

THE CHARIS PROJECT

The aim of the Charis Project is to promote the spiritual and moral development of pupils through all the subjects of the curriculum.

In the first phase of the project curriculum resources have been produced for English, Mathematics and Modern Foreign Languages. In the second phase, further resources will be produced for these subject-areas and also for Science.

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FOREWORD BY PROFESSOR SIR STEWART SUTHERLAND

The OFSTED discussion paper of February 1994, in which I took a particular interest, *Spiritual, Moral, Social and Cultural Development*, pointed out that the development of pupils in these areas, could not be restricted to one or two periods per week and related school assemblies. The focus in question is rather a whole school and whole curriculum activity.

Schools declare and commend values under all four of these headings in a whole variety of ways - as much by what schools do as by what they teach in formal context. Equally however, there is hardly an area of the curriculum which does not, both explicitly as well as implicitly, raise questions of fundamental beliefs and values. It is this latter aspect of spiritual, moral, social and cultural development which is the concern of The Charis Project. The Association of Christian Teachers is to be commended for their contribution to both the debate and to classroom activity.

The attached pack of course material has the great merit of raising specific questions of beliefs and values which arise out of particular cases of subject content. This is by no means as easy as some would imply, nor would we expect the specific examples given to be uncontentious. The most important contribution of this material is to show that questions of beliefs and values do arise across the curriculum, and that to ignore that is to diminish the impact and the potential of education. There may well be differences of opinion about precisely which questions will most stimulate young minds, and which potential answers most approach adequate answers. The challenge is to enter the debate and to do so in a way that is most likely to promote spiritual, moral, social and cultural development of pupils of diverse ages and diverse backgrounds.

Stewart Sutherland

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INTRODUCTION: THE CHARIS PROJECT

Teaching in the schools of the nineties

Teaching in our schools today is rather different from in previous decades. Teachers, pupils, communities and society have changed and developed, and technology has made a huge impact.

We talk of accountability and appraisal, SAT's scores and measurable outcomes, league tables and competition between schools. Somewhere, the pupil as a whole person is in danger of getting lost beneath the demands of all these outside constraints. Teachers may have neither the time nor the energy to consider education in its wider senses because of the effort needed to improve exam results and boost rankings in the league tables!

At the same time, the wider concerns are still there - both for legislators and for teachers. The 1988 Education Reform Act in England and Wales required schools to "promote the spiritual, moral, cultural, mental and physical development of pupils". This was further formalised by the Education (Schools) Act 1992, which saw the birth of OFSTED (the Office for Standards in Education), and of schools' inspections every four years. Amongst other things, Registered Inspectors have to report on "the spiritual, moral, social and cultural development of pupils". These are not new considerations, they have always been there, but teachers are now giving more thought to this more fundamental dimension of education - the personal development of their pupils.

The development of the whole person

This new emphasis has spawned a mass of literature, seminars, consultations and conferences. A whole new language began to appear with much talk of the "four adjectives" or of "SMSC" (spiritual, moral, social and cultural). If that suggests that the person consists of four separate and unrelated 'bits', more recent talk of 'personal development' has re-affirmed the wholeness of the person.

The development of the whole person is clearly a whole school issue. It cannot be restricted to RE and assemblies and so become the responsibility only of those involved in these aspects of school life, of central importance though they may be. Also important to personal development, taking place as it does through personal relationships, especially those between teacher and pupil, is the ethos of the school. This pervades all aspects of the life of the school - in the classroom, in the playground, in the assembly-hall or at the bus queue.

Promoting personal development throughout the curriculum

The OFSTED discussion paper *Spiritual, Moral, Social and Cultural Development* (February 1994) claims that the promotion of spiritual and moral development in all schools should be a whole-curriculum matter. It goes on to say that "to move to such a place where subjects see themselves in this way might seem to require a sea-change in attitudes and approaches, but certainly the potential is there".

The school, and here this means all teachers in every subject across the curriculum, is encouraged to create opportunities which:

- provide pupils with knowledge and insight into values and beliefs;
- enable them to reflect on and develop their own beliefs and values, aspects of life and experiences so that they develop spiritual awareness and self knowledge;
- encourage pupils to consider life's fundamental questions, and relate religious teaching to those questions;
- encourage pupils to explore meaning and purpose, values and beliefs;
- teach the principles which allow pupils to distinguish right from wrong;
- enable pupils to make moral decisions;
- foster values such as honesty, fairness, respect for truth, justice and property;
- encourage pupils to express moral values across issues affecting their school community;
- encourage pupils to respect other people and relate to them positively;

- encourage pupils to take responsibility, exercise initiative, participate in community and develop an understanding of citizenship;
- create opportunities to work cooperatively, and to participate cooperatively in the school community;
- teach pupils to appreciate their own cultural traditions, and the diversity and richness of others, to gain understanding of societies, families, school and communities; and
- provide opportunities to enrich pupils' cultural learning experiences

For some teachers, the responsibility that they are now given for the personal development of their pupils could be an added burden. For others it is a welcome return to educating pupils in a more holistic manner, re-focussed away from the exam success mentality. For all teachers in every part of the curriculum, it is an opportunity to enhance their teaching styles and resources.

The Charis Project

The Charis Project was set up to produce classroom resources for teachers who are beginning to effect the sea-change in attitudes and approaches to the curriculum called for by OFSTED. The first three subject-areas to be tackled are English, Mathematics and Modern Foreign Languages (French and German) and Science is now being added as a fourth. The first sets of resources have been designed with the needs of pupils at Key Stage 4 in mind.

The teachers in the writing teams have sought to produce materials which will help their colleagues to create the opportunities set out above. In particular, they are concerned to:

- enable teachers to respond to the challenge of educating the whole person;
- help teachers to focus on the spiritual and moral dimensions inherent in their subject;
- encourage pupils towards a clearer understanding of Christian perspectives on the fundamental questions that arise in all areas of knowledge; and
- contribute to the breadth, balance and harmony of pupils' knowledge and understanding.

It is recognised that there is much that is held in common among people of various faith perspectives and of no particular religious outlook. Values are often very widely shared and there can be quite general agreement on what is true, beautiful or good. The Charis resources seek to promote these common values. At the same time, the reasons why they are held and the basic beliefs about reality in which they are grounded differ from one perspective to another. These fundamental differences lead to different total outlooks and to detailed differences on what qualities, attitudes and actions are truly moral and/or spiritual. The Charis Project is based on the belief that these differences and the distinctives of the Christian perspective are significant and that understanding this is an important element in a pupil's education and personal development and a positive preparation for life in our contemporary plural society.

We are often asked why Charis was chosen as the name of the project. We tried without success to invent a catchy acronym. The modern foreign languages teachers said we could not have an English word in the title of a French or German book so we went to Greek and Hebrew. Somebody said "charis" and we all realised how well its idea of grace and giving fitted in with one of our concerns - to provide an antidote to the consumerist "me-first" assumptions of some curriculum resources. So it became the Charis Project!

The Charis resources are offered as a starting point with ideas to help teachers to promote the personal development of their pupils while still teaching to their examination syllabus. It is also our intention that, in using these materials, teachers will be encouraged to develop their own resources and their own methodologies for the promotion of spiritual and moral development through their subject-area. In preparing them, we have experienced something of a sea-change in our own attitudes and approaches. We hope that they may stimulate our colleagues to produce more and better resources.

John Shortt and Alison Farnell

Project Directors

INTRODUCTION: CHARIS MATHEMATICS

Spiritual and moral development in Mathematics

Encouraging spiritual and moral development has come much more to the fore because of the renewed emphasis placed upon personal development within both the National Curriculum and the OFSTED Framework for Inspection.

These facets of development are not new as goals of education. Indeed, many teachers would say that they are fundamentally concerned with the education of the “whole child”. However, establishing a shared understanding of what this means has proved to be difficult and, consequently, it has not always been seriously addressed by most subject teachers. It has, perhaps, only been the threat of impending inspection that has led schools to examine their provision more critically. There has also been a feeling that spiritual and moral development properly belong elsewhere than in a maths lesson - in RE, say, or in tutor period or assemblies.

The Charis Mathematics writing team members are convinced that moral and spiritual dimensions should be present in the teaching of their subject. In our work in preparing these resources, we have found three possible approaches to dealing with these dimensions. These approaches overlap and inter-relate. There may be - and probably are - others and we would be very interested to hear suggestions from colleagues.

Three approaches

The first of these approaches is through recognising that mathematics has been developed and applied in a wide range of human situations. Consequently, it is possible to choose contexts which allow pupils to develop and use their mathematics while, at the same time, reflecting upon and discussing spiritual and moral dimensions of ‘human issues’.

Unit One is an example of this kind of approach. It uses the 1991 Census as a context. While working on number and data-handling topics, pupils are also encouraged to consider the relative significance of people in society and how they personally respond to the issue of people who go missing.

Unit Two uses a range of mortality statistics to develop pupils’ skills in applying probability theory while, at the same time, allowing them to consider their own mortality and their attitudes to life and death. Money and finance have always provided a major application for mathematics. Units Four and Five encourage reflection on how we use our money and the values that underlie this. We believe, as a team, that such contexts used in these ways offer an important contrast to the consumerist focus of many existing resources.

The second approach is through recognising how people have found that by exploring ideas within mathematics, they have also gained insight into broader areas. For example, Unit Seven explores the truth of a series of statements about prime numbers. Pupils investigate the validity of different statements and consider how they might prove or disprove them. They are then encouraged to reflect on how, in general, they come to accept statements as true and how much they value finding truth.

Unit Three introduces the ideas of averages and norms and encourages pupils to question how they respond to people who ‘deviate’ from the norm. Unit Nine works on infinite sequences and encourages pupils to join with other mathematicians who have wrestled with the idea of infinity and its implications for understanding reality.

The third approach is through recognising how mathematics has been used to model and understand the universe. It is hoped that through this pupils will develop a sense of wonder at reality around them. Unit Six, for example, offers an introduction to fractals and, at the same time, encourages pupils to see that fractals, fascinating in their own right, still only offer a limited model of an even more wonderful world. Unit Eight seeks to introduce the Anthropic Principle through looking at a topological topic.

What the pack contains

This pack contains a set of free-standing units mainly aimed at intermediate and higher level students at Key Stage 4. However, some units are also suitable for foundation level students and some of the ideas from other

units could be adapted. The units cover a range of topics across all four attainment targets with the intention that they can be used as an alternative and more interesting way of delivering material already on the syllabus. Each unit contains Teachers Notes (on tinted pages) and Student Sheets (on white for photocopying). The Teacher's Notes provide information on mathematical content with links to attainment targets, aspects of spiritual and moral development, mathematical knowledge assumed and special resources required. There is guidance on timing; background information; additional sources and detailed notes on the activities, including answers.

Using the materials

These units can be used in a variety of ways but they are designed to enable teachers and students to engage in discussion and thought about moral and spiritual matters whilst learning mathematics. Mathematics teachers have, traditionally, been hesitant about planning this type of lesson but these materials have been trialled in a variety of schools and have proved effective in stimulating such discussions.

Most units start with some questions or reading material to get students thinking about an issue so time needs to be built into the lesson for preliminary reading and/or discussion. The unit then leads into the mathematics but other opportunities for discussion occur and are indicated in the Teacher's Notes so that time can be allowed for such discussion in the lesson.

Preliminary reading could be set for homework. Discussion could easily be started by asking students to write down their responses to some of the questions and then sharing them with the class. The aim is not to provide all the answers but to enable students to think about spiritual and moral issues.

Further guidance is given in the Teacher's Notes for individual units.

We are already working on another set of resources but we would welcome comments from users of the materials in this book and any suggestions on how these approaches can be developed and improved upon.

There is a form at the end of the book which you can use, if you wish to respond, or you may prefer to send a letter or fax or e-mail.

John Westwell and John Shortt

Editors of Charis Mathematics