to such solid support for our day was the advocacy of Queanbeyan District Superintendent, Mr Jim Coleborne. The committee explained its intended outcomes and strategy to Jim, and he then wrote to all principals in the Queanbeyan District, urging them to

maximise this opportunity by bringing a team of people from their school community. Who could refuse such a reasonable request? Some of the teams which turned up consisted of: a principal; the computer coordinator; a classroom teacher; the teacher-librarian; and a parent representative.

The invitation was not restricted to Queanbeyan District schools. Training and Development Coordinators from surrounding districts were asked to inform their schools and encourage participation. (T & D coordinators, we discovered,

*We had brought together teacher-librarians, principals, computer coordinators, classroom teachers and parents for a common purpose.*

are as skilled at networking as teacher-librarians!) The LEN group also advertised through the guru of networks, *OZTL\_NET*, which carried several notices through its electronic listserv, giving details of the day. Catholic Schools were notified through their Catholic Education Office. Schools in the neighbouring Australian Capital Territory were invited through notices posted on *ACT updates*, their internal electronic network. Finally, and optimistically, we experimented globally by placing notices on the bulletin board of *Education Network Australia (EdNA)*, which widened our range beyond teacher-librarians. The

response from all this advertising was quite overwhelming, resulting in over 220 participants attending on the day.

Registration costs were kept to a minimum by requesting that participants bring their own lunch (although morning and afternoon teas were supplied). Our major expenses were speakers' travelling and accommodation costs, venue hire and refreshments. The registration of \$30 per participant covered these costs, and meant that approximately 3.5 educators could attend for the cost of releasing a teacher for a day. By keeping the registration fee low, and giving schools sufficient notice to book casual teachers if necessary, schools were able to budget to send teams rather than individuals. This was what we wanted. Our 'no frills' approach seemed to pay off. It also allowed the committee members' energies to be focused on procuring quality speakers... and quality they were!

### Pre-eminent presenters

Our mission was to provide a 'balanced diet' for participants. Various perspectives on the issues relating to information technology ranged from the global to the local (and practical). In correspondence prior to the forum, presenters were informed of the nature of their audience, and were asked to acknowledge, during their presentations, the role of the school library.

Our first speaker, Professor Allan Luke, Dean of Education at Queensland University, had made a great impression on the committee at the State Literacy Conference in Sydney. Alan's presentation, *Information technology/Information literacy: the global perspective*, we knew, would have universal appeal.

A day like this would not be complete without Dr Ross Todd, of the University of Technology, Sydney. Is there a teacher-librarian within cooeo who would not walk over hot coals to hear him? We thought not, and counted on Ross being a drawcard. Needless to say, he did not disappoint us, leaving us once again revitalised and motivated by a stimulating address, entitled *From Web*

*crawlers and Net surfers to Net seekers: the WWW, critical literacies and learning outcomes.*

Wayne Houston, relieving Director of Education Technology at the New South Wales Department of Education and Training, had instant appeal for all technology coordinators. *Technology in today's schools: a whole new world* included a multimedia presentation, which demonstrated the use of technology in his former school, Bellingen Public. It was simply stunning.

Jenny Lewis brought us further into the practical application of technology. As Principal of Noumea Public School in Sydney, Jenny was able to give a focus on the incorporation of technology into the teaching and learning process in her school. In *Class based technology: improving school outcomes*, Jenny explained the importance of knowledge management

(*Scan* vol 17 no 2) for ensuring a holistic approach to student learning, assessment and reporting. Her attendance was guaranteed to stimulate interest amongst school administrators.

### Mission accomplished

So there you have it! It wasn't all that hard to engineer a day where key players, top speakers and 'big picture thinking' came together. Undoubtedly, the support of Queanbeyan District Office was a crucial element in the success of the day. Belief in the power of information literacy, and the worth of the teacher-librarian buoyed us along.

Perhaps another element was the realisation that teacher-librarians can be leaders within their learning communities. Through the power of an effective network, we have a message worth selling and the means to sell it.

We had brought together teacher-librarians, principals, computer coordinators, classroom teachers and parents for a common purpose. To paraphrase the ultimate beneficiaries of forums such as ours, the students of today: "Information literacy rules!"

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tion management, is currently a very prominent concept in business and organisations, and in the last five years there has been a proliferation of literature dealing with it. This paper explores the concept of knowledge management in more depth, looking at its key concepts, definitions and frameworks. It is the first of a series of papers that will appear in *Scan* addressing the theory, issues and practices of knowledge management in schools, and the role of teacher-librarians in relation to it.

### Definitions

The answer to the question 'What is knowledge management?' is not simple. Many definitions abound, coming from a range of disciplinary perspectives, and vary according to different perceptions of what data, information, knowledge and wisdom are. Common to all of these definitions however is a focus on the use of human knowledge and expertise in an organisation – often called knowledge assets, intellectual assets, or intellectual capital – to enhance the goals, market positioning and strategic

Knowledge =  
power, so share  
it rather than  
hoard it.

initiatives of the organisation. The great social thinker Michael Foucault concluded that "it is not possible for power to be exercised without knowledge. It is impossible for knowledge to engender power" (Allee, 1997). It is the notion that **knowledge = power**, so share it rather than hoard it, that underpins knowledge management.

I would define knowledge management as the synergies of organisational and personal practices that effectively tap into, organise and utilise people's competencies, experiences, expertises, skills, talents, thoughts, ideas, intuitions, commitments, innovations, practices, and imaginations, and which integrate these as part of the information resources of an organisation to achieve its goals.

Knowledge management is a holistic resource management practice that enables individuals in organisations to interact with, utilise and add value to all the information, knowledge and wisdom that an organisation possesses. According to Broadbent, knowledge management is "not about managing or organising books or journals, searching the Internet for clients or arranging for circulation of materials" (Broadbent, 1997, p 8); rather, it is thinking about information in its broadest sense as all that which has potential to inform the organisation in achieving its goals, and including going beyond the tangible information resources and services to working with and utilising the intangible knowings of people.

Underpinning this view, knowledge management is a distinction made between 'information' and 'knowledge'. In

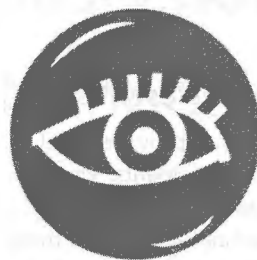
every day usage, these terms are used interchangeably, and to distinguish between them might seem like nitpicking. However, the theoretical literature of librarianship and information science does make such distinctions. Nitecki, for example, argues that information and knowledge are neither similar nor mutually exclusive autonomous concepts; but that, together, both are components of information-knowledge processes. He defines knowledge as a "a state, at any particular time, of relations known that are expressed in a system of knowing that has already been acquired by an individual" (Nitecki, 1985). It is within people, cognitive, intangible and elusive. He defines information as "a cluster of perceptions brought to our attention, but not yet fully assimilated" (Nitecki, 1985), generally presented as recorded messages in a variety of formats familiar to us: books; journals; online resources; newspapers; and the like. These objects of information, unlike human knowing, are tangible, physical, and external, and exist independently of people. Wenig, in *The knowledge management forum* (online), also recognises that there is no consensus on what knowledge is. For his purposes, he claims that "knowledge is understandings the cognitive system possesses. It is a construct that is not directly observable. It is specific to, and not residing outside the cognitive system that created it". Murray (1996, part 2) puts it succinctly: "knowledge is information transformed into capabilities for effective action".

In a similar vein, Buckland (1991) talks about information as thing, information as process, and information as knowledge. **Information as thing** refers to the external information products that represent a tangible record of the ideas and thinking of people. These have been the traditional domain of libraries and the focus of the role of librarians. Their management has given rise to the term "information management", and this has centred on an extensive range of practices related to acquiring, evaluating, selecting, organising, classifying, cataloguing, indexing, accessing and retrieving these products for users.

**Information as process** refers to the process of converting external information to human knowledge. The process itself is viewed as a type of information. This is a cognitive process that enables people to incorporate new information into their human store of knowledge. This cognitive process is also underpinned by a long history of vigorous theoretical debate, which in education is a debate about the nature of learning. Interacting with external sources of information and adding new information to an existing store of knowledge is a fundamental assumption of learning.

According to Buckland, **Information as knowledge** refers to our personal knowing that exists inside our heads. While this seems simplistic, it is in reality a complex theoretical area known as knowledge representation that cuts across many disciplines, including education. The question of how our human knowledge exists in our minds has been the subject of intense debate for many years, and various theories such as mental models, schemata, frames, and scripts have been developed and researched.

This difference between external information and human knowledge is reflected in many definitions of knowledge



*Commencing with this issue, Scan presents the first in a new series of articles we have entitled Reading the Future. As the countdown to the new millennium continues, we intend to bring you some insightful papers to enlighten pro-active educators about the future of teacher-librarianship and information technology, hopefully providing food for thought and action. First up, we explore the notion of knowledge management and what it implies for schools and school libraries.*

## Reading the future: Knowledge management 1. Background and key concepts

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



### Introduction: the emerging field of knowledge management

I came across the following statement some time ago. I don't recall its origin or source, but its message I remember clearly. It went something like "If we always see as we've always seen, we'll always be as we've always been, and always do as we've always done". Given that so much is changing around us, the stance taken in the statement is not the best one for dealing with unknown, uncertain and unpredictable futures. I am aware just how much

the field of practice of teacher-librarianship has changed over the last few years, particularly with developments in networked information technology, access to information, and the shift from a paper-based to a digital information environment.

In a recent paper in *Scan*, I posited the notion of knowledge management being a significant concept in the theory and practice of information provision, and one that teacher-librarians should consider (Todd, 1998).

Knowledge management, as differentiated from informa-

management. A range of definitions are provided here. Newman (in *The knowledge management forum*) says that knowledge management is the collection of processes "that govern the creation, dissemination and utilization of knowledge... it is not a 'technology thing' or a 'computer thing'." Grey similarly posits knowledge management as "the full utilization of information and data, coupled with the potential of people's skills, competencies, ideas, intuitions, commitments and motivations... Knowledge is stored in the individual brain or encoded in organizational processes, documents, products, services, facilities and systems... In today's economy, knowledge is people, money, leverage, learning, flexibility, power, and competitive advantage" (in *The knowledge management forum*). Wiig defines knowledge as "the insights, understandings, and practical know-how that we all possess", and considers it to be "the fundamental resource that allows us to function intelligently" and is "one, if not THE, principal factor that makes personal, organizational, and societal intelligent behavior possible" (in *The knowledge management forum*). He claims that central to knowledge man-

agement are practices that seek to maximise the real value of an enterprise's intellectual assets in systematic, explicit and deliberate ways. He claims that knowledge management and information management together represent a more holistic approach to the management of the information resources of an organisation.

The notion of knowledge management as a broader and more holistic approach than management of external information sources is supported also by Kalseth (1997). He claims that knowledge management is about "putting information and people's competence to work together". He argues that one tangible benefit of effective knowledge management is facilitating continuous learning. He claims that all too often organisational learning is reduced to memos and reports of experiences and decision making processes that are filed in cabinets and databases, and rarely ever used again. Learning, he says, must be about "exploiting in-house and external knowledge and experience using a wide variety of resources ranging from documents, databases and fellow colleagues... People represent a vast knowledge and competence network to

exploit... Knowledge management is all about facilitating continuous learning not only for individuals within the organisation, but for the organisation as a whole" (Kalseth, 1997).

Already in the librarianship literature there are claims by librarians that they have been doing knowledge management for years, and that the term is merely to add a certain pizzazz to a negative image of librarians. DiMattia & Oder (1997) insist that knowledge management is not, in fact, a new name for what librarians have been doing for years. They see it as "blending a company's internal and external information and turning it into actionable knowledge... [It] must involve capturing the internal knowledge generated by a firm - its best thinking on products, customers, competitors, and processes - and sharing it". Broadbent (1997, pp 6-7) makes an explicit

distinction between the management and utilisation of human knowledge as opposed to information resources. She says knowledge management is "a form of expertise management which draw out tacit knowledge making it accessible for specific purposes to improve the performance of organisations". It is about how the organisation's "'know-how' should be structured, organised, located and utilised to provide the most effective action at that point in time".

In essence, knowledge management is about bringing together information, knowledge and people much more holistically than in the traditional sense of providing information resources and information services through libraries. It is about knowing the knowing, capturing, sharing and utilising the knowing, and integrating this knowing into the information resources of an organisation to maximise the flow of information in it for the purposes of the organisation. Knowledge management makes explicit the value of human knowledge. It provides mechanisms to capture and share this knowledge so that it can be effectively utilised. By doing so, it adds value to the existing information services, resources and flows in an organisation.

### Other concepts of knowledge management

There is an evolving terminology, and already a profusion of terms, under the umbrella of knowledge management. Such terms are rapidly becoming a part of the vocabulary of information professionals, and these are briefly discussed. A useful collection of papers, upon which I draw, is found at the *KM Metazine* Web site at:

<<http://www.ktic.com/topic6/km.htm>>.

- *tacit knowledge*: personal context-specific knowledge residing in an individual; it is embedded in individual experience and involves intangible factors such as personal beliefs, perspectives, viewpoints and values
- *explicit knowledge*: more formal codified knowledge, conveyed from one person to another in systematic ways through documents and other deliberate communication processes
- *knowledge transfer*: the tactical dimension of converting knowledge into working solutions and actions
- *corporate memory*: the coherent integration of dispersed know-how in an organisation. This know-how may relate to: problem solving expertise; project experiences; human resources management; lessons learned; and design issues
- *intellectual assets / knowledge assets / intellectual capital*: similar terms often used to describe corporate memory; the terms often seem to connote existing information in explicit form such as an organisation's recorded information
- *information economics*: a study of the tangible value of information to an organisation
- *data mining*: identifying relevant knowledge sources that exist in an organisation, tapping into it and extracting it
- *knowledge representation*: processes of eliciting, describing and presenting in a formal and useable way the knowledge that is known by a person

- *knowledge capture*: systematic procedures for acquiring, organising and structuring organisational knowledge to make it accessible and useable to people in an organisation
- *knowledge mapping*: finding where knowledge exists in an organisation, and creating a detailed picture of skills, expertise and experiences that make up the pool of knowledge. Maps can range from simple directories of names to elaborate online search engines with hypertext links to databases of human expertise, research materials and other recorded information

Knowledge management is a holistic resource management practice.

- *concept mapping*: a visual summary of the ideas or topics in the information and the way these topics or ideas are related to each other
- *knowledge organisation*: an organisation that values and uses its own knowledge in reflective ways that lead to profound shifts in direction, behaviours, values, beliefs and operating assumptions
- *knowledge worker*: a term being used in corporations to identify key people responsible for the total organisational knowledge-creation process at the corporate level, often overseeing efforts to use technology for knowledge capture and distribution
- *knowledge engineer*: person responsible acquiring knowledge and developing data and rules for expert systems.

The above summary of key terms highlights the multi-disciplinary nature of knowledge management. While the practice of knowledge management has emerged from business organisations and corporations seeking to maximise the value of knowledge and information in organisations for strategic marketing purposes, it draws on a range of theoretical ideas from: organisational behaviour; cognitive psychology; memory studies; information processing; and information seeking behaviour.

### Key ideas of knowledge management

Knowledge management embeds a number of central ideas. It assumes that human knowledge has value and utility, and is worth exploiting. It places emphasis on the reusability of human knowledge, and that there is power in and for the organisation in capitalising on and reusing this asset. It assumes that in any dynamic organisation, people are actively creating and consuming knowledge, and using this knowledge to make quality decisions. An emphasis on the group responsibility for managing and leveraging knowledge is also a central idea.

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## Knowledge management in practice in schools

Historically, teacher-librarians, like most librarians, have not focused on knowledge management; rather, practices have been built around information management. Yet the school is an important knowledge community. The acquisition of knowledge, through learning, is a fundamental goal of schools. However, little attention is given to the human knowledge that exists in a school, and indeed in the wider community of the school, that can contribute to this. The rapid convergence of computer information technology, sophisticated information retrieval software, database creation software, networking, work flow technologies, and accountability and financial constraints now provide unparalleled opportunities for creating the school as a holistic information/knowledge/learning environment.

Knowledge management extends the boundaries of intellectual and economic access. It opens up opportunities for extending and enriching the information resource base of a school. It provides a stronger resource base for learning effectiveness and ensuring that the learning objectives of the school are met, and thus has an important tactical and strategic focus. The focus on knowledge management is thus appropriate for schools as learning organisations. It recognises that people are an integral part of the information environment and the information chain, not as mechanisms for transmission /transfer of information, but as an important information source of knowing in achieving the learning outcomes of the school.

Classroom teachers in any school represent a vast knowledge and competence network to exploit. In practice, this means enabling the implicit in-house knowledge held by the individuals in the school, not traditionally considered as a key information resource and not formally integrated into library services, to be captured, shared and used to produce creative and innovative information services and products. Experience indicates that the volume and richness of this in-house implicit knowledge in a school is huge! At present, this resource is utilised in an ad hoc fashion, generally under utilised because it is unknown, unstructured, poorly organised or inaccessible.

Knowledge management provides exciting opportunities for schools. Some key questions emerge:

- What are the benefits of knowledge management practices to a school?
- What are knowledge management process frameworks that can guide its implementation?
- How can knowledge management be implemented in a school?
- Who is responsible for knowledge management in a school, and what is the role of the teacher-librarian?
- What types of knowledge in a school should be managed?
- How is knowledge acquired, shared, organised and made accessible?
- What are some of the practical approaches to knowledge management in a school?
- How can I begin, and where do I begin?

- What are some examples of knowledge management practices already in schools?

These key questions will be addressed in the next issue of *Scan*.

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## Library stocktake: managing the ongoing process

*How can teacher-librarians, especially in small schools, make the most of their limited time and still meet mandatory stocktake requirements? Sue Marshall is teacher-librarian at Peel Technology High School in Tamworth, New South Wales. In late 1998, Sue was Acting Technology Adviser at Tamworth District Office. In this article, Sue suggests an ongoing process as one effective strategy for busy teacher-librarians.*



There are several important reasons why school libraries undertake a stocktake. It is not done just to please the Department of Education and Training's auditor. Stocktake gives a school a clear indication of what resources are missing from the library collection, enabling informed decisions to be made. These include: what resources need to be repaired, replaced, upgraded or purchased to fill gaps in the collection; and, if necessary, whether borrowing procedures and security measures need to be re-evaluated.

### Organising time

The most important factor which will affect a stocktake is time. In some small primary schools, for example, the teacher-librarian entitlement can be as little as two hours per week. Library administration time in such situations is almost nonexistent. It is imperative, therefore, that teacher-librarians, especially in small schools, consult with their principals about how their particular school will manage some class free time to permit the mandatory stocktake of resources to be completed.

A stocktake can be carried out at any time during the year, so it is a good idea not leave it until the end of year when the school may be doing the Christmas play, getting organised for Presentation Day, or trying to get organised for the next school year.

### Organising resources

Stocktake of most resources need only be completed once during a two year period. The exception is computer software which DET auditors

have requested should be checked every year. To make this easy, place all software in its own location in the location field eg COM - Computer software. This field can be edited for resources already entered on *OASIS library*. Each year, the teacher-librarian can initialise just this section and print out a report to be filed for the auditor.

Placing an item in a location in *OASIS* does not mean that it has to be in a matching physical location in the library. All Teacher Reference material should be accessioned; this enables the school to track Departmental documents which have arrived in the school. For convenience, such items can also have their own location, even if they are physically kept in the Principal's office. Even each classroom could be a location.

The advantage of dividing even small collections into different locations is that a small section can be initialised and checked without committing time to trying to locate the whole collection. Also, when a location is initialised separately it can be finalised separately. This process allows the teacher-librarian to work

through stocktake with minimum disruption to teaching and learning in the school.

Unlike the days of manual stocktakes, strict shelf list order is not required by *OASIS*. However, a quick check of the shelves to ensure no fiction is hiding in the non fiction section, etc, will save a search for unaccounted for resources later on. If the portable barcode reader is not functioning correctly, it may need resetting or require fresh batteries.

### Community involvement

Once a location is initialised, the teacher-librarian can use parent helpers, students or teaching staff to wand the resources. Training senior primary students to help with stocktakes is not as efficient in the long term, as they soon progress to high school. Good, adult volunteers are indispensable and, once trained, can be called back to use their talents for other library activities, and at the next stocktake. In small communities especially, working in the school library can be a prestigious duty.

### The stocktake in progress

It may be wise to recall loans which have been out for a long period of time, such as staff loans, to check that the item still exists and hasn't been lost or forgotten. Do not panic if many items seem to have disappeared. Check all the strange places in which resources are known to accumulate, such as in the mending box, classroom sets, staffroom displays, and items such as cassettes which may be located in separate shelves or drawers.

*Volunteers are indispensable and, once trained, can be called back to use their talents for other library activities.*

Remember that there is no need to hurry the winding process, as resources can still be borrowed and returned. However, until the stocktake has been finalised, no new resources should be added to an initialised location.

While working through the resources, make the effort to isolate the items requiring mending or those which need to be removed from the collection. After the stocktake has been finalised, damaged and old resources can be written off.

A tracking sheet is a useful record to create and keep. This would show the dates on which locations have been initialised and finalised, and reports printed. This sheet should be filed with stocktake reports as a means of checking progression of the stocktake. The teacher-librarian should also print out all reports at the end of the stocktake.

### Support for teacher-librarians

All NSW DET schools should have access to the *OASIS library stocktake* manual, distributed by the then-Department of School Education in 1997. This is very easy to follow, providing the teacher-librarian with a step-by-step outline of what has to be done, and can ease any concerns about performing an *OASIS library* stocktake.

A useful article on *OASIS* stocktake procedures, backups and rebuilds, use of portable barcode readers, and ensuring consistency of data, appeared in *Scan* vol 16 no 4, pp 45-46 under the title "School technology support".

Advice is always available to NSW DET schools through the Technology Support Help Desk, by phoning 13 2348. Small schools would also benefit from contacting one of the larger school libraries in the district. If teacher-librarians are new to teacher-librarianship, or new to the area, district offices are an important source of information on local teacher-librarian support networks.

One's first stocktake in any school always seems to create stress, but there are many teacher-librarians who have survived, and every year they go back for more! ■

# RESEARCH COLUMNS

## 1, 1999

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



Welcome to 1999. If 1998 is anything to go by, this year teacher-librarians will continue to move headlong in a scramble to understand, to learn, to keep up, to adapt and to grow. In the midst of rapid social and educational transformation, where instant information, global networks and information technology will seem to dominate, we must not lose sight of our real purpose as teacher-librarians: developing young people as creative, critical, reflective and responsive thinkers through active engagement with their rich information environment.

Winston Churchill once said that "the empires of the future are empires of the mind" (Allee, 1997). In the information professions and industries, and not just in schools, there is increasing emphasis being placed on the value of human knowledge and understanding, and how these might be developed, mapped, shared, and utilised. The development of students to be information literate places great emphasis on the "mind", and it is this pursuit that teacher-librarians must continue to champion, lead, and enable throughout 1999.

**Research columns**, in this issue, presents the work of Estelle Lewis, Head of Science at Masada College, St Ives in New South Wales. The research is significant, not just because it contributes cumulatively to research findings that demonstrate the value of information skills instruction, but also because it shows how initial work undertaken by a teacher-librarian in school was developed further by a classroom teacher.

Estelle was introduced to the NSW information process model several years ago, and with the former teacher-librarian at Masada College, Anita Joffe, has spearheaded the introduction of information literacy across the high school curriculum. Since that time, Estelle has designed a number of integrated science programs and is working with teachers in other faculties to develop similar programs in their specific subject areas. Working collaboratively with her staff, Estelle has since conducted several information literacy programs that have been fully integrated with junior science programs. The research reported here was undertaken as a minor requirement for her Master of Education degree at Macquarie University. Of particular interest to Estelle is the integration of literacy skills into subject areas other than science, and the development and evaluation of outcomes-based programs.

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# SCIENCE INSTRUCTION AND INFORMATION LITERACY: INFORMATION IS POWER



*Estelle Lewis*

### INTRODUCTION

Don't wait for tomorrow, the future starts now!

Until the beginning of this century, education was concerned with existing knowledge and maintaining the status quo. Today's educational leaders are focussing on the future and attempting to prepare society for a brave new world that will be dominated by people who hold the keys to information. In the narrower sense a literate person is one who can read and write. These skills empower people to steer their own life course and direct the lives of the illiterate within their own society. People today must be able to locate and control the vast and global stores of information. A key challenge for today is managing information overload. In a world where information is the key to personal power, the ability to access, evaluate and use information effectively from a variety of sources is vital. A new class of leaders is emerging: the information literate. These are our students. These are the vanguard of our future.

Today's education authorities recognise that students must develop skills of independent learning. Instructional techniques are moving to provide students with skills of: independent research; cooperative learning; critical thinking; problem solving; computer literacy; and creative thinking. These are the components of information literacy. Increasingly, programs are being created to provide students with real contexts and opportunities to develop these skills.

Against this backdrop, I designed, implemented and evaluated a program for high school students which incorporated many of the desirable learning outcomes students must develop to be recognised as information literate. This program was process based and student centred. It taught a range of information skills, and required students to think creatively, communicate effectively and solve a variety of information problems. The program was integrated with the science curriculum, which provided a meaningful context in which students

could develop and apply information skills. At a broader level, I believe that evaluation of integrated, subject based, information literacy programs will enable educators of the future to structure learning more effectively for the development of information literate citizens.

Over the last decade, several process models have been developed to assist the process of identifying, accessing and organising information. These include the 1988 NSW Department of Education information process model (*Information skills in the school*) and the Eisenberg-Berkowitz *Big Six* model published in 1990. These models can be taught by classroom teachers and teacher-librarians as part of independent research skills units, or integrated with a subject curriculum. A growing body of research demonstrates that students benefit from having information skills integrated into a subject context. These research findings, together with the recent increase in digital information sources within the school, provided an opportunity to research what student outcomes could be achieved when an introductory information skills program, integrated with a subject task, was designed and implemented for a cohort of secondary students.

### RESEARCH QUESTIONS

This research focused on two questions: What is the impact of introducing an information process program in a subject context on (1) the students' knowledge of the information process model?; and (2) the students' ability to use the information process model in that subject-specific context?

### LITERATURE REVIEW

Carol Kuhlthau carried out a series of research programs during the 1980s and 1990s. She investigated the design of process orientated instruction to assist students learn the process of information research as well as the sources of information available (1985). Some of the research focussed on developing and applying a model of the process students experience when researching information in a library. Kuhlthau described six stages experienced by students when seeking information for a research assignment (1987). The stages also included descriptions of typical thoughts, feelings and actions. A later research study verified and extended the model (1988). Subsequently Kuhlthau identified some of the main inhibitors and basic enablers for successful implementation of process orientated library media programs.

Todd, Lamb and McNicholas began a long term project in 1991 to integrate information skills into the curriculum of Marist Sisters' College of Sydney. Initially, the focus was on setting up the infrastructure to implement the process across the curriculum. In 1992, the focus of the research changed to investigating and assessing the effects of integrating an information skills program on student learning. The initial study identified some trends that indicated that integrated information literacy skills can add a positive dimension to learning (1995). Data

concurrently collected from Year 7 and Year 11 students (1995) supported the primary study that an integrated information skills approach can have a positive impact on learning outcomes, as measured by: test scores; increased concentration and focus on the task; and improved reflective thinking.

Todd et al's study, and Kuhlthau's work, provided the background and, to a large extent, the basis for the current research project. As with Todd et al's study, the student instruction program in this project aimed at developing and applying information skills and identifying the impact on student learning. The acquisition of these skills enhance a student's understanding and presentation of science content in a research assignment. Both Todd's programs and the current project place an emphasis on the procedures within each of the six steps in the information process, rather than on the subject content. This process orientated approach assists the students interpreting and sequencing the information collected so they may produce a coherent, scientific, research based, and unique response to the science task. Some of the data collection and analysis strategies used by Todd et al were used as is, or modified, to provide the results. This included the pre and post tests and the analysis of data to ascertain the proportion of students that successfully applied each of the steps to the science project. Analysis also revealed the proportion of students who utilised the procedural guide in each step.

To date the literature does not include research on how teaching the information process, combined with a subject related task, affects a student's ability to learn the information literacy skills. Neither are there any projects that report on whether providing a subject context and a detailed scaffold enables a student to apply the information model to a research task more effectively. Designing, implementing and evaluating the Year 9 program satisfied the school's desire to provide the Year 9 students with their first opportunity to develop information skills. At the same time, the program enabled research into the impact of providing a scaffold and an integrated approach on student learning.

## AIMS, CONTEXT AND PARTICIPANTS

The project was conducted in a small, independent coeducational school. It involved the Year 9 science cohort which consisted of 58 students. The students were organised into three classes: one streamed group, selected on their academic results; and two mixed ability groups, made up from the remainder of the cohort. Although the students had been given several introductory lessons during Year 7 on how to use the library, they had no formal instruction in locating and processing information for research tasks.

The NSW information process model, *Information skills in the school*, was integrated with a research task within the science curriculum. Each student researched and prepared a project describing the impact of a scientific invention on the world. The head of science, in collaboration with the teacher-librarian, developed the research

topics to ensure there was information resources in text books, journals, CD-ROMs, and the Internet, for the students to access in the school library. This strategy also removed competition for the limited library references.

The students chose their topic by selecting, from a beaker, a strip of paper on which was written a topic. If students expressed a dislike or lack of interest in the topic, they were able to make a second selection. Each topic was attempted by at least two students from different classes; all students in a class had different topics. This approach reduced the chance of students collectively producing the projects. It was important, in this case, in attempting to answer the research questions to establish precisely the achievement of each student.

As part of the research project, the students completed a workbook that was specifically designed to guide them through the six steps of the information process. The students presented their project in a written format of their choosing. To validate that the steps of the information process had been used, students furnished evidence in the form of: written responses to questions; a detailed bibliography; and summaries or photocopies of reference material. Initially, the students were instructed on the

*A new class of leaders is emerging: the information literate. These are our students. These are the vanguard of our future.*

NSW information skills model, and throughout the time in the library they had access to the teacher-librarian and participating teachers.

The staff provided technical support, assisted with interpretation of the information steps and tasks, and the location of reference material. Because the science lessons for each class were spread widely over the timetable, other subject lessons were also used for the program. This was to ensure that the program was completed in a meaningful period of time and before the annual examinations. Teachers from the faculties of science, religious studies, music, and PDHPE were required to supervise, and provide support to, the students during the six timetabled periods in the library. Most of the teachers involved in the program participated in an introductory workshop, during which they were presented with the NSW information process, and given an overview of the student tasks. Some also took the opportunity to familiarise themselves with the library resources.

The program was organised so that students had six 45 minute periods in the library. The project and workbook was submitted two weeks later. No other class time was provided. Students used the library during regular opening times, and consulted as necessary with their science teacher and the teacher-librarian during the two weeks

preparation period. No other science homework was set during this time but students were faced with annual examinations during the week following the due date for submission.

## METHODOLOGY

Both quantitative and qualitative methodologies were used to evaluate the data. The students completed both a pre and post test. Questions focused on: students' knowledge of information sources, gathering and processing; the six steps of the NSW information skills model; and their understanding of how learning about research skills could be of benefit when undertaking research assignments. The pre test questions included: "How do you find information when a written task or assignment is given at school?"; "How could you benefit from learning to collect and process information for assignments?"; and "If you were given three different pieces of information from different sources, how would you choose the information you need for a one page report?" Some of the post test and pre test questions were the same, while others asked for the same information but were phrased differently. For example, "In the future, how will you find

*Students motivated by achievement more readily sought assistance from the teacher-librarian and teachers.*

information when a written task or assignment is given at school?"; "Where will you find information for future school projects or homework?"; and "What do you think teachers will look for in the future when marking projects, assignment and homework now you have completed the information process course?"

The pre and post test responses were analysed to determine if students' knowledge of the information process, and their ability to apply it, had changed as a result of the program. Written responses were compared using the constant companion approach. The aim was to determine if the student used new terminology or ideas relating to the information process, types of formats, and specific sources of data in the post test. All such responses were recorded and summated for each set of pre and post test matching questions. The quantitative analysis indicated the impact of the project on the entire group.

The student workbooks were marked and analysed to assess whether the students had used the process. This was evident in the written responses, the outlines of what they planned for the **organising** and **presenting** steps, and the inclusion of summaries and photocopies of reference material they used as content in the project. Highlighting, flow charts of ideas, and headings indicated they had carried out Step 3, ie **selecting** relevant

information. As part of Step 6, they had to **assess** their project in terms of the task criteria, and complete a Likert scale which rated their perception of how well they managed each of the information steps in the program. For each information step the student ranked their how well they perceived they had managed the step according to the criteria: Very well; Good; Quite well; Not very well; Had difficulty.

As this was the first program in the school formally teaching information skills integrated in a subject task, the students also completed another Likert scale that focused on: the program management; availability of information resources; and confidence in using each step of the information process. Aspects included: interest; involvement; amount of teacher support; length of time in library; preparation of the project at home; and perception of the usefulness of the program for future research tasks. Once more the students were asked to rank each component by selecting from the alternatives: Excellent; Very good; Satisfactory; Not very good; and Unsatisfactory.

The students' projects were analysed to determine if they could apply the steps of the information skills process to the end product of the research program. Quality, quantity, and relevance of the science content to the question and science topic, was evaluated. Also included was each student's ability to synthesise an individual response to the concept of how a particular invention had created an impact on the world. Because of the open ended structure of the task, it was possible to assess whether the students could, by following the steps of **organising** and **presenting**, analyse the information they had located. It was also possible to determine if they were able to synthesise an answer from a variety of information sources.

## FINDINGS AND CONCLUSIONS

Analysis of the pre and post tests demonstrated that students increased their knowledge of the steps in the information process. At the end of the program, 95% of the students were able to name at least two of the information steps. Students' knowledge of the sources of information used to **locate** reference material significantly increased, and a proportion of students learnt the importance of validating information by locating other references, such as noting the date and authority of the information source. 29% recorded a source of information not previously known. The sources were primarily *Guidelines* and *Austguide*.

More than 60% of the students recorded they had benefited from the program. Benefits included: the ability to **locate** information quicker; an increase in awareness of the variety of information resources within the library; an enhanced ability to **select** relevant information; a recognition of the help provided by a scaffold; and a greater ability to **organise** selected information for the project. More than one third of the students believed that the teachers involved would have different expectations of them in the future when they submitted research tasks as

a result of them both participating in the integrated program.

Analysis of the pre and post test responses established that students are able to recognise how a information skills program, integrated with a meaningful subject specific task, can improve their confidence level in some of the specific skills introduced in the six steps of NSW information process model. In response to the question "In which steps, if any, has your confidence in being able to carry out the step changed?", one student wrote: "I now know how to locate sources relevant to certain topics in the library". Another student responded "Guidelines", while a third wrote, "Collecting information". "Finding information" was also a common response.

## DEFINING AND LOCATING

Most students provided written responses to the questions relating to Steps 1 and 2. These students also managed to successfully complete the tasks, including: a concept map of their key words and phrases; recording details of their sources of information; and providing a photocopy of the title page of a book that contained relevant information. **Defining** and **locating** were carried out in the library, and students had the benefit of explanations, interpretations and directions from the staff while carrying out these steps.

## SELECTING, ORGANISING AND PRESENTING

Because of the limited in class time available for the project, most students executed Steps 3-5 at home. Of those students who provided written evidence of using the guide for **selecting, organising** and **presenting** in the workbook, a high percentage were able to demonstrate their ability to use the steps in the project. Very few students sought assistance or clarification from the teacher-librarian or the science teachers during the time they were preparing the project or responding to the questions relating to Steps 3-5. This was in direct contrast to the time when the students, science teachers and teacher-librarian were together in the library.

## ASSESSING

Step 6 is a reflective stage and, as designed in this study, there was no direct evidence of the student having performed this step in the project. The evidence that the task requirements had been checked, and the quality of the science content, structure of the project and the text type used had been evaluated was in the workbook. This was done simply by having the students list each instruction and then placing a tick next to it when they ascertained it had been completed. Unfortunately, only 28% of the students recorded a response to this part of **assessing**. Students were reminded at the time of submission to complete the Likert scale to evaluate the program, resulting in this part of the evaluation being completed by all students.

## APPLICATIONS AND IMPLICATIONS FOR PRACTICE

The lack of class time allocated to the program was a drawback, as students were not directed and/or assisted with Stages 3-6 in the same way as they had been for Stages 1 and 2. The students were given an overview of the information process at the beginning of the program, but it was at least two to three weeks before they needed to utilise these steps. Many students are poor at following written instructions, and will choose to ignore them if there is not a ready source of help at the time it is required. Students motivated by achievement more readily sought assistance from the teacher-librarian and teachers during the time the projects were being completed at home. Therefore it is most important that integrated programs are conducted primarily within class time when all students have the opportunity to access the teacher as needed, and when the teacher can take the initiative with students who need supervision or who do not readily recognise when assistance is required for task completion.

## SUMMARY OF FINDINGS FROM THE RESEARCH PROJECT

In attempting to find answers to the research question investigated in this project, one has to be cautious in making generalisations because of the small sample size and the difficulties experienced by the researcher in obtaining complete responses from each student.

One of the problems encountered in the analysis of the student work samples was the lack of student responses in the workbook, particularly in Steps 3-6. Many students did not answer the questions and/or failed to include evidence supporting the use of the step. Although evaluation of the projects indicated that on many occasions the steps of **organising** and **presenting** had been used, it was not possible to substantiate it when there was no response in the workbook. The level of skill in using a step often had to be inferred from the science project.

Providing a scaffold of detailed instructions does not mean all students will use it. This research supports the conclusion that use of a scaffold *increases* a student ability to apply the scaffold to a specific task. Providing time in class, where expertise and ongoing support is provided by the teacher and/or teacher-librarian, increases the likelihood of students using the information process steps and successfully applying them to the research project. Providing a written scaffold that is to be read and understood at home *does not* increase the probability that it will be used or applied in a subject context.

A detailed, process orientated, student information skills program increases students' retention of the stages of the information process and their ability to use it, particularly in steps of **defining, locating** and **selecting**. A high proportion of students were able to recognise the usefulness of the program, although it is difficult to establish if the topic they were allocated within the subject context had any effect on the outcomes they achieved.

It is difficult to establish if integrating the information skills process in science improved the students' retention of the process. It is possible to determine that the use of such a model *does improve* the quality of the students' research work. In other words, having the information steps embedded in the science task improved the quality of the product when the steps were used.

In following up on this research, it would also be beneficial to evaluate an integrated program that took place exclusively in class time, with the support of teachers who are knowledgeable about: the information process; the available resources; and how to access sources of digital information. Other researchers (Kuhlthau, 1993) have indicated that time constraints can negatively influence the learning outcomes achieved by students undertaking information skills programs, and research into effective design, not inhibited by the factor of time, will potentially produce students who are information literate for the rest of their lives.

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## ABSTRACTS

**FIDEL, Raya, DAVIES, Rachel K., DOUGLASS, Mary H., HOLDER, Jenny K., HOPKINS, Carla J., KUSHNER, Elisabeth J., MIYAGISHIMA, Bryan K., & TONEY, Christina D.**, "A visit to the information mall: Web searching behavior of high school students", *Journal of the American Society for Information Science*, forthcoming 1999. Preprint available online at:

<http://www2.interscience.wiley.com/issn/0002-8231/preprints/>

This paper considers that searching the World Wide Web is like visiting a large shopping mall, where there are innumerable types of information, in a large variety of containers, and in many locations. The research undertook an in-depth analysis of Web searching behaviour for homework assignments of a small group of high school students in West Seattle, USA. Data collection included field observations in class and at the terminal with students thinking aloud, and interviews with various participants, including the teacher and teacher-librarian. Students performed a number of focused searching activities and these were tracked for the duration of the search process. The study found a number of learning difficulties related to: defining search requirements; working with search engines; tracking their searches; being focused on "lines on the screen that would answer the questions in the assignment"; the nature of search decisions; and the use of help. Difficulties and problems encountered by students emphasise the need for training to all involved, and highlight the importance of developing technical and critical literacies in relation to using the Web as a research tool.

**SMALL, Ruth V.**, "Designing motivation into library and information skills instruction", *School Library Media Quarterly Online*. Available online at *SLMQ online content* at:

[http://www.ala.org/aasl/SLMQ/slmq\\_toc.html](http://www.ala.org/aasl/SLMQ/slmq_toc.html)

This paper posits that effective library and information skills instructional programs not only help students acquire the skills they will need to solve their information problems, but also stimulate intellectual curiosity and encourage continued information seeking and exploration. However, a critical, and largely unexplored, aspect of designing effective information skills instruction is that of motivation. The paper provides an in-depth review and analysis of several well known theories and concepts of motivation, and how they relate to library and information skills instruction. Many practical examples of how to embed effective motivation in information skills instruction are provided. For example, the ARCS model identifies four essential components of motivating instruction:

- **[A]ttention:** the instructor uses strategies for arousing and sustaining curiosity and interest.
- **[R]elevance:** the instructor links the instruction to important needs, interests, and motives.
- **[C]onfidence:** the instructor helps students develop a positive expectation for successful achievement of a learning task.
- **[S]atisfaction:** the instructor manages extrinsic and intrinsic reinforcement.

The paper posits the ARCS model as a simple, yet powerful, motivation model which appears to hold great promise for applications to information skills instruction. ■

The following resources have been reviewed by a panel of teacher-librarians and teachers throughout the state. Reviews of some less recent publications are occasionally included where they have not been previously available in Australia, or have not been reviewed before and address a significant priority area. Information about reviewers for this issue can be found at the end of the review section. Classification given in *Scan* for non-fiction material is the 13th Abridged Dewey, although when ordering SCIS cataloguing records, the 13th or 21st may be specified. Many more reviews than we publish in *Scan* go onto the DET Web site <<http://www.dse.nsw.edu.au>>.

USER LEVELS are now given in stages as follows:

- Early Stage 1** (for Preschool/Early Childhood)  
**Stage 1** (for Lower primary)  
**Stage 2** (for Middle primary)  
**Stage 3** (for Upper primary)  
**Stage 4** (for Lower secondary)  
**Stage 5** (for Middle secondary)  
**Stage 6** (for Upper secondary)  
**Community** (for Community/Parent/Adult)  
**Professional** (for Teachers)

## Resources to support Literacy

The NSW State Literacy Strategy underpins our work across Key Learning Areas, and teacher-librarians have a vital role to play. *Scan* has already published reviews of a range of resources, including some Internet sites, to support literacy. In this issue, we highlight further resources to support literacy, in keeping with initiatives in this area. Our reviewers include literacy experts to give an accurate appraisal of resources and how they might support the NSW Literacy Strategy.

### Cadbury - Yowie. [Internet site]

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

Collectors of Yowie toys are the main target for this easily navigated, commercial site, which provides educationally useful information. Six Australian habitats are each represented by a Yowie character. Extensive factual information on habitat and fauna can be downloaded for further classroom research and use. An interactive game asks users to answer questions to 'save' the Yowies. For teachers access over thirty carefully planned, detailed activity sheets, for each of four sections categorised by grade. These sheets have a strong literacy focus, and can be printed or adapted for use in primary classrooms. The site supports environmental education, the environment strand of the HSIE syllabus, and explicit literacy teaching. The site has significant potential, but some teachers may be reluctant to use material so obviously produced by a confectionery manufacturer. W. Smith, J. Stratford

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

**KLA:** English; HSIE; ST

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

**SCIS SUBJECTS:** Animals, Australian; Environmental protection

**KEYWORDS:** Australian animals; environment; habitat; Yowie

**PUBLISHER:** Cadbury, Victoria, Australia

**REVIEW DATE:** 17/12/98

### Magic bean. [series]

Era, 1998

A set of big books (a mixture of fiction and non fiction titles) with matching small books, attempts to support guided reading programs, addressing a range of levels of reading achievement. Unfortunately, the quality of the titles varies. The books, written for less experienced readers, do not represent good models of language. Three of the narratives are constructed without any verbs; whilst students could construct a story using the attractive, clear illustrations, the reading is stilted. *When Dad bakes* is written in play form, enabling students to engage in readers' theatre; careful instruction is required to ensure students are clear on how to approach such a text. Two titles intended for more experienced readers provide better examples of language use and text structure. P. Hutton

**USER LEVEL:** Stage 1

**KLA:** English

**SYLLABUS:** English K-6

**AVAIL:** \$32.95 each big book; \$5.95 each small book

Titles in this series available as big books are:

*A cake on a plate* SCIS 929808

*Too bad* SCIS 929803

*When Dad bakes* SCIS 929805

*Something new in the forest* SCIS 929812

Titles in this series available as small books are:

*A cake on a plate* SCIS 929806

*Too bad* SCIS 929802

*When Dad bakes* SCIS 929804

*Something new in the forest* SCIS 929811

*What can fly?* SCIS 929783

*Two white dogs* SCIS 929789

*An owl, a tree* SCIS 929793

*A big black cat* SCIS 929797

### Moments of madness: 150 years of short stories.

/ edited by F. Myszor. Cambridge University Press,

1998 (Cambridge literature)

ISBN 0521599652

An eclectic mix of varying degrees of madness, featuring those significant events that could change people's lives forever, is the basis of this collection. Characters encounter death, treachery and adultery; have unrealistic perceptions of their life situations; or face growing up. The authors of these stories, including Byatt, Munro, Faulkner and Paton, offer a wide range of writing styles. With accompanying exercises, students can explore the theme of madness, and the structure of the short story narrative text type. This collection is well worth consideration, either as a literary study, or as resource material for senior English, especially the 2 Unit General topic area: discovery. B. Hull

**USER LEVEL:** Stage 5 Stage 6

**KLA:** English

**SYLLABUS:** English 7-10; 2U Contemporary

English; 2U General English;

**AVAIL:** Paper \$13.95 SCIS 941266

WADDELL, Martin & BENSON, Patrick

### Owl babies

Walker, 1998 (A Walker big book)

ISBN 0744563135

This picture book is already well known in its small book format. As a big book, it will be even more popular as a resource for shared and modelled reading sessions. The simple, beautifully written text, with its repeated chorus of "I want my mummy!", make it engaging for young readers. The enchanting illustrations enhance and preview the narrative, allowing students to develop their skills in prediction. The illustrations aptly evoke the atmosphere of the woods at night, and will act as a great stimulus for drama activities and discussions about the night and feelings of being left alone. P. Hutton

**USER LEVEL:** Stage 1

**KLA:** English

**SYLLABUS:** English K-6

**AVAIL:** \$24.98 SCIS 934708

Other titles available as big books in this series include:

*Handa's surprise* SCIS 912745

*Where the forest meets the sea* SCIS 934700

BROWN, Kristine

### Air quality today. [sound recording]

Mimosa, 1998 (81 min.)

ISBN 0731018338 [363.7]

A variety of spoken texts is provided to support teachers of older learners of English as a second language (ESL), with practical, relevant everyday examples for use in class. The-matically concerned with air pollution, the texts approach the topic from several perspectives. Experts are interviewed, prepared monologues are presented, and several phone and face to face conversations between different community members are used as examples. The texts are a rich resource for: focused listening exercises; note taking; recognising strategies that speakers use to prepare the listener; strategies for making initial inquiries; and clarifying meanings. In addition to learning about the environmental issues, students will be supported in learning about using language to gather information and affect change. S. Bremner

**USER LEVEL:** Professional

**KLA:** English

**AVAIL:** \$19.95 cassette SCIS 941665

DELARUELLE, Susan

### Green projects.

NSW Adult Migrant Education Service, 1998

ISBN 0731018400 [363.7]

The ten teaching units provided in this resource provide practical and lively suggestions for addressing topics related to dealing with waste in the environment. The literacy activities, suitable for both background speakers and those learning English as a second language (ESL), address the use of spoken and written texts for specific, clearly stated purposes, using different media, and with different audiences. Suggested activities: encourage information gathering from a number of sources; include developing aspects of numeracy; and have a particular focus on making positive changes to the environment. The material encourages action; very little adaptation will be required as most of the content is relevant to all students. S. Bremner

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

**KLA:** HSIE; ST

**SYLLABUS:** HSIE K-6; Science and Technology K-6; Science 7-10

AVAIL: Paper \$24.95

SCIS 946851

GOLDING, Elizabeth

### Beginning school: integrated units for the first year.

Macmillan Education Australia, 1997

ISBN 0732937795

[372.13]

An integrated approach to programming is effectively presented in these excellent and highly practical units of work for early Stage 1. Each unit has a comprehensive, double page overview, outcomes from National Curriculum Statements, and a materials box, which provide teachers with a clear understanding of preparation demands prior to teaching. Units are generally of five to six weeks duration, and include all primary KLAS. Blackline proformas have been carefully prepared to effectively support unit implementation. The six themes: **Animals everywhere; Growing things; Nursery rhymes; Mini-beasts; Magic; and Water;** will allow teachers to select units appropriate to the learning needs of their students and school context. This is an excellent resource. J. Stratford

**USER LEVEL:** Professional

**KLA:** CA; English; HSIE; Mathematics; PDHPE; ST

**AVAIL:** Paper \$32.95 SCIS 927712

HORNSBY, David

### The Gingerbread man. [computer software]

Mimosa, 1998

ISBN 0732723736 [398.20942]

Early Stage 1 and Stage 1 students can use this CD-ROM and accompanying blackline proformas to practise their reading skills, either independently or with a partner. The exercises, matching text to picture, crossword puzzles, sequencing, and text completion activities in the teacher's resource material will be familiar to early childhood teachers. The program will be useful for students who are beginning to use the computer, as they will need to use a range of strategies to navigate their way through the material. Interactive, multimedia texts at this early level will support students in becoming more comfortable with electronic texts that invite physical interaction, through use of the mouse and the cursor. S. Bremner

### Minimum requirements

Macintosh: 68LC040; System 7; 6MB RAM; 20MB hard disk

Windows 3.1: 486DX2; 8MB RAM; 20MB hard disk

**USER LEVEL:** Early Stage 1 Stage 1

**KLA:** English

**SYLLABUS:** English K-6

**AVAIL:** \$97.00 Mimosa SCIS 944656

ROLTON, Gloria

### The Macmillan book of invented words.

Macmillan, 1998

ISBN 0732947138 [422]

Many words we use in everyday speech were invented by people for specific purposes, when the need occurred and no other word was suitable. These words are in common use. One hundred and eighty of these words are organised alphabetically in this interesting, easy to read text. Words are cat-

egorised into eight different types including: those invented in science and medicine; those that originated as brand names; acronyms; and work related words. A symbol for each type allows students and teachers to cross reference the text. Fascinating, historical information follows the definition and explanation of the origin of each word. Humorous illustrations also accompany the text. This is a useful resource to support the etymological aspect of *Teaching spelling* K-6. J. Stratford

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

**KLA:** English  
**SYLLABUS:** English K-6; English 7-10  
**AVAIL:** Paper \$10.95 SCIS 946820

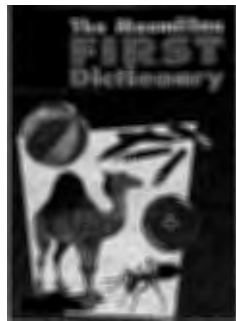
Also available:

*Eponyms and toponyms* SCIS 946826

**The Macmillan first dictionary.**

Macmillan Education Australia, 1998  
ISBN 0732950376 [423]

Each letter of the alphabet is given a single page entry, with an upper and lower case example given at the top of the page. Six to seven bright, clear illustrations per letter are each accompanied by a single word entry naming the item. Illustrations are international in nature, maintaining gender and ethnicity balance. Each page offers a simple question to engage the reader with its content. Also included are: a numbers section; a list of high frequency words; and an accumulated list of all alphabetical entries. This book could be an useful resource for teachers of Stage 1 students introducing dictionaries in the classroom. G. Ross



**USER LEVEL:** Stage 1  
**KLA:** English  
**SYLLABUS:** English K-6  
**AVAIL:** Paper \$9.95 SCIS 938120

**Disney's ready to read with Pooh.** [computer software]

Disney Interactive, 1997 (Disney's learning series)  
ISBN 1573501212 [428.0076]

Diverse options for students to access are provided on this CD-ROM. Pooh, Piglet and Tigger will appeal to students and sustain interest. Information is easily accessed by double clicking with the mouse on a variety of icons. Students must listen carefully to instructions before commencing each task. Organising letters alphabetically, word recognition skills, one to one matching, rhyming words, and active listening are just some of the skills students can practice and master. Completed tasks can also be printed for future reference. A comprehensive, easy to read guide, which includes off computer tasks, also accompanies the CD-ROM. This is a useful resource, enabling young students to practice, reinforce and improve their early reading skills. Screen colour quality is excellent, but sound volume needs to be increased prior to loading the CD-ROM. J. Stratford

**Minimum requirements**

Macintosh: 68040; System 7.1; 8MB RAM; 10MB hard disk

Windows 3.1: 486; 8MB RAM; 10MB hard disk

**USER LEVEL:** Early Stage 1 Stage 1

**KLA:** English  
**SYLLABUS:** English K-6

**AVAIL:** \$69.95 Scholastic SCIS 920857

**JOYCE, Helen**  
*Words for living.*

National Centre for English Language Teaching and Research, Macquarie University, 1998  
ISBN 1864083107 [428.1076]

Useful as a supplement to a teaching program, the material in this student's workbook focusses largely on vocabulary building exercises, and is worth consideration for intermediate English as a second language (ESL) learners who are requesting written practice. The offerings provide additional support for students with explanations about vocabulary and information about how the language works. Strategies for learning unfamiliar words build on knowledge about language students already have of their mother tongue, acknowledge differences between spoken and written English and provide information to encourage helpful learning strategies. The exercises have some variety of type, and include grids, word pyramids, taxonomic charts and word matching. S. Bremner

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**KLA:** English  
**SYLLABUS:** English K-6; English 7-10  
**AVAIL:** Paper \$16.95 SCIS 945930

**DELARUELLE, Susan**  
*Beach Street.* [kit]

NSW Adult Migrant Education Service, 1998  
ISBN 0731018192 [428.2]

The challenge of constructing a useful and focused resource for teaching adult learners of English as a second language (ESL) about spoken and written English is ably met by this publication. Conversational examples suit the language learning needs of a wide variety of adults. Non-transactional interactions are explored, focussing student attention on listening skills, relevant grammar, differences between speech and writing, with practical suggestions for classroom activities. Recognition of subtle cultural aspects, which can lead to misunderstandings, is a particular strength. ESL teachers of intermediate level adult learners, who are interested in exploring conversations on community topics such as health services, travel and work, will find this book, and the supporting student's workbook and cassette, particularly beneficial. S. Bremner

**USER LEVEL:** Professional  
**KLA:** English SCIS946918

*Components of this kit are:*

*Teacher's book* \$21.95 SCIS 946912

*Student's book* \$24.95 SCIS 946910

*Audio cassette* \$19.95

**CORNISH, Susan**  
*Conversational English.* [kit]

NSW Adult Migrant Education Service, 1998  
ISBN 0731018435 [428.3]

Listening to stories can be particularly challenging for second language learners to keep track of and understand, so the structure provided in this material will be a welcome resource for older students to listen to, read about, and revisit, using the written text and the video. Thirteen monologues, all either recounts or anecdotes, on topics such as sport, vacations and mishaps, are used. Each story is presented by a different speaker. Teachers will need background knowledge about language to use the material effectively with their students, as the suggested activities address whole text

grammar and clause grammar, taking students beyond predictable issues such as use of idioms and metaphor. S. Bremner

**USER LEVEL:** Professional  
**KLA:** English  
**AVAIL:** \$42.95 SCIS 946952

**Teachers' voices 3: teaching critical literacy.**

/ edited by Anne Burns & Susan Hood. National Centre for English Language Teaching and Research, Macquarie University, 1998  
ISBN 1864083077 [428.307]

Here is a series of first person accounts by classroom teachers involved in action research. This edition highlights the work of Australian Migrant English Program (AMEP) teachers from South Australia investigating approaches to teaching critical literacy to adult students of English as a second language (ESL). Critical literacy has quickly become 'the next big thing' in the continuing theoretical debates around literacy, and this text contains some relevant and useful discussions about the notion of critical literacy. There is still very little support material available containing explicit strategies for the teaching of critical literacy, so teachers of many levels will find this a stimulating and balanced work which also contains a diverse array of stimulus texts. J. Donovan

**USER LEVEL:** Professional  
**AVAIL:** Paper \$29.95 SCIS 943249

**TOWNSEND, Roz**

*Reading wealth.*  
Crawford House, 1998  
ISBN 1863331336 [428.4]

A person's perception of themselves as a successful reader is the starting point of this self help book, aimed primarily at people who want to improve their reading skills. The author suggests strategies to address negative attitudes to reading and how they might have developed, before introducing more practical ideas for reading faster and with more comprehension. Simple, easy to read and to follow, positive and encouraging, the suggested activities might well be beneficial for those who would like to become more efficient readers in all subject areas. Specific areas are not addressed in depth, and complex issues, such as reading critically, are alluded to only briefly in this small book. S. Bremner

**USER LEVEL:** Stage 4 Community Professional  
**KLA:** English  
**SYLLABUS:** English 7-10  
**AVAIL:** Paper \$12.95 SCIS 886959

**IVERSEN, Sandra**  
*A blueprint for literacy success: building a foundation for beginning readers and writers.*

Lands End, 1998  
ISBN 1869597214 [428.407]

Practical ideas and strategies for establishing effective classroom literacy practice in the first year of schooling are presented in this well organised, informative text. Material included is based on current educational research in literacy, and will support teachers in their selection of appropriate teaching and learning experiences, so that students can successfully move towards the achievement of syllabus outcomes in all three strands of the English K-6 syllabus. Illustrations, labelled diagrams and classroom photographs are cleverly interspersed throughout the text. Also included are well structured, quality blackline proformas. This is an excellent resource which will effectively assist teachers to meet

the learning needs of kindergarten and non English speaking background (NESB) students. J. Stratford

**USER LEVEL:** Professional  
**KLA:** English  
**SYLLABUS:** English K-6  
**AVAIL:** Paper \$32.95 SCIS 938639

**MUNRO, John**  
*Assessing and teaching phonological knowledge.*

ACER, 1998  
ISBN 0864312598 [428.407]

The State Literacy Strategy stresses the importance of a balanced reading program where students are explicitly taught how to integrate and manipulate the four sources of information. This resource over emphasises the phonological source, and provides little information to assist teachers to use a balanced approach to teach reading. The manual contains brief information on the theory underpinning the assessment process, but the majority of the text focuses on designing an assessment profile and completing the assessment tasks on five phonological performance levels using the task cards provided. Successful implementation of these, and their analysis, would require an incredible amount of teaching time. An appendix contains detailed word lists, which could be used for teacher reference. More appropriate resources in this area have already been provided to schools through the *Making a difference* program. J. Stratford

**USER LEVEL:** Professional  
**KLA:** English  
**SYLLABUS:** English K-6  
**AVAIL:** Paper \$49.00 SCIS 941757

**CROSER, Josephine**  
*Zoo animals.* [series]

Era, 1998 (Magic bean in-fact)  
A set of eight small books and book of blackline proformas, these books are well presented and cover a range of aspects of the topic. The texts are simple and feature a number of ways of presenting information, and layout devices such as the use of icons and lists. Some of the concepts covered are collective nouns and opposites. The blackline sheets provide opportunities for students to practise the skills of locating information from a number of sources, such as the index, contents page, glossary and a distribution map. P. Hutton



**USER LEVEL:** Stage 1 Stage 2 Professional  
**KLA:** HSIE, English  
**SYLLABUS:** HSIE K-6; English K-6  
**AVAIL:** \$49.95 set of 8 books and black line proformas

*Titles in this series:*

- Animal alphabet* SCIS 929479
- Animal count* SCIS 929475
- Animal food* SCIS 929471
- Mammal, bird, reptile* SCIS 929488
- Asleep, awake* SCIS 929455
- Animal tails* SCIS 929487
- Animal groups* SCIS 929484
- Animal opposites* SCIS 929457
- Black line masters* SCIS 929496









GAVIN, Jamila  
*Someone's watching someone's waiting.*  
Mammoth, 1998  
ISBN 0749731060

Although the well spaced print suggests otherwise, the vocabulary and the sophistication of this story of Emma's spooky encounters at Cotes Hall make this a book for the older primary child. Long, descriptive sentences embrace the reader with a feeling of former days. Similarly it is not, as it at first looks, a book with appeal only for girls: by the inclusion of Tombo, a bike riding boy, Jamila Gavin has written a story for everyone. Simple, line and shaded drawings complement the feeling of mystery evoked by the text. Granny is there to comfort Emma and the reader when this quality story ignites the imagination. L. Ward

**USER LEVEL:** Stage 3  
**KLA:** English  
**SYLLABUS:** English K-6  
**AVAIL:** Paper \$ 9.95 SCIS 947623

HEFFERNAN, John  
*Rachael's forest.*  
Margaret Hamilton, 1998  
ISBN 1876289031

Struggling to keep the family property, but burdened by debt over years of borrowing from the bank, Rachael's parents are forced to sell a piece of undeveloped forest country. Angry and distraught at the threatened destruction of the forest she values so much, as well as at the duplicity of the prospective purchasers, Rachael takes desperate and dangerous action to stop the developers. Believable characters, a brave and spirited protagonist, brisk action and topical subject matter combine in an exciting story, which will involve young readers, and which also offers useful material for classroom discussion on conservation, as well as the value and cost of individual actions. W. Smith



**USER LEVEL:** Stage 2 Stage 3  
**AVAIL:** Paper \$9.95 SCIS 945344

HIRSCH, Odo  
*Bartlett and the ice voyage.*  
Allen & Unwin, 1998 (A little ark book)  
ISBN 1864488352

A race against time, distance, and geography, on an apparently frivolous quest against seemingly impossible odds, combined with a strong plot, eccentric, strongly differentiated characters, exotic locations vividly and realistically described, and an emphasis upon food, characterise this slightly old fashioned tale of a spoilt and wilful queen and a laconic explorer. The book's subtle appeal will be to serious younger readers, who do not need violent action or blunt humour. It would also read aloud well, offering opportunities for discussion about the original habitats of plants and animals, food preservation, and the use and misuse of wealth and power. W. Smith

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**AVAIL:** Paper \$10.95  
**EVAL:** Highly recommended SCIS 946255

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

HOOK, Brendan  
*Planet of the Honkerzoids.*  
Penguin, 1998 (Puffin)  
ISBN 0141301481

In this novel, Chris is reunited with the feature alien character from *Harry the Honkerzoid*. They travel through space to Planet Honker, in a bid to save its musical population from a giant glacier, which is muffling the natural vibrations of wobblorock, the main element of the planet. Highly suited for reading aloud, or for those students becoming independent readers, the swiftly paced text contains many boisterous sound effects. Cartoon illustrations by Jeff Hook complement each page. The book concludes with a sample of Honkerzoid sheet music, and some useful classroom activities with which to explore the properties of soundwaves. I. McLean

**USER LEVEL:** Stage 1 Stage 2 Stage 3  
**AVAIL:** Paper \$8.95 SCIS 940424

MARSDEN, John  
*Staying alive in Year 5.* [sound recording]  
Pan Macmillan Audiobooks, 1998 (80 min.)  
ISBN 0732908930

Reluctant readers, travelling families, and the tired, ill or busy student, parent or teacher will be among those who will appreciate this audio version of a popular story for younger readers. Tim Ferguson's reading follows the text exactly, allowing those who enjoy the support of reading while listening to an audiocassette to do so. There are no added sound effects, although some characterisation is achieved through voice alteration. This schoolyard fantasy reflects well the demographics of modern urban Australia, and looks at the extremes of the teaching profession, resulting in a humorous, memorable tale with a dash of magic. N. Chaffey



**USER LEVEL:** Stage 2 Stage 3  
**KLA:** English  
**AVAIL:** \$19.95 SCIS 941983

MARTIN, Helen  
*Follow the rainbow.* [sound recording]  
ABC, 1998 (60 min.)  
ISBN 0642179824

These gentle stories enable children to relax and use their imaginations on a journey to a magic, rainbow coloured land. Soothingly read by Noni Hazlehurst, and accompanied by soft music, the stories each begin with a ride on a beautiful roundabout which takes the listener to a land of fairies or even into outer space. Each story has music filled pauses for the child imagine with scenes in their own mind of floating safe and free in space, or frolicking with the flower fairies. The tape provides a delightful experience of creative visualisation for four to nine year olds. A. Soutter

**USER LEVEL:** Early Stage 1 Stage1 Stage 2  
**KLA:** English; PDHPE  
**SYLLABUS:** ENGLISH K-6; PDHPE K-6  
**AVAIL:** \$16.95 SCIS 936023

NILSSON, Eleanor  
*Tiptoe round a pony.*  
Puffin, 1998  
ISBN 0140378057

Horse lovers will gravitate to the title and front cover of this work, illustrated by Betina Ogden. Readers will quickly

realise that the story is a backdrop for a character analysis and revelation of some of society's ills, and not simply a story about horses. The similarity to another classic horse story where the hero rides blindly through the night to fetch a doctor detracts from the freshness of this novel. The issues of literacy, and difficulties in learning to read, surround the main character, who proves herself worthy by the heroic ride. The illustrations are too cute to appropriately support the seriousness of the text. S. Rasaiah

**USER LEVEL:** Stage 2  
**KLA:** English; PDHPE  
**SYLLABUS:** English K-6; PDHPE K-6  
**AVAIL:** Paper \$11.95 SCIS 932555

PERSHALL, Katherine & PERSHALL, Mary K.  
*Too much to ask for.*  
/ illustrated by Craig Smith. Penguin, 1998 (Aussie bites/Puffin)

Changing friendship, popularity, and honesty are key themes in this not so neatly ending, though well resolved, story. Tone is light, a little laboured at times, and accurately reflects the concerns and language of ten year old girls at school. Single mother, Marissa, offers a positive role model, ably assisting her daughter as she navigates the hurdles of growing up. The valuable lessons Hannah learns about friendship could provide worthwhile discussion starters for upper primary students. Personal difficulties are dealt with in an empowering way without burdening young readers. Smith's line drawings add to the lightness and humour in the telling. C. Foley

**USER LEVEL:** Stage 2 Stage 3  
**KLA:** PDHPE  
**SYLLABUS:** PDHPE K-6  
**AVAIL:** Paper \$9.95 SCIS 949076

PEYTON, K. M.  
*Danger offshore.*  
Puffin, 1998  
ISBN 0140389598

The appeal of this story lies in the fact that the main character, Shiner, is a battler. Just as he does everything else, Shiner finds learning to ride a sail board difficult. Despite this, he is determined to succeed. After being nearly drowned in the ocean, Shiner and his clever friend, Corky, become involved in an exciting smuggling adventure. Luckily, being a brave boy who knows what is right helps Shiner to become a surfing super hero. Each of the eleven chapters, introduced by an interesting illustration, features stimulating vocabulary, short paragraphs and clearly spaced print. L. Ward

**USER LEVEL:** Stage 2, Stage 3  
**AVAIL:** Paper \$8.95 SCIS 943190

ROBINSON, Sue  
*The lyrebird's tail.*  
Lothian, 1998 (Takeaways)  
ISBN 0850918839

In this Australian rural adventure story, children play detectives and genealogists. It is a family and small town saga that stretches back four generations. In the guise of fiction, it teaches the reader a lot of Australian history and how to research using local libraries. It is well written and would have wide appeal. Younger students would enjoy this story read as a serial. It weaves the tragedy of drought, greed and gold



fever into a typical country Australian setting, with everyday people heroically living outwardly normal lives. R. Bodlay

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6; History Stages 4-5  
**AVAIL:** Paper \$10.95  
**EVAL:** Highly recommended SCIS 93039

*Solo.* [series]  
Omnibus, 1998

A winning formula for beginning readers: attractively packaged, well told, child centred stories characterise this series. The impressive list of authors and illustrators includes: Nette Hilton; Emily Rodda; Margaret Clark; Beth Norling; David Cox; and Craig Smith. Simple language in well sized print, broken into non threatening portions, combines with appealing, expressive illustrations often injected with humorous detail. In these new titles: a spoilt cat delights in seeing a greedy visitor taught a lesson; Ben, a lighthouse keeper's son, overcomes his fear of the sea with the help of a little white dog; and a family's business selling doughnuts from a van comes to an explosive end. B. Richardson

**USER LEVEL:** Stage 1 Stage 2  
**AVAIL:** Paper \$7.95

*Titles in the series include:*

*Cat chocolate* SCIS 948282  
*Hot stuff* SCIS 931385  
*The sea dog* SCIS 948281

## Fiction for older readers

*Resources are arranged alphabetically by author. Some of these items are also suitable for upper primary students.*

BROOKS, Martha  
*Bone dance.*  
Allen & Unwin, 1997 (Ark fiction)  
ISBN 1864488441

Alex mourns the father she never knew, and grieves for her recently dead and much beloved grandfather. Across the Canadian province of Manitoba, a young man tries to resolve the consequences of his mother's early death, and to make peace with the unquiet spirits which haunt his stepfather's land. Inexorably Alex and Lonny's lives draw together, until they each become the instrument of the other's redemption. The landscape and its significance is evoked in sensuous, lyrical writing. Rich with mysticism and spirituality, this spellbinding love story celebrates the aboriginal culture of the two, showing how it has formed them and continues to give meaning to their lives in contemporary Canada. M. Lobban

**USER LEVEL:** Stage 5 Stage 6  
**AVAIL:** Paper \$14.95  
**EVAL:** Highly recommended SCIS 941854

BURKE, Moira  
*Losing it.*  
Longman, 1998. (Rave)  
ISBN 0733903762

Josie is a teenager growing up in the suburbs of Melbourne. The development of her identity, and acceptance of her place in the world throughout these stormy adolescent years, is revealed in a modified interior monologue, in which the stylistic use of the second person produces an immediacy

reminiscent of girls' confidences. The images of her life: McDonalds; delivering pamphlets for pocket money; life with four sisters; boys who burn cars; and experiments with sex and drugs; accrete from swirling flotsam in this remarkable novel. The sad, serious backbone of the story, the effects of living with her slowly dying alcoholic father, will be familiar and painful for some readers. M. Hamlyn.

**USER LEVEL:** Stage 5  
**AVAIL:** Paper \$10.95 SCIS 935122

**CARMICHAEL, Claire**  
*Originator.*

Random house, 1998 (A Mark Macleod book)  
ISBN 0091829534

How well do Adam and Callie really know their father? He couldn't possibly be an originator, could he? For the twins, the idea that their famous geneticist father could be involved in the creation of a perfect master race to rule over genetically produced drones is unthinkable. Important ethical and moral issues are raised in this science fiction novel: the fact that they are couched in a fast moving story peopled with credible characters acting in a well realised, post apocalyptic world (complete with its own teen speak), should ensure this book a place on recommended teen reading lists. Hopefully there will be a sequel. B. Richardson



**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**AVAIL:** Paper \$14.95 SCIS 948291

**CATRAN, Ken**  
*Running dogs.*

HarperCollins, 1998  
ISBN 0732259754

To escape the regimented, sterile, brave new world of the 21st century, the spoilt children of the elite purchase extreme virtual reality games from the desperados who run the fringe dwelling gangs. Desperate parents hire Directional Orientation Guardians (DOGs) to rescue their children from entrapment in the games. Relationships depend on partners, and trust is essential. The relationship between Folant and Serena develops, but will it be too little too late? This book puts an interesting spin on our view of the future and is as much about relationships and society as it is about adventure. Of particular attraction to those keen on computer games, it will have a wider appeal for those who enjoy fast moving adventure. L. Monticone

**USER LEVEL:** Stage 4 Stage 5  
**AVAIL:** Paper \$10.95 SCIS 941099

**CLARK, Margaret**  
*Annie with attitude.*

Addison Wesley Longman, 1998 (Rave)  
ISBN 0733902642

Annie and her little brother are constantly being dragged from town to town by their feckless mother who is usually escaping from her latest man. Add to that the wound of sexual abuse from one of mum's men, and it's not hard to see why Annie has an attitude. In a small coastal town, Annie is unexpectedly befriended by the coolest boy in school and his family, as she shares their environmental concerns, and she resolves that this is one town she's not going to leave without a fight. The predictable plot is peopled by stock

characters, compromising the novel's credibility and minimising its emotional impact. M. Lobban

**USER LEVEL:** Stage 4 Stage 5  
**AVAIL:** Paper \$10.95 SCIS 935117

**COOK, Elspeth & DONALD, Anna**  
*Hard time.*

Fremantle Arts Centre Press, 1998  
ISBN 1863682333

Two young people, Debbie and Alex, are involved in a fatal traffic accident and consequently sent to a juvenile detention centre. Like Dickens' *Hard times*, the female protagonist finds salvation of sorts while her male counterpart is lost. Debbie has little sense of self, but inside the centre she learns to value herself, control her anger and decides to be a victim no longer. Chance and fate appear to determine Debbie's survival and Alex's suicide. Each account has a different author: Debbie's story is very didactic, but Alex's is told in a more complex and literary way. Alex's Aboriginality seems to be a literary device for his grandfather to introduce the concept of a malevolent spirit. Alex has little knowledge of his identity and does not encounter racism. The failure of this book to show that suicide is not a viable choice makes it unsuitable for NSW government schools. It is not a book for young Aboriginal readers. B. Corr, M. Lobban

**USER LEVEL:** Stage 5 Stage 6  
**AVAIL:** Paper \$12.95 SCIS 939204

**GREENWOOD, Kerry**  
*Feral.*

Hodder Headline, 1998  
ISBN 0733608884

Australia, post holocaust, is the setting for this well written and intricately plotted novel. The narrative alternates between three characters: Sasha, one of the cloistered university elite; Xanthippe, a formidable river trader; and the Geek, whose subservient role in the university masks a revolutionary intent. Their stories finally unite during a desperate bid to overthrow the dictatorship of the management, and restore some semblance of life as it was. A professor of classical history guides the revolution, using ancient history to show the way to a new world order. Part fantasy, part science fiction, this is also a tender love story between two young people who regard themselves as unlovable outsiders. M. Lobban



**USER LEVEL:** Stage 5 Stage 6  
**AVAIL:** Paper \$11.95 SCIS 942246

**HARNETT, Sonya**  
*All my dangerous friends.*

Viking, 1998  
ISBN 0670880272

Harnett specialises in portraying the dark side of adolescent experience, and this novel is no exception. Louie is tired of being a good little girl, and celebrates the freedom of university life by allying herself with a drug taking, thieving, vicious gang presided over by the wealthy, charismatic Sasha. Her commitment to the gang is constantly being tested, until the day she joins them in a ritualised revenge against Sasha's sister's abusive partner. Treatment of issues such as stealing and drug taking are explicit. Louie's emotional need, and the attractiveness of the gang's lifestyle are absolutely believable. The reader is similarly seduced by

taut prose, graphic descriptions, and extraordinary events, making this a powerful novel for mature readers. M. Lobban

**USER LEVEL:** Stage 6  
**AVAIL:** Paper \$16.95 SCIS 948297

**HARRIS, Christine**  
*Jigsaw.*

Hodder Children's, 1998 (Vibes)  
ISBN 0733608841

Imagine having no recollection of your former life, experiencing strange vibes, and living with two people who claim to be your parents but are reluctant to let you out of the house. This is the situation in which Brittany finds herself in this extremely well written story that keeps the reader puzzling and questioning throughout. The book's short chapters enhance the appeal for independent readers and middle school students. As the introductory instalment of a new series, with three other books to follow, this is sure to be a popular book with those who enjoy a satisfying, suspense filled mystery. J. Eade



**USER LEVEL:** Stage 3 Stage 4  
**AVAIL:** Paper \$8.95 SCIS 930727

**HAUTZIG, Deborah**  
*Second star to the right.*

Walker, 1998  
ISBN 0744560063

In this novel, the complexity of anorexia nervosa baffles doctors, parents, teachers, best friends, and the victim herself. In this account of one girl's decline further into the grip of anorexia and bulimia, resulting in hospitalisation, there are no easy answers or resolution. Written in an intimate style, where innermost thoughts serve to explain the outward, irrational behaviour of this fourteen year old, the novel will appeal to teenagers whether or not they have been personally touched by this condition. S. Rasaiah

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** PDHPE  
**SYLLABUS:** PDHPE K-6; PDHPE 7-10  
**AVAIL:** Paper \$8.95 SCIS 943812

**LASENBY, Jack**  
*Taur.*

Hyland House, 1998  
ISBN 1864470623

The mythical elements woven into this otherwise straightforward story of pursuit and survival, give it a resonance beyond these themes. In an imagined future, the land is inhospitable and humans have reverted to barbarism. Crippled Ish meets Taur, a powerful but mute victim of torture and mutilation, and their mutual acceptance creates a trust which enables them to flee from the vengeful Salt Men. Taur and Ish's acts of courage and initiative are balanced against the calculated cruelty of their pursuers, and the impersonal harshness of the environment. This epic novel can work on several different levels, and has a strong appeal for teenage boys. J. Nisbet

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**AVAIL:** Paper \$12.95 SCIS 947802

**MCKERRAL, Helen**  
*Homestrung.*

Hyland, 1998 (Hylander)  
ISBN 186447016

Following the death of her mother, Lexie is forced to live in Grunethal, a small country town, with her little known grandmother and great grandmother. Lexie is not happy with this situation, and has to come to terms with her mother's death, a new family situation, and her own adolescence. Not simply a straightforward first person narrative, the author intersperses Lexie's story with official documents, a letter and Oma's interview. This provides the reader with different insights, especially into the character of Oma, a parallel in terms of self knowledge. This well structured novel is especially useful for the senior English topics: growing up; and discovery. B. Hull

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** English  
**SYLLABUS:** English 7-10; 2U Contemporary English; 2U General English  
**AVAIL:** Paper \$14.95 SCIS 925782.

**MALONEY, James**  
*Angela.*

University of Queensland Press, 1998  
ISBN 0702230820

Provoking thought on often contentious issues about racism, both obvious and subversive, in Australia, the flow of this book at times seems forced. Through strong character development and interaction, Maloney (not an Aboriginal) exposes raw areas of race relations between Aboriginals and non Aboriginals, personalising the experience and often rendering the reader pointedly uncomfortable. It appears possible that Marsden himself is not comfortable. As Gracey strengthens her Aboriginal identity, themes such as the visibility and invisibility of Aboriginals in education, sporting role models, Aboriginal Deaths in Custody, the Stolen Generations, and the strength and community of Aboriginal family life, are explored intimately across a range of human experience and emotion. Angela's stereotypical reactions, and struggle to reassess her views, are cleverly interwoven, though can annoy the reader with the time it takes her. This has potential as a unit of work with thoughtfully prepared lesson material in keeping with Departmental policy. Such a study would be incomplete without Aboriginal community consultation. C. Foley

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** English; HSIE  
**SYLLABUS:** English 7-10; History Stages 4-5  
**AVAIL:** \$22.95 SCIS 950665

**MALONEY, James**  
*The snake man.*

Lothian, 1998 (After dark)  
ISBN 0850918995

Tightly written, this short novel has solid appeal for readers of suspense. What was in the box Terry and Liam helped carry into the derelict house of the taxidermist? Were Terry's concerns warranted? Why did he disappear? Can Liam find him? Effectively utilising the friendship between the two boys, tension builds steadily. The unpredictable conclusion is uncomfortably satisfying, in keeping with the style and intent of the story. Gouldthorpe's solid black and white illustrations match tone and plot well. Older reluctant readers and difficult to please boys

may well be drawn into this exciting, well constructed, quick read. C. Foley

**USER LEVEL:** Stage 3 Stage 4  
**AVAIL:** Paper \$8.95 SCIS 942712

**MARSDEN, John**  
*Burning for revenge.* [sound recording]  
Louis Braille, 1998 (420 min.)  
ISBN 0732021561

Kate Hosking's reading of this novel is evenly paced, of very consistent quality, and characterises Ellie perfectly. She has developed from the gauche innocent of *Tomorrow when the war began* into a bitter soul resolved on revenge, writing a contemptuous record of the resistance to the invasion of Australia. This is a very useful text for both sighted and vision impaired audiences. Each cassette begins with a brief excerpt from the end of preceding cassette, thereby eliminating confusion and frustrating interruption. Marsden's great, thrill packed tale, with its reflective moments, is well presented in this format. W. Bowie

**USER LEVEL:** Stage 4 Stage 5  
**KLA:** English  
**SYLLABUS:** English 7-10; 2U English  
**AVAIL:** \$49.95 Louis Braille Books SCIS 947346

**MASSON, Sophie**  
*Green eyes.*  
Hodder Children's, 1998 (Best friends)  
ISBN 0733609325

A study of adolescent friendships, and the jealousies and insecurities that are often so much a part of peer group dynamics, permeate the plot of this novel. Jenny is thrilled when she is invited to accompany Cassie and her family on a camping trip. When Cassie meets up with Kerys, a young man whose company she learns to enjoy very much, Jenny sets out to destroy their friendship with lies, believing her actions to be for Cassie's benefit. Simply told, with language that is accessible to competent readers, the story is arranged in short chapters. It is a competently crafted novel in which important and relevant themes are sensitively handled. J. Anderson

**USER LEVEL:** Stage 3 Stage 4  
**AVAIL:** Paper \$11.95 SCIS 947258

**METZENTHEN, David**  
*Falling forward.*  
Omnibus 1998  
ISBN 1862913366

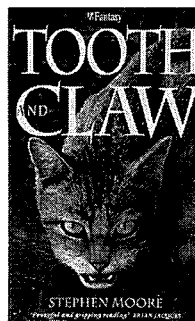
Bruce is a bit slow, but his life suits him, working as a builder's labourer and the live in custodian of a yacht club. Into his simple life comes Troy, a restless young man who drags Bruce into his wild ambitions to become a country and western star. Through Troy he loses his job and his home, yet when they inevitably part, he feels he has gained a life. Troy's manipulation of Bruce is painful to watch, but his amoral behaviour is constantly challenged by Bruce's steadfast decency. At times the narrative is limited by Bruce's inarticulate ingenuousness, but this is balanced by the cautious joy of his expanding world and growing self reliance. M. Lobban

**USER LEVEL:** Stage 5  
**AVAIL:** Paper \$12.95 SCIS 941850

**MOORE, Stephen**  
*Tooth and claw.*  
Hodder Children's, 1998 (H fantasy)  
ISBN 0340704543

It's hard not to search for allegory behind the dramatic facade of this story, in which domesticated animals suddenly face a survival situation without humans. In the evacuated town, dogs and cats struggle to revive the instincts dulled by dependence, almost destroying each other, though the real enemy is elsewhere. The anthropomorphism is justified by remarkable central character development essential to the plot, and accompanied by keen observation of animal behaviour. The storytelling is gripping, emotive, and of high quality. H. Gordon

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**AVAIL:** Paper \$9.95 SCIS 937851



**PRYOR, Michael**  
*The house of many rooms.*  
Hodder Headline, 1998 (The doorways trilogy 1)  
ISBN 0733609260

Long deserted by his mother, and neglected by his father, sixteen year old Saul is accustomed to being independent and resourceful. When the Princess and her ragtag band of Followers burst out of the toolshed, closely pursued by the horrifyingly silent Hollow Men, he is reluctantly drawn into their conflict, their affairs, and eventually their world. Fantasy, adventure, magic and suspense are combined in this novel, in which a blend of familiar fantasy elements and a suspenseful plot, as well as the conceptual originality of the House itself, offset some anachronistic language, thin motivation and shallow character delineation. W. Smith

**USER LEVEL:** Stage 3 Stage 4  
**AVAIL:** Paper \$14.95 SCIS 942241

**PULLMAN, Philip**  
*The broken bridge.*  
Macmillan Children's, 1998  
ISBN 0330368559

The failure of Ginny's father to be honest with her about her family, in particular her mother, is the pivot around which this complex tale revolves. Ginny is strong, curious, and artistically talented. This credible and attractive character's adventurous spirit drives her to overcome formidable obstacles in search of the truth. Her quest exposes her to the ways in which prejudice and intolerance can break up families and destroy lives. The resolution does not provide any easy answers. A plethora of themes, including race, sibling rivalry, and friendship, do slow the momentum and cannot be fully explored, but nevertheless this is a powerful and engrossing story. J. Nisbet

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** PDHPE  
**SYLLABUS:** PDHPE 7-10  
**AVAIL:** Paper \$9.95 SCIS 945776

**QUINTANA, Anton**  
*The baboon king.*  
/ translated by John Nieuwenhuizen. Allen & Unwin, 1998 (Ark fiction)  
ISBN 186448349

Of magnificent scope, this open ended tale deals effortlessly with themes of pride, intolerance and prejudice. Nascent capitalism gives fresh allegorical form to ubiquitous intolerance. Nieuwenhuizen's translation preserves the original's integrity. Its unobtrusive narrative, with powerful imagery that encourages us to inhabit the consciousness of humans and animals alike, the soporific heat of savannah day and the twig snapping terror of African night, is palpably drawn and indelibly etched. All contribute to the inexorable development of an extremely disturbing concept, the true nature of human nature. Morengaru, a man divided against himself and outcast to the wilderness, must live as an animal. The experience is both scarifying and enlightening for us all. W. Bowie

**USER LEVEL:** Stage 4 Stage 5 Stage 6 Professional  
**KLA:** English  
**SYLLABUS:** English 7-10; 2U English  
**AVAIL:** Paper \$14.95  
**EVAL:** Highly recommended SCIS 945342

**ROY, James**  
*Full moon racing.*  
University of Queensland Press, 1998 (UQP young adult fiction)  
ISBN 0702229741

Gunner is sixteen when she takes literally her mother's ultimatum to 'fit in or find somewhere else to live'. Her older cousin, Arky, announces her decision to head up the coast after a disastrous relationship, so Gunner impulsively joins her. During the three days it takes to reach Queensland, they befriend a hitchhiker who is running away from his own demons. Through their time together, they each come to terms with what they are doing, and make different decisions about keeping going. Gunner's emotional growth and emerging independence are portrayed honestly and at times humorously in a readable and engaging road novel. M. Lobban



**USER LEVEL:** Stage 4 Stage 5  
**AVAIL:** Paper \$12.95 SCIS 935909

**WESTALL, Robert**  
*Voices in the wind.*  
Macmillan Children's, 1998  
ISBN 0330352180

Westall's ten quality short stories in this collection share a common theme of mystery. They are written with subtlety, so that the degree of impact depends on the reader's imagination. Ranging from the intriguing to the chilling, they are all completely captivating. From disquieting ghosts in graveyards, to treacherous rat like traps set to catch criminals, dreams coming true or life imitating dreams, each tale completely different in all but their merit. Their strongly British setting may not appeal to some readers, but they would entrance an audience of younger and older readers if read aloud. L. Monticone

**USER LEVEL:** Stage 4  
**AVAIL:** Paper \$9.95 SCIS 945547

## Information, poetry and drama

Resources are in Dewey order. The category KLA is intended to provide a guide as to which Key Learning Area the resource supports. These, and the **USER LEVEL**, should only be used as a guide, as many resources transcend age and subject barriers.

The following symbols indicate the Key Learning Area used by the NSW Board of Studies:

- CA Creative Arts (primary & secondary);
  - English English (primary & secondary);
  - HSIE Human Society & its Environment;
  - LOTE Languages other than English;
  - Mathematics Mathematics (primary & secondary);
  - PDHPE Personal Development/Health/Physical Education;
  - Science Science (secondary);
  - ST Science & Technology (primary);
  - TAS Technology & Applied Studies (secondary);
- and

VOC ED Vocational Education  
CEC in front of a syllabus denotes that it is a Content Endorsed Course.

**Le CORNU, Peter**  
*Computer system basics.*  
Eastern House, 1998  
ISBN 0864580320 [004.16]

Teachers, including community educators conducting introductory courses, and students needing a starting point for understanding computers and computing, are the intended audience for this textbook. It satisfies the needs of teachers by providing graded exercises, clear and simple graphics, and a logical sequence of topics. Students can progress at their own pace, at home or in class, by following the nine topic focused units. Icons within each unit indicate practical or written activities, review tests or assessment tasks, suitable for TAFE students. The extensive glossary of technical terms is a valuable inclusion. D. Low

**USER LEVEL:** Stage 4 Stage 5 Community Professional  
**KLA:** Science; TAS  
**SYLLABUS:** Computing Studies 9-10; Science 7-10  
**AVAIL:** Paper \$19.95  
**EVAL:** Highly recommended

*ViaGrafix kidz club.* [videorecording] [series]  
ViaGrafix, 1998 (60 min. each)

For teachers and students who are visual learners, this series of computer manual video recordings could prove very useful. Both video training manuals taking the viewer from turning the computer on, to using various applications. Set in a clubhouse, the program introduces the club leader, a bright, bubbly, American girl complete with baseball hat, who talks the user through the practicalities of computer operation. Point and click, on screen instructions are paced to allow the viewer follow her actions. The pause button on the video recorder would also help. This video could be used in small segments: with beginner students as a whole class or in small groups, or for reinforcement with individuals. Teachers who themselves are absolute beginners may prefer to learn in the privacy of their own homes. S. Blackwell

Do you have an idea for a future Scan article?  
Contact Ian McLean at (02) 9886 7501

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6  
Community Professional  
**AVAIL:** \$24.95 each  
**KLA:** RAS; ST  
**SYLLABUS:** Computing studies 7-10

*Titles in the series are:*

*Windows 95 for kids* SCIS 935260  
*Internet for kids* SCIS 935262

FRENCH, Jackie  
*The little book of big questions.*  
Allen & Unwin, 1998  
ISBN 1864487712 [030]

All parents of inquisitive children will appreciate the format of this unusual book. The author takes the part of a listener and philosopher. The questions keep coming, and the subjects range from speculations on what happens after death to questions on the existence of aliens. The answers are thoughtful and factual. Sometimes there is no answer, and then the questioner is drawn into the debate to share in the thinking. Terry Denton has illustrated each page with cartoons and doodles which add light relief to the conversation. This is a useful resource for gifted and talented students and children interested in science and philosophy. S. Rasaiah

**USER LEVEL:** Stage 3 Community  
**KLA:** HSIE; ST  
**SYLLABUS:** HSIE K-6; Science & Technology K-6  
**AVAIL:** Paper \$12.95 SCIS 946258

BECKETT, Wendy  
*Sister Wendy's book of saints.*  
Dorling Kindersley, 1998  
ISBN 0751305332 [270.092]

Who better to guide the reader to some of the greater saints than that seemingly unlikely television star, Sister Wendy, who has created a new following for great works of art with her short gallery walk-throughs for the BBC? Design values are given top priority here, with each saint illustrated by illuminations and decorations chosen from manuscripts in Italian museums. It's a book to treasure, regardless of any religious affiliation, for it is a work of art in itself, yet it contains solid information on each saint, and demonstrates where each fits into the church year. Explanations are simple and easily understood. M. Steinberger

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** CA; HSIE  
**SYLLABUS:** Visual Arts 7-10; 2U Visual Arts  
**AVAIL:** \$29.95 SCIS 937464

*A sustainable earth.*  
Cambridge University Press, 1998  
ISBN 0521455928 [304.2]

Specifically written to meet the needs of secondary students of environmental studies in Australia, this textbook covers the content of many of those courses, and the environmental aspects of others. Environmental keywords, such as: sustainability; economic systems; environmental impact; greenhouse effect; and endangered species are defined and explained in easily understood terms. Environmental issues are well illustrated and followed up with stimulating and suitable exercises. All of the relevant international agreements from the past decade are explained, and placed in an Australian context. Ideas for environmental action and extension activities are included for many chapters, as well as guest experts' essays and specialised case studies. D. Low

**USER LEVEL:** Stage 6 Professional  
**KLA:** HSIE; Science; TAS  
**SYLLABUS:** 2U Biology; 2U/3U Design & Technology; CEC Environmental Studies; 2U/3U Geography  
**AVAIL:** Paper \$34.95  
**EVAL:** Highly recommended SCIS 931227

*Great Australian women of the twentieth century.* [computer software]

/ written and edited by Nicolas Brash, Heinemann, 1998

ISBN none [305.40994]  
Biographical details of over 500 famous Australian women of the last 120 years are featured on this CD-ROM: from Lucy Garvin, the first female principal of Sydney Girls High School, through to the sporting achievements of Cathy Freeman, and the defection of politician, Cheryl Kernot. Students can choose: a **Timeline** search; an A-Z listing of surnames; or simply browse the biographies. **Fact files** provide: a photograph of the subject; a thumbnail description including academic achievements; and a link to the expanded **Life story**. Another feature is a **Who am I?** game requiring yes/no answers, with a link to the **Biography** option to help students respond correctly. While the database offers a simple approach in its presentation, the information is precise, and the subject matter is extensive. Supported by a series of worksheets for teachers to print out, this useful resource could be incorporated into a wide range of curriculum areas. B. Kervin

**Minimum requirements**

Windows 3.1/95: 486; 8MB RAM; double speed CD ROM  
**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** CA; English; HSIE; PDHPE; Science  
**SYLLABUS:** English 7-10; History Stages 4-5; PDHPE 7-10; Science 7-10; Visual Arts 7-10  
**AVAIL:** \$79.95 Reed SCIS 949233

ALDRICH, Robert  
*The last colonies.*  
Cambridge 1998

ISBN 052141461X [321]  
Despite the Hong Kong handover, a shrinking legacy of empire survives in the post colonial world, with at least 50 colonies, by various names and definitions, shared by at least nine nations, including Australia. This scholarly, but eminently readable, survey reveals these fascinating places scattered about the globe, profiling their histories, contemporary situations, and significance. Thematic overviews of constitutional, economic, strategic issues and change agents such as independence movements or territorial disputes are also provided. These surviving colonies offer a world of diversity and anomaly, many barely impacting on world consciousness, while others produce wider implications, as events concerning East Timor, the Falklands, Mururoa and Hong Kong testify. G. Spindler

**USER LEVEL:** Stage 6 Professional  
**KLA:** HSIE  
**SYLLABUS:** 1U General Studies; 2U/3U Modern History; 2U/3U Society & Culture  
**AVAIL:** \$59.95 SCIS 943185

*Lives and times.* [series]  
Heinemann Library, 1997

The aim of this series is to introduce young students to a range of biographies of famous people. Each book is in two

sections, the first of which tells a short story about the person's life, and the second attempts to introduce young students to the process of gleaning information from primary sources. Photographs, museum pieces, and newspaper articles are used. The books are attractively designed and illustrated with both coloured drawings and reproduced photographs. Print is well sized for the intended audience. The series would make a useful resource for teaching information skills, although some of the subjects are a little obscure for primary students. K. Chauncy

**USER LEVEL:** Stage 1 Stage 2 Stage 3  
**KLA:** English; HSIE  
**SYLLABUS:** English K-6; HSIE K-6  
**AVAIL:** \$22.95 each

*Titles in this series include*

*Helen Keller* SCIS 946339  
*Mohandas Gandhi* SCIS 943014  
*The Wright brothers* SCIS 946336  
*Emmeline Pankhurst* SCIS 943022

MCALVERY, Tony  
*Superpower rivalry: the Cold War 1945-1991.*

Cambridge University Press, 1998 (Cambridge history programme)  
ISBN 0521597390 [327.47073]

A focused text, this work links the themes, issues and events of the Cold War; a dominating historical issue of the contemporary world. Through activity questions based on primary and secondary evidence, students can develop a solid overview of the Cold War, and why it has been a major historical issue this century. The primary evidence is a balance of images and written texts. Carefully selected topics such as the war's origins, the Cuban missile crisis, and the arms race, develop a good knowledge base for further study. The author provides balanced views, arbitrating between the propaganda of the East and the West. C. Dorbis

**USER LEVEL:** Stage 4 Stage 5 Stage 6 Professional  
**KLA:** HSIE  
**SYLLABUS:** History Stages 4-5; 2U Modern History  
**AVAIL:** Paper \$18.95  
**EVAL:** Highly recommended SCIS 941566

*World of money.* [computer software]  
British Museum Multimedia, 1998

ISBN none [332.4]  
The concept of money and the development of coins and notes, through a number of historical time periods and locations, including Ancient Greece and Rome; European expansion; the Islamic World; and the present day, is the focus of this CD-ROM. Ease of navigation is enhanced by clever design features; the helpful menu screen represents the foyer of the British Museum. **Information centre** enables conceptual aspects to be explored, such as: **What is money?**; **Money and society**; and **Saving money**. By examining coins of each period, students can gather much background and anecdotal information. Images of coins can be magnified, front and back, to allow closer inspection. Five interesting **Activities** are provided for students to: design their own notes; search for treasure; test understanding of financial decision making by role playing a mayor budgeting for a future Olympic Games; or reorganise a gallery based on the inscriptions provided. An interactive map allows searching activities. A well referenced and sourced **Bibliography** is also provided and there is a link to the **British Museum** home page on the Internet. B. Kervin

**Minimum requirements**

Macintosh: 5260; System 7; 16MB RAM; six speed CD ROM; 16.7 million colours  
Windows 3.1/95: 486DX4; 8MB RAM; quad speed CD ROM  
**USER LEVEL:** Stage 4 Stage 5  
**KLA:** HSIE  
**SYLLABUS:** Commerce 7-10; History Stages 4-5  
**AVAIL:** \$59.95 Thames & Hudson SCIS 944559

SNEDDEN, Robert  
*The environment.*  
Wayland, 1998 (Science projects)  
ISBN 0750221593 [333.7]

The complexities and interrelationships that exist within the global environment are presented here in a child friendly way. Fascinating questions about energy, natural cycles, habitats, and the major contemporary problems facing humans today are answered using project oriented tasks. The projects, focusing on experimentation, are relevant, stimulating, and complement discovery learning. Photographs, by Chris Fairclough, present the beauty and detail of our diversified ecosystems. A relevant glossary, and answers to the questions posed by the projects, has been added to assist the student or teacher in their use of this worthwhile factual text. B. Roberts

**USER LEVEL:** Stage 2 Stage 3  
**KLA:** ST  
**SYLLABUS:** Science & Technology K-6  
**AVAIL:** \$29.95 SCIS 945151

*Primary industries prime notes.* [computer software]  
Queensland Dept. of Primary Industries, 1998  
ISBN 0724267751 [338.10994]

From the table of contents of this informative and easy to use CD-ROM, the user has access to information from: Department of Primary Industries (DPI notes); Department of Natural Resources (DNR facts); Department of Natural Resources and Environment (agriculture notes and landcare notes); Department of Primary Industries and Resources (fact sheets); Grain Research and Development Corporation (project summaries); Kondinin Group (machinery evaluations and research reports); and Tropical Beef Centre (TBC facts). Each of these areas contains an individual contents list which is accessed by clicking on the name. If general facts are required, they can be searched by accessing the search facility in **Acrobat reader** (included on this CD-ROM). The information is primarily text based, and very easy to read. All areas of agricultural production are covered, including land management and government regulations. Most states of Australia are represented. K. Heap

**Minimum requirements**

Macintosh: 68020; System 7.0; 3.5MB RAM  
Windows 3.1: 386; 8MB RAM (16MB RAM for Windows NT)  
**USER LEVEL:** Stage 5 Stage 6 Professional  
**KLA:** Science; TAS  
**SYLLABUS:** Agriculture 7-10; 2U/3U Agriculture



**AVAIL:** \$45.00 Dept. of Primary Industries,  
QLD  
**EVAL:** Highly recommended SCIS 943544

**LOWENSTEIN, Wendy**  
*Weevils in the flour: an oral record of the 1930s  
Depression in Australia.*

Scribe, 1998  
ISBN 0908011334 [338.50994]

This twentieth anniversary edition reminds us how effective and influential this classic of oral history is. Many of its accounts have subsequently become the source of much social history writing. We hear directly about the experiences of almost 200 Australians from all walks and parts of life, some in brief paragraphs, others in more sustained interviews or narratives. There are the usual strengths and weaknesses of oral history, but most weaknesses are overcome by the diversity of views, often multiple views of the same issues, and excellent editing and organisation. This is an essential and very accessible source book for students, amply supported with introductory, statistical and chronological material. G. Spindler

**USER LEVEL:** Stage 3 Stage 4 Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6; History Stages 4-5; 2U/3U History  
**AVAIL:** Paper \$29.95  
**EVAL:** Highly recommended SCIS 925724

**Young achievers.** [series]  
Heinemann, 1998

It is refreshing and motivating to find information about the diverse lives and achievements of some remarkable young Australians, some of whom have the potential to achieve and contribute yet more in their life times. Well set out, diversely presented information is punctuated by relevant images and photographs. Each individual's achievements are highlighted in the context of their field of endeavour: politics; business; or sport. The reader's understanding is further developed by brief historical background information and an apt, informative glossary in each volume, explaining terms relating to the individual's interests and achievements. N. Chaffey

**USER LEVEL:** Stage 2 Stage 3 Stage 4 Professional  
**KLA:** English; HSIE; PDHPE  
**SYLLABUS:** English K-6; HSIE K-6; PDHPE K-6  
**AVAIL:** \$24.95 each  
**EVAL:** Highly recommended

*Titles in this series include:*

*Natasha Stott Despoja* SCIS 944719  
*Poppy King* SCIS 943097  
*Shane Warne* SCIS 943101  
*The Woodies* SCIS 943104

**Indigenous peoples, the United Nations and human rights.**

/ edited by Sarah Pritchard. Zed, 1998  
ISBN 1856495949 [342.94]

Historical developments, and raising of consciousness, about Australia's Indigenous peoples are outlined against the broader context of human rights in this collection of essays. Arising from a 1995 conference, this resource discusses the international forces which shape legal and moral obligations of governments and people. Indigenous issues are dealt with clearly and concisely. Invaluable for international comparative studies in legal and Aboriginal studies, the book

includes excellent primary sources and sound interpretations of issues, provided by Indigenous Australians, jurists, and historians. General background knowledge of the United Nations' Declaration of Human Rights, and its role in monitoring, would be helpful for using this book in the classroom. C. Dorbis

**USER LEVEL:** Stage 6 Professional  
**KLA:** HSIE  
**SYLLABUS:** 2U Aboriginal Studies; 2U/3U Legal Studies  
**AVAIL:** Paper \$29.95 Federation Press  
**EVAL:** Highly recommended SCIS 944157

**Youth and the law.**

/ edited by Kaye Healey. Spinney, 1998 (Issues in society 90)  
ISBN 1875682996 [342.94]

Another volume in an indispensable series, this edition tackles youth and legal issues, suggesting the complexity of the debates through the juxtaposition of articles. For example, an article on the persecution of young people in community spaces lies alongside articles about soaring youth crime rates and the high incidence of vandalism and graffiti. This collection contains articles of direct relevance across a range of subjects, and represents the best of contemporary commentary on the issues, helpfully supported by statistical information. Lists of additional reading, and a guide to relevant organisations nationwide, are useful bonuses. J. Donovan

**USER LEVEL:** Stage 6 Community  
**KLA:** HSIE; PDHPE  
**SYLLABUS:** 1U General Studies; 2U Legal Studies; 2U/3U Life Management Studies; 2U PDHPE  
**AVAIL:** Paper \$14.50 SCIS 927892

**DELLORA, Daryl**

*The highest court.* [videorecording]  
Film Art Doco, 1998 (56 min.)  
ISBN none [347.94]

The purpose of the video is to explore the constitutional separation of powers between parliament, the executive function of government and the High Court. What was once the exclusive and unquestioned constitutional responsibility of the High Court in the development of case law has now come under much criticism from governments and special interest groups. The video successfully explores the complexities of judicial independence through personal profiles of, and discussion with, members of the High Court bench, including the former Chief Justice, Gerard Brennan. This represents historic access to High Court processes, roles and responsibilities in an attempt to explore its complexities. It is relevant to Civics and Citizenship. F. Plummer

**USER LEVEL:** Stage 6  
**KLA:** HSIE  
**SYLLABUS:** 2U Legal Studies  
**AVAIL:** \$95.00 SCIS 947253

**MacADAM, Alistair**

*Judicial reasoning and the doctrine of precedent in Australia.*  
Butterworths, 1998  
ISBN 0409308978 [347.94]

Unfortunately, the doctrine of precedent is just one tiny part of the packed legal studies syllabus, so the detailed contents of this text will be of limited use in the high school classroom. It is primarily written for tertiary law students and practising lawyers, and the writers state that it assumes some

knowledge on the part of the reader. The text is dense and thorough, yet readable, in its examination of judicial legal reasoning and the application of the doctrine of precedent. The hundreds of cases cited are listed with a table of legislation: this alone may make the text a worthwhile reference for the legal studies teacher. J. Donovan

**USER LEVEL:** Stage 6 Professional  
**KLA:** HSIE  
**SYLLABUS:** 2U Legal Studies  
**AVAIL:** Paper \$65.00 SCIS 929256

**The story of the medicos: the doctors, nurses, dentists, stretcher-bearers, medical orderlies, ambulancemen, etc, in Australia's three armed services 1885-1998.**

/ edited by Bob Leonard. Westpac sub-branch, Returned Services League of Australia, 1998  
ISBN 0646352148 [355.3]

Personal accounts, extracts and summaries in this work give a comprehensive overview of Australia's military medical services. In the many locations where Australian forces have operated, from situations as diverse as Gallipoli and Rwanda, or POW camps in Japan and Cowra, medical units were there too. Their experiences offer an important perspective on war and peacekeeping, not only humanitarian but very human. Most of these brief and easily read accounts focus on personal experiences rather than medical issues, almost incidentally portraying the selfless bravery, devotion and good humour that seem characteristic of this paradigm of civic service. This is a useful student resource for history and Civics and Citizenship. G. Spindler

**USER LEVEL:** Stage 3 Stage 4 Stage 5  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6; History Stages 4-5  
**AVAIL:** Paper \$15.00 SCIS 938125

**MOSES, Brian**

*Look inside.* [series]  
Wayland, 1998

History comes alive in this series, which reveals snapshots of the times inside places where people lived, worked and played. From the elegant covers, to the classical borders around each page, this series invites inspection. The reader is not disappointed. The wealth of information and the entertaining snippets supported by full colour photographs, diagrams, and quotes from historic sources, make this a treasure for all lovers of history. The child oriented text is well sized and in short blocks which would suit younger students. This series is a worthwhile resource, providing children with a peep through a keyhole into fascinating times. S. Rasaiah

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6  
**AVAIL:** \$29.95 each  
**EVAL:** Highly recommended

*Titles in this series include:*

*A Tudor warship* SCIS 941247  
*A Victorian mill* SCIS 941244



**Drug use and abuse.**

/ edited by Kaye Healey. Spinney, 1998 (Issues in society 94)  
ISBN 187681103X [362.29]

Delivered in short articles, offering a variety of opinions supplemented with graphs and cartoons, and selected from current sources of information, this is another volume in this excellent series which provides senior students with a superb resource for research and essay writing. The narrow focus is on the illicit drugs: heroin; cannabis; and ecstasy. References to tobacco and alcohol are cursory at best. The prohibition versus partial legalisation debate is well canvassed. Other issues, such as the use of drugs in sport, are touched on more briefly. This volume should be used with others in the series on smoking, alcohol, and the drug debate. A. Gates

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** English; PDHPE  
**SYLLABUS:** 2U Contemporary English; PDHPE 7-10; 2U PDHPE  
**AVAIL:** Paper \$14.95 SCIS 937767

*Also available in this series:*

*Alcohol* SCIS 895647  
*The drug debate* SCIS 841557  
*Smoking* SCIS 914978

**ASHTON, John**

*The perils of progress: the health and environment hazards of modern technology and what you can do about them.*  
University of New South Wales Press, 1998  
ISBN 0868404888 [363.7]

The impact of technology on our environment is an issue relevant to everyone. What is spelled out here, in no uncertain terms and with easily understood examples, is the way such technological impact affects people now, and will affect future generations. This is no "doomsayer" book to frighten readers, but a carefully researched document which indicates what can be done, in taking action for the environment, as a positive approach to a better lifestyle. Some of the information gathered by the authors may give cause for worry, but for individuals wishing to have fewer technological hazards in their environment, possible steps to overcome the effects are provided. D. Low

**USER LEVEL:** Stage 6 Community Professional  
**KLA:** HSIE; Science; TAS  
**SYLLABUS:** 2U Biology; 2U/3U Design & Technology; CEC Environmental Studies; 2U/3U Geography  
**AVAIL:** Paper \$29.95  
**EVAL:** Highly recommended SCIS 928733

**Hogg, Russell**

*Rethinking law and order.*  
Pluto Press, 1998  
ISBN 1864030275 [364.994]

A text so fascinating that you want to read it from cover to cover in one sitting is surely a rarity in any field. This text informs the debate about law and order that is currently alive and well in NSW. It is controversial and provocative, not least for simply seeking to break down the myths about crime which are popularly perpetuated by mainstream media, and often unquestioningly believed in high school classrooms. The thoughtfulness of this text cannot fail to

inspire the 'rethinking' referred to in the title, both within the classroom and in wider society. J. Donovan

**USER LEVEL:** Stage 6 Professional

**KLA:** HSIE

**SYLLABUS:** 1U General Studies; 2U Legal Studies  
**AVAIL:** Paper \$24.95 SCIS 941705

**BERESON, Iteil & McDONALD, Dianne**  
*Civics and citizenship in Australia.*

Nelson, 1997

ISBN 0170091864

[370.11]

Divided into two parts, history of European government, and current civics and citizenship issues in the 1990s, this text covers all essential points of study. Issues covered include: the student's place in Australia society; historical developments in Australian democracy through to the present; and current issues that are pushing its boundaries. Content is adaptable to the NSW curriculum. A balance of text and image, many of which are from primary sources, results in a solid, useful textbook. However, some of its concepts may be difficult for the less able student. C. Dorbis



**USER LEVEL:** Stage 4, Stage 5

**KLA:** HSIE

**SYLLABUS:** Aboriginal Studies 7-10; History Stages 4-5

**AVAIL:** Paper \$28.50

**EVAL:** Highly recommended SCIS 914015

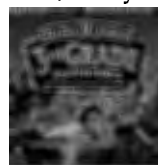
**The Clue finders' 3rd grade adventures.**

[computer software]

The Learning Company, 1997

[371.33]

If you have more time in the day than you need, or if you want to base an entire unit on a piece of software, this CD-ROM provides the adventure for you. The animation is excellent; the adventure is fun; the graded level of the problems is workable. Maths, logic, language arts, science and geography problems are dealt with at four increasingly difficult levels, from **Level 1 to Challenge**. Students can easily load the program, then sit back and let the adventure take them to the depths of the Numerian rainforest in search of a lost city. Inspired by Indiana Jones, the program's requirement of extended time to complete, makes it more suited to home than to classroom use. A positive feature is the facility to track each user's progress. Be warned that it uses the imperial, not metric, measurement system. S. Blackwell



**Minimum requirements**

Macintosh: System 7.1; 16MB RAM; 12MB hard disk; quad speed CD-ROM drive

Windows 3.1; 486 DX; 8MB RAM; 12MB hard disk; quad speed CD-ROM drive

**USER LEVEL:** Stage 2 Stage 3

**KLA:** English; HSIE; Maths; ST

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

**AVAIL:** \$59.95 Roadshow SCIS 939511

**Kuiyku mabaigal: Waii and Sobai.**

/retold by Aidan Laza; illustrated & translated by Alick Tipoti. Magabala, 1998

ISBN 1875643408 [398.209943]

Part of Torres Strait Islander cultural heritage is revealed as this story of warriors unfolds. It is a collaboration between a Badu Island Elder and a young Badu man (the translator and illustrator). Through the complex tale of two warrior brothers, a worldview emerges reflecting the uniqueness of the Torres Strait Islander people. The bilingual text reflects the revival and maintenance of cultural heritage, and its important place amongst Australian literary genres. The story is most relevant when undertaking comparative regional studies, as part of a wider cultural study. This study should be undertaken with Torres Strait Islander people; perhaps achieved through the Internet. C. Dorbis

**USER LEVEL:** Stage 4 Stage 5 Stage 6

**KLA:** HSIE

**SYLLABUS:** Aboriginal Studies 7-10; 2U Aboriginal Studies; History Stages 4-5; Geography Stages 4-5

**AVAIL:** Paper \$14.95

**EVAL:** Highly recommended SCIS 946269

**COLLIER, Mark**

*How to read Egyptian hieroglyphs: a step-by-step guide to teach yourself.*

British Museum, 1998

ISBN 0714119105 [493]

The decoding of the Rosetta Stone opened up a fascinating world for scholars and students. The understanding of these priestly pictograms adds depth of knowledge to a tantalising world. This is a reference book that takes interested readers into the language lessons of Ancient Egypt. Embedded in the text are history lessons for a civilisation that lasted 3000 years, for to decode the hieroglyphs we learn of the social and political lives of Egyptians. This is not a text for beginning language learners, as the complexities of hieroglyphs requires at least a solid understanding of basic grammar, syntax, history, and historiography. C. Dorbis

**USER LEVEL:** Stage 6 Professional

**KLA:** HSIE

**SYLLABUS:** 2U/3U Ancient History

**AVAIL:** \$29.95 Thames & Hudson SCIS 940962

**Why?: scientists answer children's questions.**

ABC Books, 1998

ISBN 0733303668 [500]

Conceived from the desire to interest children in science, this book aims to answer questions that children want answered. The questions are organised into subject chapters, and each is answered by a prominent scientist. Biographies detail the interests and studies of each participating scientist. There are humorous black and white sketches by Stephen Axelsen throughout the book. Pages are clearly presented and uncrowded. The questions are varied, from "How do mushrooms grow?" to "Why do cells and organs wear out?" They are answered in surprisingly simple language. R. Bodlay

**USER LEVEL:** Stage 2 Stage 3 Stage 4

**KLA:** HSIE; Science; ST

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

**AVAIL:** Paper \$16.95 SCIS 936080

**Ingenious! [computer software]**

Department of Communication and the Arts, 1997  
(Australia on CD)

ISBN none [507]

Using a game format, this CD-ROM allows young scientists and environmentalists to participate in five scenarios. The impressive thing is that they are all actual areas of contemporary Australian scientific investigation and experiment. Students can: try to help save an endangered animal; build a solar car; find evidence of extraterrestrial life; use science to battle bushfires; or investigate why huge numbers of pilchards are dying. Like all good games, these can be played at several levels of detail and sophistication, but no matter how basic or advanced participation is, learning is almost inevitable, and enhanced by structured lesson approaches. Whilst the complexity of the presentations may be daunting to adults, experienced young game players will relish the multimedia presentation and interactive nature of the games. The wealth of relevant scientific information and the problem solving approach give students a taste of real science: the gathering of data; posing and testing of hypotheses; and the drawing of conclusions. M. Lobban

**Minimum requirements**

Macintosh: 86040; System 7.1; 16MB RAM

Windows 3.1/95: 486; 16MB RAM

**USER LEVEL:** Stage 3; Stage 4; Stage 5

**KLA:** HSIE; Science; TAS

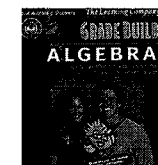
**AVAIL:** Supplied to schools; additional copies approx. \$50.00 SCIS 940915

**Grade builder: algebra 1. [computer software]**

TLC Properties, 1997

ISBN 0763014540 [512]

Action packed, with explicit and systematic teaching, this CD-ROM presents 60 comprehensive lessons which can be linked to generic or specific texts, with a guarantee to match any US published textbook. The setting is a cyber cafe, with its own simulated Web site, complete with email facilities. Peer tutors, with teenage interests, present lessons with up to date, practical examples. Interactive revision is delivered in gameshow and video game formats. Enjoy soaking your sibling, or watch your game score points roll over in **Death by algebra**. The exercises, which are timed and mostly extremely challenging, include: coordinate geometry; inequalities; exponents and roots; polynomials; and more. The program is user friendly with high teenage appeal. D. Doust



**Minimum requirements**

Macintosh: 68040; System 7.0.1; 16MB RAM; 25MB hard disk

Windows 3.1: 486DX2; 16MB RAM; 25MB hard disk

**USER LEVEL:** Stage 4 Stage 5

**KLA:** Mathematics

**SYLLABUS:** Mathematics 7-10

**AVAIL:** \$59.95 Roadshow

**EVAL:** Highly recommended SCIS 933544

**HEINRICH, Sally**

*Cherry stones: a book of numbers.*

Lothian, 1998 (A Walter McVitty book)

ISBN 0850918936 [513.2]

*Cherry stones* is much more than the book of numbers its title implies! It's a picture book of nursery rhyme and fairy tale

characters to spot and count, number puns and jokes, and no less than twenty six languages are represented for the linguist. Busy pages that are cleverly illustrated in a double paged repeated frame, will entertain readers at all stages in the primary school. This is a book for independent or paired reading, that can support or enhance many common K-6 classroom themes. Parents would enjoy this one too, and it would be an excellent addition to student recreational reading. K. Chauncy



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

**KLA:** English; Mathematics

**SYLLABUS:** English K-6; Mathematics K-6

**AVAIL:** \$22.95

**EVAL:** Highly recommended SCIS 941857

**GOMERSALL, Bob**

*Earth & universe. [computer software]*

Bradford Technology, 1995

ISBN none [520]

All aspects of space are explored in this CD-ROM. This would be a wonderful way for students to investigate the different facets of the universe. All sections are supported with text, both written and read, catering for all types of users. As can be seen in **Observations and explanations**, the video of **Movement of stars** provides a simple and easily understood explanation. The **Solar system** lists each planet, with supporting video and still pictures for all. For teachers wishing to extend students, the **Study guide** provides an aid to further work, supported with lesson plans and practical ideas. Students' knowledge gained during exploration of the CD-ROM can be tested in **Quizzes**, a self marking test provided in each section. If space travel is the topic of interest, it can be found by clicking on **Exploration and satellites**. Senior students studying 2 Unit physics will find it a relevant introduction to the astronomy elective. K. Heap

**Minimum requirements**

Windows 3.1: 386; DOS 3.3: 4MB RAM

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

**KLA:** Science

**SYLLABUS:** 2U Physics; Science 7-10

**AVAIL:** \$263.00 Educational Film Services SCIS 940110

**Bright sparks. [series]**

Walker, 1998 [523.1]

These inviting books will appeal to younger scientists, offering them intellectual access to our knowledge of the universe's evolution and humankind's exploration of it. From the beginning, the reader is engaged, and comprehension of quite complex concepts is enhanced by the series' manner of presentation. Text linked illustrations, and cartoon style, coloured images cover each double page spread. Brief, numbered pieces of information move across each page, ensuring understanding is incrementally and sequentially built up. A scatter of quiz questions stimulates and challenges the reader. A minor detraction is a misleading comment about astronomers. N Chaffey

**USER LEVEL:** Stage 1 Stage 2 Stage 3

**KLA:** ST

**SYLLABUS:** Science & Technology K-6

**AVAIL:** \$17.95 each

Titles in this series include:

*Out of this world* SCIS 943836  
*Seeing stars* SCIS 943838

MADGWICK, Wendy  
*Science starters.* [series]  
Wayland, 1998

An enjoyable, hands on exploration of the world of science is provided in this series. Each property of the particular subject, for instance, water, is examined in short, simple sentences suitable for beginning readers. This is followed by experiments that illustrate the property, allowing students to predict, observe, record, and draw conclusions. Well illustrated, step by step instructions help to guarantee success. A handy addition for the teacher or parent is to be found at the back of each book, detailing materials needed and providing hints to helpers. A brief, easily read and understood glossary, and suggestions for further reading, emphasise the practical nature of the series. S. Blackwell



**USER LEVEL:** Stage 1 Stage 2  
**AVAIL:** \$29.95  
**KLA:** HSIE; ST  
**SYLLABUS:** Science & Technology K-6

Titles in the series include:

*Up in the air* SCIS 941208  
*Water play* SCIS 941210

WILLIAMS, Simon  
*Multimedia minerals.* [computer software]  
Bradford Technology, 1995  
ISBN none [549]

Divided into a number of areas, this informative CD-ROM is aimed at students with a keen interest in minerals. By clicking on the **Structural index**, the user is led to a list of minerals, classified according to structure, with each topic is by further information. The **Alphabetic index** provides information on 240 minerals, two thirds of which are supported by pictures. For explanations of descriptors (eg. cleavage, hardness, lustre) the user selects **Introduction to minerals**. **Mineral identifier** is an interactive segment, allowing the user to alter characteristics to identify different minerals. **Chemical index** provides a different classification of minerals according to their chemical group eg. oxides and silicates. Exploration of world mining sites is located under **Mining for minerals**. Explanations are accompanied by pictures, some by video and sound. Younger students may find this CD-ROM challenging to use, but senior students could find it an enhancement to the 2 Unit chemistry syllabus. It is well supported with lesson plans and practical ideas. K. Heap

**Minimum requirements**

Windows 3.1: 386; 4MB RAM  
**USER LEVEL:** Stage 5 Stage 6 Professional  
**KLA:** Science  
**SYLLABUS:** 2U Chemistry; Science 7-10  
**AVAIL:** \$263.00 Educational Film Services  
SCIS 941141

*The living planet.* [series]

Cherrytree, 1998

Here is an informative set of factual books that effectively explains: how different ecosystems are formed; where they occur; the plants and animals that survive therein; and how to keep the environment healthy. The series looks at the structure of each ecosystem, its role on the planet, and the adaptations and food webs that sustain it. Each chapter is clearly set out. The colourful pictures, maps and diagrams aid the sometimes complex explanations. An interesting section at the end of each book contains practical experiments, which can be undertaken to demonstrate some of the principles underlying a particular ecosystem. This is a useful and extremely attractive series. J. Eade

**USER LEVEL:** Stage 2 Stage 3 Stage 4 Stage 5  
**KLA:** HSIE; ST; Science  
**SYLLABUS:** Geography Stages 4-5; HSIE K-6; Science & Technology K-6; Science 7-10  
**AVAIL:** \$29.95 each

Titles in this series include:

*Deserts* SCIS 945871  
*Oceans* SCIS 945868  
*Rainforests* SCIS 945874

*The dynamic coast: processes, landforms and human impacts.* [computer software]

Video Education Australasia, 1998

ISBN none [551.45]  
An easily navigated CD-ROM, this resource has nine content delivery topics and 54 chapters, comprising clear graphics, well chosen video footage, accurate explanations, and a sound glossary. Particularly impressive is the array of multiple choice questions, crosswords, and mapping exercises. In all, there are over 200 exercises. Ample scope for further research is provided through the Internet site included in the package, although time is required to assess the current status and curriculum relevance of the sites. Students can bookmark relevant chapters, paste and include their own notes, and are encouraged to undertake fieldwork. This CD-ROM is a extremely useful resource, either networked or used in class presentation; or used as a tool for individual investigation and enrichment. N. Hutchinson

**Minimum requirements**

Macintosh: LC475; System 7.1; 16MB RAM; 5MB hard disk  
Windows 95/98/NT: 8MB RAM; 5MB hard disk  
**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** Geography Stages 4-5; 2U Geography  
**AVAIL:** \$159.95 Video Education Australasia  
SCIS 943005

DEDMAN, Stephen

*Bone hunters: on the trail of the dinosaurs.*

Omnibus, 1998 (Extraordinary)

ISBN 1862913595 [567.9]  
Dinosaurs fascinate children, and this account of people for whom dinosaurs have become a life's obsession is pretty fascinating too. It gives a human face to palaeontology, describing the jealousy and petty rivalry which plagued the work of many famous discoverers, and the incredibly hard work and plain good luck that lie behind many famous discoveries. The exploits of the colourful palaeontologist who served as a model for Indiana Jones are shown to be as extraordinary as those of his screen counterpart. There is also a

wealth of dinosaur lore and information, impeccably presented and sourced. This series combines accessibility and enthusiasm, and encourages young readers to pursue their interests. M. Lobban

**USER LEVEL:** Stage 2 Stage 3 Stage 4  
**KLA:** HSIE  
**AVAIL:** Paper \$9.95 SCIS 938738

*Rainforest.* [kit]

Two-Can Publishing, 1997 (Interfact)

ISBN 1854344870 [574.5]  
Consisting of a 48 page spiral bound book, with a CD-ROM attached to the cover in a hard plastic pouch, this 'book and disk that work together' focusses on: the extent and location of rainforests; plants, animals and people of the rainforest; and controversial issues of rainforest destruction and conservation. An overview of the disk's seven segments, are included in the well presented factual book, along with instructions for using the CD-ROM. However, by comparison with the book, the standard of the CD-ROM is disappointing, especially to students used to more sophisticated interactive products; the limited animation, poor sound effects and sometimes confusing navigation did not seem to hold the interest of the Early Stage 3 students trialing this resource. L. Sepetauc

**Minimum requirements**

Macintosh: 68020; System 7.0; 4MB RAM  
Windows 3.1/95: 386; 4MB RAM  
**USER LEVEL:** Stage 2 Stage 3  
**KLA:** HSIE; ST  
**SYLLABUS:** HSIE K-6; Science & Technology K-6  
**AVAIL:** \$19.95 The Learning Journey

Other titles in this series include:

*Egyptians* SCIS 920818  
*Vikings* SCIS 920789

*In the rain forest.* [series]

Wayland, 1998

The natural wonders of rainforests, and the peoples who live there, are introduced in this series. The world map at the front pinpoints where different topics covered in the book occur. These books supply facts and figures, and interesting bites of information, interspersed with some opinion, about the topic. Each features a procedure. Helpful inclusions are a topic web and brief teachers' notes in each book. References for further information include most media formats, and will prompt users to extend their resource base. The books are stunning in their bright, colourful presentation and good use of white space, offering users appropriately sized amounts of information. They are well suited to teaching information skills. R. Murray



**USER LEVEL:** Stage 2 Stage 3  
**KLA:** English; HSIE; ST  
**SYLLABUS:** English K-6; HSIE K-6, Science & Technology K-6  
**AVAIL:** \$29.95 each  
**EVAL:** Highly recommended

Titles included in the series are:

*People in the rain forest* SCIS 945864  
*Trees and plants in the rain forest* SCIS 945866

*Ecosystems of Australia.* [series]

Heinemann Library, 1998

Each volume in this attractive, well bound series describes: a specific ecosystem; its unique features; the history of its use and development; its resident plants and animals (both native and introduced); and threats from human activity. The complexity and fragility of ecosystems is stressed, as well as the interaction and interdependence of their components. Accurate information is provided in simple, direct language, and the ideas for conservation are also presented at a level appropriate to student readers. Illustrations include coloured photographs, maps, and diagrams. Sources of further information, including Internet sites, are located at the end of each volume, though time is required to verify the curriculum relevance of Internet sites. W. Smith

**USER LEVEL:** Stage 3 Stage 4  
**KLA:** Science; ST  
**SYLLABUS:** Science and Technology K-6; Science 7-10  
**AVAIL:** \$24.95 each

Titles in this series are:

*Alpine regions* SCIS 941429  
*Deserts* SCIS 941425  
*Forests and woodlands* SCIS 941424  
*Rainforests* SCIS 941428

ROYSTON, Angela

*Life cycle of a ...* [series]

Heinemann Library, 1998 (Heinemann first library)  
The aim of this simple series is to introduce emergent readers to some of nature's life cycles. Topics and subjects covered are well identified for the target readership. Headings and large print on double page spreads provide some examples of the explanation text type. Layout and other inclusions, such as fact files and highlighted text assist in teaching information skills. Clear photographs show the chronological order for each life cycle process, and assist assimilation of information. This could be a useful series in infants classrooms for teacher directed and modelled lessons. R. Murray.

**USER LEVEL:** Stage 1 Stage 2  
**KLA:** English; ST  
**SYLLABUS:** English K-6; Science & Technology K-6  
**AVAIL:** \$22.95 each

Titles in the series include:

*Apple* SCIS 948897  
*Butterfly* SCIS 948902  
*Chicken* SCIS 948903  
*Sunflower* SCIS 948900

*Bug books.* [series]

Heinemann Library, 1998 (Heinemann first library)  
A stunning series for young students, this set of books open up the fascinating world of insects and other small creatures in an imaginative and entertaining way. Consistency of style and format ensures easy access to the essential facts. The books are a useful resource for introducing information retrieval, with most information organised under focus questions (approximately four lines of text per page). Striking, colour photographs enhance the simple text for emerging readers. A clear, labelled diagram (**Bug map**) and **Thinking about** questions to stimulate discussion about each creature, are included. This series is an invaluable resource for the



ever popular lower primary unit of work, minibests. J. Anderson

**USER LEVEL:** Early Stage 1 Stage 1 Stage 2

**KLA:** ST

**SYLLABUS:** Science & Technology K-6

**AVAIL:** \$24.95 each

*Titles in this series are:*

<i>Ant</i>	SCIS 943066
<i>Bee</i>	SCIS 943071
<i>Mosquito</i>	SCIS 943062
<i>Snail</i>	SCIS 943076
<i>Worm</i>	SCIS 943074

MORRIS, Jill & MUIR, Lynne  
*Australian kangaroos: magnificent macropods.*

Greater Glider, 1998.

ISBN 0947304363 [599.2]

The award winning team of Morris and Muir has created another fine environmental artbook, crammed with carefully researched and authenticated, written and visual information on one of Australia's most fascinating animals, the kangaroo. Their acclaimed formula, which features full colour pictures of the targeted animals set in their natural habitats, framed with interesting, detailed borders, and accompanied by pertinent rhyming verses for younger children, and more detailed factual text for older students, ensure appeal and usefulness to a very wide audience. Location maps, comparative sizes chart, comprehensive glossary, index and recommended reading list complete the excellent package. B. Richardson



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

**KLA:** ST; Science

**SYLLABUS:** Science & technology K-6; Science 7-10

**AVAIL:** Paper \$17.95

**EVAL:** Highly recommended SCIS 948287

WALLACE, Karen

*Imagine you are a dolphin.*

Hodder Children's, 1998

ISBN 034067833X [599.53]

Readers of this picture book feel as if they are swimming with the dolphins and sharing their adventures. Each new page presents a different, ocean fresh dolphin experience. Most are fun, but two are realistically threatening. Because both the bold print and the colourful drawings are large and clear, this is a book which a teacher can share with a class. The text is entertaining, and uses a descriptive vocabulary which complements the images effectively. This helps make the simple story, and the illustrations supporting it, very exciting. While most children will love this book, a few might find some parts of its realism frightening. L. Ward



**USER LEVEL:** Stage 1

**KLA:** ST

**SYLLABUS:** Science & Technology K-6

**AVAIL:** Paper \$12.95 SCIS 941937

MORRIS, Jill

*Fraser dingo.*

Greater Glider, 1998

ISBN 0947304398 [599.77]

Using the different genres of recount, report, play and narrative, the story of the dingoes of Fraser Island is explored. Recounted through stories based on observations, with excellent colour drawings by Sharon Dye, a truly remarkable story of survival unfolds. It is as much an ecological story of balances and counter balances as it is the story of the dingoes' daily lives. A simple overview of other flora and fauna, and map are included. The book provides a good framework for students to model if undertaking a local area study. It will challenge students to understand how natural balances have changed through human intervention; and ask the important question: when is extinction point reached? C. Dorbis

**USER LEVEL:** Stage 3 Stage 4 Stage 5

**KLA:** HSIE; ST

**SYLLABUS:** HSIE K-6; Science K-6

**AVAIL:** Paper \$9.95

**EVAL:** Highly recommended SCIS 946850

NUNN, John F.

*Ancient Egyptian medicine.*

British Museum, 1997

ISBN 0714119067 [610.932]

For those interested in the history of medicines and medical personnel in Ancient Egypt, this text covers: nutrition; physiology; diagnosis; treatment; surgery; specialists; magic; and religion. Archaeological sources include Stelae and reliefs from tombs, such as Ankmahor; written sources include Edwin Smith and the Berlin medical papyri. Much information is also presented in tables and labelled diagrams, such as the plans of sanatoria, while the appendices provide extra detail, including some translations of hieroglyphics. Modern medical interpretations are offered. This is a scholarly, but readable, insight into this facet of an ancient society. It is a fascinating and useful text for senior students and teachers of Ancient Egypt. B. Hull.

**USER LEVEL:** Stage 6

**KLA:** HSIE

**SYLLABUS:** 2U Ancient History; 2U Personalities & their Times

**AVAIL:** Paper \$42.00 SCIS 927341

*Scholastic's The magic school bus explores the human body.* [computer software]

Microsoft, 1995

ISBN 157231074X [612]

Another CD-ROM based on the series of books by Joanne Cole and Bruce Degen, this one deals with the internal exploration of twelve major human body parts. Students familiar with other CD-ROMs in this series will have no trouble with navigation, or completing tasks; others may need to use the on screen help initially. Designed not to be a serious reference tool, but rather as an exciting interactive field trip, it is filled with information which is presented to students via narration, video and animation clips in an entertaining, yet informative manner. Learning occurs through a variety of games, experiments and reports as the bus whizzes through a human body. Due to its American origins, teachers will have to explain some of the non metric measurements used. This imaginative resource would be ideal as an integral component in a unit of work on the workings of the human body. N. Paull

**Minimum requirements**

Macintosh: LC550; System 7.1; 8MB RAM; 8MB hard disk;

Windows 3.1: 486SX; 4MB RAM; 5MB hard disk; 8 bit sound board

**USER LEVEL:** Stage 2 Stage 3

**KLA:** PDHPE; ST

**SYLLABUS:** PDHPE K-6; Science & Technology K-6

**AVAIL:** \$69.95 Scholastic SCIS 937404

ANGUS, Beverley M.

*Tick fever and the cattle fever in Australia 1829-1996.*

Queensland Dept. of Primary Industries, 1998

ISBN 0724267603 [636.2]

Concentrating on a topic important to the animal industry, this book demystifies the cattle tick and the effects of tick fever. Using an historical focus, it follows the movement of cattle ticks, and hence tick fever, from 1829 to the present. All aspects of the disease are covered in great detail, making this book an excellent reference for those studying beef as their product study, but would be a difficult prospect for some students to read completely. It is well supported with diagrams and pictures, and thoroughly referenced for further study. K. Heap

**USER LEVEL:** Stage 6 Professional

**KLA:** TAS

**SYLLABUS:** 2U/3U Agriculture

**AVAIL:** Paper \$125.00 SCIS 937230

PAULSEN, Gary

*My life in dog years.*

Macmillan Children's, 1998

ISBN 0330372750 [636.7]

Gary Paulsen fans will relish this chance to read about the author's life, and go beyond his fictitious adventures. Paulsen's real life adventures and the dogs he shared them with make fascinating and absorbing reading. The depth of rapport Paulsen has had with the many dogs he has owned over the years is to be envied. The hysterically funny episodes which characterised each dog, are described in exquisite language; as are the tender moments where the reader feels like an intruder into a very private memory. Presented as a series of separate incidents, this book works well to illustrate the art of short story writing. S. Rasaiah

**USER LEVEL:** Stage 3 Stage 4

**KLA:** English

**SYLLABUS:** English K-6; English 7-10

**AVAIL:** Paper \$10.95

**EVAL:** Highly recommended SCIS 945303

STOCKLEY, Michele

*Art investigator.*

Heinemann, 1998

ISBN 0858598337 [709]

Placing Australian artists and schools within the context of Western art history is the method chosen here, encouraging students to make the connections with European traditions. Although, in its chronological outline, the book appears to be conventional, the difference is in the detail. Sidebars in the text challenge the student to respond to questions, and to research, discuss and create. Special sections at the end of each chapter take up issues such as the artist in society, while links to Internet sites (which need to be checked for curriculum relevance) complement some topics. Even though there are few references to non European art, this textbook offers a stimulating and contemporary approach to its subject. J. Nisbet

**USER LEVEL:** Stage 5 Stage 6

**KLA:** CA

**SYLLABUS:** Visual Arts 7-10; 2U/3U Visual Arts

**AVAIL:** Paper \$38.95 SCIS 944660

VAN WYK, Gary

*African painted houses: Basotho dwellings of Southern Africa.*

Abrams, 1998

ISBN 0810919907 [728.096885]

The colourful, bold patterns painted on the adobe houses of the Basotho people of the kingdom of Lesotho, landlocked inside South Africa, are essentially religious murals, a particularly vibrant form of prayer. Van Wyk's fine photography shows the infinite variety of these startling designs, created only by women amidst bare red landscapes, and encoding symbolic and religious beliefs and, sometimes, ritual or political statements. His fascination with the art forms leads naturally to an exploration of Basotho history and culture. A superb example of the integration of art into daily and spiritual life, the houses also offer marvellously inspirational compositions of colour and form for students. G. Spindler

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

Professional

**KLA:** CA; HSIE

**SYLLABUS:** Studies of Religion 7-10; 2U Studies of Religion; 2U/3U Society & Culture;

Visual Arts K-6; Visual Arts 7-10

**AVAIL:** \$69.95 SCIS 937350

*Michelangelo: sculptures & paintings.* [computer software]

Montparnasse Multimedia, 1995

ISBN none [709.45]

A detailed study of Michelangelo's life, work and times is available on this CD-ROM. Access is provided either via a narrated journey, targeting a particular work, or by researching other characters and places in that time period. Each link permits students to move easily from one search method to another. The **Years** approach focuses on the different periods of Michelangelo's life. **Characters** offers background information on his rivals, patrons and associates. **Places and works** enables the user to view plans of sites and buildings and, with the zoom function, to examine Michelangelo's works in minute detail. For those desiring to be more specialised in their searching, the **Quick move** icon allows for keyword searching. This eliminates the chance of being sidetracked or revisiting material unnecessarily. This CD-ROM provides a wealth of information and gives students an opportunity to more fully appreciate Michelangelo's artistic achievements. B. Kervin

**Minimum requirements**

Macintosh: LCIII; 3.5MB RAM; double speed CD-ROM drive

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

**USER LEVEL:** Stage 5 Stage 6

**KLA:** CA

**SYLLABUS:** Visual Arts 7-10; 2U/3U Visual Arts

**AVAIL:** \$98.00 Educational Film Services SCIS 937243



**SYLLABUS:** Geography Stages 4-5  
**AVAIL:** Paper \$32.00 SCIS 943252

**ESTENSEN, Miriam G.**  
*Pathways to ancient times.*

Science Press, 1998 [930]  
ISBN 0855832738

With its clear layout and accessible information, this general text would provide a useful starting for the current preliminary and HSC ancient history courses. Topics covered include: archaeology (discovery and dating methods); case studies (Thera and marine archaeology); and information on ancient civilizations, such as Egypt, Greece, Pompeii, and the Celts. The text is simply written, interspersed with: up to date written and archaeological sources; diagrams; maps; plans; and exercises. These exercises involve analysis, empathy, and information skills. Brief glossaries appear throughout the work. **What to do** and **Think about it** boxes suggest activities. B. Hull.

**USER LEVEL:** Stage 6  
**KLA:** HSIE  
**SYLLABUS:** 2U Ancient History  
**AVAIL:** SCIS 930752

**CALLENDER, Gae**  
*Egypt in the Old Kingdom: an introduction.*

Longman, 1998 [932]  
ISBN 0582812267

Designed specifically for the classroom, and reflecting effective history teaching principles, this work opens up to students a world of magnificence and fascination. A plethora of primary evidence (photographs, written texts and archaeology) is embedded, and then examined in balanced writings by the author. Clearly identified headings allow the multi-layered Egyptian society to be studied and understood. This text reflects the wealth of knowledge now accumulated about ancient Egypt, which gives us a far wider view of the nascence of a 3500 year civilization. Appendices and a glossary are useful additions. This is a good reference book for the junior history syllabus. C. Dorbis

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** History Stages 4-5; 2U/3U Ancient History  
**AVAIL:** Paper \$29.95  
**EVAL:** Highly recommended SCIS 929726

*Life in ancient Egypt.* [videorecording]

Gateway, 1997 (30 min.) (Plundering the vault) [932]  
ISBN none

Aspects of Ancient Egyptian social life and customs, concentrating on the New Kingdom period, are presented in this video. Focussing on actual tomb paintings as source material, daily activities are featured, such as: the harvest; fishing; banquets; games; and the work of craftsmen. Explanations of the paintings are supplemented by closer examination of selected, three dimensional artefacts (eg. cosmetic bowls). As pointed out in the newly filmed prologue, the documentary footage was "filmed some time ago", so there are variations of colour quality (although the tomb scenes are good) and the narration is somewhat stilted. Blackline proformas of multiple choice questions are included for classroom use. B. Hull

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** 2U Ancient History; History Stages 4-5; 2U Personalities & their Times

**AVAIL:** \$45.00 SCIS 921915

**KERR, Greg**  
*Lost Anzacs: the story of two brothers.*

Oxford University Press, 1998 [940.4]  
ISBN 0195506634

A proud celebration of the life and achievements of two soldier brothers, the beloved grandfather and great uncle of the author, is the focus of this book. It is an account written with sensitivity, and a writer's professional touch. This riveting work plots the course of a Gallipoli Campaign survivor, from his turbulent youth, enlistment, training in Egypt, through to his capture and internment in a prisoner of war camp in Turkey. Unlike many war diarists, George Kerr did not record daily events, but wrote objectively of those around him. Photographs provide fascinating additional information. Students of Australian history will be intrigued by this personal insight into World War I. J. Watts

**USER LEVEL:** Stage 4 Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** History Stages 4-5  
**AVAIL:** Paper \$19.95  
**EVAL:** Highly recommended. SCIS 931122

**Leapman, Michael**  
*Witnesses to war: eight true-life stories of Nazi persecution.*

Viking, 1998 [940.53]  
ISBN 0670873861

Children of the Holocaust, and their remarkable stories of survival and loss, are the basis of this collection, which includes stories of: Kindertransporte (the evacuation of children to Britain and America by boat); stolen and ghetto children; Rom (or Gypsies); and the account of Anne Frank. Adding personal insights to the history of World War I, each chapter opens with a brief background to the case studies. Even in the Frank story, there is a glimmer of hope in the outcome. A well illustrated work, with detailed maps and black and white photographs of survivors and contemporary events, this is of particular interest to secondary history students. B. Hull

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** History Stages 4-5; 2U Modern History; 2U People & Events  
**AVAIL:** \$29.95 SCIS 943833

*World War Two: stories & archives.* [computer software]

Montparnasse Multimedia, 1996 [940.53]  
ISBN none

Students have an extensive range of information and source material available to them when using this CD-ROM as a research tool. Primary sources include maps, military files and firsthand accounts, while secondary sources include film clips and related literary passages. Access is achieved via: **Reference points**; **Events of the month**; and **Archives**. Sections are supported by detailed graphics and photographic images. The **Research** option caters to different student learning styles, providing access to search engines, and further options for the user to create information files and personal commentary on the range of material. The scope and range of evidence available in the context of World War II as a predominantly European conflict is extremely worthwhile, especially with the insights it provides on the society of the time. Some of the material on concentration camps, in particular, is not readily available in other source formats. B. Kervin

#### Minimum requirements

Macintosh: 67040; System 7.1; 5.2MB RAM; double speed CD-ROM drive

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

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** HSIE  
**SYLLABUS:** History Stages 4-5; 2U/3U Modern History  
**AVAIL:** \$98.00 Educational Film Services SCIS 937238

**MIDDLETON, Haydn**  
*Diana, Princess of Wales.*

Heinemann Library, 1998 (Lives and times) [941.085]  
ISBN 0431025061

Books about Diana will interest many readers, and this simple biography is no exception. Aimed at younger readers, the picture book briefly traces Diana's life from her privileged upbringing to her marriage to royalty, the birth of her sons, her charity work, divorce and death. Short, simple sentences are accompanied by watercolours and photographs of events in her life. Considerable space is devoted to her death and the public response to it, with some negative comments about the role of the media in her life. This is balanced by some focus on her humanitarian achievements. B. Roberts

**USER LEVEL:** Stage 1 Stage 2  
**KLA:** HSIE  
**SYLLABUS:** HSIE K-6  
**AVAIL:** \$22.95 SCIS 937753

*Paris: promenades & history.* [computer software]

Montparnasse Multimedia, 1997 [944]  
ISBN none

Paris, France, can be explored on this CD-ROM via an historical trip of discovery, and a more relaxed travel guide highlighting the sights and attractions of the city. The **Historical itinerary** provides a comprehensive study of the growth of this city through various time periods, from its origins to the present. Each period of time includes narration and visual material. Links are provided for students to research associate material about the main characters of the period, importance of the sites and historical background to the period. A **Panorama** allows for a visual study of the city by viewing the different attractions. There is a three dimensional presentation of the buildings, and users have a vantage point to view the rest of the city. For a narrow subject range, this resource offers students a number of possibilities to use both information and format to full advantage in a skills orientated approach. B. Kervin

#### Minimum requirements

Macintosh: 68040; System 7.1; 12MB RAM; double speed CD ROM drive

Windows 3.1/95: 486; 12MB RAM; double speed CD-ROM drive

**USER LEVEL:** Stage 4 Stage 5  
**KLA:** HSIE; LOTE  
**SYLLABUS:** French 7-10; Geography Stages 4-5; History Stages 4-5  
**AVAIL:** \$98.00 Educational Film Services SCIS 937246

**Morcombe, Margot & FIELDING, Mark**  
*The spirit of change: Russia in revolution.*

McGraw-Hill, 1998 [947.08]  
ISBN 007470656X

For the student and teacher of modern history, particularly the Russian Revolution option, this is a detailed, comprehensive and extremely well resourced text. It covers: the definition and theory of revolution; pre revolutionary Russia and the personalities involved; and the crisis itself. The well written text provides both a link and background to the wide range of sources: cartoons; photographs; statistics; letters; posters; and newspaper reports. The diagrams are clear. The focus questions direct students' use and analysis of the sources. Other exercises range from simply retrieving information to critically thinking, evaluating and drawing conclusions. This is a worthwhile text, particularly for its scope of source material. B. Hull

**USER LEVEL:** Stage 6  
**KLA:** HSIE  
**SYLLABUS:** 2U/3U Modern History  
**AVAIL:** Paper \$28.95 SCIS 946055

**De SOUZA, Marian**  
*Asian perspectives: a thematic approach across the middle school curriculum*

Longman, 1998 [950]  
ISBN 0733900852

Written to meet the requirements of the Victorian Curriculum Standards Framework (CSF); this text covers the, Level 6 outcomes for the Studies of Society and Environment (SOSE) syllabus. Nevertheless, the content is relevant to aspects of the NSW HSIE curriculum. The text covers a wide range of topics and it is reasonably up to date on recent events and statistics. There are many activities, more than a few of which are irrelevant ("Imagine you are the water of a great flood and create a story detailing your source"). A minor problem is the tiny print on some pages, especially where source material is reproduced. J. Donovan

**USER LEVEL:** Stage 4 Stage 5  
**KLA:** HSIE  
**SYLLABUS:** Asian Social Studies 7-10  
**AVAIL:** Paper \$29.95 SCIS 943206

**CHINNERY, Sarah**  
*Malaguna Road: the Papua and New Guinea diaries of Sarah Chinnery.*

National Library of Australia, 1998. [995.3]  
ISBN 0642106878

Her sense of adventure is indicated by the fact that Chinnery was, early this century, the second woman in England to ride a motorbike. She was a practising dentist married to an Australian anthropologist. In 1921 she accompanied him to New Guinea where she lived for sixteen years, until the disastrous volcanic eruption in Rabaul in 1937 forced them to leave. This engaging diary, illustrated with her photographs, offers an interesting insight into a very individual woman. Passages would be suitable for studies of the individual and conformity, and crossing boundaries for students of senior English and women's studies. M. Hamlyn.

**USER LEVEL:** Stage 5 Stage 6  
**KLA:** English, HSIE  
**SYLLABUS:** 2U General English; History Stages 4-5  
**AVAIL:** Paper \$24.95 SCIS 944019

## Professional reading

Resources are in Dewey order.

POSPISIL, John

### *How to get more from your computer.*

Choice, 1998

ISBN 0947277471

[004.16]

Just bought a computer? As the title suggests, if you want to get more from your computer, then this book is for you. A follow up to the author's *How to buy a computer*, this volume answers frequently asked questions and clarifies computer terms in an easily understood way. For instance, readers no longer have to be confused about the difference between megahertz, megabytes and gigabytes, as they are all explained. The basics are covered: word processing; desk-top publishing; spreadsheets; databases; graphics and the Internet. Hints on computer housekeeping are very useful, as is the discussion on upgrading your computer. As one would expect with any Choice publication, consumer rights are dealt with. S. Blackwell

USER LEVEL: Professional

AVAIL: Paper \$10.00

SCIS 946967

FERRES, Susan

### *Mouse art: creating art on the computer.*

ISBN 0074705660

McGraw-Hill, 1998

[006.6]

Exploring the principles of line, shape, texture, colour and tone, this book helps the reader to use the computer as a creative drawing tool. Activities encourage the development of computer skills by introducing the painting tools slowly, so students can gradually learn to control the mouse and draw the shapes they desire. Interesting, well set out and achievable theme based activities, using *ClarisWorks*, *Kid-Pix*, and *HyperCard*, on Windows or Macintosh, are grouped at: **Junior level** (pre-school to Year 4); **Middle level** (Years 3 to 6); and **Senior Level** (Years 5 to 8). This could be a useful resource for those schools keen to extend the use of computers beyond word processing. S. Blackwell

USER LEVEL: Professional

KLA: CA; ST; TAS

AVAIL: Paper \$22.95

SCIS 937047

CHATTEN, Dave

### *Mensa brainwaves: lateral thinking & logical deduction.*

Viking, 1998

ISBN 0670882402

[153.4]

A large collection of puzzles is used here to make learning enjoyable and challenging. The activities, combining lateral thinking and logical deduction, could be applied to individual or team learning situations. The problems, posers, and conundrums are aimed at middle school level but many older users may find them intriguing, mind stretching and infuriating. The solutions could be: teased out and shared in group discussions, presentations and performances; critiqued by students for learning opportunities; and reflected upon to uncover different ways of learning. Presented as blackline proformas and applicable across the whole range of KLAs, the activities provide stimulus material for preparing teams for lateral thinking competitions and challenges. F. Plummer

USER LEVEL: Professional

AVAIL: Paper \$19.95

SCIS 941544

### *Your future, your say: the Constitution in your life.*

/ produced by Parliamentary Education Office, Canberra in association with Ryebuck Media.

Educational Media Australia, 1998

ISBN 0646325167

[342.94]

A student centred approach to the Constitution is an excellent idea, but not without its problems: the video accompanying this kit shows situations with little relevance to students' lives and experience. Each segment is linked to issues based and inquiry centred units of work, concerning the Constitution itself and relating it to: the environment; Indigenous Australians; the economy; Parliament; and the future. The six units, designed for secondary students, each have several excellent investigations based on real situations and incorporating the resource material. Teacher resources include: a teacher's guide; a thorough interpretation of the Constitution; and the annotated Constitution produced by the Constitutional Centenary Foundation. It is relevant to Civics and Citizenship. G. Spindler

USER LEVEL: Professional

KLA: HSIE

SYLLABUS: Commerce 7-10; 1U General Studies; History Stages 4-5; 2U/3U Society & Culture

AVAIL: \$199.00

SCIS 928382

GILLIGAN, Beth

### *Reverse garbage environmental education resource cards.*

Reverse Garbage, 1998

ISBN none

[363.72]

Reverse Garbage Truck is a non profit community cooperative, based in Sydney, which promotes the recycling of industry waste as raw materials for art, craft and environmental projects. Their resource cards are extremely well researched, suggesting: a variety of activities within each category; and student learning outcomes for programming purposes P-10; key concepts; background information; classroom management strategies; and health and safety aspects. Topics include: **Exploring through the senses**; **Healthy waterways**; **Creatures and their habitats**; and **Food, glorious food**. Numerous cards suggest ideas for use in the area of adult education. This resource would not require access to Reverse Garbage materials to be of value in schools. I. McLean

USER LEVEL: Community Professional

KLA: CA; HSIE; Science; ST; TAS

SYLLABUS: Science & Technology K-6; Visual Arts K-6; Visual Arts 7-10

AVAIL: \$45.00 full set or \$10 each section

EVAL: Highly recommended SCIS 928767

GINSBERG, Margery B.

### *Educators supporting educators: a guide to organising school support teams.*

Association for Supervision and Curriculum Development, 1997

ISBN 0871202816

[371.2]

There are many aspects of this US developed resource that would have relevance to Australian educators at school, district, state or national level. The initiatives outlined in the book grew out of the experiences of a 1995 US Congress initiated vision of a collaborative, schoolwide approach to comprehensive instructional reform in high poverty schools. The authors argue that the initiative transformed traditional ways of working with students through the engagement of

external change agents or school support teams who provided professional development and support. The book offers practical advice, case studies, suggested agendas, handouts and blackline transparencies on how to make school support teams work. L. Rowles

USER LEVEL: Professional

AVAIL: Paper \$28.00

SCIS 931994

WEEKS, Fiona

### *Partners in projects: six steps to successful research tasks for your child: parent program.*

[kit]

Catholic Schools Office, Diocese of Broken Bay, 1998  
ISBN 1876377003

[371.3028]

Comprising a presenter's manual, a booklet for parents, blackline proformas, a set of six posters, and a CD-ROM, this kit is designed to be used by schools to take parents through the information process. Ideally, parents will be led to an understanding of the process, which will enable them significantly to assist their children in completing information tasks. The non interactive CD-ROM is in two parts: one with audio comment for the presenter to use in preparing the presentation; the other for showing to a group of parents as a screen projected slide show. Although prepared by, and for use in, the Catholic sector, this kit could be used in any school. W. Smith

USER LEVEL: Professional

AVAIL: \$90.00

SCIS 947544

### *Technology in the classroom, a collection of articles.*

/ edited by Tom King. Hawker Brownlow, 1997

ISBN 1864016922

[371.33]

Excitement in learning through the use of technology is the unifying theme of these nine essays. The editor has selected these articles to highlight three essential messages to teachers. The first is the difference which technology, in the form of learning tools, can make to learning. The second concerns the processing of information through multimedia, virtual reality, and multiple intelligence enhancing technologies, thereby empowering teachers to transform their teaching. The third conveys the exciting promise of the radically altered learning world towards which the technological revolution is propelling us. A brief editorial note completes the book on a unifying note. A detailed index is included. L. Ward

USER LEVEL: Professional

KLA: CA; English; HSIE; LOTE;

Mathematics; PDHPE; Science; ST; TAS

AVAIL: Paper \$ 29.95

SCIS 940507

CLARK, Edward T.

### *Designing and implementing an integrated curriculum: a student centred approach.*

Holistic Education, 1997

ISBN 0962723274

[375]

As the title suggests, this small but dense text presents as a thoroughly researched exploration into the implications of designing and implementing a truly integrated, learner centred curriculum. Although anchored in the American context, it has relevance for Australian teachers who are striving to develop a genuinely integrated curriculum that is global, holistic, ecologically orientated, futuristic, and clearly centred on students learning how to learn. The book contains powerfully constructed philosophical arguments, strategies, models, and authentic examples of implementation that will challenge teachers in all curriculum areas into

radical new ways of thinking about learning. The author's accessible style makes the text an effortless read for teachers keen to move in this direction. L. Rowles

USER LEVEL: Professional

AVAIL: \$26.00

SCIS 931240

MACGREGOR, Helen

### *Listening to music: history: age 9+.*

Black, 1998

ISBN 0713647175

[780.9]

Teachers of music will appreciate the uniqueness of this pack, as it will appeal to music readers and non readers alike. A 57 track history of music, from medieval times to the twentieth century, is presented on either compact disc or cassette. There are worksheets to accompany the music, supported by detailed teacher's notes. Students will have the opportunity to hear the similarities and progressions made in music from 1200 years ago until now. An obvious omission is popular music from the twentieth century selection. This listening resource fills a gap for teachers searching for material for a comprehensive history of music for middle school students. B. Roberts

USER LEVEL: Stage 3 Stage 4

KLA: CA

SYLLABUS: Music K-6; Music 7-10

AVAIL: Paper \$60.00

SCIS 941257

### *Set no limits: 2000 Paralympic Games.* [kit]

Sydney Paralympic Organising Committee, 1998

ISBN 0646354337

[796.04]

An outstanding kit, this resource easily succeeds in its aims of creating understanding of athletes with a disability, and promoting the Sydney 2000 Paralympic Games. It uses a well paced and brilliantly produced video to briefly introduce the topic. This is elaborated with a thoroughly prepared set of teaching units for both primary and secondary teachers. These are accompanied by originals for overheads, student fact sheets, athlete profiles, and a directory of contacts. The teaching units are of an exceptionally high standard, with interesting and varied activities assigned to particular KLAs. As well as providing a quality series of stimulating lessons, the kit's information can be used for more general topics such as heroes, famous Australians, and overcoming adversity. L. Monticone

USER LEVEL: Stage 1 Stage 2 Stage 3 Stage 4 Stage 5  
Stage 6 Professional

KLA: English; HSIE; PDHPE; Science; ST; TAS

AVAIL: Sent to all schools; additional kits \$25.00; video only \$10.00

EVAL: Highly recommended SCIS 944424

## 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  
Sally Blackwell, SO2, Computers in Schools  
Rosemary Bodlay, Telopea Primary  
Bill Bowie, English, Dulwich High  
Sue Bremner, SEO2, Training & Development  
Jill Buckley, SEO1, Training & Development  
Nell Chaffey, Tamworth Primary  
Katharine Chauncy, Sutton Forest Primary  
Barry Corr, SEO2, Drug Education

Jenny Donovan, SEO1, Literacy Assessment  
 Chris Dorbis, SEO1, Aboriginal Studies  
 Diana Doust, STLD, Lismore High  
 Jan Eade, Turramurra North Primary  
 Colleen Foley, SCIS Review Coordinator  
 Anne Gates, SEO2, Drug Education  
 Helen Gordon, secondary teacher-librarian  
 Marion Hamlyn, Wollongong High  
 Karen Heap, Science/TAS, Muirfield Technology High  
 Bronwyn Hull, Goulburn High  
 Nick Hutchinson, HSIE, Turramurra High  
 Penny Hutton, SEO2, Middle Years/Literacy  
 Narelle Johnston, SEO1, Training & Development  
 Bede Kervin, Bowral High  
 Marjorie Lobban, Peter Board High  
 Daniel Low, TAS, Epping Boys' High  
 Elizabeth Maxwell, Cherrybrook Technology High  
 Ian McLean, *Scan* editor  
 Lea Monticone, Monaro High  
 Rebecca Murray, Blacktown South Primary  
 Jennifer Nisbet, Sydney Secondary Distance Ed.  
 Nigel Paull, South Grafton Primary  
 Frances Plummer, SEO2, Training & Development  
 Jenny Quirk, Turramurra Primary  
 Sally Rasaiah, Waitara Primary  
 Beverley Richardson, teacher-librarian/literacy specialist  
 Darryl Roberts, South Grafton Primary  
 Graeme Ross, AP, South Coogee Primary  
 Lorraine Rowles, Project Officer, Literacy  
 Lyn Sepetauc, St Clair Primary  
 Cathy Sly, English/Drama, Barrenjoey High  
 Wendy Smith, Tamworth Primary  
 Alison Soutter, Project Officer, Student Welfare  
 Graham Spindler, Parliamentary Education Liaison Officer  
 Margaret Steinberger, secondary teacher-librarian  
 Jenny Stratford, Literacy Consultant  
 Laurence Ward, DP, Carlton Primary  
 Helen Wyatt, SEO2, BOS ■

## HOW DO YOU USE *SCAN*?

The SCIS/*Scan* team would like to hear how you use *Scan* in your school.

Have you adopted or adapted ideas or strategies from recent issues of *Scan* into your school program? Which articles did you find to be particularly inspirational for your school's future directions?

Just a short paragraph will do. Please let us know by 31<sup>st</sup> March. Contact the editor at:

*Scan*  
 Department of Education and Training  
 Private Bag 3  
 Ryde NSW 2112  
 Email: Ian.McLean@det.nsw.edu.au  
 Fax: 02 9886 7413

Two submissions will be chosen at random to receive a poster of *The Paw* illustrated by Terry Denton, and autographed by *The Paw's* creator, children's author Natalie Jane Prior.

## 1998 KOALAs

### (Kids Own Australian Literature Awards)

40 000 school aged children voted for their favourite authors in the KOALA awards last year. The winners were announced at the Powerhouse Museum, Sydney, on Thursday 22nd October.

#### Best picture book:

WILD, Margaret & JAMES, Ann. *The midnight gang*.

#### Best junior book:

BALL, Duncan. *Selby speaks*.

#### Best senior book:

MARSDEN, John. *Cool school...*

The KOALAs are presented annually and the program is a great way for teachers, librarians and teacher-librarians to promote Australian literature and reading to children. KOALA is registering members for 1999. If your school is interested in becoming involved, please contact Miranda Harrowell at Ryde Public Library on (02) 9952 8361 (phone) or (02) 9952 8355 (fax).

## Children's Book Council Awards

In November 1998, **Kate Colley** of Bloomin' Books was presented with the Lady Cutler Award for her significant contribution to children's literature by the NSW Branch of the Children's Book Council. Congratulations Kate!

Winners of the 1998 Frustrated Writers Competition were announced as being **Robert Armstrong** (Adult Section) for *The midnight man*, and **Emma Wright** (Student Section) for *Daniel and the three medicines*. This initiative is sponsored by the NSW Ministry for the Arts.

The Children's Book Council of Australia will announce the 1999 shortlist on 12th April. **Book Week** this year is from 21st-27th August, with the medal presentation in Canberra on the preceding Friday. The theme is: "**Weave the Book Web**".

Some details for **Book Week** in the year 2000 have also been announced. Medal presentation will be on 18th August, will Book Week spanning 19-25th August. The theme will be "**Book Week 2000: The Edge of Tomorrow**".

Visit the Children's Book Council of Australia's official Web site at: <http://www.slsa.sa.gov.au/cbca/>

## ALIA Award

Congratulations to **Michelle Ellis**, Senior Curriculum Adviser, Library and Information Literacy, Curriculum Support Directorate, who was recently recognised for her services to teacher-librarianship, by the NSW Branch of ALIA, the Australia Libraries and Information Association.

## Online resources for OASIS

Information on how to print library resource spine labels with a laser printer is available at  
 <<http://www.tdd.nsw.edu.au/oasis/library/index.htm>>

## Primary School Library Training Program in Fiji

A teacher-librarian training program recently took place in Fiji and a delegation of New South Wales teacher-librarians, jointly sponsored by NSW Rotary Clubs, Rotary International and AusAID, played several important roles. The project included consulting in local primary schools, a visit to Library Services of Fiji in Suva, the writing of a manual for the training course, and participation in a meeting of the University of South Pacific. The sponsorship funds also enabled the purchase of sets of encyclopaedias, books, posters, library signs and book

processing equipment for schools in the Labasa, Lautoka and Suva Educational Districts.

The team consisted of: Sandra Lucas (Wagga Wagga); Susie Fletcher (Orange); Margaret Geddes (Mudgee); Jennie McNiven (Lithgow); Diny Jones (Grenfell) and Liz Pattinson (Dubbo).

As a result of our visit, the delegates would like to encourage Australian colleagues to consider supporting school libraries in Fiji. Some suggestions: **sending 'as new' books** which are useful and attractive; **adopting a school** and sending them new books annually during Book Week or a book fair; or **donating a subscription** to a professional journal. Addresses can be supplied through the team. Please think twice before shipping off all of your culled books to developing countries, as many recipients are too polite to turn away gifts, even when they do not meet the needs of their students.

For more information, contact: Liz Pattinson, Dubbo School of Distance Education

Phone: (02) 6885 9607, Fax: (02) 6884 0777 ■

## I N D E X E S

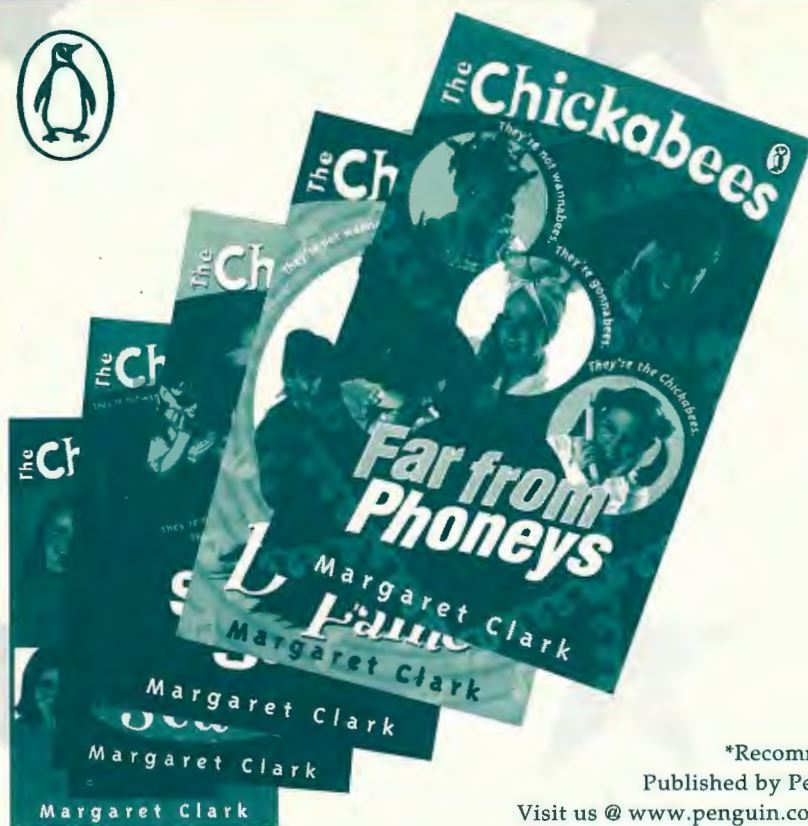
### RESOURCES 18/1: TITLE

- |   |   |  |   |
|---|---|--|---|
| A-Z of Australian sports stars. [series] 80   | Cadbury - Yowie. [Internet site] 54   | environment. , The 71  | In the rain forest. [series] 77                                   |
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