

CONSERVATION AND THE CLASSROOM

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This article describes an 'environmental awareness' course presented in Kimberley by the McGregor Museum at the Teachers' Centre. Two of the successful outings which occurred as a result of this course are also described.

INTRODUCTION

I can well understand teachers who are convinced that it is an essential part of education to do field work but who don't attempt it. I can also understand teachers who are not convinced of its value; an outing is expensive in terms of money and time and, if not carefully planned, can be disastrous in terms of waste and the negative effect of lack of impact on pupils. After reading 'The Great Neglected Outdoor Classroom' by Frank Opie in the May 1986 issue of this *Journal*, I felt compelled to recount simple outdoor expeditions which took place in the Kimberley area. But first things first - how did it come about?

THE MUSEUM COURSE

The McGregor Museum offered a 'Bring Conservation to the Classroom' course for teachers of all subjects at all levels at the Teachers' Centre in March 1985. As the Museum is both a Cultural and Natural History museum the course included both these aspects of the environment. The aims of the course were:

1. To increase awareness of our urban and natural environment and man's place in it.
2. To introduce the fundamentals of environmental conservation and inspire the need for the conservation of nature and natural resources.
3. To introduce the environment as a potential, and marvellous, teaching resource.

The programme content was divided into three 2½ hour sessions viz. two afternoon (Monday and Thursday) sessions from 15h00 to 17h30 and a Saturday morning from 07h00 to 09h30, all in the same week.

Day 1

The session began at the Teachers' Centre with a lecture by the Director of the Museum, Dr. R. Liversage, entitled 'Man and the Environment: a factual and philosophical look'. Miss R.M. Tietz, our Deputy Director, conducted 'Rhodes Drive' - a bus tour of sites and buildings associated with Cecil Rhodes which aimed to give teachers personal experience of the wonder of learning history on site.

Day 2

The day began with a lecture on 'Nature Conservation: understanding ecology' by Mrs. S. Lloyd, the Museum's Education Officer, followed by a session on 'the do's and don'ts of organising an outing for school children' by Messrs. E. Auret and Krasuse, teachers at the H.F. Verwoerd Primary School. A 'think-tank' session was held on 'Living Conservatively' with Mr. C. Davey from Kimberley Junior School as Chairman. The objective here was to determine simple ways in which the man-in-the-street could contribute towards the conservation movement which could be readily passed on to school pupils e.g. making compost from vegetable scraps and organic matter.

Day 3

An early start was made to 'Benfontein', a game farm eight kilometres south-east of Kimberley, for the 'Outdoor Interpretation' session. Here the participants were divided into two groups. Group A consisted of Biology teachers who went with Mr. A. Gubb, an ecological botanist on the museum staff. Worksheets had been carefully prepared by Miss Tietz and Mrs. Lloyd to illustrate ecological principles as seen on Benfontein. These would act as a future guide for teachers organising their own outings. Group B consisted of teachers of other subjects as well as primary school teachers under the direction of Dr. Liversage and Mrs. Lloyd. The activities of this group were more practically orientated and their worksheet included bark and leaf rubbings, bird streaking and a tabulated identification of depicted animals which were to be found on the farm.

TEACHER'S FOLLOW-UP

Here are two examples of actual outings organised by teachers who had attended the course. The first involved a group of 20 boys and girls in Std. 5 and was organised by a 'non-science' orientated teacher.

Outing I

Step 1

Mr. Colyn Davey, of Kimberley Junior School, contacted the writer to discuss the possibility of an outing to Benfontein.

1. Permission was obtained to visit Benfontein, which belongs to De Beers Consolidated Mines.
2. Length of visit was decided.
3. Transport was discussed.
4. Content of visit was decided upon. This was to be:
 - a. Bird streaking - lecture, field work and direct observation.
 - b. Spoorcasting - instruction and field work.
 - c. Plant types - lecture and identification in the field.
 - d. A visit to the enclosure in the veld where ecological theory would be discussed.
 - e. The identification of spoor specimens by professional staff of the Museum.

Step 2

Mr. Davey and Mrs. Lloyd drew up a worksheet suitable for pupils; Mrs. Lloyd supplied the sketch for bird streaking; Mr. Davey drew and labelled a map of the area to show venues, provided illustrated instructions of how to make plaster casts of animal spoor and drew up a time-table viz:

08h00	Leave for Benfontein in school bus and museum vehicle.
08h00-08h30	Travel to Benfontein and briefing.
08h30-09h00	Birdstreaking lecture and field work.
09h00-09h30	Spoorcasting at lakeside: field work.
09h30-10h00	Plant types: grasses/forbs/shrubs/trees: lecture and field work.
10h00-10h30	Enclosure: study of effect of excluding grazers.
10h30-11h00	Lifted spoorcasts en route back to bus for refreshments and toilets.

11h00-11h20 Return to McGregor Museum.
 11h20-12h15 Identification of collected spoorcasts by Museum staff.
 12h15 Return to school.
 All relevant information was then organised into a handout for each pupil.

D-Day (3 May) dawned bright and clear and with great excitement and anticipation the group set off. The programme however proved to be a little too ambitious and, as time had run out, the group returned straight to school, leaving out the visit to the museum which was arranged for another day. A follow-up evaluation done by the children produced such remarks as: 'Can't we go every week?', 'Why couldn't we have spent the whole day there?' and a whole-hearted majority vote that the best way to learn is to see and experience.

Outing II

The second outing was for the Std. 8 Biology classes at Girls' High School. The outing was organised by Mrs. L. Berry and Miss I. Phillips.

Step 1

Mrs. Berry contacted the Museum to organise an outing to Benfontein for 70 pupils. Permission for the visit was granted. Because of the size of the group it was decided to divide it into three smaller groups and the study area into three. Each teacher would then take one group through the three study areas.

Step 2

Mrs. Berry drew up the worksheets and outing instructions, the ecology section of the syllabus having been completed in class.

D-Day (6 June) dawned crisp and clear. The pupils were divided into three groups and we proceeded to visit the three study areas which were:
 Study area A - from gate to Homestead,
 Study area B - the dam and surrounds.
 Study area C - the pan up to the Kalahari sandveld.

The worksheet was designed to coincide with each study area and consisted of the following:
 The physical factors: sunrise and sunset (day length), humidity, wind-strength etc.

The children were each required to draw a map of the farm showing relevant details e.g. dams, buildings, roads, north, wooded areas etc. . . . and the

position of the three study areas, A, B and C. Each worksheet for the separate areas began in the same way i.e.

Abiotic factors:

- i. Edaphic (soil type)
- ii. Physiographic - slope?; Which way is slope facing?; The significance of this.

Biotic factors:

- i. Plants - grasses found here; trees/shrubs found here.
- ii. Animals - invertebrates found here; vertebrates found here.

Then specific characteristics were investigated:

Study area A: 'Succession at Benfontein'.
 Study area B: 'Man's interference at Benfontein'.
 Study area C: 'Food chains and food webs at Benfontein'.

In conclusion a simple tabulation comparing the study areas in respect of abiotic and biotic factors had to be filled in.

This outing occupied the equivalent of one school day i.e. the group left just after school began at 07h15 and returned just before the final bell at 13h30. The comments made by pupils were similar to those made by the children at the Junior School.

CONCLUSIONS

There is a formula for success in field work which may be summed up as follows:

1. Thorough planning.
2. Know the area yourself.
3. Don't be too ambitious.
4. Prepare to be flexible when necessary.
5. Be enthusiastic.
6. Learn by experience (everyone has to do it for the first time).

Teachers should also make use of museums where Education Officers will help plan such outings and introduce them to professional staff. These staff members have a wealth of knowledge of the surrounding area to be tapped and utilized. The local centre of the Wildlife Society will also be able to help if teachers were to contact them, as well as the Education Officer of the provincial Nature Conservation agencies. Finally, keep it simple and success will breed confidence and ambition.

REFERENCE

- OPIE F. 1986: 'The Great Neglected Outdoor Classroom'. *Southern African Journal of Environmental Education*. No.2 (May) pp.8-10.

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sal op 'Die Gebruik van die Plaaslike Omgewing' fokus. Artikels wat betrekking het hiermee of oor enige ander aspek van omgewingsopvoeding word verwelkom.

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