

CyberSchool: Integrated Curriculum on the Net

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Abstract

The students and staff at Eltham College took up the challenge of the International School's Cyberfair in 1996. As an integrated curriculum project we collected and collated information then designed pages for the World Wide Web in the category of 'Environmental Awareness'. Issues of environmental concern were represented in the school and the wider community. Through the Internet these localised issues are now able to be accessed all around the world. While completing the project consideration was given to technical aspects and the authenticity and quality of the content. Our entry came in the top five for its category and we are pleased that we accepted the challenge and forged links via the Internet with other schools internationally.

CyberSchool: Integrated Curriculum on the Net

Project outline

The Cyberfair Project was a world first event which created the opportunity for schools and their communities to share resources on the World Wide Web. 'Share and Unite' was the theme of the 1996 Cyberfair which encouraged schools and their communities to establish partnerships and work together to accomplish goals. Participants were asked to create curricular content for use by students around the world. They were invited to conduct a research project involving community resources and to publish their project on the Internet's World Wide Web.

For Eltham College information about the Cyberfair came initially through a mailing list, Classroom.Connect.Mailing.List@ns.wentworth.com. Unfortunately we did not find out about the project until January, whereas it had been launched in October 1995 as part of the 1996 Internet's World Fair. The project was organised by the Global SchoolHouse under the auspices of the Global SchoolNet Foundation. Sponsorship for the project was provided by Cisco Systems and MCI. Entries are now showcased with the Global SchoolHouse Pavilion of the Internet 1996 World Exposition.

WWW addresses:

1996 World Exposition <http://park.org>

Global SchoolHouse <http://www.gsh.org/>

International Cyberfair <http://www.gsn.org/gsn/cb/index.html>

Schools were invited to register in one of the following categories:

Category 1: local leaders

Category 2: community groups and special populations

Category 3: business and community organisations

Category 4: local specialties

Category 5: local attractions (natural and man-made)

Category 6: historical landmarks

Category 7: environmental awareness

Eltham College chose the Category of 'Environmental Awareness' and concentrated largely on issues to do with living on the edge of a city. We called the project: 'Environmental Awareness on the Urban Fringe'.

Project aims

It was important to be using the Internet in the College and to be promoting Internet literacy in the school as well as to demonstrate the utility of the Internet in classes and the community. It was a unique opportunity for students and staff to work together and be ambassadors for Eltham College. Another important aim of attempting the Cyberfair was to coordinate a project using the Internet that linked with the weekly student radio program, 'Voices of Eltham College' on Plenty Valley fm.

Briefly, other aims of the project were:-

- to promote global citizenship facilitated by technology.
- to unite the school community.
- to foster interaction between the school community and the wider community.
- to feature cross-age group work and integrated curriculum and extend thinking in both technology and environmental awareness.
- to gather data and construct web pages based on the chosen category of environmental awareness.
- to participate in a peer review process, helping to identify the best entries in each category.

Planning and collating the content

Whilst the topic chosen was science founded it integrated a number of different curriculum areas. It was also a cross-age, multi-disciplinary project that involved a number of student groupings within the school. It is important to point out that most of the curriculum content of this entry was already a part of our comprehensive courses of study

and that the Cyberfair competition provided another means of expressing the students learning.

The time line was particularly tight given our late start in the Southern Hemisphere. Only eight school weeks were available to introduce, plan, design and produce the web pages. In all project areas we endeavoured to present the main environmental issues and to increase awareness of the historical and futuristic implications of education about and for the environment.

Our Cyberfair Project contains information in the following areas-:

1. Our School Community

- The Eltham College Environmental Reserve - history, development, indigenous species, curriculum focus and student action.
- Recycling - past and present.

2. The Wider Community

- Endangered species - The Eltham Copper Butterfly.
- Environmental Issues - An interview series conducted on community radio with representatives from the Nillumbik Shire Council highlighting the main aspects and concerns within the community and providing a local government perspective.
- The Historical Perspective - The way things were. (Nillumbik Historical Society)

3. Port Phillip Bay

- The Changing Coastal Environment - environmental issues along the coastline.

Designing the web pages

A technical crew was established from volunteers consisting of five, Year 8 and three, Year 11 boys. As the timeline was so short I did not push for gender equity, but am concerned about this issue in relation to technology at Eltham College. In retrospect, and ideally, it would have been easier if we had collected all of the prepared content and then set about designing the web pages - like setting out a large project. As it happened the content was produced in bits and pieces right up until the last possible day so we were designing and consequently redesigning as new information and ideas emerged. This wasted

some time, e.g., more images were scanned than we needed due to the lack of being able to see the big picture. It was a project without walls for a long time until the looming deadline and the reality of having to actually complete it called for some quick decisions.

The students developed and refined their technical skills as the project grew. They continually bounced ideas off each other and collaborated as a close knit team. In designing the web pages they collated the different types of content including text, images and sound files. The project was worked on in separate sections with different students responsible for certain areas of content layout. In the last week of production we looked at the overall uniformity and style of presentation e.g., heading size, menu layout, links to other pages, colour schemes and the other extra trimmings that improved the site overall.

Technical considerations

All work, except for some word processing and graphic manipulation, was completed on Macintosh computers, mainly LC 475's. A PowerMac and flatbed scanner were also accessed. The Internet was used to obtain regular information about the Cyberfair, email, submit peer review scores, and download some necessary software and references used in research work. All work was completed offline and then uploaded to the Netspace (ISP) server by the deadline. Software used for this project included:-

- Netscape - web browsing.
- Eudora - email.
- BBEdit - text editing.
- PageMill - drag and drop Internet authoring tool.
- SoundEdit 16 - to digitally record and manipulate sound recordings.
- Graphic Converter - organise, resize and convert graphics.
- Photoshop - scanning images.
- RealAudio - sound file compressor.
- Sound Application - reading and playing sound files

The school purchased a copy of PageMill as it was thought this would be the easier and most likely way the project could be completed. Interestingly, the students had existing

knowledge of programming in HTML and their insistence on using this more painstaking process and their willingness to learn from each other as they went along was underestimated at the start. As it turned out PageMill was used in a limited way and could have done the job but does have some limitations. By the end of March all of the participating sites had completed their entries and put them on the Internet for international viewing. We were all ready for the next exciting process - the judging!

Judging procedure

There were two parts to the judging:

- Peer review.
- Industry judging (peer review evaluated by industry panellists).

Peer review was an important part of being an entrant in the Cyberfair. We were asked to evaluate five other Cyberfair entries (in categories different to our own). These scores were then collated and determined the ten semi-finalists in each category.

The peer review took place from April 2 - 18, which was difficult for us being mostly in our holiday time. The technical crew met for one extended session prior to Easter and accessed the sites online with a datashow allowing easier group viewing. During the holidays final consensus was arrived at between myself and other students with online facilities at home.

We used a proforma called the Peer Review Evaluation Guide to assess each site. Evaluation was necessary in six scoring categories under two headings - Content and Organisation; Hypermedia Presentation and Technical. Criteria for presentation included the effective use of Internet tools, layout and design, ease of navigation, appropriate use of multi-media (images, audio, video). Criteria for content included usefulness of information provided, authenticity of information, segments of the community represented, extent of the resource sharing demonstrated, primary information sources rated higher than text book sources e.g., oral histories and interviews.

Online awards ceremony

As a final climax to the Cyberfair project the Global SchoolHouse organised an online awards ceremony. Using CU-SeeMe Internet videoconferencing the Cyberfair awards ceremony was broadcast on a number of reflectors. Thousands of students and educators worldwide participated live via the Internet and others through audio teleconferencing. An enthusiastic group of about forty students, parents and teachers as well as a representative from the major sponsors, Cisco Systems, met at Eltham College at 6am on May 14th for the big event (this was 1pm the day before in California).

We had been experimenting successfully with CU-SeeMe technology leading up to the event but were still quite nervous as to its success on the morning. As it turned out we couldn't get onto a reflector, they were all full by 5.30 am, and missed out on this part of the ceremony. What we did have was audio teleconferencing using a hands free phone. We could hear the entire event while watching different sites to do with the Cyberfair up on the datashow via the Internet connection.

After online speeches, including comments from the Vice President, Al Gore, and the 'father of the Internet', Vint Cerf, the winners were announced. Five schools from Australia completed entries in the Cyberfair competition. Three of these gained top five places in their categories.

Other Australian sites

The Fahan School, in Hobart, retold an Indonesian tale and came third in the category of 'Community groups and Special Populations'. Elanora Heights Primary School, Sydney, were also in the 'Environmental Awareness' category. This school embarked on an ambitious project with an international flavour. They corresponded with a number of schools around the world and compiled information about rivers and lakes. They came second and Eltham College was awarded fourth in this category. First place in our category went to the Academy for the Advancement of Science and Technology in New Jersey. They used quite sophisticated programming features, including the new language called Java.

1. Australia , NSW, Sydney.

Elanora Heights Primary School : <http://www.zip.com.au/~elanora/cbsummary.html>

Category 7: Environmental Awareness

2. Australia, Tasmania, Hobart

Fahan School : <http://www.tas.gov.au/fahan/cbsummry.html>

Category 2: Community Groups and Special Populations

3. Australia, Victoria , Melbourne

Eltham College : <http://netspace.net.au/~elthamc/cyberfair/cbsummary.html>

Category 7: Environmental Awareness

4. Australia, Victoria , Warrandyte

Anderson's Creek Primary School: <http://cyberfair.gsn.org/acreekp/cbsummry.htm>

Category 5: Local Attractions (Natural and Man-Made)

5. Australia, NSW, Albury

Xavier High School, Albury : <http://www.albury.net.au/~xavierhs/cbfair96/cbsummry.html>

Category 5: Local Attractions (Natural and Man-Made)

Summary

By completing this project we have 'shared and united', as the theme suggested, within the school and in the wider community. We have shown that students and staff from different age levels and curriculum areas can work cooperatively together on an integrated project. Each stage of the project has pushed the boundaries of knowledge and experience even further onto the cutting edge of technology and education. More importantly we have shown that the Internet is relevant and growing in importance in education and communication. It gives students and educators the opportunity to network instantaneously around the world and to share concerns about issues such as environmental awareness.

As an educator I find the international perspective I get working via the Internet a continuous adventure. I would like to give a special thank you to my colleagues for seeing this project to an end without losing their sense of humour and particularly for humouring me along the way.

In conclusion I will leave you with the words of Vint Cerf, spoken at the recent online awards ceremony:

“The joy of pioneering is that you get to do what no one else has ever done and of course the agony of pioneering is that you get to do what no one else has ever done.”