

THE USE OF WILDERNESS IN ENVIRONMENTAL STUDIES ACROSS A SCHOOL CURRICULUM



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Man's historical attitude to 'wilderness' is one of the subjugation and exploitation. This has contributed significantly to contemporary environmental and social problems. The way in which wilderness areas can be utilized within an integrated school curriculum is explored. The example of Treverton Preparatory School, where such a programme is now running for the fourth consecutive year, is given.

Introduction

Then God said,

"And now we will make human beings; they will be like us and resemble us. They will have power over the fish, the birds and all the animals, domestic and wild, large and small." So God created human beings making them to be like Himself. He created them male and female, blessed them, and said, "Have many children so that your descendants will live all over the earth and bring it under their control. I am putting you in charge of the fish, the birds and all the wild animals." (Genesis 1: 26 - 28).

This scriptural word from God seems to have been completely misunderstood by the Judeo-Christian cultures. They have literally overpopulated the earth and subdued it. Only during the last decade have Christians begun to understand that God put man on earth as a steward - to control it wisely - to indeed practice conservation - "I am putting you *in charge of* the fish, the birds and all the wild animals," and this would include habitat too.

The ancient reflection of God-in-man made the natural world of secondary interest to the old Christian artists too. Nature was not painted for its own sake but as background illustration in pictures that depicted a religious theme. The paintings became the precursor of the style by which men learned to perceive the world around them. Thus the harmonious garden, separated from the wilderness in the background by a barrier, enabled viewers a sensuous enjoyment of nature within a framework of theological approval. Even today, gardens are separated from the rest of the nature as symbols of a "benign and orderly world." (Mc Harg, 1966)

Added to this was the fear of wilderness with its age old associations with evil; a place that harboured dragons and wild men. In the light of this it was not surprising that Christianity became an urban movement. Indeed the early literate Christian deemed a country dweller to be pagan. It was in the cities that one was surrounded by the works of the mind and these in turn were emblems of a creativity in God that transcended the physical world and gave a higher value to things of the Spirit. Education spread first through the Church.

The religious influence on man's perception of wilderness is nowhere better illustrated than in the settling of the New World and the westward movement of the pioneers. The reality of the rough nature of the land resulted in writings that described the wilderness as an enemy to be subdued by a pioneer army. Settlements were carved out of the wilderness - conquering the wilderness became the major concern of Americans well into the seventeenth century.

As self-styled agents of God, these early colonists conceived their mission as one of breaking the power of evil and they took a pride in westward expansion.

So it can be seen that anti-wilderness-conservation attitudes have been handed down through generations of western Christian societies to the present day. At the same time the writer sees the only way in which a sense of responsibility for the use of the environment could be inculcated would be through a widespread acceptance of the Christian doctrine of stewardship; a belief that we are part of the working out of God's plan for the world, and that we are accountable at the end of the day for the manner in which we have used the resources entrusted to us. (Black, 1970).

Education

Michelangelo is reported to have made the statement that "As the marble wastes, the sculpture grows." This not only applies literally to the development of a piece of sculpture, but also abstractly to the psychological and spiritual development of children. Nearly three thousand years ago, King Solomon, under the inspiration of God, wrote the statement, "Train up a child the way he should go: and when he is old, he will not depart from it." (Proverbs 22:6)

It seems logical that because of the present rate of loss of species, the degrading of ecosystems and the depletion of wilderness areas for development, our future citizens should be taught and brought up as environmentally literate people, so that they learn to care for and conserve not only their own environment but wilderness areas also.

Juvenile delinquency is an increasingly serious problem throughout the world. Ernest Swift, noted American conservationist and writer, sounded this warning:

"Our young people are more in need of sunburn and callouses and a healthy appetite than they are of psychiatrists and play."

In South Africa, the picture is just as grim. We have the same inherent problems of the affluent societies of the West; our children are faced with the same temptations and lack of parental guidance and knowledge of environmental matters.

There is chronic overcrowding in the cities – 60% of our population live in urban situations, many of them in urban sprawl and squalor. The population at the current rate of increase will double itself within the next 25 years. Pollution of air, water and land is not adequately controlled. There seems little control over litter and little care for both man-made and natural environments. It has been estimated that four hundred million tons of soil is washed down South African river systems annually and the Karroo desert continues to spread eastward at an alarming rate.

Haydon Washington (1983 p. 27) writes:

"If humanity is to continue to live on earth, to have fresh air and fresh water, to have an environment which is stable, then it is responsibility of us all to save wilderness, and to find time to save it before it is too late."

Shafer and Mietz (1969) stated that a 'wilderness experience' gave aesthetic, emotional, physical and social satisfaction to people. The writer has over many years seen the therapeutic effect of wilderness on people and how it has 'switched' young people toward a higher commitment to its preservation. Why not then use the wilderness in a dual role? Why not use it as the classroom, bearing in mind small groups, to teach all school subjects and by so doing inculcate a desire for its protection and conservation by the young people?

A blueprint – The Treverton programme

Treverton Preparatory School in Mooi River has embarked on an exciting educational venture by introducing environmental studies across the whole curriculum at the standard five level. This involves tuition and practical work in all the normal school subjects, (including science, geography, history, mathematics, English, Afrikaans, art and religious instruction) in the outdoors and then later in the classroom where the pupils consolidate what they have learnt.

The central theme of the study is the Mooi River from its source in the Drakensberg Mountains to its confluence with the Tugela River. The many varying ecological habitats and systems provide ideal subjects for study and comparison by the boys and girls in the standard five classes. The study area embraces three major wilderness areas in Natal and Zululand and these are used not only to good effect towards an understanding of normal school subjects in the curriculum but also serve to make the pupils vitally aware of the need for wilderness areas.

The members of a class are divided into groups which camp out at different study points along the river and in the wilderness areas where they do research. They then complete a two week consolidation period back at school, during which time they prepare projects and teach-backs on the results of their research. In this way the whole class benefits from the work of each group. Exercises from text books prescribed by the Natal Education Department are interwoven with these environmental studies and the pupils also have normal tuition during the year, all interrelated with what they have learned in the field.

The environmental approach to education is one which enables boys and girls to study and learn through real-life situations, backed up by normal teaching practices. As they get to grips with the environment and especially with wilderness areas, they discover their place in it and their responsibility to it. They also discover that they are an important link in God's creation.

Study areas

As we are using the Mooi River as the central theme, we cannot divorce it from the rest of Natal. The history, geography and ecology of the whole province has affected the Mooi River area and *vice versa*. Whilst covering these subjects, *in situ*, it is logical to cover practical maths, language, art and physical education in these areas. Physical education is covered by hiking, climbing and canoeing during research periods.

The study areas covered are:

- (i) The school and its environment.
- (ii) The Giants Castle Game Reserve – a study of the Bushmen.
- (iii) Mooi River town – an urban study.
- (iv) Fernwood Field Centre – a study of the source of the Mooi River and its environment.
- (v) Zululand – study of the culture and history of the Zulu people plus bushveld ecology and estuarine ecology.
- (vi) Rosetta settlement – a study of the upper-middle Mooi River and its environs.
- (vii) Durban – early history of Natal, early settlers, plus study of fish, reptiles, docks.
- (viii) Pietermaritzburg, capital of Natal.
- (ix) Mooi River falls area.

In this paper only two study areas are discussed, namely

- (a) The Giants Castle Game Reserve, and
- (b) Zululand.

A study of the Giants Castle Game Reserve (see Figure 1)

"In the wilderness, Man is but a traveller, who, in passing leaves no trace of his wandering.

It is therefore deemed unlawful, by we creatures of the wilderness, who were here first, for humans to bring into this area the problems of Mankind. We do not want them, so you will discard them before entering.

Take nothing but pictures, and leave nothing but foot-prints, and we shall welcome you as our guests."
(Richards & Shuter, 1977)

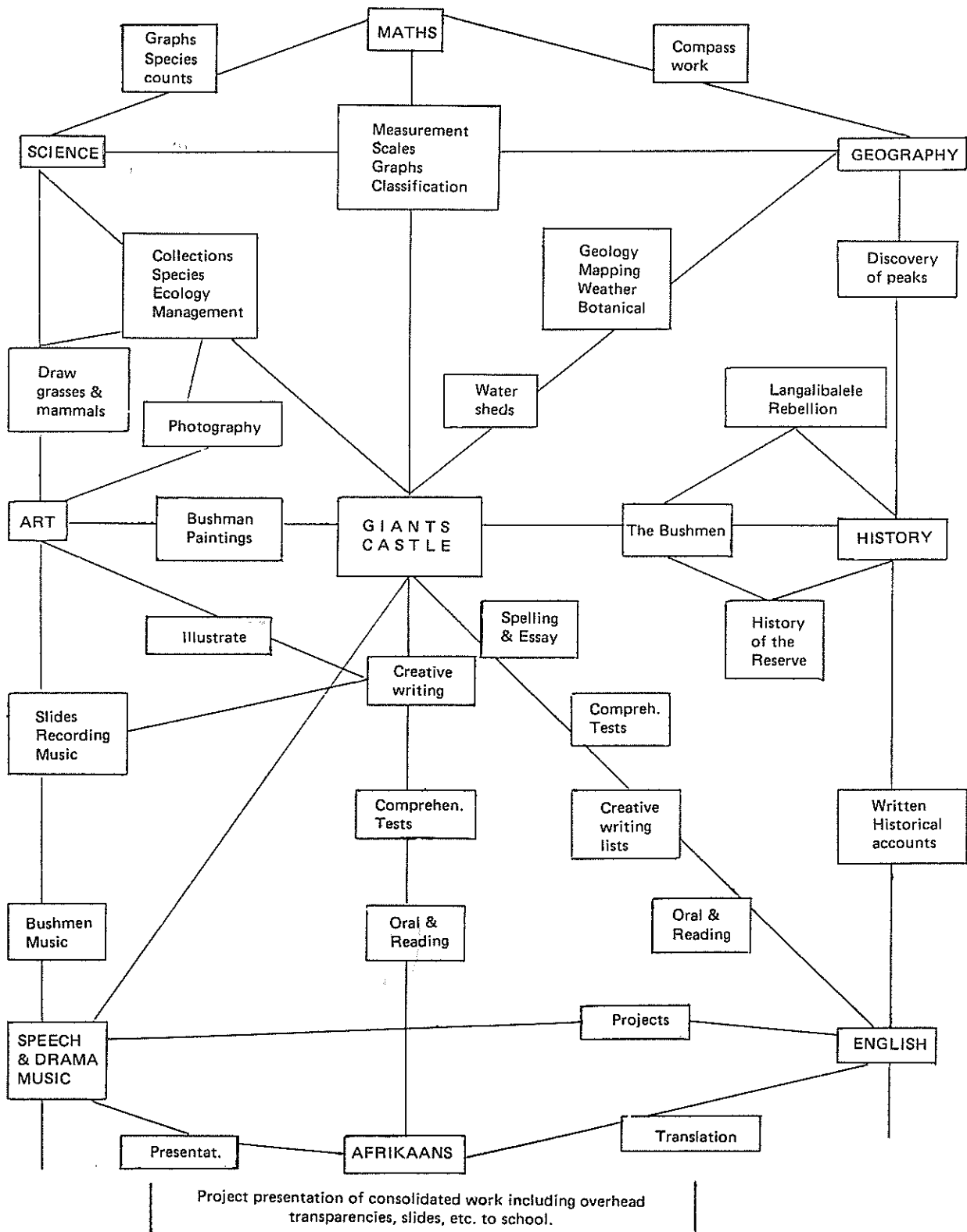
Aim of study

- (i) To study the history and culture of the Bushmen in relation to the ecology of the Giants Castle area.
- (ii) To learn about geographical concepts such as plateaux, peaks, valleys, watersheds and sponges.
- (iii) To learn about the geology of the area and link this with its plant life.
- (iv) To learn that wildlife areas have to be wisely managed and conserved in all respects.
- (v) To learn that areas such as Giants Castle are needed by mankind to reflect God's wonderful creation.

Preparation

- (i) An outline of the work schedule is compiled.
- (ii) A preliminary reconnaissance of the area is made.
- (iii) Pre-study, on-study and post-study worksheets are worked out.
- (iv) Accommodation, food and transport are arranged.
- (v) Necessary materials and reference books for the study are collected.

FIGURE 1 (Adapted from Lines and Bolwell. 1971)
 A STUDY OF THE GIANTS CASTLE GAME RESERVE CENTRED AROUND THE BUSHMEN



Introduction of study

- (i) A sound tape on the history and culture of the Bushmen in the Giants Castle area, borrowed from the Natal Parks Board, is played to the class.
- (ii) Pre-study worksheets are given out in the class.
- (iii) The basic geology of the area is discussed.
- (iv) The basic vegetation of the area is discussed in relation to the geology.
- (v) On-site worksheets and reference material handed out on arrival at the rest camp at Giants Castle or when necessary during the study.

The class is divided into groups, with each group being allocated an assignment.

- Group 1 – The history of the Giants Castle Game Reserve.
- Group 2 – Wildlife of the Giants Castle Game Reserve.
- Group 3 – A study of the Bushmen.
- Group 4 – The Drakensberg – geology, ecology, and importance as a water conservation area.
- Group 5 – Management of the Giants Castle Game Reserve.

Field work

All groups complete the general study (including worksheets on plant ecology, river ecology and a worksheet on the Giants Castle Game Reserve.)

In addition each group works on its own assignment and on an Afrikaans project.

Consolidation work in school

Back at school each group has to write up a project, and to prepare a teach-back to the rest of the class, on their particular assignment.

Conclusion of study

The following are summaries of points that might be discussed by each group.

- Group 1 – The history of the Giants Castle Game Reserve. Project and teach-back on: The early people – The Bushmen; the Langalibalele Rebellion; the formation of the reserve – the pioneers of the Giants Castle Game Reserve. Audio-visual displays to accompany teach-back.
- Group 2 – Wildlife of the Giants Castle Game Reserve. Charts and drawings, game counts to be graphed, sound recordings made. Food chain and habitat displays to accompany teach-back and project.
- Group 3 – A study of the Bushmen. Project and teach-back on the history and culture of the Bushmen to be accompanied by visual and audio displays.
- Group 4 – The Drakensberg – geology, ecology and importance as a water conservation area. Project and teach-back to include models and overhead transparencies of :
 - (a) cross section of the geology of the area;
 - (b) cross section of the vegetation belts of the area;
 - (c) a map and model of the Giants Castle Game Reserve.

- Group 5 – Management of the Giants Castle Game Reserve. Project and teach-back to include management techniques employed by the Natal Parks Board. This is to be illustrated by models, overhead transparencies and slides of conservation modules and methods.

Evaluation and recording of pupil's work and progress

The work done by each pupil is recorded and their progress in writing, language, maths and other skills noted. Special talents, such as artistic ability, are also noted. This information is used at a later stage. The projects are then marked.

All materials are collected and stored for exhibitions, (e.g. Parents Day, Conferences, Symposiums) or for reference.

Zululand

"I looked over the vastness of the wilderness and wondered why it was that man in all his striving for a better life, could neglect the recognition of his creator – in wilderness he can discover God and himself." (Richards & Shuter, 1977)

The Zululand study is handled in much the same way as the study of the Giants Castle area.

The study of Zululand covers the following:

- (i) The history and culture of the Zulu people.
- (ii) The Anglo-Zulu War of 1879.
- (iii) A study of land settlement – white and black farming areas – a comparison between monoculture and subsistence farming.
- (iv) Bushveld ecology.
- (v) Estuarine ecology including a study of the role of the crocodile and the hippopotamus.
- (vi) Zululand and wilderness areas – Umfolozi, St. Lucia, Mkuzi.

Conclusion

During this year of total involvement in the environment, the children emerge as young people whose attitudes and values have changed. They have not only received a true education, but have become caring people; caring for others, for their environment and for the wilderness they have grown to love.

We have to look to the future and we believe that this form of education immerses the students mentally, physically and spiritually in their surroundings, enabling them to gain a deep understanding of man's dependence on his environment and his responsibility to it as the custodian of God's creation. There is hope that our wilderness areas can be left in capable hands.

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