

Notes for Teachers

Information for Teachers on the Education Section of the CD

- 1.0 Introduction
- 2.0 Educational aims and objectives of the CD
- 3.0 Content of the Education Section
- 4.0 Supporting Post-16 Courses
- 5.0 Aids for Pupils and Teachers
- 6.0 Updating the CD ROM
- 7.0 The Education Team

1.0 Introduction

This CD ROM is structured to include two main areas: a Business Section and an Education Section.

The aim of the Business Section is to promote the use of remotely sensed data in the business world. The material is arranged in case studies explaining the application requirements and how using remotely sensed data met these requirements in operational situations. The content of the Business Section may be useful for certain Secondary and Tertiary level courses; for example business GNVQ. However, the material here is designed for business use rather than the college or school context, since the Education Section fulfils this requirement.

The aims of the Education Section are to raise awareness of, and promote involvement in, remote sensing. The content, structure and functionality of the CD are designed to make it attractive and useful for pupils, teachers and parents. The material is structured so as to be accessible to pupils from a range of age groups and curriculum areas. The material supports the requirements of the National Curriculum, in Science and Geography and provides information relevant to post-16 courses such as the GNVQ and A level Geography/ Physics. Pupils who are interested in a career in Remote Sensing can find information about a range of career options in the Careers Section. The factual content is presented by means of text and graphics, including diagrams, maps, and imagery, supported by video sequences and animations. Interactive participation by the user is provided in the Games Section.

The Education Section of the CD ROM can be used:

- as a reference resource for material on the CD itself,
- as a database of sources of further information and imagery, including web sites
- by an individual for stand-alone interactive activities
- by a teacher as a resource for class based activities

2.0 Educational Aims and Objectives

The aims of the Educational Section are:

"To make users aware of the potential and current use of remote sensing as a tool for;

- *scientific investigation and monitoring of the Earth's processes,*
- *practical, sustainable, utilisation of the earth's resources ,*
- *global communications*

The main themes within the CD ROM are shown in table TN 1.1.

The objectives within each theme are:

- *to provide background information covering the issues relating to the theme so that the user understands :*
 - the basic issue or problem*
 - the physical principles of the techniques being used by the sensors*
 - the reason why remote sensing is useful in each case*
- *to provide suitable imagery and support material*
- *to provide the user with possible routes to related themes and case studies via hypertext links*

3.0 Content of the Education Section

The content of the CD is shown in the table, figure TN1.1.

The sections *What is a Satellite* and *Principles of Remote Sensing* provide information concerning the varied nature of satellite missions and the physical principles of the techniques used.

The major sections *Monitoring Planet Earth* and *People and Economic Activities* include an introduction giving background relevant to each topic and a variety of *case studies* that illustrate the uses of remote sensing within these topic areas.

In *Getting the Most out of Your Images* the pupil is made aware of the processes involved in transforming raw image data from the sensor into a product suitable for the required application.

The *Games and Activities* are designed to involve the user and increase user enjoyment. They also help to provide a means by which the user's understanding of the material can be assessed.

In *Where to Find Out More* pupils and teachers are directed to contact addresses, including internet web sites for further resources.

The *Careers section* provides the pupil with profiles of people currently working in remote sensing.

The *Download Zone* contains software that may be required to run the CD on various platforms and other useful packages.

4.0 Supporting Post-16 Courses

Material on the CD is relevant for certain post-16 courses:

- A level Geography syllabuses
- A Level Physics syllabuses (see the *Principles of Remote Sensing* section).
- A level General Studies courses
- GNVQ Business courses (Business Section of the CD - case histories of how remote sensing is used by different businesses).

Visit the [Contents Page](#) or the [Contents Chart](#) to see the content of the CD

5.0 Aids for Pupils and Teachers

- **Where to find out more button**

Lists of resources and the names and addresses of organisations providing information on remote sensing topics relevant to pupils and teachers, including teaching packs. Internet resources are listed.

- **Project-Clipboard**

A template allows pupils or teachers to build their own word processed page from the material held on the CD. The help pages include instructions pupils or teachers on how use this.

- **Search facility**

This allows pupils and teachers to search for material on a particular topic.

- **Teachers Notes**

Suggested activities and some worksheet material which can be printed out for use in the classroom as hard copy exercises are included here, together with more detailed notes on selected topics not covered in detail in the main sections.

- **Guided Tour Feature**

Teachers are able to build a tour of the CD, that can then be followed by pupils. Thus appropriate material, in terms of content and level, can be selected for the age and ability of the group. The guided tour could be used by the pupils outside the class time. Pupils could build their own guided tour or tours, using criteria given by the teacher. These could be shared with the whole set. *The guided tours could be put onto the server where computers are on a local area network, allowing the tour to be followed on any machine on which the CD is used.*

6.0 Updating the CD ROM

The information and activities provided on the CD ROM will be updated to ensure that the material is relevant and useful. Future releases on CD ROM are planned on a two-yearly basis. In the interim, new material will be available as compressed, self-extracting files that can be downloaded from the BNSC website. The update page on this CD ROM provides an airlock connection; which will ensure that updating is simple and straightforward.

7.0 Education Team Responsible for Education Section

The Education Team consists of a number of practising teachers, who have worked together with experienced university teachers and researchers who are able to communicate technical information to lay people. Material has been contributed by remote sensing specialists, from business, industrial and academic spheres and from people working in the UK and overseas.

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