



ENVIRONMENTAL EDUCATION PROJECT

WATTLE PARK TEACHERS CENTRE
424 Kensington Road
Wattle Park S.A. 5066
Telephone: 08-332-4555

MITCHELL LIBRARY

19 FEB 1984

SYDNEY

NEWSLETTER No.1

JUNE, 1978

Dear Colleague,

Much is happening in environmental education in Australian classrooms today. For some time those involved have felt the desire to share their many good ideas, their valuable resources, their aspirations and their disappointments. Eight national conferences have been held since 1970 when the Australian Academy of Science helped environmental education (E.E.) re-emerge in Australia. The conferences reaffirmed the need for better lines of communication between environmental educators and many reports pointed to the need for a coordinated curriculum thrust in schools at all levels. Yet E.E. remains only vaguely defined and without a clear direction.



Alan Reid, education officer with the Australian Conservation Foundation (ACF), initiated the successful Environmental Education Review Network but this is no longer operational. I hope a newsletter such as this can not only help to inform you of the activities of others but can also help develop that thrust in this vast domain called environmental education.

THE ENVIRONMENTAL EDUCATION PROJECT

This new project based on reactions to the report of the CDC Study Group on Environmental Education, August 1977, began in April with a national conference in Perth.

The project aims to develop the "diffusion of teacher awareness phase" of the report particularly through the publication of examples of environmental education from around Australia. The field is K-12 and CDC is anxious to encourage the development of an environmental emphasis in all curricula rather than the development of a new subject. Particular attention will be paid to developments in subjects such as English, History, Art, Economics, Mathematics, Physical Education and so on - subjects not usually associated with environmental education.

I have been seconded from the Education Department of S.A. to coordinate the project. I am based at Wattle Park Teachers Centre in Adelaide and will work closely with each State Liaison Officer. I taught in Secondary Schools until 1972 when I became the Biology Consultant for S.A. In 1977 I began a Master of Environmental Studies degree and am currently developing an instrument to assess teachers' environmental knowledge - attitudes - values - behaviour systems.

The Perth conference was attended by State Liaison Officers and representatives from tertiary institutions and national subject and teacher associations. Guidelines for selection of projects to be funded under a small scale grants scheme (of \$32,000 over the two years of the project) were developed. They are listed on the following page.

National Project Director: John H. Smith

.../2

CRITERIA FOR SELECTION OF PROJECTS TO BE FUNDED

Support will be given to projects which are clearly identified as being in the area of environmental education.

They should also meet as many as possible of the following criteria:

- (1) BE RELEVANT TO OTHER TEACHERS THROUGHOUT AUSTRALIA.
- (2) EMPHASISE METHODS OF DEVELOPMENT AND THE PROCESS INVOLVED.

The relevance of a project to other teachers most probably lies in the concepts, developmental steps and processes rather than in the uniqueness of location or personnel involved.

- (3) HAVE ALREADY BEEN DEVELOPED AND IMPLEMENTED.

Funding is provided so that programs which have been, or are being carried out can be described in a form which can then be published by CDC.

- (4) INVOLVE ALTERNATIVE OR INNOVATIVE APPROACHES.

N.B. Programs regarded as "standard" in one district or state may, from a national point of view, match this criterion.

- (5) INCLUDE SOME FORM OF EVALUATION.

Some form of descriptive evaluation will provide others with sign posts for the development of their own projects.

The grants are limited to approximately \$500 each.

To give both the management committee for the project, and educators interested in applying for grants some clearer guidelines, the following priority areas are outlined:

PRIORITIES

Projects or papers which describe:

1. a. The nature of environmental education in the areas K-12. This would include a conceptual framework.
- b. The development of curriculum guidelines.

2. a. School programs that incorporate broad scale approaches such as K-7, 8-12.

- b. Special strategies or methodologies:

Methodologies that use local areas, urban areas, school grounds, community personnel or media with high impact, are to receive priority.

3. a. The development of system level policies.

- b. The development of school level policies.

4. Which environmental education objectives (if any) are best achieved through "field studies"? How?

"Field studies" is used in the broadest sense to denote education in the outdoor environment.

5. a. Methods of approach to controversial issues.

- b. Methods of approach to values education.

6. Courses of study which are at a particular year level and have an environmental education emphasis or are denoted environmental studies (or the like).

7. The measurement of student performance in environmental education.

8. a. Criteria for selection of "field study sites".

"Field study sites" can be special centres, urban locations such as local tips, rural sites such as farms, natural features such as beaches, or wilderness areas.

- b. Development and operation of "field study sites".

- c. Development of school environments as part of environmental education.

9. The structure and function of environmental education committees.
10. The development of syllabus guidelines.
11. Pre-service teacher education in environmental education.
12. How information about resources can be made available.
13. In-service activity-teacher initiated, system initiated, community initiated, CAE initiated, evaluation of.

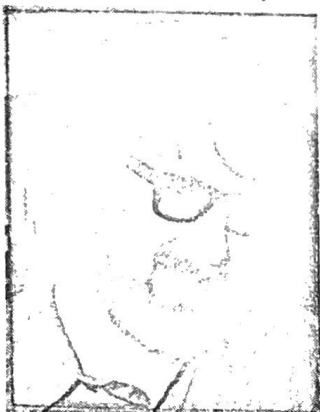
STATE LIAISON OFFICERS

The following people have been seconded by their education systems to help administer the E.E. project on a one-fifth time basis. They are the point of contact for prospective applicants for small scale grants and for general enquiries about the E.E.P. in each state.

BOB STEVENSON

QUEENSLAND

Bob is Research Officer with the Curriculum Branch and is known for his Pilot E.E. Project and inservice work with field studies centres staff. He provides support service to primary and secondary schools in E.E. and helped the completion and dissemination of the audio-visual package on rain forests. He can be contacted at 127 Creek Street (6th Floor), Brisbane, or phone 07-224 4569.



FRANK HADDON

NEW SOUTH WALES

Frank is the new Curriculum Consultant for E.E. He continues some of the functions of the previous Advisor in Conservation, Allen Strom, who recently retired. His responsibilities include liaison with teachers in charge of Field Studies Centres, and work with teachers and other consultants to help in the development of environmental programs specific to their schools or districts. He can be contacted at the Education Dept. 5th Level, Cnr. Bridge and Loftus Sts. Sydney, phone 02-240 8629.

JIM WILSON

VICTORIA

Jim is E.E. Consultant with the School Forestry Branch. He is available to primary and secondary teachers as resource person, for inservice activities, and to encourage curriculum developments. He is particularly interested in using school grounds as a teaching resource and developing field study guides for excursions and camps. He can be contacted at the Special Services Division, 234 Queensberry St. Carlton 3053, phone 03-347 3833.



PETER HOBBS

A.C.T.

Peter is the Geography and Environmental Studies Advisor for the A.C.T. Schools Authority. He is the editor of the *Environmental Geographer* and is available to both primary and secondary teachers as a resource/curriculum person. He can be contacted at A.C.T. Schools Office, Macarthur House, Northbourne Ave., Lyneham, or phone 062-47 0500.

LESTER RUSSELL

SOUTH AUSTRALIA

Lester, a Superintendent of Curriculum, is well known for his inservice work with teachers and his co-authorship of the *In Search of Science* texts. He has been the chairman of the Outdoor Education Committee and has worked with the scouting movement. All teachers involved or interested to become involved in environmental education in their schools are invited to contact him on the 3rd Floor, Education Dept., Flinders St., Adelaide, phone 08-227 2925.



GRANT GODFREY

TASMANIA

Grant's involvement in environmental education began when he established an *INSPECT* group in his school. He joined the Committee on Environmental Education in Tasmania which met during 1974-75. As a Science Consultant in 1976-77, he was given an additional responsibility for environmental education. His present position is Counsellor of Beginning Teachers in the Northern Region. He can be contacted at the Education Dept., 45 Mayne Street, Launceston, or phone 003-261 568.



HARRY PEARSON

WESTERN AUSTRALIA

Harry is Assistant Director of Schools and Chairman of the Departmental Committee on Environmental Education which has produced guidelines for E.E., controlled the field study centres and stimulated in-service activities. Harry taught at Secondary and Tertiary levels before moving into the Curriculum Branch to produce junior science materials and from there into administration. He can be contacted at 8 Parliament Place, West Perth, 6005, or phone 09-323 0221.

SMALL SCALE GRANTS FOR ENVIRONMENTAL EDUCATION

A scheme to help educators disseminate their ideas more widely is already under way. To date, 19 projects have been funded and 3 papers commissioned, covering the following topics:

Living things in lower primary school.
Introductory field activities for
school grounds or nearby parks.
Environmental education advisory team
at work.
Integrated activities in a conserva-
tion park.

Changing environments: a Year 2 look
at a housing development,
Community gardening - a film.
Criteria for selecting an urban field
study centre.
Aluminium smelter - field simulation game.
Woodchip-Environmental conflict simula-
tion.

Environmental education activities based
on scout and guide awards.
Description of history, organization, etc.
of range of field studies centres.

Development and operation of a field
study centre.
Establishing a field study centre in a
declining mining area.
Team teaching environmental studies at
Years 7 and 8.
Multi-strand science, Years 11 and 12.
Outdoor education activities for use
in your own environment.
Use of forest reserve site by children
in years 1-6 - a film.
Development of a part of the school
grounds as an ecology centre.
Reclamation and restoration of creek
adjacent to school; public aware-
ness campaign.
Living classrooms - use of plants and
animals to improve basic skills
- 12 posters.

CDC hopes to have a number of these published by the end of 1978. The second round of grants begins in July. The money, of up to \$500 per grant, is to help the grantee produce a "manuscript" (which can be a film, poster, audio-visual pack, etc.) in a publishable form. It can be used to employ secretarial, media, or artistic assistance or simply to "buy time". A feature of the grant is the use of a collaborator to help with the "polishing" process - a necessary

step if the final publication is to be of use to educators in other areas of Australia. Successful applicants will be notified in November 1978, and the manuscript deadline will be March 2nd, 1979.

Any educator (either in the formal system or outside it) interested in obtaining a grant is asked to contact the State Liaison Officer or the Project Director for further details. Deadline for applications is September 15th, and applicants will be notified of success or otherwise in mid-November. Selection will be made on a national basis but the priority order of each state Advisory Panel in E.E. will be taken into account.

WHAT ELSE IS HAPPENING?

- (1) The Environmental Education Resources Project began with a National Estate grant to produce student materials on 4 topics: The Fragile Environment (coastal sand dunes); Exploring your Local Area (the built environment); The Aborigines and the Environment; and Decision Making and the Environment (the Adelaide Parklands). Trialling of units will begin in Term 3. "The Great Coastal Dune Show", a 16 mm film has already been released. Contact person is Bill Fawcett, 3rd Floor, Education Department, Flinders St., Adelaide, or phone 08-227 4328.
- (2) A CDC project on "Investigating the National Estate" is being directed by Helen Simulhaig, who has just joined CDC from Port Hacking High School, N.S.W. She is developing teacher and student material to promote an understanding and appreciation of the cultural, social, aesthetic, prehistorical and historical aspects of the national estate and attention will be given to the skills and values involved in identifying, recording and managing the national estate. She welcomes suggestions and can be contacted at CDC, P.O.Box 632, Manuka, A.C.T. 2603, or phone 062-733 666.
- (3) The Environment Council of N.T. is holding an E.E. conference at Batchelor from July 23rd to 26th. Teachers and members of the community are attending. Contact Joanna Parish, P.O. Box 2120, Darwin 5794, or phone 089-813 804 for further details.
- (4) Queensland, W.A. and Tasmanian Education Departments have produced policy statements on E.E. Victoria has a draft document.
- (5) Many people presented papers at the Perth E.E.P. conference - a list of the papers and copies of each are available from the project office. So too is the conference report.
- (6) The Schools Commission has announced another round of innovations grants. A collated list of 343 grants given for some aspect of E.E. since 1974 and a list of 36 grants in E.E. given by the National Committee on Social Studies teaching is available from the project office.

WHAT ISN'T HAPPENING?

- (1) World Environment Day passed unnoticed in S.A. education circles. Was it the same in other states? If so, it was a pity considering the theme "What's Worth Keeping?" and the attractive poster and booklet produced by the Dept. of Environment, Housing and Community Development (D.E.H.C.D.). Perhaps you/we can do something constructive towards June 5th, 1979. Any suggestions?
- (2) E.E. is not moving into a clearer perspective. It seems to be regarded either as a form of field studies in Science or Geography, or just more educational jargon. What do you use to define it? Have you tried classifying other peoples' descriptions of what they do as E.E., or not E.E., such as some of the Schools Commission Innovations? A.M. Lucas in his (soon to be published) thesis *Environment and Environmental Education: Conceptual Issues and Curriculum Implications*, Ohio State 1972, analysed the terms closely and suggested "The goal of E.E. is the enhancement of the environment to facilitate individual well being." He suggests education about the environment

and education in the environment are not sufficient to be classified as E.. The essential component is education for the environment..of the individual human.

A teacher level, conceptual framework for E.E. is to be developed by David Stokes (Rusden S.C.V.) and Jon Womersley (ex D.E.H.C.D.) as a commissioned paper under the small scale grants scheme.

RESOURCES OF INTEREST

A selection of materials currently available is given. Information on teaching materials is particularly welcome for inclusion in this newsletter.

(1) The Victorian Association of Social Studies Teachers (VASST) has published *The Throwaway Society*, a well-designed pack of poster/workcards covering Population, Resources, Energy; Designing for People; Rubbish, Paper and Glass; Metals and Plastics, What can be done; plus a folder of newspaper clippings, etc. The emphasis is on activities which encourage students to look critically at the consequences of the consumer society. A minimum of information is given. It is suitable for mid-secondary students, particularly at year 11.

(2) Other resources on wastes/recycling include:

Recycling - Is it the Solution for Australia? by Ian Pausacker. This is teacher or student reference material, full of information. Penguin; \$3.25.

Tyre Recycling, Re-use and Disposal, by D.E.H.C.D., Australian Government Publishing Service (A.G.P.S.). This is a detailed analysis of what could be done with 10 million tyres per annum. \$3.10.

(3) Uranium - a flood of material is available, very little of which is suitable for students. Much of it is suitable for teachers but the complexity of the issues makes it hard to analyse. What is needed is a teachers' guide to each publication. Any volunteers?

VASST has prepared one such to accompany the A-V kit *Uranium Mining in Australia* - 70 colour slides plus 22 min. tape concentrating on the effects of mining on the aboriginals and the Kakadu National Park. This is a useful introduction to set the scene for discussions on the topic. Available from Environment Audio-Visuals, 51 Nicholson Street, Carlton, Vic. 3053 at \$22.75 in filmstrip format, or \$38 in slide format.

Uranium - Australia's Decision, A.G.P.S. \$1. A collection of ministerial statements and background papers.

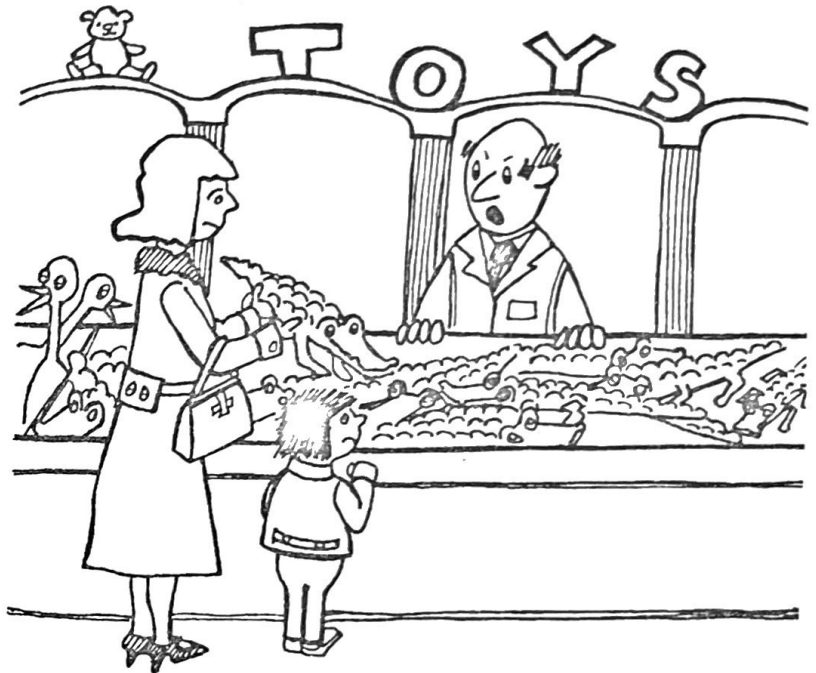
Ranger Uranium Environmental Enquiry, First and Second Reports. Detailed reports of the Fox Commission, A.G.P.S. \$10.95 and \$5.30.

Uranium : A fair trial. Both sides of the debate as presented in the ALP Discussion Kit, \$2. A. Manning, Box 1, P.O., Canberra, 2600.

Nuclear Power: The Fifth Horseman, and *Energy for Development: Third World Options*, Worldwatch Papers Nos. 6 and 15, from A.C.F.

Nuclear Energy. Topiclips, by W.A. Centre for Educational Technology - a collection of newspaper articles, August 1976 - February 1977.

Energy Strategy: The Road Not Taken? A. Lovins, Friends of the Earth. \$1.



"They're made from old suitcases."

(4) REPORTS OF INTEREST

Development of Environmental Education in Australia: Key Issues, by Greenall and Womersley, CDC, \$4 - available from project office or CDC.

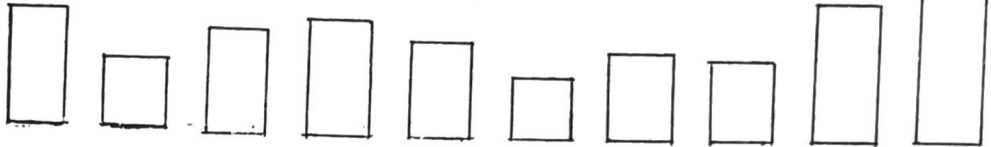
Education and the Human Environment, a report of the 1975 UNESCO Conference, R.D.Linke (Ed.) - available from CDC, P.O.Box 632, Manuka, A.C.T. 2603, \$7.50 paper, \$10 hard.

A Report on the Belgrade Conference on Environmental Education 1975, by P.J. Fensham, CDC.

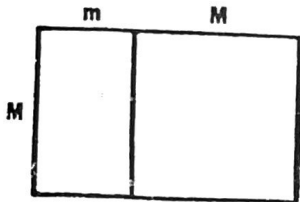
PERCEPTIONS, PENTAGONS AND PLANTS

Divide the line below so that a pleasing relationship exists between the two parts.

Choose which rectangle has the most pleasant proportions.

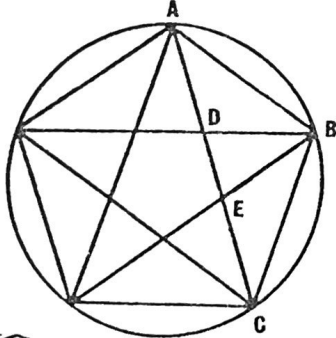


In 300 C.B. Euclid discovered that the ratio 1.618:1 had some interesting properties, e.g. $1.618^2 = 2.618$,

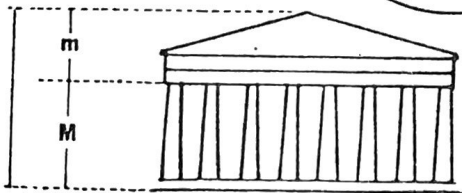


$$\frac{1}{1.618} = .618 \text{ and } \frac{1.618}{1} = \frac{1.618+1}{1.618} = \frac{1.618 + 1 + 1.618}{1.618 + 1} = \dots$$

Geometrically this latter amounts to adding squares made of the longest side M to a rectangle of ratio M:m (where M:m = 1.618:1).



The resulting rectangle has the same ratio! 1.618:1 is called the ϕ (phi) or Golden ratio and is found in pentagons which were sacred symbols to the Greeks, e.g. AC:AB = ϕ , AD:DE = ϕ , CE:ED = ϕ . They incorporated it into their architecture and LeCorbusier, an architect, used it as a basis for both harmonious and practical design. ϕ can be found in the human body.



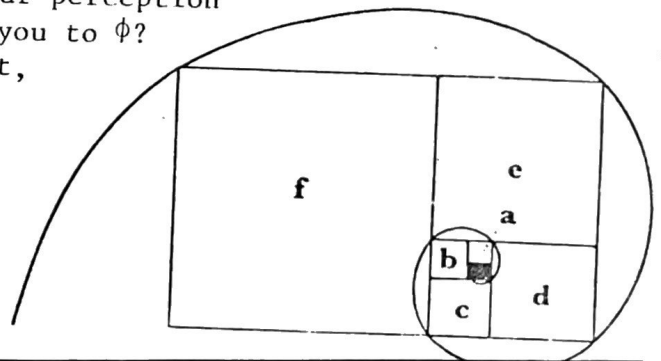
In the Fibonacci series ; 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89 ... the ratio formed by dividing a number by its preceding number gets closer to ϕ the higher you go. Just mathematics? NO!

Plants with composite flowers such as daisies, pyrethrums, buttercups, have left and right-handed spirals in their flower heads. The ratio of these spirals is often found to be near ϕ .

The spiral of the logo for this project was formed by joining the corners of ϕ rectangles built up in the manner described above.

Did your perception guide you to ϕ ?

(If not, don't fill in



the form at the end of the newsletter!) For further reading see Kurt Rowland, *The Shapes we Need*, Looking and Seeing 3, Ginn & Co.1965 (commonly used in art departments of secondary schools)

I would like to make this a regular newsletter which reaches you at the beginning of each second month. I will use themes where practicable to help focus the information (themes also make filing easier). I will need you to contribute short items, and deadlines can be the 15th of the month of issue, i.e. the next deadline will be the 15th August.

Until I receive feedback on this first issue, it is hard to tell which aspects of E.E. require a special theme. A few ideas for consideration are:

- (1) Energy Conservation - educational approaches, school building design, house design;
- (2) The Urban Environment - looking positively, trails, preservation;
- (3) What's happening in Kindergartens? - the hidden curriculum, exotics before locals, sensory developments;
- (4) The areas most students miss out on - environmental economics, environmental politics, environmental law, environmental ethics;
- (5) Tackling Environmental issues - a balanced view or a committed view?;
- (6) The Arts and Environmental Education;
- (7) Student and teacher magazines for Environmental Education;
- (8) Environmental Education Overseas.

If you wish to continue to be part of this communication network, please fill out the form at the end and return it. I have taken over Alan Reid's mailing list but have also gleaned names from E.E. conference lists and from the State Liaison Officers. If you have interested colleagues who fit any of the following categories, do tell them about the newsletter and ask them to make contact with me:

Informal educators interested in E.E., Teachers or advisors or administrators of subjects not usually associated with E.E., Kindergarten to Primary level Teachers (most on the mailing list are Secondary and Tertiary people)

TEAR OFF AND RETURN IF YOU WANT NEWSLETTERS Nos. 2, 3, etc.

I would like to continue receiving the E.E.P. Newsletter on a personal subscription basis. I enclose

* EITHER \$3.00 for postage for 1978-1979

OR A copy of my/our newsletter in exchange

My areas of interest/expertise are.....

I could/would contribute an item on.....

.....for the Aug./Oct./Dec./Feb. newsletter.

I would like to see the following items incorporated into future newsletters.....

Return to:

John H. Smith,
Environmental Education Project,
Wattle Park Teachers Centre,
424 Kensington Road,
WATTLE PARK, S.A. 5066

PLEASE PRINT

NAME.....

Address.....

.....Postcode.....

* Please send a crossed cheque made payable to Curriculum Development Centre, Canberra. The next newsletter will be your receipt!