VIRTUAL QUARRY INTERACTIVE

www.virtualquarry.co.uk

Introduction to the resource

Customise the Curriculum

Take a fresh approach to your teaching with our 21 educational units that help you adapt the standard QCA schemes of work while still meeting the requirements of the National Curriculum. The units, which include more than 100 lesson plans, have been written and vetted by practising teachers. They help you incorporate quarrying themes into science, geography, education for sustainable development and citizenship teaching for key stages 1 to 4.

The activities and information help young people understand the economic importance of quarrying and the contribution restored quarries are making to the natural environment, as well as providing opportunities to debate issues relating to quarries and their impact on the environment.

A comprehensive set of supporting resources is available, including an image library; the *Virtual Quarry* with its guided tour; guidance on organising visits to real quarries; and over 100 links to other websites providing learning resources.

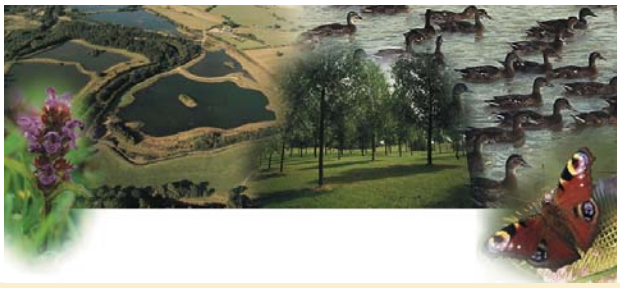
The *Virtual Quarry* resources are available free-of-charge via this open access website. The project has been part-funded through a government tax on aggregate production that is fed back into projects which benefit communities in quarrying areas.

The themes

There are four themes within the *Virtual Quarry* education resources:

- **Working quarries and geology**
- **Restoration and restored quarries**
- **Materials produced by quarrying**
- **Issues related to planning**

The resources support the concept of out-of-classroom learning and encourage teachers and pupils to engage in practical, hands-on experiences in working and restored quarries. There are opportunities in all the units to carry out investigations, fieldwork and practical activities outside the classroom.



A virtual tour

Blow up rock and drive a truck! The *Virtual Quarry* might be full of fun for kids, but it also has great potential as a tool for teachers. Many of our educational units can be enhanced by the virtual tour, perhaps using an interactive white board if available. Pupils can then be given homework tasks, requiring them to re-visit the *Virtual Quarry*. A number of extension activities are available at the end of the tour, including opportunities to restore your own quarry and study rocks and fossils.

Using this resource

The units are set out in Word documents that can easily be downloaded and adapted for your classroom needs if required. There is also an option to download whole documents as Adobe Acrobat PDF files. Each unit consists of:

- **A front cover giving a brief overview of the unit**
- **A scheme of work based on the QCA document**
- **An introduction to the unit for the teacher**
- **A set of lessons designed to cover aspects of the scheme of work**
- **Supporting material, including images and website links**

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Crossing the Curriculum

BIODIVERSITY

Young people are now more aware of environmental issues and they need information that is both understandable and accessible. Biodiversity as a concept is central to an understanding of the rich diversity of plants, animals and habitats and the complex relationships that link living organisms to their surroundings. But biodiversity is also about people's relationship with nature and it embraces their spiritual, ethical and cultural view of the world as well as a scientific and economic one.

The *Virtual Quarry* education resources address the issues relating to biodiversity through a study of quarries and the measures taken to ensure working and restored quarries make a contribution to supporting biodiversity. The resources are essentially based on the National Curriculum science and geography schemes of work.

Biodiversity education is a key theme in the following *Virtual Quarry* units:

- **Unit 08: Improving the environment, for people, for wildlife, or both?**
- **Unit 2B: The Quarry Mouse and the Woodland Mouse**
- **Unit 4B: Herbivore Heaven - the place to eat**
- **Unit 5B: Peregrine Paradise and Dandelion Delight**
- **Woodland regeneration in a restored quarry**

SCIENCE AND GEOGRAPHY

Each of the learning units is based on a QCA scheme of work for geography or science, with the exception of one citizenship unit. The geography units cover: geographical enquiry and skills; knowledge and understanding of place, patterns and processes; and knowledge and understanding of environmental change and sustainable development. The science units cover scientific enquiry, investigative skills, life processes and living things and materials and their properties. But they also make clear the relevance of quarrying to the cross-curricular themes within the curriculum, including biodiversity, citizenship and sustainable development.

CITIZENSHIP

Citizenship education equips children and young people with the knowledge, understanding and skills to play an active part in society as informed and critical citizens who are socially and morally responsible.

Citizenship education consists of three strands:

- **Social and moral responsibility**
- **Community involvement**
- **Political literacy**

By the end of key stage 4, young people should have a comprehensive knowledge and understanding of:

- **The topical events they study**
- **The rights, responsibilities and duties of citizens**
- **The role of the voluntary sector**
- **Forms of government**
- **The criminal and civil justice, legal and economic systems**

Citizenship is a key theme in the *Virtual Quarry* unit:

- **Unit 12: Marine aggregate production**

EDUCATION FOR SUSTAINABLE DEVELOPMENT

Education for Sustainable Development (ESD) ensures that young people develop the skills, knowledge and values to participate in decisions about the way we do things individually and collectively - both locally and globally - that will improve the quality of life now without damaging the planet for the future.

The seven key principles are:

- **The interdependence of society**
- **The rights and responsibilities of citizens**
- **The needs of future generations**
- **The importance of cultural, social, economic and biological diversity**
- **The quality of life**
- **The need for change to be sustainable**
- **The principle of precaution in taking action**

ESD is a key theme in the *Virtual Quarry* units:

- **Unit 16: The sustainable Olympics**
- **Unit 20: What's going to happen here?**
- **Unit 12: Marine aggregate production**