

## SECTION F:

# A Selection of Organisations which offer Video Conferencing Activities



These providers have all been used successfully by some of our case study schools:

## Science Museum, London

[www.sciencemuseum.org.uk/education](http://www.sciencemuseum.org.uk/education)

020 7942 4750

Video conference lessons are available directly from the Science Museum and can be booked by contacting Sarah Leonard or going to the Science Museum website. Sarah Leonard writes, "These lessons are suitable for students from Key Stage 2 to post 16. We have a range of sessions available including virtual object handling, practical workshops, drama characters and curator question time. In addition to these 'off the shelf' lessons, the Science Museum works with Global Leap to offer a series of multipoint conferences during the year. These involve actors playing the part of historical characters and answering questions from pupils." Contact Sarah Leonard for further information [s.leonard@nmsi.ac.uk](mailto:s.leonard@nmsi.ac.uk)

## Public Record Office

[www.pro.gov.uk/educationservice/](http://www.pro.gov.uk/educationservice/)

020 8392 5330, extension 2020

The PRO holds nearly 10 million original documents, relating to most major events and famous people from the last 1000 years of history. The Education Department has developed a programme of on-site history workshops for all key stages. Most workshops from their current programme can be delivered via video conferencing, or they can create a new video conferencing workshop to suit your school's particular needs. To view workshops for video conferencing currently on offer, see the section on the website for Key Stage 2 workshops, Key Stage 3 workshops and AS/A2 level workshop. See page 101 for a case study written by Philip Stanley-Berridge about the PRO video conferences. For further information contact Philip Stanley-Berridge: [philip.stanley-berridge@pro.gov.uk](mailto:philip.stanley-berridge@pro.gov.uk).

## The Ocean Institute

[www.ocean-institute.org/edu-tech/index.html](http://www.ocean-institute.org/edu-tech/index.html)

(949) 496-2274, extension 313

The Ocean Institute, a marine study centre in Southern California, provides a range of video conferences to suit all ages and will tailor conferences to meet your school's requirements. Kelli Lewis presents a regular selection of Ocean Institute programmes, including 'An octopus is amazing', 'Safari into the intertidal zone', 'The mysterious whale' and 'Careers in marine science'. The most popular session booked by schools in the UK is a lesson on earthquakes which includes the opportunity to speak with someone living on the San Andreas Fault. Contact Kelli Lewis, Department of Distance Learning, for more information [klewis@ocean-institute.org](mailto:klewis@ocean-institute.org)

# National Museums and Galleries on Merseyside

[www.nmgm.org.uk](http://www.nmgm.org.uk)

0151 478 4291

Biologist Steve Cross offers virtual trips to the Natural History Centre at Liverpool Museum and a variety of sessions on the Natural Sciences. The museum has a wide range of specimens, over 10,000 being available in the Centre from a total collection of well over one million. Topics include insects, birds, skeletons, fossils, minerals, rocks, wood, seeds and plants. At present there is no charge for this service. Contact Steve Cross to discuss possible video conferences and for more information [steve.cross@nmgm.org](mailto:steve.cross@nmgm.org).

## Athena EAZ

[www.athena.bham.org.uk](http://www.athena.bham.org.uk)

0121 4550216

Athena Education Action Zone is developing a number of video conferencing projects which schools can join. These include a programme of Literacy and Numeracy lessons delivered 'live' to a class in Birmingham, with a number of classes around the UK joining in via video conference. Athena can also set up opportunities for teachers to observe lessons via video conferencing. They are currently developing an interactive soap opera! Contact Geoff Turrell at [Athena@seaz.bham.org.uk](mailto:Athena@seaz.bham.org.uk)

## NASA

<http://learningoutpost.jsc.nasa.gov/>

The Johnson Space Centre at Houston in Texas, USA is one of the homes of the International Space Programme and is where American astronauts are trained. From the early 1960s to the present day NASA has been synonymous with the great space adventure. The distance-learning programme offers a genuine insight into the world of the International Space Station (ISS). A range of programmes is available through the website, including a virtual tour of the space station, and the teachers at NASA are also happy to adapt a lesson to meet your school's requirements. Contact Susan Anderson/ Sherri Jurls at [dislearn@ems.jsc.nasa.gov](mailto:dislearn@ems.jsc.nasa.gov)

## Reef HQ

[www.reefhq.org.au/reefhq\\_edu/intro.html](http://www.reefhq.org.au/reefhq_edu/intro.html)

Reef HQ - the Reef Education Centre for the Great Barrier Reef Marine Park Authority - provides a unique environment for experiencing and learning about the Great Barrier Reef. A Reef HQ Education programme allows you to see more than 5000 live reef creatures, watch reef

creatures feeding and discover the latest reef research. Experience the reef from anywhere in the world with Reef-VIDEOLINK. This programme combines the living reef experience at Reef HQ with state-of-the-art video conferencing technology, underwater communication and images to present a unique teaching experience. Curriculum-based programmes, supported by comprehensive teaching materials, provide students with detailed information on a variety of complex marine issues. Although there is a 12-hour time difference between the UK and Australia, the Reef HQ Education Centre regularly has sleepover events, so it is possible for to join student volunteers in Queensland at 9.00 am (9.00 pm there) and learn about the ecology of the reef. You can even make special arrangements to visit the reef during Queensland daylight hours. If you're prepared to get to school very early you can meet a diver and ask questions as he scuba dives on the reef.

See page 138 for a case study written by Reef HQ about their video conferences. For information contact Fred Nucifora [fredn@gbrmpa.gov.au](mailto:fredn@gbrmpa.gov.au).

## Moorhouse Black

[www.mbdls.com/index.html](http://www.mbdls.com/index.html)

01248 679025

Formerly 21st Advanced Options, Moorhouse-Black has pioneered technology-based distance learning since 1988 and has become the leading provider of interactive, video conferenced, education courses. It offers a wide range of A level/AS level and GCSE courses to more than 2000 students in 150 plus schools and colleges across the UK. It is currently offering: AS/A2 Accounting, Critical Thinking, Electronics, Film Studies, Government and Politics, Law, Psychology, Sociology, Dutch and, from September 2002, Physics, Chemistry, Mathematics and GCSE Latin. For more information contact [courses@moorhouse-black.com](mailto:courses@moorhouse-black.com).

## Liberty Science Centre, New Jersey

[www.lsc.org/](http://www.lsc.org/)

201 451 0006 x382

You can access the LSC's 250-plus hands-on exhibits and experiences via video conferenced Electronic Field Trips (EFTs). From their Environment, Health and Invention exhibit floors, they share exhibits such as exotic insects and reptiles, a video light microscope, real human lungs, an 80' torsional wave and fish tanks depicting the Hudson River estuary environments. "Let LSC's dynamic instructors become your partners in the exploration of science concepts. Interacting with our exhibits and science experts, doing activities, your students will have a great experience learning. Just like when you come through our doors for a visit, you and your students will be actively learning by doing and experiencing the best at Liberty Science Centre." For more information, contact Amy Lefanto [alefanto@lsc.org](mailto:alefanto@lsc.org)

## Space Centre, Leicester

[www.spacecentre.co.uk](http://www.spacecentre.co.uk)

0870 6077223

The Education Department at the Space Centre is currently developing a programme of video conferencing experiences but, in the meantime, will consider requests for 'one-off' video conference sessions. Contact Joy Houghton [joyh@spacecentre.co.uk](mailto:joyh@spacecentre.co.uk)

## Media Education Centre, Exeter

[www.devon.gov.uk/dcs](http://www.devon.gov.uk/dcs)

01392 426821

The Media Education Centre, part of Devon LEA's education advisory service, can help to organize or support video conference links with schools in Devon and the South West. They can also arrange input via video conference into training and professional development days from Devon Curriculum Services primary, secondary and subject advisers. Contact Tim Arnold [tjarnold@devon.gov.uk](mailto:tjarnold@devon.gov.uk)

## Global Leap

[www.global-leap.com](http://www.global-leap.com)

+44 (0)7900 814 922

Global Leap is an educational video conferencing service based at Arbour Vale School, Slough, available to offer help and support to your school or college with video conferencing technology in the classroom. Global Leap also offers the opportunity to share the cost of an international video conference. The Global Leap 'bridge' can link two or three schools together in one conference and, as a result, the cost of calls can be shared. Contact Mike Griffith [info@global-leap.com](mailto:info@global-leap.com)

## Atsuko Shiwaku, Japan

[sherry@memenet.or.jp](mailto:sherry@memenet.or.jp)

At the end of the Japanese school day Atsuko Shiwaku teaches English in her own home to students wishing to improve their language skills. Because of the time difference, the end of the school day in Japan is the beginning of our school day. This exciting link enables you to share the culture of Japan directly from Atsuko's home.

**Information about the following organisations is taken directly from each provider's website. Most of them are geared up for their own US State curriculum and may not have experience of working with UK schools. Note that there is sometimes a charge for video conference events. We cannot vouch for the quality of any of these providers.**

## **Museum of Tolerance, USA**

**[www.wiesenthal.com/mot/youthedu/gap.cfm](http://www.wiesenthal.com/mot/youthedu/gap.cfm)**

The Museum of Tolerance has a distance learning programme called Bridging the Gap, which connects disciplines, generations, communities, and experiences via video conferencing.

## **Bronx Zoo, USA**

**<http://wcs.org/home/zoos/bronxzoo>**

The WCS Education Department offers “the keys to the animal kingdom... through programmes that help you discover the natural world and get involved in its protection”.

## **Aquatic Research Institute, USA**

**[www.arcec.org/Main/Main1.htm](http://www.arcec.org/Main/Main1.htm)**

The Aquatic Research Institute is dedicated to increasing public awareness, knowledge and understanding of the aquatic environment through distance learning/video teleconferencing and out-reach programmes.

## **Buffalo Zoo, USA**

**[www.buffalozoo.org](http://www.buffalozoo.org)**

The Buffalo Zoological Gardens is the USA’s third oldest zoo. Located in 23.5 acres of beautiful Delaware Park, the Buffalo Zoo exhibits a diverse collection of wild and exotic animals, and more than 320 different species of plants. Animals on exhibit include the lowland gorilla troop, rhinoceros, hyenas, polar bears, and many more. Open year-round, the Zoo is a constant source of both education and entertainment for individuals and families throughout Western New York.

## **California Science Centre, USA**

**[www.casciencectr.org](http://www.casciencectr.org)**

Explore the wonders of the world we live in, from the outer reaches of the universe to the hidden lives of the microscopic realm, through programmes designed for children, families, adults, schools and educators.

## **Center for Puppetry Arts, USA**

**[www.puppet.org/index.htm](http://www.puppet.org/index.htm)**

Distance learning is a term used to describe the innovative K-12 programming offered via video conferencing. The Centre offers free, hands-on curriculum-based programmes to all schools in the distance learning network.

## **Challenger Learning Centre, USA**

**[http://challenger.brownsburg.k12.in.us/distance\\_learning.html](http://challenger.brownsburg.k12.in.us/distance_learning.html)**

Brownsburg Challenger Learning offers distance learning to students ‘across the nation’. The distance events include topical workshops, virtual tours of the CLC, mission access workshops, and special events.

## **Cincinnati Zoo, USA**

**[www.cincyzoo.org/](http://www.cincyzoo.org/)**

The Cincinnati Zoo and Botanical Garden offers programmes via video conferencing that are designed to engage students in active learning and complement classroom study of a variety of biological and earth science topics. All programmes are delivered live by zoo educators.

## **Space Science Centre, USA**

**[www.ccssc.org](http://www.ccssc.org)**

As a member of the Georgia Statewide Academic and Medical Systems network, (GSAMS), the Bellsouth distance learning classroom can connect to all major medical and university institutions within the State of Georgia, as well as many secondary schools, public and private museums, and other educational facilities. Using advanced, multi-base video conferencing technology, up to eight GSAMS sites can communicate simultaneously, providing a whole range of instructional services throughout the state.

## **Children’s Museum of Indianapolis, USA**

**[www.childrensmuseum.org/teachers/schodist.htm](http://www.childrensmuseum.org/teachers/schodist.htm)**

The Children’s Museum has a series of programmes available to US schools on a first-come, first-served basis arranged by the Corporation for Interactive Learning and Collaboration (CILC). Phone number 317-231-6525. It may be amenable to arranging video conferences for UK schools.

## **Clowes Memorial Hall of Butler University, USA**

**[www.cloweshall.org/education](http://www.cloweshall.org/education)**

Clowes Memorial Hall, one of the Midwest’s premiere performing arts facilities, has a video conferencing programme connecting students in the classroom to artists and educators. The mission of the CMH Distance Learning Programme is “to help educators meet state academic standards and curriculum goals through interactive sessions that link the arts with other core subject areas. The content of sessions varies yearly to offer students new and innovative programming that correlates with current Clowes Hall performances”.

## **Columbus Zoo and Aquarium, USA**

**[www.colszoo.org/education/distance.html](http://www.colszoo.org/education/distance.html)**

The Columbus Zoo broadcasts video conferencing programmes directly from animal exhibits and incorporates a variety of hands-on activities into every lesson. Each teacher will receive a ‘teacher packet’ upon booking a programme. This packet will contain information and materials for each session, as well as ideas for pre- and post-visit activities.

## **Conner Prairie, USA**

**[www.connerprairie.org/edu/dl.html](http://www.connerprairie.org/edu/dl.html)**

Conner Prairie’s Teacher Institutes offer diverse and practical professional development to teachers. Creative, fun sessions focus on an interdisciplinary approach, immersing participants into history and providing practical ideas to take back to the classroom.

## **Indianapolis Zoo, USA**

**[www.indyzoo.com/education/distance\\_learning.asp](http://www.indyzoo.com/education/distance_learning.asp)**

One of the first zoos in America to offer two-way interactive video adventures, IZS connects with students across Indiana, throughout the United States, and around the world. Students learn about the world, the environment, and the wonderful range of creatures that share it during each of these video adventures, expanding their classroom walls beyond their community boundaries.

## **COSI Columbia Science, USA**

**[www.cosi.org/programs/ee.htm](http://www.cosi.org/programs/ee.htm)**

COSI Columbus is among the country's most highly-respected science centres. It provides video conference programmes that involve students in hands-on activities and demonstrations. Each programme includes hands-on materials for 30 students that will be used during the 40-60 minute show and materials for many additional hours of in-class activities.

## **The Elephant Sanctuary, USA**

**[www.elephants.com](http://www.elephants.com)**

Students can take an 'electronic field trip' to the Sanctuary. Images and sound are transported live, allowing students to view an elephant's daily life without causing any intrusion.

## **Ohio Historical Society, USA**

**[www.ohiohistory.org/resource/teachers/dlearning/index.html](http://www.ohiohistory.org/resource/teachers/dlearning/index.html)**

The Ohio Historical Society's distance learning programming transports students through time to historic venues ranging from river boats to Civil War parlours to prehistoric mounds to 'safe houses' on the Underground Railroad. Video streaming, remote cameras, blue-screen projections, and theatrical sets and costumes are among the innovative techniques used to make history come to life for students of all ages. Distance learning programmes are offered on a regular basis during the school season and by appointment at the Society's sites in Marietta and Lebanon. Advance reservations are required and may be made by contacting the Scheduling Office at 614-297- 2663.

## **Victoria's 3 Major Zoos, Australia**

**[www.zoo.org.au](http://www.zoo.org.au)**

Melbourne Zoo is the first zoo in Australia to offer this interactive video conference experience. Under the guidance of our Education Officers, students will be able to see live animals and ask questions about them and be challenged about conservation issues. Zoo Trek offers a truly interactive experience to schools anywhere in Australia and overseas. Contact Melbourne Zoo **[mz@zoo.org.au](mailto:mz@zoo.org.au)** or 9285 9355 for further details.

## **Health Museum of Cleveland, USA**

**[www.healthmuseum.org/education/distance/index.html](http://www.healthmuseum.org/education/distance/index.html)**

Through interactive video conferencing and web-based activities, distance learning brings the best of The Health Museum's programmes into your classroom. Connecting live from The Health Museum, these real-time learning experiences bring science to life using hands-on activities, applied maths concepts and exploratory discussions.

## Los Angeles County Museum of Art, USA

**[www.lacma.org](http://www.lacma.org)**

Los Angeles County Museum of Art offers students, teachers, and community members an opportunity to experience the museum's collection of nearly 100,000 works of art spanning ancient times to the present. During each interactive video conference, participants will look at and discuss works of art representing a variety of artistic movements and styles, gaining insight into the social, political, and cultural reasons behind their creation.

## Louisville Science Centre, USA

**[www.lsclouienet.org/programs.php3?page=distance.ext](http://www.lsclouienet.org/programs.php3?page=distance.ext)**

The Louisville Science Centre offers a variety of hour-long distance learning programmes. They are designed to support National Science Standards in science, mathematics and technology. Teacher preparation materials and supplies for hands-on activities are provided for each interactive link. For details, call the Distance Learning Coordinator at (800) 591-2203, ext. 6579 or send e-mail to **[dwood@louky.org](mailto:dwood@louky.org)**

## The Library of Congress, USA

**[www.loc.gov](http://www.loc.gov)**

The Library preserves a collection of nearly 121 million items, more than two-thirds of which are in media other than books. These include the largest map, film and television collections in the world. In addition to its primary mission of serving the research needs of the U.S. Congress, the Library serves all Americans through its popular website and in its 22 reading rooms on Capitol Hill. They offer a series of video conference programmes including a tour round the library: **<http://memory.loc.gov/ammem/ndlpedu/educators/video/index.html>**

## Mote Marine Laboratory and Aquarium, USA

**[www.seatrek.org/programs.htm](http://www.seatrek.org/programs.htm)**

Mote Marine Laboratory provides a selection of marine science sessions via video conference, including 'Sharks: Devouring the Myths', 'Sea Turtles: Amazing Reptiles of the Sea' and 'Manatees: Gentle Giants of the Coasts'.

## The NASA Glenn Research Centre Learning Technologies Project, USA

**[www.grc.nasa.gov/WWW/k-12/CoE/Coemain.html](http://www.grc.nasa.gov/WWW/k-12/CoE/Coemain.html)**

The NASA Glenn Research Centre Learning Technologies Project (LTP) offers video conferencing connections between teachers and students and NASA scientists, engineers, researchers, and education specialists.

## North Carolina Museum of Natural Sciences, USA

**[www.naturalsciences.org/education/distance.html](http://www.naturalsciences.org/education/distance.html)**

The museum has a programme of distance learning classes from their Windows on the World gallery in the new Museum. These include one-hour sessions on 'Dinosaurs', 'Migrate, Hibernate, Pupate' and 'Animal signs'.

## Smithsonian American Art Museum, USA

<http://nmaa-ryder.si.edu>

The Smithsonian American Art Museum is the home of the largest collection of American art in the world. Its holdings - over 37,500 works - represent the most inclusive collection of American art of any general museum today, reflecting the nation's ethnic, geographic, cultural, and religious diversity. You can take a 'Virtual Field Trip', from 30 minutes up to one hour, via online session or video conference, where museum docents will engage students in exploring the country's history and culture through looking at important works of art from our collections. Virtual Field Trips can be tailored to meet curricular needs, or you can select one of the ten standard trips ranging in theme from Western Migration to the Modern Era. Targeted to specific grade levels, themes cross the curriculum and link to national education standards.

## Museum of Television and Radio, USA

[www.mtr.org](http://www.mtr.org)

The Museum of Television and Radio is a non-profit organization founded by William S. Paley in 1975 to collect and preserve television and radio programmes and to make these programmes available to the public. During each video conferencing session a Museum Educator focuses on a particular subject, using clips from the Museum's collection as a basis for discussion. Sessions available include: 'Animation', 'The Fine Art of Persuasion: Television and Advertising', 'America through the Lens: The Art of the Television Documentary', 'The Civil Rights Movement on Television', 'The Race for Space' and 'Surprise, Suspense and Twist Endings: A Look at Hitchcock on Television'. Contact Cid Pearlman at 310.786.1099 or [cpearlman@mtr.org](mailto:cpearlman@mtr.org)

## Philadelphia Museum of Art, USA

[www.philamuseum.org/education/distance.shtml](http://www.philamuseum.org/education/distance.shtml)

The distance learning initiative of the Philadelphia Museum of Art uses video conferencing to enable virtual tours of the Museum's collections. In this pioneering programme, real-time interactions with the Museum's expert staff allow students and teachers to explore the fascinating world of art without ever leaving their classrooms. Introductory lessons include 'Learning to Look' and 'Elements of Art, Principles of Design' and there is also a programme of 'in depth' lessons. Contact: Candace LeClaire, Distance Learning Coordinator, at (215) 684-7584 or [distancelearning@philamuseum.org](mailto:distancelearning@philamuseum.org)

## Wetlands Institute, USA

[www.wetlandsinstitute.org/electronic\\_field\\_trips.htm](http://www.wetlandsinstitute.org/electronic_field_trips.htm)

The Wetlands Institute offers virtual trips to the Salt March through live, interactive presentations by the Institute staff. Each 30-minute programme includes a choice of topics: Wetlands, Adaptations, or the Wetlands Institute Terrapin Conservation Programme. Contact the Director of Education at the Institute [education@wetlandsinstitute.org](mailto:education@wetlandsinstitute.org) or 609-368-1211 for more information.

# EXAMPLE 1:

## Public Record Office Education Department

### Background

The PRO is home to an amazing collection of historical documents relating to virtually all the major events and personalities, as well as the lives of ordinary people, from the last 1000 years of history. These are the original documents, produced at the time, by the people involved. Very few topics in British history are not covered by our collection of nearly 10 million documents, kept on over 100 miles of shelves.

We have original sources in all formats: photographs, posters, maps, plans, artefacts and paper files. We hold famous items such as Domesday Book, Magna Carta, Shakespeare's Will, the logbook of HMS Bounty, and Wilfred Owen's service record.

### The Education Service at the PRO

We aim to give students of all ages the genuine experience of what it means to investigate history through original sources. Our video conference and on-site workshops are designed to meet the requirements of the history National Curriculum throughout all key stages and conform to exam board specifications. They give pupils the opportunity to develop key skills as well as their awareness of archives and original sources.

Our workshops also aim to develop pupils' general knowledge, understanding and enjoyment of history by stimulating their imaginations and engaging their interest in the past. This sometimes includes using costumed interpreters but always involves original and fascinating sources that really do bring the past alive.

### What we offer for video conferencing

We are currently developing a full programme of events for 2002/2003. Events planned so far include:

- 'What are original sources?' An investigation into how to use original historical material.
- 'Battle Of the Somme Case Study' An individual soldier's story.
- 'Day of Judgement' A Domesday investigation.
- 'Cat and Mouse' An investigation of Women's Suffrage.
- 'Tudor Imagery' Who was Henry the VIII?

### Teacher Training and Inset

We also provide training for student teachers and more experienced colleagues in the use of video conferencing and use of original sources in the teaching of history.

## WORKSHOPS

The two workshops that we have focused on are 'Day of Judgement' a Domesday investigation, and a special Victorian workshop for the Great Ormond Street Children's Hospital. The planning and format for each workshop are detailed below. The conclusions and ideas for future development for both workshops are given together at the end.

### Day of Judgement

This workshop was originally designed as an on-site role-play. The basis of the workshop is as follows: the villagers of Mortlake have been gathered together to answer the questions of the Domesday Commissioner, sent by William the Conqueror, to find out details of the land, and what taxes are due from the village.

Professional actors play the parts of the Commissioner and the Reeve of the village of Mortlake. The pupils are divided into groups playing the rest of the Commissioners or villagers. Some of them are assigned a particular role, with specific information they have to give as part of the story. The Reeve is trying to save the villagers (and himself!) some money by being a bit economical with the truth. The Commissioner has his suspicions and sets about trying to untangle the web of deceit.

The workshop was offered to schools, with the option of receiving it via video conferencing. One school, Applemore College in Southampton, chose to take this option up. The teacher who booked the session, Martyn Ashmead, has made extensive use of this technology for around five years. Both his, and the pupils' familiarity with working in this medium was evident during the workshop and helped to ensure it ran smoothly. It was particularly useful for us to work with such an experienced school at this early stage in our own use of the technology. We felt we learnt a great deal about how to manage and run a video conference workshop, and it certainly showed us the potential for video conferencing.

The on-site workshop had to be adapted for the video conference session. A detailed information pack was sent to the school a few weeks beforehand. This contained the script for the teacher to read so he was aware of what would happen, as well as information for the pupils to research.

The pupils were divided up into groups, as for the on-site workshop, but this time we asked the teacher to arrange the pupils in the room according to our plan. This meant we knew which group we would be speaking to on the day as soon as we started. Each group had been given something specific to investigate so initial questions could be targeted straight at the relevant group. This helped to break down any initial barriers or nerves about speaking via this medium - for both parties! In this case one of the groups had some secret information that only came out during the workshop, which helped to add to the performance.

## Great Ormond Street Children's Hospital

Video conference workshops are crucial to the work of Great Ormond Street Hospital School. They provide a stimulating educational resource for children who, despite serious illness, are trying to continue formal education whilst undergoing medical treatment. Class structures tend to be of a very transient nature, and cover a wide range in age, ability and physical capability. Thus the workshop presented different challenges in its planning and application.

Our workshops are usually based on primary sources within our own archive collection. This time we created an ongoing resource to be used for future video conference sessions and to provide the pupils with something particularly relevant.

A source pack from original documents within the Great Ormond Street Hospital archive was produced. The pack contained high-quality copies of documents relating to the founding of the hospital, its later rebuilding during the 19th century, as well as healthcare and welfare issues of the time. Also included was a detailed set of questions relating to specific documents for the pupils to work through in preparation for the session.

On the day of the video conference session, we set up a couple of informal test sessions in order to introduce the pupils to this medium. This had the advantage of ironing out technical hitches and familiarizing the children with a technology which many of them had never seen before. The value of preparatory sessions too far in advance would have been negligible, as children are discharged and new ones admitted.

Initially, we just introduced ourselves to each other, chatted with the children and showed them documents, textiles and replica costume from the Victorian period via the document camera. It became clear that sessions would have to be very ad hoc due to children having to leave for medical treatment intermittently. However, the children responded extremely well to these sessions, gradually becoming more comfortable with looking into the camera and addressing us with questions rather than having to be prompted.

The final session of the day involved professional actors, backdrops and lighting used in order to 'transport' the pupils back in time. The children had been forewarned that they were going to experience something quite different, as they were going to meet a VIP from the past. Specific questions and documents in the resource pack had been selected for the pupils to concentrate on, which assisted the actors in directing the session. In this way the children were questioned by 'Prince Bertie' who, with his charitable connections to the hospital, was interested in its progress. A surprise visit by his mother, 'Queen Victoria', ended the session with information about the 19th century royal family, linked to documents at the PRO.

All in all, both children and staff really enjoyed the sessions and viewed video conferencing as a particularly valuable resource for pupils who would otherwise not have the opportunity to experience educational visits.

## CONCLUSIONS

### Preparation

In both workshops, the key element to making the most of video conferencing was detailed preparation work, prepared by us and completed by the school. This is essential to making the most of the interactive nature of the medium, rather than just using it to deliver a lecture.

### Test Runs

Test runs, which can include a check to see if the preparatory work has been understood and completed, are vital to ensuring all runs smoothly on the day. Technical and practical issues such as sound balance, clarity of image as well as the layout of the class can all be checked.

### Delivery

Although both examples used in the case study have involved the use of professional actors, subsequent experience of delivering workshops ourselves has raised some issues about which works best for this format.

Professional actors usually have their script to work to and may not like deviating from this. If they do ask questions of pupils, they tend to be safe 'closed' questions, which they know will help their script along the planned path. While there is some potential for interaction, this can be limited. The effect can end up being similar to watching a video performance, not making use of all that video conferencing can offer.

Using teaching professionals to deliver the workshops make for quite a different experience. Pupils are encouraged to be interactive, to ask their own questions, give more open answers and engage in debate with the professional at our end and amongst themselves. This leads to a much better learning experience for the pupils.

### Reception

Experience of making follow up 'visits' to the same group has taught us that familiarity is a great help in this medium. Pupils seem much more relaxed and open with their questions and ideas when they know who they are talking to. We have also found that it makes for a better experience for the pupils if the teacher takes a 'back seat', letting us work directly with the pupils, rather than acting as intermediary, feeding our questions through themselves.

### Presentation

While stressing the advantages of delivery in an informal manner, this depends heavily on a thorough and professional amount of planning, research and presentation.

The presentation aspect is one we have developed from working with the actors. They required a theatrical backdrop to 'set the scene' and we have continued to find this useful to focus attention on ourselves and what we are studying, rather than an indiscriminate room in view behind us.

## Learning

A comment from a teacher summed up the benefits of video conferencing as a way of learning. The preparation his students had done and the unusual format of the delivery created such a sense of an event that the work covered as a result of the workshop would really stay with them.

If teachers do take a back seat, and let those delivering the workshop interact directly with the pupils, they develop a very strong sense that they are taking responsibility for their own learning within the traditionally teacher-led classroom environment.

It also enables the pupils to develop their ICT skill by giving them responsibility for operating the equipment.

## The Future

The main advantage of video conferencing for the Education Department at the PRO, is that it enables us to provide workshops for students excluded by problems of a geographical distance or class size. We can now reach schools right across the country. We can also deliver to a whole year group, whereas our on-site workshops are usually limited to 35.

There are clear advantages to video conferencing for schools. Pupils still get the opportunity to 'visit' places and learn from 'experts' there at a minimum disruption to their school day - sessions can be delivered to coincide with their usual lesson time. Key skills using new technology are seamlessly integrated into their learning.

## Finally

Video conferencing is essential to reach as wide an educational audience as possible, both in this country and abroad.

The Education Department looks forward to the further development of video conferencing as a medium for delivering educational workshops. New schools and other educational providers seem to be coming on line all the time. The PRO Education Department is keen to encourage this growth, work with new partners and seeks to spread the word about this medium as much as possible.

**Philip Stanley-Berridge, Public Record Office**

## EXAMPLE 2:

# Reef HQ, the Reef Education Centre for the Great Barrier Reef Marine Park Authority

### AIMS OF VIDEO CONFERENCING SESSIONS

The primary aims of video conferencing from Reef HQ, the Reef Education Centre for the Great Barrier Reef Marine Park Authority, are:

- To share the uniqueness of the Great Barrier Reef with the community (on a national and international level);
- To encourage and stimulate understanding of the issues surrounding the Great Barrier Reef from social and environmental perspectives;
- To provide opportunities for students to share knowledge and interact with each other in a fun and educational setting;
- To assist students to develop the knowledge and skills, and the opportunity to develop attitudes, values and patterns of behaviour that will enable them to make effective contributions to the ecologically sustainable use of the Great Barrier Reef.
- To enable others to see more than 500 live reef creatures, watch them interacting and discover the latest reef research.

### CURRICULUM CONTEXT

Curriculum areas that embrace the study of the Great Barrier Reef and World Heritage Areas are 'Studies of Society and Environment', inclusive of geography, history and environmental studies and science. Educational elements include, but are not limited to, science (biology, biotechnology, physics and ecology), language, and technology. Video conferencing has been used across Australian schools (both primary and secondary) as an innovative tool to enhance environmental education. Special one-off international programs allow for extra-curricular environmental activities that students can then share with their peers. In short, Reef HQ has used video conferencing as part of its environmental and marine education across the curriculum.

### PLANNING, RESEARCH AND PREPARATION

The Reef HQ Education Team are educators who support video conferencing by accessing up-to-date information from local marine science centres such as:

Reef HQ [www.reefHQ.org.au/](http://www.reefHQ.org.au/)

Great Barrier Reef Marine Park Authority (GBRMPA) [www.gbrmpa.gov.au/](http://www.gbrmpa.gov.au/)

The Australian Institute of Marine Science (AIMS) [www.gbrmpa.gov.au/](http://www.gbrmpa.gov.au/)

Environmental Protection Agency (EPA) [www.env.qld.gov.au/](http://www.env.qld.gov.au/)

Queensland Fisheries [www.dpi.qld.gov.au/home/default.html](http://www.dpi.qld.gov.au/home/default.html)

The information is presented to students in a flexible manner, taking into account the age and background of the student audience. In some instances, the Education Team work with the Reef HQ Student Volunteers (aged between 15-18) to encourage students to present to students in a 'one-off' situation such as 'SeaWeek 2001', 'Global Leap 2000', 'Global PIE', 'Rivers to Reef Day 2001', or 'World Environment Day 2001'. More formal programmes are delivered by the Reef HQ Education Team and focus specifically on managing the Great Barrier Reef or water quality and the food web on the living reef. The formal presentations currently on offer can be found at: [www.videolinq.qld.edu.au/](http://www.videolinq.qld.edu.au/)

## DETAILS OF SESSIONS

*Please note that additional programmes are planned post June 2002.*

Standard video conferencing sessions or modules include dry presenters plus a 'real-time' SCUBA diver underwater, in the Coral Reef Exhibit, thus allowing the audience to ask questions directly of the diver. Currently these presentations are made to national and international audiences. The modules consist of a 'situation' presented in the first video conference. Students and teachers are provided with clues and resource materials to research possible solutions, and students are then invited to present their solutions in the second video conference to Reef HQ staff that provides feedback.

Special international sessions, such as participating in 'Dive into Earth Day' or 'Global Leap 2000' allow for audience interaction and focus on students presenting to students about local and international marine and environmental issues. They also provide Reef HQ with an opportunity to raise awareness and understanding of the fragile nature of the Great Barrier Reef, its connectivity to the world's oceans, its biodiversity and the pressures the reef and catchment areas are currently facing. It provides the international audience with personal perspectives and provides information relevant to guiding students' behaviour towards best environmental practices.

## TECHNICAL ISSUES

Usually the sessions run smoothly and pre-checks are essential to minimise possible hazards. Pre-checks also test the compatibility of each site's software, which we have found (at worst) can crash an entire bridge.

We have found that it is beneficial to have a copy of all the possible help numbers nearby plus phone access, so if anything should go awry, there can be immediate action to troubleshoot and minimise 'down time'. It is also essential that there are people on hand who are familiar with the equipment and able to troubleshoot potential problems before they magnify and jeopardise the session.

The other consideration of note is timing. Timing can be a problem, especially when dealing with multiple time zones, class lesson times, etc. Usually these can be overcome with careful negotiation, but it can mean one or more sites are operating outside school hours. International bookings need to be made well in advance.

## EVALUATION OF LEARNING OUTCOMES

There have been a number of positive outcomes from these learning opportunities:

- Feedback from Reef HQ volunteers and local students after these events suggests that the students felt privileged and special to have taken part and it has made them aware of the connectivity throughout the planet. For example, what one country dumps in their oceans can (and does) end up in another's; or human environmental impacts are common concerns throughout the different countries. The students are keen and enthusiastic to become involved in sharing possible solutions and working towards Best Environmental Practices.
- Students are able to interact with specialists in a variety of fields for a variety of topics. geography becomes a moot point and the students are able to access current information from the primary sources. They are also able to experience and develop knowledge, understanding and values of the Great Barrier Reef from anywhere in the world.
- Students are able to interact with peers from around the world. They are able to share experiences and knowledge and ultimately increase their understanding of society. They can talk face to face about what issues are important to them and offer suggestions for the future.
- Specifically, Reef HQ and the Great Barrier Reef Marine Park Authority are able to increase their audiences to share the message of "Providing for the protection, wise use, understanding and enjoyment of the Great Barrier Reef in perpetuity through the care and development of the Great Barrier Reef Marine Park".
- Positive attitudes have been forged after the video conferencing sessions. Students feel they have made a worthwhile contribution in sharing information about the planet and possible sustainable use of the environment. We have also found that after they have shared this information, the students are more reflective on their own behaviour and how they can 'do their bit' and make a difference.
- Students develop knowledge, understanding and values about the Great Barrier Reef.

## IDEAS FOR POTENTIAL DEVELOPMENT

- Planning is underway for increased educational modules post June 2002.
- A delayed chat room would be great! After the session, students could post questions and the room could be open for a few weeks before being frozen. Perhaps even the session or just some highlights could be streamed onto the web. If funding could be sought to cover this, that would be great. Multi media is a popular tool for making education 'fun'.

**Fred Nucifora, Reef HQ**