



ENVIRONMENTAL EDUCATION PROJECT

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NEWSLETTER No.7

URBAN ENVIRONMENTAL EDUCATION

David Prideaux - Curriculum Studies, Hartley C.A.E., S.A.

*Environmental education should begin where the individual lives, works, goes to school and spends most of his or her time. This is the environment that is best known together with its inherent problems. (Rillo, 1974)**

For the majority of Australians the environment that is "best known" is an urban one.

While much of the development of environmental education in Australia and elsewhere has centred on environments where human modification is minimal, many of the techniques and strategies developed apply equally well to situations of large-scale human impact. Sensory awareness activities for example, have great potential in urban areas. Indeed, the three central concerns of environmental education, viz.

developing processes and skills for enquiry into environmental issues,
clarifying values and attitudes to questions of environmental importance,
and making decisions about questions of environmental management,
are essential in the study of all environments, urban, rural or pristine.

Urban environmental education should start with an examination of the child's own community and own environment. From that may follow two other important aspects of urban environmental education; questions of urban design including safety, energy consumption, provision of recreation areas, transport, etc. and issues concerning preservation and conservation of urban structures and streetscapes.

But it is the starting point which is of greatest concern and which should be approached with greatest sensitivity. Children need an understanding of their own environment and an opportunity to examine their own reactions to it, without necessarily having positive or negative valuations placed upon it for them. While it may be far removed from the "shady trees" of the national park or field study centre, it is after all *their environment* which has its own particular attractions or drawbacks *for them*. In this sense urban environmental education can become community education. It may involve parents, community leaders and community development agencies in a cooperative program of examining both the physical and social aspects of community life. Ideally it should be a learning process for the teacher too, particularly if the teacher is not a member of the community in which he or she teaches. If the teacher approaches the study with sensitivity and with an attempt to rid him/herself of any preconceived ideas of the child's environment, then a cooperative learning exercise may develop where children, teachers, parents and others enquire into their community, examine their own attitudes and values to it, and begin to make decisions concerning the quality of its physical and social environment.



National Project Director: John H. Smith



A C.D.C. funded project.

* Rillo, T.J. Guidelines for environmental education, *Journal of Environmental Education*, Vol.6, No.1, 1974.

A CONSERVER SOCIETY

Dr. R. G. Downes

Former Director of Conservation
Vic.

The long-term welfare of a community depends on how well it is able to fit into its environment. The demand for resources from the land and water systems available to it, to satisfy its chosen life-style should not degrade but maintain the capability of the environment to continue to provide them.

Primitive communities had to rely on their immediate surroundings to provide for their needs, but modern technological communities draw resources from many parts of the world; consequently the effects of their life-style are of significance and interest to the whole of mankind.

Modern technological societies are approaching a crisis for two reasons. Their social and economic systems are heavily dependent on non-renewable resources, particularly for portable forms of energy derived from oil. Without it those communities would have to rely on their own immediate surroundings to provide the resources to satisfy their needs. At present levels of population in most of those communities, it would be impossible to sustain even a basic supply of food. The rapidly increasing rate of use of non-renewable resources cannot persist for ever. There must be an end point and there is little value in arguing about when that may occur. The second effect is the creation of increasing amounts of wastes that must be disposed of safely if they are not to have an increasingly degrading effect on the environment.

If this situation is to be changed, some difficult decisions will have to be made, but they will not be made by the politicians unless there is reasonably strong public opinion in favour of changes. Public opinion will never be favoured unless there is a clear rationale for the need for those changes. If changes are to be made before a crisis arises, people will need to be informed in such a way that the need for change is almost self evident. Furthermore, they will need to have some conceptual framework within which they can assess how their own demands and activities will need to be modified.

Many people have thought about a conserver society as the means of overcoming these problems but few have given it the depth and breadth of thought as the Gamma Group in the universities of Montreal. Whereas the thinking of many people about conserver societies is negative, preservationist and anti-technology, the Canadian group has adopted a positive approach of analysing the problem and seeking to find solutions that will be acceptable to people and therefore likely to be adopted.

The group defined conservation as "prolonging the useful life of resources", a definition having the same thrust as many before it, but expressed much more positively and elegantly.

The needs of a community are provided by the transformation of resources to commodities, a commodity being something that gives someone satisfaction. The transformation of resources to commodities is a throughput process and so the group examined this process and the whole production-consumption cycle in modern society.

To produce a commodity from a resource usually requires one or more transformations, each of which requires energy. At each stage there is production of an intended product but also some unintended by-products which are either pollutants to be disposed of safely, or materials that may be converted to recycled resources by further transformations. Every transformation uses energy and there is always loss of energy by entropy, the losses that are not recoverable, such as noise, light and heat. Consequently, the fewer transformations needed to convert resources to commodities, the more

conserving is the throughput process. Less energy is used, less non-recoverable energy is lost, less unwanted by-products are produced and so there are less waste management problems.

In a conserver society one can look at commodities of various kinds in relation to the general objectives to be attained. Some are essential for satisfying requirements of subsistence, shelter, and health for the general welfare of the community. Other requirements, not essential for those reasons, may be essential for aesthetic or psychological reasons, but there are many non-essential commodities that are a result of artificially created demands for status symbols and other trappings of personal egotism and self satisfaction.

Some commodities such as a cigarette, are destroyed in providing satisfaction to one person; others such as a radio or television set are durable and can provide satisfaction to many people for a long time.

Such a classification of commodities is not for the purpose of passing any moral judgement, but it provides a way of looking at the real need for many commodities and for individuals to examine their own demands and their relative priorities in a conserver society.

For attainment of a conserver society the broad social objectives would include a high priority for waste reduction in the throughput process, harmony with nature and a longer time horizon as the bases for decision making.

The Gamma Group considered several kinds of conserver societies, but finally took a pragmatic view and presented as a first step an option that would not be unattractive to people because of too much change too quickly. The selective conserver society which the Group believes could be introduced does not seek to change the present life-style to any great extent but it does demand the elimination of waste and much more efficiency in the throughput process. It would seek to reduce the amount of throughput by various social and economic devices to lower the demands of people for many of the non-essential commodities.

There is not space to outline the whole philosophy of the proposal or the means to achieve it, but one example will give an idea of the nature of them. The Group discusses the development of a "rental society" as the means for eliminating "ownership waste". Durable goods that are used only occasionally are available for renting rather than owning. The more sophisticated the goods that people own, the more time is required to use and enjoy them. Consequently they often remain unused for long periods of time.

Conservation is not an end in itself but rather a means to an end, human fulfilment in ecological harmony with the environment. This depends on developing a balance between the needs of the people and the provision of commodities from resources to satisfy those needs without destroying the capability of the environment to go on providing the necessary resources.

The conserver society philosophy provides a conceptual framework that will help the whole community think more positively about its objectives and its life-style.

Gamma Report on the Conserver Society, Nov. 1977, \$20 from Gamma/Uni. Montreal, Suite 210, 3535 Queen Mary Road, Montreal, Quebec, H3V 1H8.



ENVIRONMENT AND THE QUALITY OF LIFE IN THE PORTUGUESE CONSTITUTION

Portugal is the first country to incorporate an article concerning the environment and the quality of life into its constitution. Article 66 of the new Constitution (April 2, 1976) includes the following provisions:

1. All men are entitled to enjoy and obliged to defend a healthy and ecologically balanced human environment.
2. Through its institutions or by soliciting community initiative, it is the duty of the Government to:
 - (a) prevent and control pollution and the effects of pollution, as well as damaging forms of erosion;
 - (b) institute land-use policies so as to ensure a biologically balanced milieu;
 - (c) create and develop natural parks and recreation areas in addition to classifying and protecting landscapes and sites in order to guarantee the conservation of nature and the preservation of cultural riches of an historical or artistic nature.
3. A citizen threatened or injured in the exercise of the right guaranteed under paragraph 1 is entitled by law to request the suspension of the violation and to receive suitable compensation.
4. It is the obligation of the Government to progressively and increasingly improve the quality of life for all Portuguese citizens.

from *Ecodevelopment News*
No. 7, Dec. 1978
(54 Boulevard Raspail,
75270 PARIS, CEDEX 06)

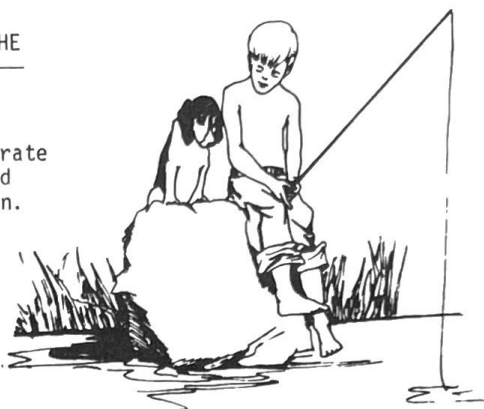
The Highway

The highway is laid as smooth as glass
For miles and miles and the cars can pass.
But the ant and the bee and the bush and the tree
Whose home it was are now exiles.
And the cars rush by for miles and miles,
To find a place where they can see
A plant, a bush, and a blade of grass,
And a ladybug, and a bee.

MALVINA REYNOLDS

From "The Highway," words and music by Malvina Reynolds.
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The linear distribution of trees by urban councils leaves much to be desired. Ornaments especially of European origin are wasteful when commercial trees could be used to greater economic advantage.

Thirty per cent of urban areas are taken up by roads and paths and natural watercourses have been replaced by concrete drains, with the result that there is a minimum absorption of rain where it falls. To offset this, water has to be reticulated from distant reservoirs to redress this loss. It was suggested that paved roads and paths be replaced by porous ones.

This new concept could be organised by local councils with the assistance of

foresters.

The social aspect of an urban forest is that it helps the whole community to

- (1) develop a land ethic,
- (2) use it as an open classroom,
- (3) create a social responsibility to care for it and thus reduce vandalism through personal interest.

Further, it provides a recreational facility where the community is encouraged to walk rather than use a motor vehicle. Also, it develops a micro climate through close association of trees with the dwellings.

from *Coolibah Club*
Newsletter, Sep. 1978

R.Dare
S.A.Institute of Technology

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The O.E.C.D. Secretariat has produced an overview of the state of the environment in member countries over the last 10 years. Amongst other things it found:



- : Public concern about quality of life is growing despite the economic situation. In Europe and North America "the Environment" ranks third after inflation and unemployment.
- : Demand for space and energy is increasing.
- : Many pollution problems have been solved but others have appeared.
- : Resources are being used less wastefully in some sectors.

*O.E.C.D.Observer 98, May 1979*

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URBAN FORESTS - the planned management of vegetation in urban areas.

The idea is not new, in fact, it has been a feature in Europe for many years. It promotes the growing of trees for their timbers or produce in a suburban situation where housing is of the cluster variety. The produce belongs to the local community and thus avoids the wasteful production of fruit, for instance, and enables the production of a wider variety of produce which would be shared by the whole community.

It was suggested that Government loans, as with primary producers, could be the means whereby such schemes were financed. Further maintenance and other costs would be recouped from the sale of products and produce.

The present distribution of suburban housing restricts the promotion of these new concepts. Also the desire of most urban dwellers to have a house and garden on their own block of land would not conform to the principles of an urban forest.

Under the present system, thousands of tons of rubbish are accumulated in home gardens each year with the consequent pollution problem upon disposal. Much of what is burnt could be chipped and disposed of other than by burning.

W.A.E.E.

WISCONSIN ASSOCIATION FOR ENVIRONMENTAL
EDUCATION, INC.
125 West Kohler Street
SUN PRAIRIE, WI 53590

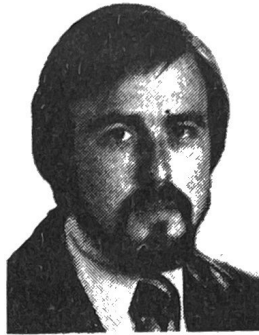
Annual subscription of \$3 US will provide you with a very readable bimonthly newsletter which covers U.S. conferences, resources and ideas for environmental education. Many of the illustrations in this newsletter have come from there.



EDUCATION IN MELBOURNE'S METROPOLITAN

REGIONAL PARKS

R. Whately - Education/
Interpretation Officer,
Melbourne and Metropolitan
Board of Works



The M&MBW, Metropolitan Parks Division, is involved in education at two levels. Limited interpretative programs are provided as a service to park visitors, which aim to increase people's enjoyment, awareness and appreciation of parks. Secondly, school and tertiary institutions are encouraged to use the parks as sites suitable for outdoor education. The park education officer acts as a consultant to teachers regarding suitable sites, background data and curriculum materials to suit the teachers' field work aims and objectives, and assists in program planning.

Of the 1,400 schools in the Melbourne metropolitan area, almost 25% are within 10 minutes bus ride of one of the Metropolitan Parks, and about 15% are within walking distance (see map).

The main educational advantages of these regional parks are

- (a) the variety of natural resources
- (b) the location, close to many schools, enables easy and frequent integration of field studies with classroom lessons, as costs and travelling times are kept to a minimum,
- (c) the contrast they provide to the surroundings and encroaching urban scene. Park areas, although having limited bushland contain, for example, sites for water-based studies, sites related to aboriginal pre-history, early exploration, settlement history and land use changes in river valleys, and sites for creative subjects such as art, writing and photography.

The best general public interpretive programs are the personal ones. Obviously a personal contact is a much more effective way of educating people than non-personal services such as displays and brochures. One of the educationally most successful programs in metropolitan parks has been a series of guided bird walks in Jells Park, Waverley. Each walk is preceded by a slide talk which explains the importance of the park for bird conservation, gives the beginner clues on how to observe birds and explains habitat requirements. The aim of this program is to attract the novice and provide him with basic observation skills and background information, as well as to provide the opportunity of seeing

the park through "different" eyes thereby increasing appreciation of the park. One of the most pleasing features of the program is that the majority of people attracted have not been "the converted". Many people are anxious to learn more about their local environment, and use the guided walk as a starting point for further exploration on their own, or for developing an interest in bird watching.

The Metropolitan Parks are being increasingly used by primary, secondary and tertiary students as well as by community bodies involved in public education, such as the Bird Observers Club, Society for Growing Australian Plants, and the Environment Studies Association of Victoria.

At the school level, the effectiveness of education in parks is very varied. At the secondary level those teachers using parks as a field work site usually have quite specific objectives and most activities are well planned and carried out. At primary level many teachers fail to build on children's natural curiosity and interest in exploring park/bushland areas. The most successful field studies are the result of a teacher properly preparing the students and organizing activities, using Gould League of Victoria activity sheets and guides for example, which focus on observing, recording and self-discovery (see photograph). Unfortunately other teachers use a guided walk, lecturing and questioning approach which is rarely as successful with children of this age.

The potential for increased use and more educationally valuable use of Metropolitan Parks by secondary schools is great. However, if this is to happen the Victorian Education Department as a whole will need to follow the lead of the Secondary Geography Committee. This Committee has, in consultation with the Board of Works, produced special materials for use at Brimbank Park, in the Maribyrnong Valley Metropolitan Park.

The Board of Works has so far built visitors centres, which incorporate display and meeting rooms, in the Dandenong and Yarra Valley Metropolitan Parks. Although well used at weekends, these centres and other park facilities are being underused by schools during the week. The opportunities are there, waiting to be taken.

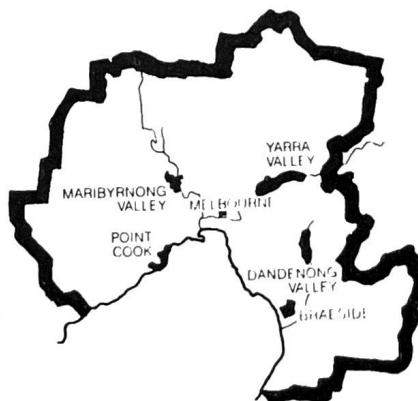


Primary school group at Banksia Park, Yarra Valley Metropolitan Park.

PROPOSED METROPOLITAN PARKS

The MMBW's Metropolitan Parks system -

convenient extensions of the classroom



Teaching Program

Ecodevelopment News,
No. 8,
March 1979

LATIN AMERICA Colombia

A new decree by the Government of Colombia directs that teaching of ecology and protection of environmental and national resources must be introduced in all the country's educational institutes, and establishes a National Environmental Service in Colombia principally to teach Colombians about ecological issues and their solutions, in accordance with the special needs and characteristics of the region.

The Ministry of Education has mandated set up, jointly with INDRENA (the National Institute for Ecology and Natural Resources) Institute de desarrollo de recursos naturales renovables. An advisory commission to select ecological subjects for the teaching curricula at every level of the Colombian educational system.

The decree has also empowered the Colombian Institute for Furthering Higher Education to help organize university seminars on ecology, environmental management and renewable natural resources (2).

ENVIRONMENTAL PSYCHOLOGY AND ENVIRONMENTAL EDUCATION

Dr. J. Peterson

Department of Educational Psychology,
Churchlands C.A.E., W.A.

What is Environmental Psychology?

I would not pretend to give the final answer to this question for two reasons. One is that I do not consider myself to be an expert in the area and the other is that the discipline itself, if it can even be called discipline at this stage, is so new that its central concepts and concerns are constantly being revised. However, it is fairly generally agreed that Environmental Psychology can be tentatively defined as the study of man's interaction with his physical environment. Of course, this definition taken by itself would fit a half dozen other fields of interest, both within and outside of the general discipline of psychology. So we cannot get a true sense of what Environmental Psychology is without looking at its central topics and concerns. What Environmental Psychology really tries to do is draw together under one roof ideas and interests from many other areas, ideas and interests which may go back hundreds, even thousands of years.

When I tell people I'm interested in Environmental Psychology in relation to education, a common response goes something like this: We're building a new school, what colour shall we paint the classroom walls? The question seems straightforward but, alas, the answer is not. To begin with, Environmental Psychology is not solely concerned with the effects of specific environments or of specific environmental features on man. Such a concern is misleading and terribly one-sided. Environmental Psychology is concerned with man's interaction with his environments. The question is how well or how poorly does he pursue his needs, interests and values in various environments. To understand this we must look at two things: one, the psychology of the person and two, the nature of the environments.

To really understand Environmental Psychology, we would need to look at every single aspect of man as a psychological being. But for practical reasons, we tend to focus on certain areas. Of greatest interest are physiological reactions, like reactions to temperature and environmental chemicals, perceptual processes, formation of concepts, memory, and motivational processes, including needs attitudes and values. One of the more difficult and yet exciting challenges of Environmental Psychology is that we must take these topics out of the laboratory and study them in the real world. And this, I believe, is an exciting promise for environmental education.

To study the nature of environments is, of course, something which environmental education as it has been developing has been more directly and dynamically concerned with. Until recently, however, environmental education has been mainly concerned with the study of natural environments. Environmental Psychology, on the other hand, has begun to delve into a great variety of environments and environmental features. A recent text on Environmental Psychology (Bell, *et al.*, *Environmental Psychology*, Saunders 1978) has included sections on work environments, leisure environments, learning environments, residential settings, and institutional settings. It has also looked at the relation of human behaviour to such environmental features as noise, heat, cold, air pollution and wind. Of special interest to Environmental Psychology has been the study of the effects on human behaviour of people, not in the traditional sense familiar to us all, as social stimuli, but rather as physical stimuli. Related topics which have received much attention in this way are crowding and population density, territoriality and the need for personal space, and privacy. There has, of course, also been some attention given to natural environments in terms of topics like environmental aesthetics, preference for environments, and littering.

What are some central concerns of Environmental Psychology?

Many of these concerns are becoming more frequently mentioned in environmental education. This is highlighted in recent issues of the E.E.P. Newsletter. I think these

concerns can be grouped under two general headings:

- : actions in environments
- : reactions to environments

Actions in environments. When we look at these concerns, we ask questions about people's needs, interests and values. And then we look at how people behave in various environments in an effort to maximize the satisfaction of these needs, interests and values. Sometimes they behave wisely and sometimes they behave unwisely. What do they want their environments to do for them? How well or how poorly are different environments designed to achieve these purposes? This last question opens up a topic of very special concern to me, and one which I have looked at in terms of the physical design of classrooms, not the structural features of classrooms, but the moveable, changeable, features, especially wall displays and desk arrangements. Who plans these features and who uses these features? What are the harmonies and the disharmonies which exist between the interests and purposes of the planners of these features and the users of these features? If we consider teachers to be predominantly planners and children to be predominantly users in this instance, my studies have suggested that the disharmonies overshadow the harmonies to a surprising degree.

Reactions to environments. These are concerns which seem to have occupied a larger part of environmental education. Of these, the major one, of course, is the physical effects of various environmental features, particularly the growing number of environmental pollutants to which we are daily exposed.

There are other reactions, however, to which Environmental Psychology has given special attention. Chief among these is the psychological reaction of stress to which a growing number of both physical and psychological features of our various environments seem to contribute. Other reactions may relate to work efficiency and maximization of growth potential of the individual. A topic of special concern and one which I think is becoming central in environmental education has been recently highlighted in an excellent discussion by Prof. Roger Russell of the Flinders University. In an article entitled "Environmental Stresses and the Quality of Life" (*Australian Psychologist* 13, July 2, 1978) Prof. Russell has focussed on our failure to consider the quality of life as a factor in so many of our environmental decisions in modern society. And I am convinced that the quality of our physical environments may have a very great but largely ignored effect on our outlook on life, if we can speak in such global terms. Surely this is an issue of central concern to environmental education?

What contribution can Environmental Psychology make to environmental education?

I would hope that some of the conceptualizations and concerns which I have already expressed would be of some value in designing programs in environmental education. In addition, I think Environmental Psychology may be a worthwhile source of specific information on man-environment interaction. There exists a professional journal called *Environment and Behaviour* which monthly provides new research information on a great variety of environmental behaviour topics. In addition, there are new textbooks appearing (e.g. Ittelson *et al.*, *An Introduction to Environmental Psychology*, Holt, Rinehart, Winston, 1974; Proshansky, *et al.*, *Environmental Psychology: People and their Settings*, Holt, Rinehart, Winston, 1976) which provide many different ways of looking at environmental issues.

I know that environmental education will not lack for contributions from many different areas, as the E.E.P. Newsletter indicates. I think the greatest potential contribution of Environmental Psychology to environmental education is to add the much needed psychological perspective to our planning of environmental programs in schools. Too often do we seem to assume that if we explore the physical dimensions of environmental actions we have said all that needs to be said about environmental education. It becomes increasingly clear nowadays that in many instances of environmental pollution, for example, the technical, physical solutions are known and clear-cut. The problem is basically a human one.

School buildings and the environment

Andrew Tidswell

Design architect, school design office, Public Buildings Department

One of the most important developments of the past decade has been the emergence of a world-wide concern for the environment. It first emerged as a series of concerns for isolated instances of pollution and environmental damage. It grew into a realisation that growing populations, rising levels of expectations, increasing economic growth and continued depletion of finite natural resources could not be sustained indefinitely. In fact, the limits to growth in these areas could come much sooner than is comfortable.

Thus a world environmental view developed, and the term "ecology" was popularised, meaning a study of the relationships of living things to one another and to their surroundings.

Any responsible planning now must be based on an understanding of ecology and an awareness of environmental impact. The post war economic boom which foresaw no limits to energy supplies, natural resources or economic growth no longer exists, and will never return. We must now learn to live in our environment and within its capabilities to sustain us, instead of dominating and exploiting it. We must have regard for the consequences of our actions.

Schools constitute a significant part of our built environment. They consume a lot of energy. From 1975/76 to 1976/77 there was a forty percent increase in the cost of electricity consumed in South Australian schools. The factors responsible for this were a twelve per cent increase in the tariff for electricity, a greater use of school facilities by the community and the commissioning of new higher energy consuming schools.

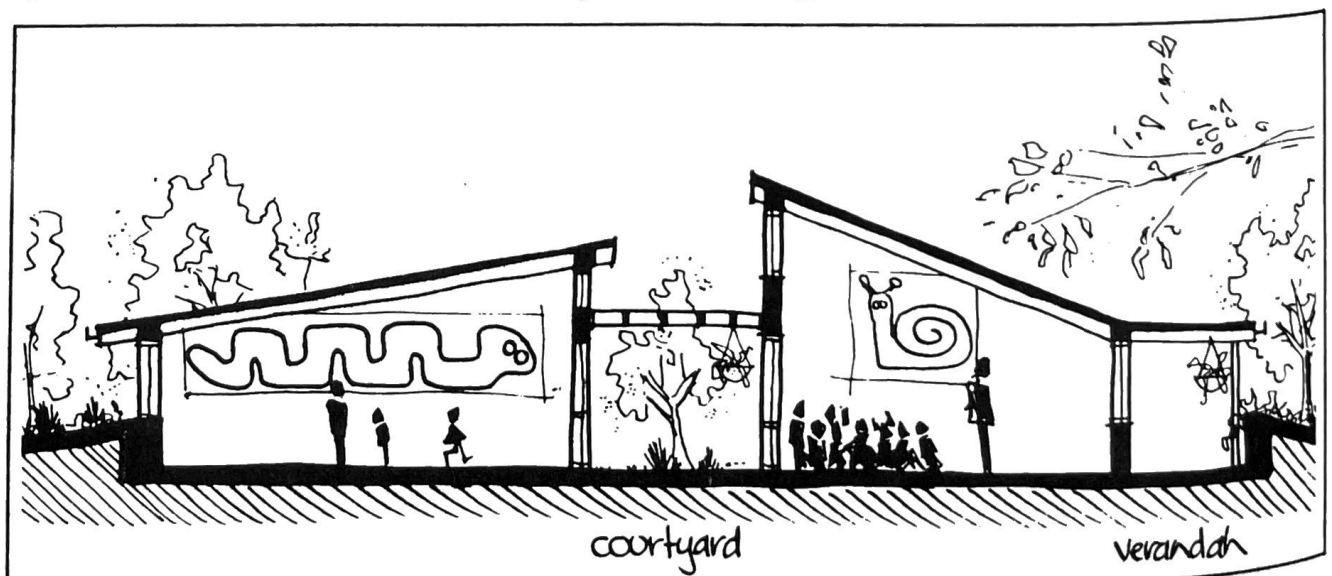
Schools also consume a lot of materials. The cost of a new high school has increased some 250 per cent over the past five years. Inflation in the form of higher cost of labour and materials has contributed to over half this increase, the rest being a growth in the size and complexity of schools to cater for an expanded curriculum and wider community use and more energy intensive design.

The school is becoming much more of a focus within its community and more demands are being placed on it for wider educational and recreational use. This is most desirable and will only increase. However, it makes it much more critical that the buildings be designed and managed to limit the consumption of energy and

materials. The present design of school buildings is going in the opposite direction to that which a responsible environment-conscious architecture should be heading.

There are other factors which apply to schools. If schools are regarded as places where people receive much of their education, and this education will increasingly cover environmental issues and ecological awareness, then schools must reflect these aspects in their design and management. There is no point preaching conservation in a building that wastes energy and materials!

So, what can be done? The first step is to introduce "good house-keeping" measures into existing schools. The second step is to integrate environmental awareness into the educational process. These two steps go hand in hand, cost nothing to implement and can be done immediately. It is merely a matter of deciding that they are important enough to want doing. The third step is to modify existing buildings, equipment and grounds. The final step is to design future schools to reduce energy and resource consumption and to encourage environmental awareness and attitudes of conservation.



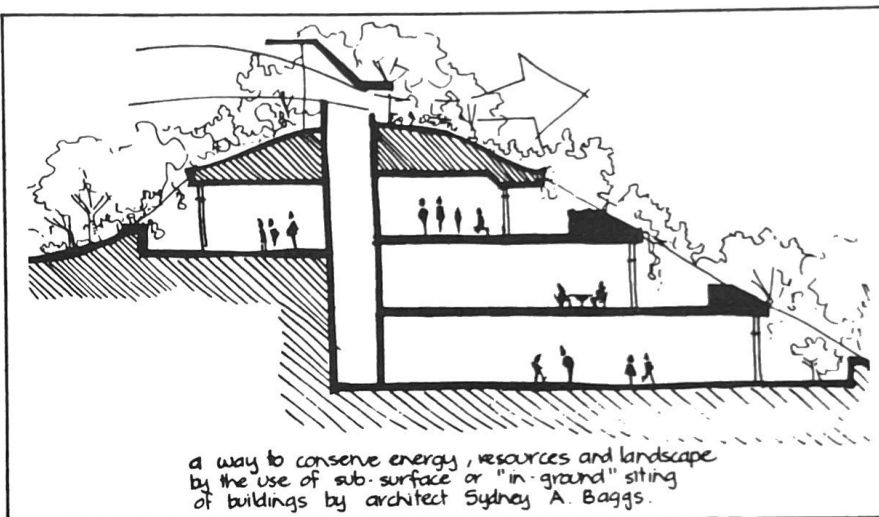
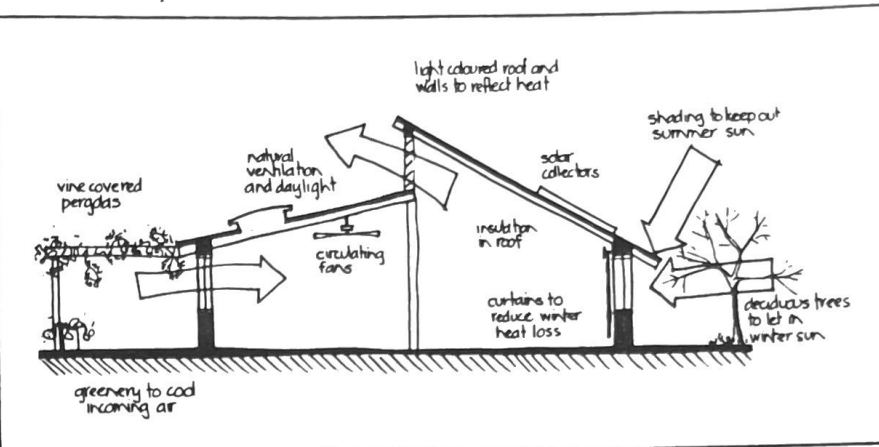
Good housekeeping

Some of the simple conservation measures that can be carried out by the school users are as follows.

- ☐ Turn lights on only in areas that are occupied, and only when natural daylight is inadequate.
- ☐ Turn on only the number of lights required to give an adequate illumination for the particular task.
- ☐ Only use heating or cooling equipment when the temperature is too cold or hot.
- ☐ Use windows and doors to take advantage of the natural conditions when appropriate.
- ☐ Turn heating on early in the day then off again when the temperature reaches a comfortable level.
- ☐ Only heat or cool areas that are occupied (if the equipment lends itself to this control).
- ☐ Do not leave plant operating at night or at weekends when the school is not occupied.
- ☐ Ensure that all equipment is maintained in good working order.
- ☐ Encourage users to wear clothing appropriate to the climate.
- ☐ Hold vigorous activities first thing on cold mornings to warm people up.
- ☐ Use the outdoors wherever possible.
- ☐ Conserve water usage.
- ☐ Recycle paper. (Use the blank back of paper for notes.)
- ☐ Obtain scrap and reject materials from industry.

Many of these measures may seem obvious, but they are very rarely followed. We are used to wasteful habits because resources have been plentiful and cheap; anyway, someone else always paid the bill for each school's expenditure.

It is most desirable that the above measures be carried out as a deliberate and positive act by all the users (not in the form of rules to be obeyed). However, it is an unfortunate fact of life that financial incentives are the most effective means of encouraging conservation. Thus the measures will be seriously



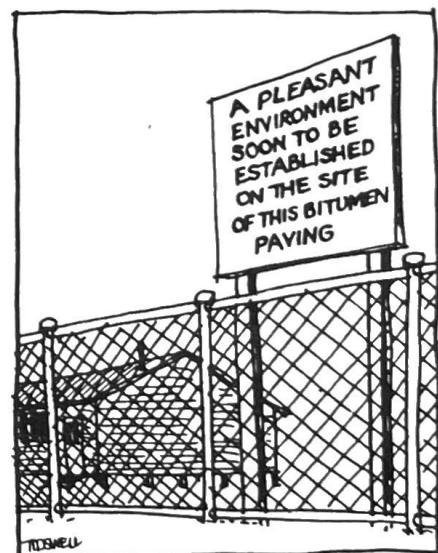
and extensively implemented only when school-based funding is extended to cover such expenditure.

Integration into curriculum

At present environmental education is mainly confined to isolated school projects and Conservation Day and relies heavily on the enthusiasm of individual teachers. This parallels with the early stage of awareness of environmental issues in the community mentioned at the start of this article.

We are now aware that environmental issues cannot be looked at in isolation. They should be integrated into all subjects in the school curriculum. The natural and built environment, our relationships to them and impact on them, cannot be appreciated or understood in isolated studies. They should be thought of as a framework which can be fitted over all other studies, from Wordsworth's poetry to world politics.

Environmental awareness must become second nature in people, then they will consistently act in an environmentally responsible man-



ner. The educational process is a long term one, so an immediate start is essential if this environmental awareness is to be developed.

Taken from an article appearing in *PIVOT* Vol.5, No.2, 1978, Pub.Ed.Dept. of S.A.

An expansion of these ideas will appear in the forthcoming publications of this project.

SCHOOL GROUNDS : A BIRTHPLACE FOR E.E.?

J. H. Smith

Rillos's statement at the beginning of this newsletter suggests that e.e. should begin in backyards and school grounds. The latter is a much wasted resource in schools around Australia, either because it hasn't been perceived as a resource or because it hasn't been developed as one. I know that many would say that any school ground can be used for e.e. without special attempts at development. Di Ward's excellent booklet, *On Safari* (50c from Teaching Resources Centre, Railway Ave., Burwood, 2134) works on this assumption.

I for one am not convinced that there is sufficient diversity in the average school ground to maintain pupils' interest for any length of time.

Both the Victorian and South Australian Education Departments provide professional and financial assistance to schools wishing to redevelop their grounds.

Victoria has a State Schools Nursery which provides plants, landscaping advice and horticultural courses for schools and teachers. It also has a School Forestry Branch whose advice goes beyond the development of school forestry plots and into the development of school grounds. As well many people have been touched by the magic of Kevin Hines who promotes gardening on T.V. He is employed by the Education Department to promote gardening and school ground development. The Victorian Gould League also assists in this area particularly through trail design. It is no wonder Victoria calls itself the "garden state".

South Australia on the other hand has a Public Buildings Department team of landscape architects and a liaison officer who assist in the redevelopment of old schools as well as plan new ones. Some 20-30% of capital costs for a new school is allocated to site works and grounds development. However, prior to any building, new school sites have recently been forest planted to ensure adequate tree cover when a school is finally established. *Guidelines for the Development of School Grounds* and *Bringing School Grounds Alive* are two publications available from the Education Department's Educational Facilities directorate.

In Tasmania no formal service is provided for schools but the Society for Growing Australian Plants, through the Schools Commission, employs an half-time advisor who teaches children how to grow plants (which are then planted around the school).

Queensland's Agricultural Projects Branch provides advice and teaching aids for activities which range from forestry, agriculture and apiary to the landscaping of ponds, nature gardens, and the use of trails.

New schools in W.A. come "complete" with landscaping. However a group of parents calling themselves POD or "Playgrounds on Demand" provides help to parents in developing backyards, to community groups in developing communal areas such as reserves, and to primary schools and kindergartens in developing their grounds. The focus is play but their film "Go Jump" (\$100) and their publications, *Primer for Playground Planning* (25c), *POD on Cubbies* (50c), *POD on Ropes* (25c), *POD on Tyres* (25c), provide food for the thought that play could be a very significant factor in the early development of a child's sensitivity to his environment. They are available from Jan Knight, 32 The Boulevard, Floreat, 6014.

The International Playground Association has commissioned POD to produce a report on children at play in Australia for I.Y.C.

The Victorian Playground and Recreation Association, 37 Gertrude Street, Fitzroy, 3065, has a wide range of local and overseas publications on play/adventure playgrounds. Write for a list. They have become very involved in school ground development in Victoria and are currently organizing a national tour by Paul Hogan of Playground Clearing House (U.S.A!) - a leading builder, writer and film-maker - (Oct. 8-11, Bris; 12-13 Syd; 14-16 ACT; 18-21 Mildura; 22-23 Adel; 24-29 Melb; Oct.30-Nov.2 Tas; 3-8 Melb).

Information on the development of school grounds will be available in forthcoming publications from this project.



STATE NEWS

WESTERN AUSTRALIA



The idea that environmental education involves the bush and rivers and mountains is still prevalent in W.A. while the urban environment and the physical environment of sounds and smells are neglected.

One of the directions for Keith Anderson, who has recently replaced Peter Hammond as E.E. Officer, will be to coordinate some of the resources available to the Education Department for environmental education. These resources include two field studies centres, museums, the zoo, the botanical gardens at Kings Park and the various camp schools controlled by the Physical Education Branch. While the control of the various facilities will remain unaltered, it is hoped that materials will be produced which will enable users of the facilities to embark on a significant component of environmental education. Already undergraduate students from one College of Advanced Education have developed a number of exercises which school students might find useful when visiting that centre. The experience of visiting the camp and preparing materials seems to be of value for the undergraduates and certainly the product is of value to the school system. The response has been such that that College wishes to revise and extend the materials produced on the first visit.

The Education Department is looking to extend this shared activity with other Colleges of Advanced Education.

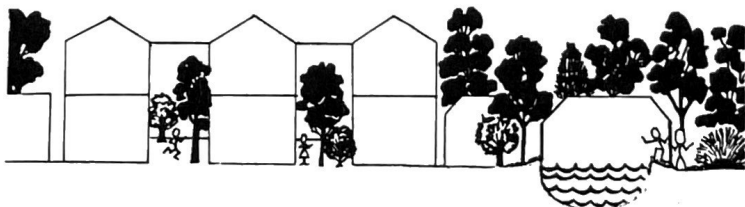
Alternative methods of producing materials will be encouraged. For example, the Department would support some regional inservice initiatives to produce materials for a centre.

The Education Department now has a representative on the Committee for the Understanding of the Environment, formed by the Conservation and Environment Council. Its responsibility is to advise the Council, the Environmental Protection Authority and the Department of Conservation and Environment.

Another priority for 1979 is teacher development in environmental education which would include some elaboration of the policy statement of 1977. The concept of environmental education has to be developed and the emphasis during 1979 will be to relate environmental education to the situation in which the child finds itself.

* * *

Harry Pearson



NEW SOUTH WALES



The "E.E.Group", which essentially consists of advisors from 'museums' (zoos, etc.), field study centres and curriculum projects, continues to meet in Sydney on a regular basis.

At a recent meeting it discussed: Inservice programs and community involvement at field studies centres (even across State borders), curriculum development in primary science (a new policy statement is due soon), the establishment of 70 Gould League coordinators around the State, the Australian N.P.&W.S. survey of field studies centres and the return to the "stream of" a pioneer F.S.Centre teacher Keith Armstrong (ex Wirrimbirra).

* * *

Frank Haddon

CONFERENCES

PERTH August 21-23
Gould League National Conference on E.E.
Stimulating Environmental Awareness in an Urban Setting.
Contact: David Sieber, Convenor, Claver House,
823 Wellington Street, Perth, 6000.

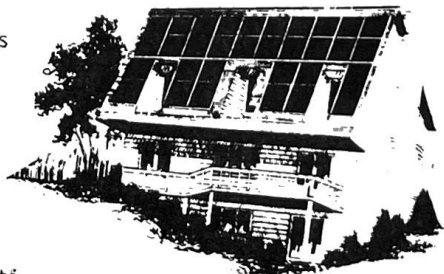
PERTH August 25-30
Museum Education Association of Australia
Museum Education in a Changing World.
Contact: Education Officer, W.A.Museum, Francis
Street, Perth, 6000.

MELBOURNE August 19-24
Australian Association of Community Educators
Here Come the 80s - Community Participation and Learning.
Contact: International Association of Community
Educators, 14th Floor, Nauru House,
80 Collins Street, Melbourne, 3000.

HOBART August 31-September 4
National Outdoor Education Conference
Resources Outside the Classroom.
Contact: Mr. B. Tomalin, Division Recreation,
Kirksway House, Battery Point, 7000.

ENERGY EDUCATION

Liquid fuel shortages have prompted the development of a considerable volume of educational material in the U.S.A., much of it aimed at "the interdisciplinary nature of energy" (or more particularly "of energy conservation"). In Australia to date Chloride Batteries (*The Energy Story*), The Australian Mining Industry Council (*Nuclear Electricity*) and several other industries have produced materials for the educational market. Government energy authorities have recently begun pushing the theme of energy conservation in the home (*Energy-efficient Dwellings*, E.T.S.A.; *The Low Energy House*, Gas & Fuel Corp. Vic; *Using Energy Wisely*, S.E.C. Vic.) while C.S.I.R.O. (*ECOS* Feb. 1979), A.C.F. (*Habitat*, Apr. 1977) and F.O.E. (*Chain Reaction* Vol.3, No.3, 1977) have concentrated on providing up to date information in experimental fields. *Solar Focus* is a bimonthly newsletter on the latest technical and economic developments in Australia (from P.O. Box 45, South Yarra, 3141).



The latest home guide to arrive is *Small Alternatives: a Personal Guide to Saving Energy and Money* (\$1.95 from Small Alternatives, P.O. Box 95, West End, 4101) which, like a similar guide by P. Clements, *Day-to-Day Ecology in Your Home*, Sydney Ure Smith, is full of good ideas on things to avoid doing or buying, but assumes readers are committed to altering their life-style.

This rash (*sic*) of energy materials is useful for the person looking for specific information but overwhelming for the teacher trying to come to grips with this fluid topic. Too little of it is as yet written at student level (or even householder level!).

American schools however, have received extensive grants from the federal Energy and Education Action Centre which was established soon after the first U.S.A. energy crisis to

- : encourage energy conservation in education facilities
- : increase awareness of multidisciplinary nature of energy, environment, and engagement through curriculum materials
- : support inservice training of teachers, administrators and others in the education community
- : support career and vocation education programs in energy related fields of employment.

Some of the materials sighted so far are:

- : *Interdisciplinary Student/Teacher Materials in Energy, the Environment and the Economy* - 11 books of 70 pp. covering The Energy We Use (grade 1), Community Workers and the Energy they Use (grade 2), Networks (grades 4,5), Bringing Energy to the People (grades 6, 7), Energy Engines and the Industrial Revolution (grades 8,9), Transportation and the City (grades 8,9), Mathematics and Energy (grades 8,9), Energy and the Global Market-place (grades 9-11), Agriculture, Energy and Society (grades 10-12), How a Bill becomes a Law to Conserve Energy (grades 9,11,12), U.S. Energy Policy - which direction? (grades 11,12).
- : *Award Winning Energy Education Activities for Elementary and High School Teachers.*
- : *Fact Sheets* - 20 each of 4 pp. illustrating the scientific approach to energy.
- : *Energy and Education* - a bimonthly newsletter with the latest on projects, books, workshops.

These four have been prepared by the National Science Teachers Association of U.S.A.

- : *Science Activities in Energy* - a series of 5 experiment packs for years 4-6, covering Wind, Solar, Electrical, Chemical, and Conservation. Produced by the American Museum of Atomic Energy, Oakridge.
- : *Public Schools Energy Conservation Service* : an energy audit program for elementary and secondary schools. Prepared by Educational Facilities Laboratories, N.Y.
- : *Sun Day in the Schools*, May 3, 1978. Produced by the Centre for Renewable Resources, Washington, D.C.

- : *Energy : an Annotated Bibliography of Selected Energy Education Materials.* Compiled by Hatheway Environmental Education Institute of Massachusetts Audubon Society.

- : *Selected Department of Energy Publications* - annotated bibliography of, mostly school level, materials.

* * * * *

The Centre for Alternative Technology in Wales has produced an imaginative Energy Education Pack containing ideas for involvement in making energy collectors (simple plans included), energy conservation, integrated energy systems, plus information on fossil fuels and nuclear power. Available from the Centre at Machynlleth Powys, Wales, at approx. \$16.00.

* * * * *

Diamonds used to be a girl's best friend but nowadays everybody is hoarding their joules.

RESOURCES



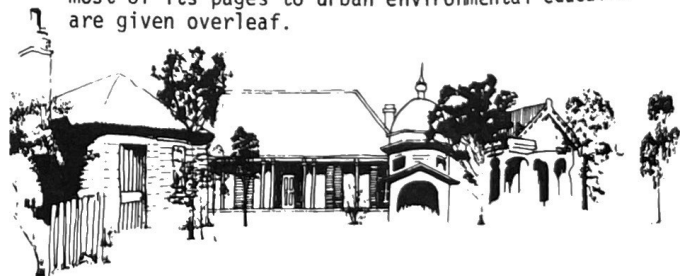
1. A quick guide to some Australian materials -
 - : *People and Shelter; People and the City; People and Planning*, S.E.M.P. Urbanism Kits. Heinemann Ed. Aust. 1978. A series of comprehensive kits from CDC's Social Education Materials Project. Some of the units within each have an environmental education flavour. *Noise*, published by CDC as part of the S.E.M.P. Community Kit is a well produced series of activity cards to investigate an urban problem.
 - : *The Car : An Ideas Book*, by Ross and Kasepuu of the N.S.W. E.E. Unit (now defunct) is available from the Teaching Resources Centre, Burwood, at \$4. This really is an ideas book aimed to increase awareness of the impact of the car on society, heighten responsibility and develop a concern for the quality of life (undefined!).
 - : *The Highway : Go Back, you are going the Wrong Way*. \$1.50 from Dr. K. Morgan, Kuring-Gai C.A.E., P.O. Box 222, Lindford, 2070, is a K-6 Teachers guide to a resource outside many schools in Australia. This activities book relies on having perceptive students.
 - : *You and Your City*, from a student workshop held in urban Melbourne in 1975. Publ. former Department of Urban and Regional Affairs, A.C.T.
 - : *Habitat - Human Settlements for the Future*, Publ. by CDC-EHCD 1976 - a kit prepared for the international conference in Vancouver with slides and booklets on Living, Planning, Population, Resources, a Teachers Guide and the Belgrade Charter on Environmental Education.
 - : *The Throwaway Society : Packaging, Rubbish Disposal and Recycling*, \$13.50 from V.A.S.S.T., 59 Stanley St. Melbourne, consists of a kit of 6 large format work cards/posters with 5 copies of each. They cover Population, Resources Energy, Designing for People, Rubbish, Paper and Glass, Metals and Plastics, What Can be Done. For Soc. Stud., Art and Consumer Ed.
 - : A Reverse Garbage Cooperative operates from Salisbury Education Centre in S.A. This teachers centre gathers industrial "offcuts" such as polystyrene, denim, lenses, clay, leather, carpet, perspex, tiles, etc. and sells them at a nominal price to schools. Not only does it reduce Adelaide's solid waste but it helps education. The scheme and ideas for the re-use of materials is outlined in *Recycle for Learning*, from P.O. Box 433, Salisbury, 5108, at \$1.00.
 - : Mari Davis' *Resource Book for Urban and Environmental Studies*, by EHCD 1976 is an annotated bibliography for primary and secondary teachers with an emphasis on Australian materials. It includes Government reports and planning documents many of which can be put to considerable use in the classroom - see BEE, Jan. 1979.
 - : Bibliographies date rather quickly in these days of the information explosion so the above needs to be supplemented with information from a regular newspaper such as the bimonthly *Study of Society* - the Journal of the Victorian Committee on the Teaching of the Social Sciences in Secondary Schools. This is sent to all secondary schools in Australia and contains a welter of curriculum ideas and book reviews some of which are relevant to E.E., e.g. the October 1975 issue contained an extensive article on a unit *Magnificent Melbourne*, being developed to familiarize students with the central city area by walking. Well worth digging out!
 - : The Victorian Gould League's book *Trailing - 1978*, 40c from P.O. Box 446, Prahran, 3181, is a must for anyone thinking vaguely about using trails as an educational technique (be it in the library, the mathematics lesson, or the outdoors!). The League has produced urban trails for the handicapped in Melbourne, for the tourists in Echuca and for students around a number of schools (sometimes set out as detective trails).

- : *The Importance of Aesthetics* is a student unit from CDC's forthcoming Investigating the National Estate project which aims to show the difference between historic, functional, economic, scientific and aesthetic judgements of buildings, bridges, streetscapes, etc. Aesthetics has often been part of the hidden curriculum and few subjects have tackled it. Art and Geography teachers seem to be in the forefront particularly in the U.K. with resources such as:
 - : *Learning to See* 1-4, Kurt Rowland, Ginn (Primary)
 - : *Looking and Seeing* 1-4, " " " (Secondary)
 - : *The Concise Townscape*, Gordon Cullen, Architectural Press
 - : *Streetwork : The Exploding School*, Ward & Fyson Routledge & Kegan.

2. A quick guide to some U.K. materials

- : Geography for the Young School Leaver Project. Thomas Nelson 1974. *Man, Land and Leisure; Cities and People; People, Place and Work*. Like S.E.M.P. this is a carefully trialled but expensive kit which looks at ideas, skills, values and attitudes for 14-16 year olds. Some units are clearly E.E. and some only implicitly E.E. However, the teachers guide folders which include one set of the student materials can be bought at \$25 each and are well worth examining.
- : Geography 14-18 Project. Schools Council (U.K.) Macmillan 1978. Four kits, *Urban Geography, Transport Networks, Industry, Population*, each containing:
 - : student resource sheets - 30 copies of each
 - : spirit masters of other selected resource sheets and activities
 - : Teachers Guide with facsimiles of student sheets, a framework and a 2 page guide on each topic.
 e.g. The Teachers Guide on Industry covers topics such as "Factors which influence decisions about industrial location and how these changed with time", "Perceptions of the industrial environment", "Are there limits to growth?" etc.

If you have able 14-18 year old students it would be well worth getting hold of the Teachers Guides to these kits.
- : B E E - Bulletin of Environmental Education. Some excerpts from this monthly publication which devotes most of its pages to urban environmental education are given overleaf.



LETTER TO THE EDITOR

"Dear Sir,

While reading with interest the contributions on Environmental Education from various States, in Newsletter 6, I was both surprised and dismayed by the absence of information from Queensland.

Whatever happened to all the enthusiasm that appeared to be generated by the National Environmental Education Conference of 1977?

Perhaps everyone is so involved in absorbing programs, that nobody has time to write about them. D.Dove, Qld."

Ed. Note - A comparison of the names of the 400 subscribers to this newsletter with the names of environmental education conferees (1970-1978) shows surprisingly little overlap. Is e.e. just another educational ephemeral?

Bulletin of Environmental Education

The teacher's guide to the theory and practice of environmental education, with emphasis on the urban scene and general ecological problems. BEE includes articles and study ideas from active teachers and creative environmentalists, and news and reviews of interest to all disciplines concerned with social and physical aspects of the environment.

First issue May 1971. Back issues and off-prints of key articles usually available.

Annual subscription (11 issues) £6.50 a year. Extra copies £5.50 a year.

BEE is published by the Education Unit of the Town & Country Planning Association, 17 Carlton House Terrace, London SW1.



Comment

This issue of BEE looks at ways planners and teachers can work together to their mutual advantage. It shows there are encouraging signs of interest in education from the environmental professions and government officials.

a report from the Schools Council Geography 16-19 Project team

Planning the urban environment: a new addition to Advanced Level Geography

MICHAEL NAISH, ASHLEY KENT & ELEANOR RAWLINGS

'Committee throws out Plans for new Shopping Centre'.
'Monster Office Block - Community says NO'.
'Secretary of State for the Environment launches new Inner City initiative'.

These are a selection of newspaper headlines representing some of the ways in which planning may be seen to have an impact on the urban environment. Do 16-19 year olds understand the causes and consequences of man's attempts to plan the urban environment? Are they aware of what a planning committee is, or of how the Secretary of State may have an influence on the urban landscape? Do they appreciate the negotiations which lie behind the appearance of a new office block and the conflicting opinions about who benefits from it? More importantly, are they aware of how they can make their views known and play a part in shaping the changing urban environment?

At a very immediate level, it is considerations like these which have provided one influence on the Geography 16-19 Project in its formulation of a new Advanced level Geography syllabus. In many courses, the contribution of geography to understanding real urban problems and issues is not revealed adequately. The Project's approach to geography aims to improve this situation, and as this article will indicate, one consequence is that 'planning the urban environment in the UK' finds a place in the proposed A level syllabus.

THE NATURE AND OBJECTIVES OF ENVIRONMENTAL EDUCATION

Conclusion 1: Urban environmental education should help people perceive, understand, analyse, and finally improve their built environment. It should be centrally concerned with aiding people to participate more effectively in shaping their local environment. It is not a pure subject in its own right, but should draw on environmental aspects of traditional subjects ranging from natural sciences through geography and history to art, architecture and planning. It should include visual and design components, and should involve direct experience as well as academic study.

...as a nation, and as planners for that matter, we attach the greatest importance to thought and very little to feeling. We train our children how to think, how to use their brains, but not how to feel, how to cultivate their imaginations. We wonder at the intellectual feats of the 'Brain of Britain', while the sensibility of Ben Nicholson remains by comparison unknown. We can determine the design of a house or a motorway by intellectual analysis, but if we leave feeling or intuition out of the process, the appearance is an affront to our visual sense. We cannot define the aesthetic experience that moves our spirit, but we can recognise it...

C. E. E. - A CONFEDERATION OF ENVIRONMENTAL EDUCATORS ?

Feedback on the value of keeping a Newsletter such as this going has been small, though positive. What position the silent majority then? One suggestion to maintain this communication network has been to form a National Association with an executive who would produce a newsletter, run, say, a biennial conference, and provide a lobby for environmental education.

The State Liaison Officers for this project plan to meet later in the year to discuss the project publications and their inservicing. That meeting could provide an opportunity to formalize any moves that you might like to make. So far no person or group has indicated any strong preferences. What do you think?

Here is the gallery from which to choose a discussant!

Clockwise from top centre -

Frank Haddon (NSW);
Jim Wilson (VIC);
Bob Stevenson (QLD);
Grant Godfrey (TAS);

Harry Pearson (WA);
Lester Russell (SA);
Peter Hobbs (ACT);
centre - Jim Cameron (NT)



Word Ball

If the Earth
were only a few feet in
diameter, floating a few feet above
a field somewhere, people would come
from everywhere to marvel at it. People would
walk around it, marvelling at its big pools of water,
its little pools and the water flowing between the pools.
People would marvel at the bumps on it, and the holes in it,
and they would marvel at the very thin layer of gas surrounding
it and the water suspended in the gas. The people
would marvel at all the creatures walking around the surface of
the ball, and at the creatures in the water. The people would
declare it as sacred because it was the only one, and they
would protect it so that it would not be hurt. The ball would
be the greatest wonder known, and people would come
to pray to it, to be healed, to gain knowledge, to know
beauty and to wonder how it could be. People
would love it, and defend it with their lives
because they would somehow know that
their lives, their own roundness, could
be nothing without it. If the
Earth were only a few
feet in diameter.

JOE MILLER

IN THE BEGINNING

God created Heaven and Earth. Quickly he was faced with a class action suit for failure to file an environmental impact statement. He was granted a temporary permit for the Heavenly part of the project, but was stymied with a Cease and Desist Order for the earthly part.

Appearing at the hearing, God was asked why He began His earthly project in the first place. He replied that He just liked to be creative.

Then God said, "Let there be light," and immediately the officials demanded to know how the light would be made. Would there be strip mining? What about thermal pollution? God explained that light would come from a huge ball of fire. God was granted provisional permission to make light, assuming that no smoke would result from the ball of fire. That He would obtain a building permit and to conserve energy. He would have the light out half the time. God agreed and said He would call the light DAY and the darkness NIGHT. Officials replied that they were not interested in semantics.

God said, "Let the Earth bring forth green herb and such as may seed." The EPA agreed so long as native seed was used. Then God said, "Let the waters bring forth the creeping creatures having life and the fowl that may fly over the Earth." Officials pointed out that this would require approval of the Game and Fish Commission coordinated with the Heavenly Wildlife Federation and Audubongelic Society.

Everything was okay until God said He wanted to complete the project in six days. Officials said it would take at least 100 days to review the application and impact statement. After that there would be public hearings. Then there would be ten or twelve months before. . .

And God said, "The H... with it!"