LEARNING THROUGH CULTURE

The DfES Museums and Galleries Education Programme: a guide to good practice

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Acknowledgements
Thank you to all those projects that contributed images and resource material and their time.

Graphic design: Tom Partridge

Commissioned photographs: Janine Wiedel

ISBN 1 898489 24 6
Published by RCMG, February 2002
Copyright DfES
DfES publication reference number DfES/0159/2002

Further copies of this publication are available from:
Research Centre for Museums and Galleries (RCMG)
University of Leicester
105 Princess Road East
Leicester LE1 7LG
Email: rcmg@le.ac.uk
Or can be downloaded from www.teachers.net

This publication is also available in large print and computer disc formats on request from RCMG

Contents

4 **Introduction**

Section 1 The value of visiting a museum or gallery

01

5 New situation, real objects
6 Relevance to and enhancement of the curriculum
6 Learning is different in a museum
6 The value of working with an 'expert'!
7 Inclusive
7 Summary

Section 2 Learning based on museum collections

02

9 Motivating and inspiring
9 Developing skills
9 Increasing knowledge and meaningful understanding
10 Using artefacts: Ijeles and headrests at the Horniman
10 Promoting access
10 Encouraging high standards
11 Long-term value
11 Summary

Section 3 Using museums to deliver and enhance the curriculum 1: Core subjects

03

12 Introduction to core subjects
12 Inspiring literacy
16 Hands-on numeracy
17 Enhancing science
17 Summary

Section 4 Using museums to deliver and enhance the curriculum 2: Non-core subjects and cross-curricular opportunities

04

19 Introduction
19 Focus on specific foundation subjects
22 Cross-curricular opportunities
23 PSHE and citizenship
24 Vocational education
24 Summary

Section 5 New Technologies, new challenges

05

25 Introduction
25 Video
25 Interactive smart board
27 Using the web
27 Virtual visits
27 Internet classroom
28 Online resources
28 Video conferencing
29 Email update
30 Difficulties and overcoming them
30 Developing new skills
30 Summary

Section 6 Entitlement

06

31 Introduction
31 Open to all
32 Targeting Education Action Zones
32 Special educational needs
34 Cultural inclusion
34 Promoting self-worth

Section 7 Professional impact

07

35 Introduction
35 Real partnerships: new relationships
38 Family and community involvement
38 Learning new skills
39 Working through difficulties
40 Summary

Section 8 Long-term impact

08

41 Introduction
41 Disseminating good practice
41 Written into planning
42 Professional development
43 Resources
44 Issues

Section 9 Developing effective projects

09

45 What is a project?
45 Developing and testing ideas
46 Working in partnership
46 The project team
47 Planning the project
48 Delivering the project
48 Evaluation
50 Where to go next

Appendices

1 **List of DfES MGEP Projects**

2 **Project information, contacts and resources**

3 **Glossary**

4 **Illustrations**

Introduction

In 1999 the Department for Education and Employment (DfEE) now the Department for Education and Skills (DfES) launched the Museums and Galleries Education Programme (MGEP), in response to a clear desire within government, education and the museum sector itself to use museums and galleries more fully to improve the quality of children's learning.

While it was realised that many museums offered excellent education services, some did not and it was clear that the support museums could give to young people's education was under-utilised. Similarly it was apparent that many schools would welcome guidance on how to use the resources museums and galleries could offer.

When the MGEP was launched it was underpinned by objectives that were twofold; firstly, to improve pupils' use of the opportunities presented by museums and galleries to enrich their education and secondly to stimulate and encourage museums and galleries to develop their educational role, and to strengthen their links with schools. The MGEP was a £3m initiative, the largest amount of funding ever awarded to museum education.

Running from 1999-2002 the programme funded 65 separate projects giving museum experiences to thousands of schoolchildren geographically spread over England, from schools in rural Devon to many inner-city schools in Manchester, Leeds, London and Bradford. The MGEP involved an extensive range of museums, which included tiny volunteer-run museums in rural areas, local authority museums and galleries and huge London national museums. The programme was inclusive in its range across the Key Stages, from early years to post 16. It was diverse in the range of curriculum areas it covered, from core subjects like Literacy to Art and Design and Citizenship. It was comprehensive in terms of the range of museum and gallery collections and exhibitions that were used, from transport collections to archives of the Second World War, from old masters to challenging contemporary art.

About one third of the projects received funding after the initial round; these were short in the timescale for their delivery and modest in budget.

This guide has developed out of the experiences of the participants of the MGEP and it has been produced to highlight good practice. It intends to raise awareness of the high potential that exists in museums and galleries for genuine and long-lasting learning and to show some of the ways in which this learning can be achieved. The guide does not take the form of a set of prescriptions; rather it shows how underlying principles can be built on in creative ways. All of the examples in sections one to eight are drawn from the MGEP, section nine offers guidance on establishing and maintaining successful projects and the appendices offers other useful information including a glossary.

01

Section 1

The value of visiting a museum or gallery

'The joy of being here with the children and seeing what they were getting. It was delightful... wonderful!'
Teacher after a visit to Wingfield Arts

All pupils are entitled to high-quality museum learning experiences that are recognised as being an integral, but special, part of their education. Museums and galleries are full of potential for learning. The environment is rich and dense; the collections can work across the curriculum and opportunities for fresh ways of thinking can occur while working out of the classroom. Although many projects experienced some difficulties along the way, the overriding conclusion from the MGEP is that museums and galleries provide rich and diverse environments that have enormous potential for meaningful learning.

New situation, real objects

The physical experience of visiting a museum or gallery (a new experience for many children and some teachers) created huge excitement and considerable awe. A class visiting Cartwright Hall in Bradford for the first time were astonished by the gallery itself and were *'wide-eyed'* when confronted with the artworks. It was '*a good experience I should like to repeat every year. Too many of our children have never been to a gallery before. The building and the artworks excited them*'. (Jane Law, teacher). A teacher from another Bradford school taking part in the same project recalled: *'It takes us out of the real world, a different way of learning. Usually we're stuck in a portacabin.*' (Ifat Sultana).

Museums offer the opportunity of interacting with the 'real' thing. At Wingfield Arts, the children were intrigued by the unusual collections: *'We went around the whole college [museum] and saw other things. There were strange pictures on the wall and a plaster man, a tuning fork and very strange garden tools with sculptures on the top. I liked seeing the sculptures. There was a big shower curtain.*' (Pupil from All Saints Primary School, Wingfield Arts).

Relevance to and enhancement of the curriculum

Many projects were directly focused on the National Curriculum, but rather than delivering what could be done in the classroom, they provided new and meaningful ways of meeting targets. In Leeds children were able to hold original Egyptian artefacts and, through video conferencing, were able to talk to the keeper of archaeology in 'Ask the Expert' sessions - meeting the objectives of the Programme of Study on Ancient Egypt but providing so much more. As the class teacher explained: *' I've worked on the Egyptian topic several times before and it gave it a totally new perspective.'*

Children from Curry Rivel School visited the Fleet Air Arm Museum as part of their work on Britain since 1930. Working with real objects on real problems made the learning more meaningful: *'A visit is so much more specific than a classroom experience. It makes so much more sense, for example seeing pilots' clothes. The children could really feel, touch, see and compare materials... [They could] problem-solve [the ways] clothes were needed for warmth for the pilot.*' (Rupert Lovesy, Curry Rivel School).

There were many opportunities to develop cross-curricula work, some of which just developed organically*: 'it's been wonderful, not a strain to bring in all the strands, a natural thing*'. (Debbie Stevens, class teacher).

Learning is different in a museum

Many teachers commented on the added dimensions that a visit to a museum could bring that are not available in a classroom. *'Being able to go to the place [the National Tramway Museum]... it's all very well talking hypothetically but they won't be able to get a true picture. Going there, seeing it all happening, it's far better than anything that could be done in the classroom.'* The variety of experiences ranged from role-play to screen printing; animation to uploading on to a website. Children worked individually or in groups, developing many new skills from problem-solving to observational inquiry, all encouraging self-confidence and esteem. Many commented on how good it was to have the time to immerse themselves and see it through, something of a luxury in today's overcrowded curriculum.

The value of working with an 'expert'!

For many schools this was the first opportunity they had had to work with a museum educator and many appreciated the different professional dimensions they were able to bring to learning. In North Devon, where many schools are in rural situations, a museum educator went out into schools, bringing a small but unusual selection of objects from the museum's collection. She presented the objects to the children in ways that the class teacher had not previously considered and allowed observation and inquiry skills to be developed: *'Ann... showed us how to look historically, question historically. She brought in the artefacts - an elephant skull, a pinnacle (from a roof), a child's shoe. We worked in groups. She gave us guidance on how to use them. The relationship with the children was so positive, it was lovely to see, to react to their reactions. I was just amazed by the elephant's skull - it's huge and heavy. Also, we had to be careful, another good learning opportunity. We made new comparisons. We looked at it from different angles - this is now built into the way we shall look at artefacts.'* (Theresa Winters, head teacher, Shirwell Primary School, Devon)

In a Derby school, the unfamiliarity of taking a class around a museum was made less threatening by the reassuring professionalism and experience of the museum educator. *'I've not been on a museum trip since qualifying... I couldn't see how it would work though, how the children could spend a whole day there... I wanted to see what would happen though... I knew Ann (the education officer) would be there... it was a revelation realising there was someone there who could help you.*' (Class teacher from Nightingale Primary School on visiting the National Tramway Museum).

Inclusive

Primary, secondary and special schools were all involved in projects, occasionally working in collaboration. Many teachers and museum educators were profoundly aware that working within a museum, or developing work as a result of a visit, allowed all children, regardless of ability, to contribute in some way. In fact, many children who were considered to have learning difficulties were able to become fully involved, to shine. Other projects valued and promoted cultural differences: *'The biggest part for them [the children] was to be aware that you could come into a gallery... to see things that you can relate to in the museum from India and Pakistan... it makes them feel less alien'* (Ifat Sultana, class teacher from Bradford).

Disaffected students or those with difficult histories also became involved. The students at Orchard House Resource Centre are young offenders, boys who often have violent backgrounds. They are not renowned for their concentration, but while engaged in the Dulwich Picture Gallery's Does Art Matter? they amazed their co-ordinator by arriving promptly at 9.15am and working through to the end of the day, fully engaged.

Summary

Museums and galleries can:

- Provide unusual ways of achieving National Curriculum targets by basing learning on objects, sites and activities
- Enhance the National Curriculum and reach beyond it by offering a holistic learning experience
- Provoke alternative ways of learning through stimulating senses, arousing curiosity and unleashing creativity
- Provide the opportunity to work together with schools to solve problems
- Enable those who find classroom learning difficult to access ideas and emotions in non-verbal ways, and to demonstrate what they can achieve
- Increase self-esteem through achievement and success
- Open up new pathways to learning for teachers, and extend opportunities for learning for parents and the wider community

02

Section 2

Learning based on museum collections

'When I came away my brain was full of things.'
Child's comment after a visit to the Fleet Air Arm Museum

Direct contact with collections is one of the special things that museums and galleries can offer. An extremely diverse range of collections was involved in the MGEP, from original Roman artefacts to steam engines; dresses worn by the Brontes to an elephant's shoe; African masks to enormous sculptures! The opportunity to see, touch and interact with objects firsthand had a profound effect on learning and impressed and affected students in many different ways.

Motivating and inspiring

Children participating in the MGEP projects, whether infants or sixth formers, all seem to have been affected by the opportunity to work with the 'real thing.' Many were inspired by the objects - both immediately on site where the opportunity to interact with the objects was much valued - but also back in the classroom, where the impact of using the objects could provide inspiration for a term's work. One class visiting Cartwright Hall in Bradford collected as much information as possible on site - sketches, photographs, word banks, poems, thoughts - and used them as a creative stimulus back in school, plastering the walls of the classroom, as a constant reminder of the objects they had seen and a source of continuing and accessible inspiration.

Other children were amazed at the age of the objects: *'It can't be that old!'*, exclaimed one pupil entrusted to examine a thousand-year-old Egyptian artefact from Reading Museum's collection.

Somewhere motivated by discovering how objects worked. A group of students taking GNVQs in Manufacturing visited the Dean Heritage Centre in the Forest of Dean. They were introduced to the technology of pole lathing, known as 'bodging', and their fascination resulted in new attitudes towards their work back in school. Their design and technology teacher explained: *'We had 12 GNVQ pupils with short attention spans and needing communication skills. We went for a day at the Dean Heritage Centre. When they came back they wanted to build a lathe (tones of disbelief). They've been in at lunchtime. In terms of ownership, and taking things home to show the family, it's been very motivating. And this was achieved in one day. Now it's "come on sir, let's get the lathe".* (Andrew Winstanley, Whitecross Secondary School, Lydney). The success of the one-day museum visit is based on careful and rigorous planning.

Developing skills

Studying museum collections or works of art involves close observation of artefacts and specimens. This can mean seeing familiar things through fresh eyes. It can involve peering closely or scrutinising unfamiliar objects and using the details discovered to deduce facts and construct meanings.

'Being close up, seeing the techniques involved - as with the embroidery - it encouraged [the pupils] to analyse what they were looking at. Better than photos or books.' (Isobel Coney, art teacher. V&A project).

Handling objects provokes lots of questions: how old is it, what is it used for, who used it, what is it made from? - a great opportunity to develop speaking and listening skills, as well as observation, deduction and inquirey. At the Bronte Parsonage Museum the children were shown the dresses belonging to the Bronte family. These generated a lot of discussion about tiny waists and tiny shoes and provided useful links between the past and the present.

Increasing knowledge and meaningful understanding

Through engaging with museum collections children can develop their understanding in specific and grounded ways and preconceptions can be challenged. At the Fleet Air Arm Museum, where pupils explored life in World War Two from a variety of perspectives, the opportunity to see original planes from that period was illuminating: *'Real objects are vital. You need to see it for real, for example the material the aircraft is made from. The children did not believe that they were not made out of plastic until they saw the wood and metal.'* (Michaela Jauncay, class teacher Castle Primary School, Fleet Air Arm Museum). At Sandwell, a project on the Home Front enabled one child to get unexpectedly close to a wartime connection: *'The power of the objects was really significant; for example from one identity card one child found out that an Asian family had lived in his house during the war. The sense of cultural connection was significant for this Asian child.'* (Maureen Walden, education and hstory officer,County Archives, Sandwell).

Made in Walsall was one of the Programmes of Study in the Walsall Museum's Entitlement Project. Designed for year-eight history pupils studying the Industrial Revolution, it specifically deals with living and working conditions in the leather industry. *'The children were able to touch and handle something old... and they would ask questions... They found by investigating that the objects were not what they had thought. They were surprised, their preconceptions were wrong. By handling, they found out that things were not as heavy as they expected... Working with objects leads on to other questions... They loved measuring and magnifying. They loved the sights and smells of the old stuff.* (Emma Martin, class teacher, Hardon Primary).

Using artefacts: Ijeles and headrests at the Horniman

At the Horniman Museum in London, the 12 schools participating in the MGEP each chose a different artefact from the African collection to focus on - ranging from an African headrest to a Nigerian ijele (a Nigerian masquerade costume). Actually seeing the objects was inspirational but also provided opportunities to delve deeper and explore the cultural meanings behind them. Children at Brent Knoll Special School chose the Shona headrest as their object, along with a 'key word' - dreams. They examined the object, recorded what it looked like and felt like, but then took simple observation further by investigating the symbolic meaning behind the object and exploring how it made them feel. The resulting creative and written work was of an extremely high standard.

... hard and uncomfortable because they are made of wood ... peaceful...happy... sleepy ... confused and tired ... horrible.
(words describing the Shona headrest)

We had to put our head on the table and draw round it. We worked together. Tony showed us how to keep our heads still like we were sleeping. (child's writing)

Headrests were used to rest the head when sleeping. Among the Shona people of Zimbabwe only the men used headrests. The cross supports represent people sleeping with out-stretched arms and legs. (caption)

Promoting access

Learning from objects is stimulating for all children and can be an especially effective way of learning for children who have difficulty accessing information through other sources. Handling and exploring objects does not require writing skills, and the security of actually seeing what you are learning about can promote confidence, allowing less assured children to participate. As Jean Whitaker, class teacher at Allerton Primary School in Bradford discovered when working on Inish Kapoor's sculpture at Cartwright Hall where follow-up work was mainly art-based: *'statemented children often have learning difficulties... this didn't come out with the artwork... I was really pleased with the work done by a dyslexic boy... it was really mature work... interesting - not something any of the other children did, very interestingly set out.'*

Encouraging high standards

Wingfield Arts worked with KS2 pupils on the theme of developing art as an integral part of people's lives, looking at art in a domestic rather than a gallery setting. Perhaps because children had been actively involved in the learning process, both physically and emotionally, the quality of work produced was often of a higher standard than anticipated: *'I was genuinely thrilled and shocked by the quality of the work... the whole thing went further than I expected, in ways that could be tested. I got the impression that this project has spoken to them about things that mattered.'* (Ian Chance, director, Wingfield College).

At Cartwright Hall, Bradford, having been inspired by an impressive sculpture called the Bell Metal Lamp, one class, whose school was in an Education Action Zone, returned to school and continued working on the project for the remainder of the term with impressive results: *'[the children] were quite poor in literacy at the beginning of the year... they are slowly building up now... I can't believe how much they are using wonderful descriptions and vocabulary... the lamp has really got their imaginations.'* (Sandra Brickley, class teacher).

I was walking and whistling past a huge lamp shop on Margate Road so I decided to dash inside. The shop was as high as a beanstalk and as wide as a giant. I saw a gorgeous bronze coloured bell metal lamp. The lamp was triangular, cold and mysterious. I liked the lamp so much. I couldn't take my eyes off the beautiful metal lamp.
(Part of a story by a year-three pupil having been inspired by the lamp).

Long-term value

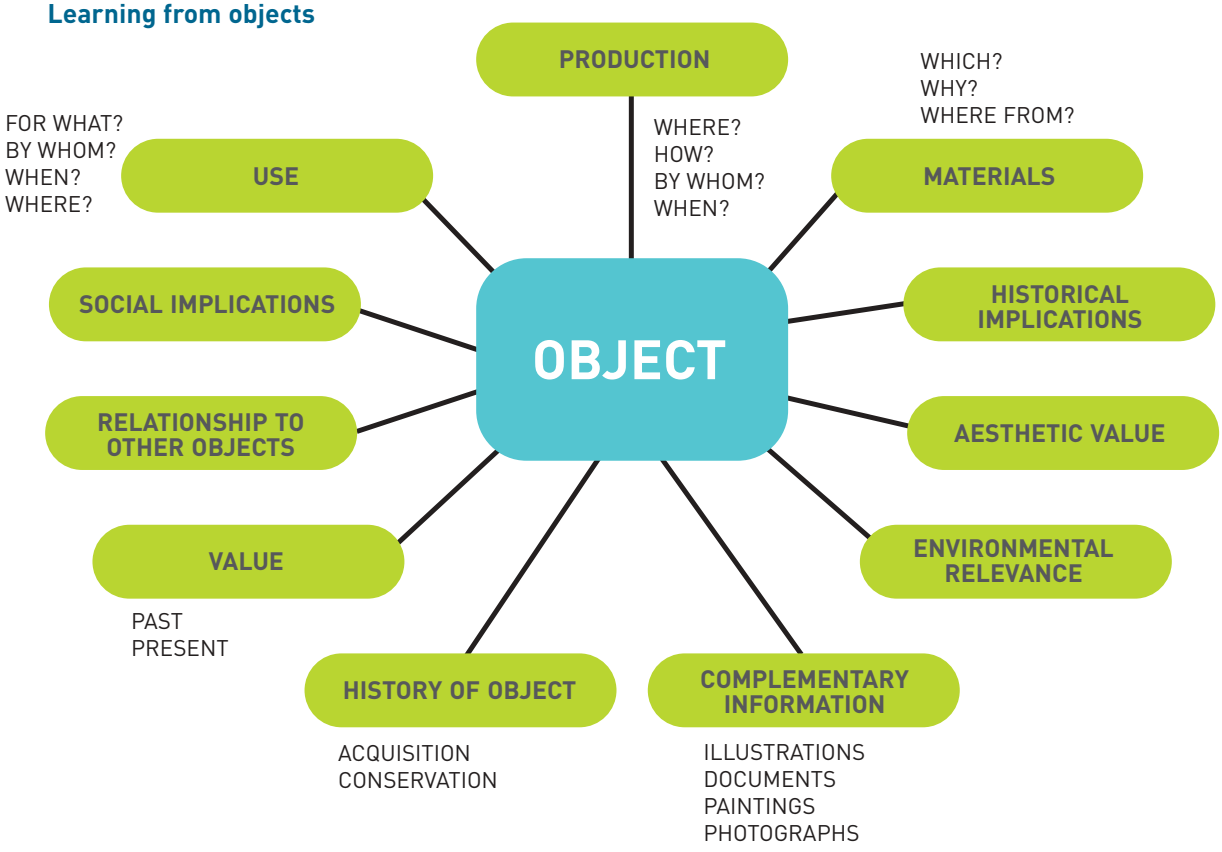
Museum and gallery collections offer rich and dense experiences that can be recalled and valued over long periods of time. Research into the use of loan boxes by Reading Museum has discovered that: *'Children could use their memories of using objects six months later.'* This is confirmed by the experiences of one year-four pupil to Brighton and Hove Museum participating in a project aimed at tackling underachievement, disaffection and demotivation among pupils struggling in mainstream education. When asked if she could remember what she did on a visit to the Booth Museum of Natural History a year previously the pupil, from St Bartholomew's Church of England Primary School, replied without hesitation: *'We saw stuffed animals, birds, fishes, insects, unicorns, mermaids, a peacock, a whale... On the floor there was a glass with a badger, snake, insects, butterflies under. There was a snake - big and curled up - it could eat us.'* These detailed memories feed the imagination and continue over time to provide building blocks for new understanding.

Summary

Objects can:

- Inspire creative work
- Sharpen visual awareness
- Help develop skills
- Increase knowledge and understanding through direct contact
- Provide alternative ways of working
- Provide personal relevance
- Motivate learning, including children for whom traditional methods have little appeal
- Increase levels of involvement and engagement

Learning from objects



Section 3

Using museums to deliver and enhance the curriculum 1: Core subjects

'Open doors, open arms...' Anna Bourke, primary literacy adviser, Nottingham City Council

Introduction to core subjects

The National Curriculum, introduced in 1989 and last reviewed in 2000, contains Programmes of Study for each curriculum subject and each Key Stage. There are three core subjects - maths, English and science. Teaching requirements are clearly laid out in the National Curriculum documents.

An additional two strategies have been introduced into primary schools to raise standards - National Numeracy Strategy (NNS) and National Literacy Strategy (NLS). Frameworks for teaching these strategies have also been published, offering detailed objectives for planning and teaching. All primary schools are expected to devote an hour a day to literacy and numeracy. The Key Stage 3 National Strategy is aimed at raising standards for all pupils in the early years of secondary education. The initial focus is on the English and Mathematics strands that began in September 2001.

Many of the projects in the MGEP have focused on the core subjects, in particular literacy. This is partly because it is a core subject and a strand running through most other curriculum areas; but also because many projects concentrated on areas where literacy was a priority. Some projects worked with schools in Education Action Zones (designated areas designed to support schools in deprived areas); others worked specifically with Education Authorities where literacy was known to be a concern, including those where schools had failed OFSTED inspections.

As can be seen by the scope of the projects, museums and their collections offer huge potential to enhance the teaching of the core subjects, particularly, but not exclusively, literacy.

Inspiring literacy

Many MGEP projects used literacy as an inspiration, often combining it with other subjects in an imaginative and innovative way. Some focused very tightly on the NLS, others used it as a springboard to explore personal preferences, but all seem to have had a considerable impact not just in schools, but in the museums themselves.

Word Power in the Power Hall at the Museum of Science and Industry in Manchester

Word Power in the Power Hall, developed by the Museum of Science and Industry in Manchester was an extremely well-researched project that focused tightly on requirements within the National Literacy Strategy at Key Stages 1 and 2. Chris Chadwick, education services manager, explained the objectives: *'We wanted to encourage people to come to the museum; to develop breadth and depth to the curriculum by using literacy... we knew it had to be literacy, not science dressed up as literacy; to use a permanent gallery that would be interesting for boys,*

who are often most resistant to literacy... It had to be specific... we wanted them to use the exhibits but not just as background... this was an opportunity to use real objects... we didn't just want to ask questions, we wanted them to think too... We are trying to show that museum education makes a difference.'

Working closely with teachers and literacy advisers, the museum developed literacy sessions with a science focus, to take place in the mighty Power Hall, an impressive collection of vast and noisy engines. The focal point was Pender, a real steam engine, and the initial session was led by Forgetful Fireman Fred and Engineer Eric, two museum demonstrators who unexpectedly found themselves in new roles! Initially reluctant, they blossomed: *'We talked them into it. At first they were really nervous, by the end they were playing up! Laurence Oliviers by the end!'* (Sylvia Hadfield, education officer). Their session was followed up by carefully differentiated literacy activities in various sites around the Power Hall. Children were encouraged to use the sights, smells and sounds around them to collect word banks and develop creative writing. The visit, free to all primary schools in the Salford Local Education Authority (LEA), was complemented by literacy packs which provided half a term's follow-up work, carefully constructed to provide word level, sentence level and text level activities inspired by the initial visit and the museum's collections. The project is now being extended to LEAs in Manchester.

The literacy packs provided a steep learning curve for the museum educators, who initially produced one pack which they hoped would be suitable for all ages. After discussion with their teacher 'consultants' they were persuaded to develop three packs suitable for the direct requirements of the NLS for Years 1/2; 3/4 and 5/6. As Chris Chadwick, education services manager at the museum acknowledged: *'right from the word go we followed what teachers wanted'*. This is a good example of how consultation and co-operation between museums and teachers can produce resources that are of real value and relevance.

Focus on Literacy at Nottingham Museums

Due to poor literacy standards in Nottingham, one of the aims of Focus on Literacy was to target low achieving secondary schools, some of which were on special measures, and to use the city museums as a mechanism to inspire, excite and raise standards. Working in direct partnership with the LEA and schools, and using literacy as the core subject, cross-curricula museum-based activities were developed in history, science and art. Schools studying Medieval Realms, as part of their work on Britain 1066-1500, for example, could visit Nottingham Castle, enjoy handling copies of weaponry and armoury, and visit the underground caves to meet Ken Fletcher a medieval castle guard (part of the living history programme). Yosef, then a pupil in year seven, recalls his visit to Nottingham

Castle: *'We had to pretend the castle was under attack. We had to design a stronger one. We had instructions. We had to select windows and choose towers, we built up a picture of our castle. Then we went round to see other groups. We wrote about what we did and the best eight descriptions were read out at the end of the day.'*

At Wollaton Hall, science and literacy combined to enhance work being carried out in Life Processes and Living Things, (Sc2). Themes and activities were based on the explorer Sir Francis Willoughby, a former owner of the hall. Jim Grevatte, the project manager, admits the science was initially a 'bit woolly' and was not meeting expectations so a rather eccentric and intriguing freelance educator known as the Creeping Toad was brought in to assist creative work through investigation, role play and exploration. As one child recalls: *'At Wollaton we did a play... we wrote it three times at least, then once more! We practised it, then did it again, then we did it to an audience... I was a big brown bird, I had the best costume.'* Follow-up work in each case was fully supported by literacy packs.

Westall's War at Tyne & Wear Archives Service

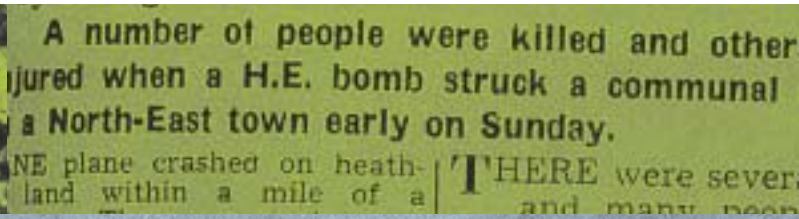
Aimed at the objectives detailed in the Key Stage 3 Framework for teaching English Years 7, 8 and 9, particularly children in year 7 who are struggling to achieve level four in English, this pack and website combines literacy with strong links to history and ICT. The pack is partly based on fiction - the popular novel by Robert Westall The Machine Gunners - set locally; and partly on fact - the tragic true story of one fateful night in May 1941 when a bomb hit Wilkinson's lemonade factory in North Shields which had a large air raid shelter in its basement. The literacy pack contains fascinating and sometimes poignant evidence from the Tyne & Wear Archives Service including evidence relating to the 103 people who died. It also offers an attractive and stimulating scheme of work directly aimed at meeting literacy targets. John Youldon from Pennywell Comprehensive School, Sunderland: '*We got five or six packs and I passed them round to other teachers/departments and some teachers were photocopying them... we use the internet site too. It has all been really useful and has enabled work to happen across the school - excellent.'* Although local teachers thought it a particularly relevant local archive, it has nationwide appeal and relevance. The website has received an enormous amount of interest, including enquiries from as far away as New Zealand! (www.westallswar.org.uk)

Big Books In Lancashire

One innovation of the Literacy Strategy was the introduction of Big Books - teaching aids based on texts that can be seen by the whole class. Lancashire Museum Service has produced ten boxes of artefacts based on National Curriculum themes such as Ancient Egypt; Tudor Medicine; Teddy Bears; and 'Science all Around Us' aimed at Key Stages 1 and 2. The boxes complement big books prepared on the same themes, for use during literacy sessions. The books and boxes were produced in partnership with advisory teachers and have been enthusiastically welcomed by schools in the LEA.

Words Alive! At the British Library

The British Library worked in partnership with local schools (Camden) and distant schools (Torbay) to create a cross-curricula programme to support literacy. It focused on making texts from the library's collections accessible, both on site at the library and virtually via the website. (www.blewa.co.uk) Six cross-curricula projects were developed, all with a strong literacy theme, from Discovering the Written Word to Traditional Stories. Graham Sherfield, adviser, Torbay LEA believes: *'It has confirmed my conviction that literacy is a skill that runs through people's learning; it cannot just be pigeon-holed into literacy hour.'*



Opening The Door to Wuthering Heights at the Brontë Parsonage Museum

A visit to the Brontë Parsonage Museum, combined with a visit to the moors, really brought the novel Wuthering Heights alive. How much more meaningful, dramatic and memorable to run over the moors yourself and see the places described by Charlotte Bronte in her book, than having to simply rely on text. This is how one child summed up their experiences, combining personal experiences and knowledge of the text:

> We saw the little window. There was a scary scene with a branch banging on the window and noises of scratching and Cathy's ghost. Mr Linton found his wife had died in the bed. He found letters she had written to Heathcliffe. It was ghostly. The window was scary.

This project was developed by the Bronte Parsonage Museum and was intended to support middle school pupils in Bradford where low levels of literacy and multicultural backgrounds meant that understanding the texts of the Bronte novels was often problematic. The project concentrated on bringing the texts alive by visiting Haworth, home to the Bronte family, exploring the moors where the books were set and allowing the children to find their own meanings through role play and drama. Alex Fellowes, class teacher at Scotchman Middle School explains the benefit to his students: *'Projects like this turn the kids on to literature. It's relevant and child-centred. The number of children who read for pleasure is very small... the project helps counteract the strong anti-analysis-of-the-novel feelings the students have. It improved the children's writing, creativity and art.'* Another year-eight class also revelled in the experience: *'They found the story involving - they loved the grand passion bit (they watch Eastenders!) They liked the environment of the novel - going out into the moors in the rain...'* (Alex Fellows).

Summer Schools

In Education Action Zones, or areas with low levels in literacy, funding for Summer Schools has been provided by the Excellence in Schools Initiative. As the name suggests, these sessions are held during the school holidays, usually for a fortnight, and have a strong emphasis on literacy - but also on fun! The aim is to provide an enjoyable learning environment for children in year six/seven who have not yet reached level four in literacy. At least two MGEP projects participated in Summer Schools. At the Museum of Science and Industry in Manchester, work originally developed for term-time literacy sessions continued into the holidays: *'We only planned term-time session, suddenly all the schools got wedges of money to run summer schools... we were absolutely swamped!'* (Chris Chadwick, education services manager). However, new relationships and a more relaxed atmosphere allowed a special kind of learning to develop. This is the second year Nottingham Museums have been involved in Summer Schools: *'This year schools were ringing me. It's a positive, confidence-building experience... there's little drop off, the emphasis is on fun. We've had lots of positive feedback. The atmosphere is just wonderful. The staff and children say this is what [school] should be like!'* (Jim Grevatte, project manager).

Hands-on Numeracy

Rochdale 2000 and Counting

Fewer MGEP projects concentrated on numeracy, but Rochdale 2000 and Counting, a partnership between the art gallery, museum service and local studies library in Rochdale, focused on ways of teaching numeracy using their collections. Aimed at Key Stage 2 pupils, this project developed loan boxes on the theme of numeracy, with emphasis on investigations and problem-solving activities. One box, called Let's Go Shopping included weighing scales, packaging, sugar sacks, stone water bottles, and pre-decimal money. Lesson plans, supporting the National Numeracy Strategy (NNS), included activities on estimating and number skills, presented through role play and group work.

A second strand of the project focused on family learning; photo packs in Urdu, Bengali and English were used informally at home encouraging parents as well as their children to learn numeracy skills.

Let's Discover! at Eureka!

The web-based Let's Discover! produced by the children's museum Eureka! in Halifax was designed to support the numeracy strategy, as well as literacy and science. It is strictly in line with the National Curriculum and designed for Key Stage 1. Young children can access the website (www.letsdiscover.org.uk) and immerse themselves in problem-solving activities - how many coins do I need to buy the objects for sale on screen? How many animals can I find? Which ingredients do I need to make a healthy sandwich? The website also provides information on planning and preparing for a curriculum-based visit to Eureka!

Enhancing science

Parachutes and balloons in Hackney

The Science Museum combined science and numeracy to increase learning through museums, targeting specific schools in Hackney. Working closely with Hackney Museum and the City Literacy Institute, activities, workshops and resources were prepared and piloted in schools. The science workshops, taken into schools, allowed Key Stage 2 pupils to explored difficult scientific concepts such as Forces first hand and to focus on the often challenging attainment target: 'Scientific Enquiry' (Sc1). Workshops were stimulating and great fun. Parents and children benefited from being able to take materials home to their families and experiment themselves. Parents' learning was an important dimension of the project. Workshop tasks were planned not to undermine the confidence of the parents who spoke little English but also to be challenging and exciting for the children. This project was unusual as it appealed to fathers who attended the workshops as well as mothers. The involvement of parents was part of a long-term objective to develop parents learning, *'if adults are supporting the children in their learning, then the children will do better, if an adult enjoys learning and thinks education is a good thing then the whole family benefits'.* (Jill McGinley, City Literacy Institute) *'Some parents have little education themselves and their child leaps ahead of them leaving the parent feeling de-skilled and worthless... Having parents in school allows the adults to have a more equal relationship with the teachers, parents have a lot of skills and talents....'* (Diana Stoker, City Literacy Institute).

Summary

Museums and galleries can enhance the teaching of core subjects by:

- Providing new and stimulating environments
- Providing access to rich resources
- Encouraging experiential and experimental learning
- Supporting in-depth follow-up work
- Inspiring a multiplicity of responses
- Demonstrating understanding of abstract concepts
- Tackling complex issues
- Providing experiences that are meaningful and relevant both to the curriculum and to the children involved.

The school curriculum and the National Curriculum: about key stages 1 and 2

Where and when the National Curriculum applies

The National Curriculum applies to pupils of compulsory school age in community and foundation schools, including community special schools and foundation special schools, and voluntary aided and voluntary controlled schools. It is organised on the basis of four key stages*, as shown here.

	Key stage 1	Key stage 2	Key stage 3	Key stage 4	
Age	5–7	7–11	11–14	14–16	
Year groups	1–2	3–6	7–9	10–11	
English	■	■	■	■	National Curriculum core subjects
Mathematics	■	■	■	●	
Science	■	■	■	●	
Design and technology	■	■	■	●	National Curriculum non-core foundation subjects
Information and communication technology	■	■	■	■	
History	■	■	■		
Geography	■	■	■		
Modern foreign languages			■	●	
Art and design	■	■	■		
Music	■	■	■		
Physical education	■	■	■	●	
Citizenship			▶	▶	

■ Statutory from August 2007
● Statutory from August 2001
▶ Statutory from August 2002

Note about physical education
The Government believes that two hours of physical activity a week, including the National Curriculum for physical education and extra-curricular activities, should be an aspiration for all schools. This applies throughout all key stages.

This table from the National Curriculum orders shows the core and non-core subjects that are statutory for each Key Stage

* The four key stages are defined precisely in section 355(1)a–d of the Education Act 1996.

04

Section 4

Using museums to deliver and enhance the curriculum 2: Non-core subjects and cross-curricular opportunities

Introduction

The National Curriculum consists of three main core subjects and other foundation subjects. Programmes of Study set out what should be taught in each non-core subject at each Key Stage. Visits to museums and galleries are specifically mentioned in the history and art Programmes of Study. Exemplar Schemes of Work in each non-core subject are also provided by the Qualifications and Curriculum Authority (QCA). These schemes provide teaching plans for each year group and have been widely adopted by teachers. Secondary schools have always worked in separate subject blocks, but for primary schools this has also become a common way of working. However, many projects in the MGEP, although often focusing on one subject, worked across the curriculum. Many teachers were pleasantly surprised to find that this could be achieved within the framework of the National Curriculum and QCA schemes, yet still leaving possibilities to work in a comparatively open-ended manner. *'Many teachers said how it was like old "topic work", and that it was good to be able to do cross-curricula work, to take the lead from the children.'* (Robin Clutterbuck, consultant, Learning on the Move).

The most successful projects were often those where museums and schools worked in close partnership and although they may have had clear objectives, were prepared to be flexible to accommodate each other's needs and requirements as the project developed: *'There was lots of pressure to deliver history and geography rather than an open-ended resource... we decided to promote the collections so teachers could use their own interpretations.'* (Sue Ball, project manager, Leeds).

Further information on working in partnership is available in section nine.

Focus on specific foundation subjects

...Bringing History Alive

History is traditionally a subject that has been enhanced by visits to a museum. Many projects combined aspects of historical enquiry with other curriculum areas.

National Curriculum, KS1/2 p104

Historical enquiry
Pupils should be taught
a. to find out about the past from a wide range of sources of information (for example stories, eye-witness accounts, pictures and photographs, artefacts, historical buildings and visits to museums, galleries and sites, the use of ICT sources).

The opportunity to work with real objects or visit real historic sites provided meaning and substance, and was fun. In the Home Front at Sandwell, learning about life in the Second World War was enhanced by an evacuation weekend complete with a trip on a stream train and an air raid at the other end! Epping Forest District Museum Archaeological Access project explored life in the Iron-Age with children building their own Iron-Age Roundhouse.

...Handling sessions in Hereford

Resources in Rural Schools in Hereford, developed by Hereford Heritage Services, worked closely with schools and in partnership with Hereford Record Office. Herefordshire has the second lowest pupil density in the country and many of the schools are very small. Using artefacts, the intention was to develop museum education sessions to be taken out to primary schools and delivered by freelance museum educators. The sessions were based on the National Curriculum and the QCA schemes for history and science but an added dimension was the emphasis on locality, intended to foster pride of place and relevance to the children. One session, for example, explored what it was like to be a Victorian country child.

The ability to immerse themselves in real history was appreciated by many of the teachers: *'We've done real research skills. This is real history, real discovery, real skills not English, as so much history can be, doing cloze procedures.'* (see glossary for details). Teachers who were now able to access real artefacts and investigative approaches to them welcomed the new approaches to old subjects: *'[I've got] lots of new ideas... I feel really refreshed!'*

...Art and Design

Due to the nature of many museum and gallery collections, the art curriculum was the theme of many projects.

National Curriculum, KS 3 & 4 p169

...every pupil should be taught the knowledge, skills and understanding through
d. investigating, art, craft, design in the locality, in a variety of genres, styles and traditions, and from a range of historical, social and cultural contexts (for example, in original and reproduction form, during visits to museums, galleries and sites, on the internet).

However, the art curriculum was approached in extraordinarily diverse ways. For some projects it was the main focus, for others it was used to enhance other curriculum areas such as ICT and literacy.

...Art in the V&A

The Victoria and Albert Museum, working in partnership with the Institute of Education, developed a programme for Key Stage 3 & 4 students which included facilitating greater understanding of the work of artists in other times and cultures through practical investigation and experience.

National Curriculum, KS3/4: Programme of Study, art & design. Knowledge and understanding p168

c. continuity and change in the purposes and audiences of artists, craftspeople and designers from Western Europe and a wider world (for example, differences in roles and functions of art in contemporary life, medieval, Renaissance and post-Renaissance periods in Western Europe, and in different cultures such as Aboriginal, African, Islamic and Native American).

The schools visited the galleries and used the spectacular and original works of art to inspire and inform.

'We went to the V&A for our art school trip... We went to help us on our artefact project... We went to three galleries - the sculpture hall, the cast gallery and the glass gallery. In the sculpture hall we used the drawing techniques - line drawing, where you can't take your pen off the paper; negative space drawing where you just draw the outline and colour the background black; and tone drawings, where you just have to draw shadows and tone... Next we went to the cast gallery, where we chose a plaster cast, took some view finders, and drew only a small part of the cast... I liked the glass gallery best... in the glass gallery there was a big artwork with lots of bits of glass which shone in different colours in the sun, which was my favourite piece of art. The banisters in the glass gallery were also really beautiful, for banisters, anyway!'
(Clara, year-seven pupil, Fortismere School, Muswell Hill, London).

The visit was followed up by the students making their own plaster casts, as Clara explained: *'We had to bring in a plastic bottle and plaster cast it, with a piece of paper about ourselves inside. The paper poked out of the cast, so people knew it was there but couldn't get at it!'* Her teacher is certain of the value of visiting the gallery and investigating the objects in depth: *'Looking at those precious, valuable objects... the children wouldn't have been interested in really looking, really accessing the artefacts unless they were **shown** them...'*

...Art in the Forest of Dean

Dean Heritage in its Expressive Arts Environment and Sustainability project used the Forest of Dean itself as a huge open-air gallery. Focusing on the work of artists such as Andy Goldsworthy the project explored ways of using the natural environment around the museum site to help deliver innovative and exciting work based on the art curriculum.

National Curriculum. KS3/4 p169

Pupils should be taught the knowledge, skills and understanding through
a. exploring a range of starting points for practical work including themselves, their experiences and natural and man-made objects and environment.

By focusing on natural materials found in the forest and creating their own sculptures and works of art, the year-ten students at Whitecross Secondary School experienced art in a completely new way.

Cross-curricular opportunities

...Art, ICT and Literacy at Cartwright Hall

National Curriculum. Programme of study: art and design. KS 3 p169

Breadth of study
During the Key Stage pupils should be taught knowledge, skills and understanding through:
c. using a range of materials and processes, including ICT (for example, painting , collage, print making, digital media, textiles, sculpture).

Cartwright Hall, Bradford used its extensive collections to inspire and motivate work across the curriculum, working closely with local schools, LEA literacy and ICT advisers and Bradford College. The main criterion of the ArtIMP project was that children should be offered the opportunity to work in a real gallery among real artworks. ICT and literacy became increasingly relevant after Bradford LEA received a poor OFSTED report, which revealed weaknesses in these areas.

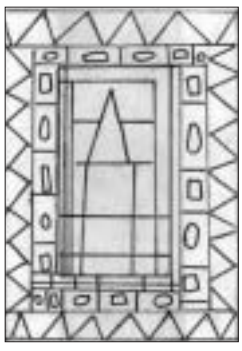
The project was delivered in three phases. Phase one involved eight schools, selected from the lower quartile of literacy. They were invited to the gallery to work with artists, and for training, which was provided by the LEA in partnership with the museum for teachers in ICT, literacy and art. The children's work was then displayed in the gallery. Many teachers who saw the exhibition, were inspired and applied to join phase two of the project which involved 24 schools. The third phase of the project, currently underway, is open to 72 schools and includes the completion of the website and the introduction of ArtIMP - a multimedia pod to be used in the gallery itself.

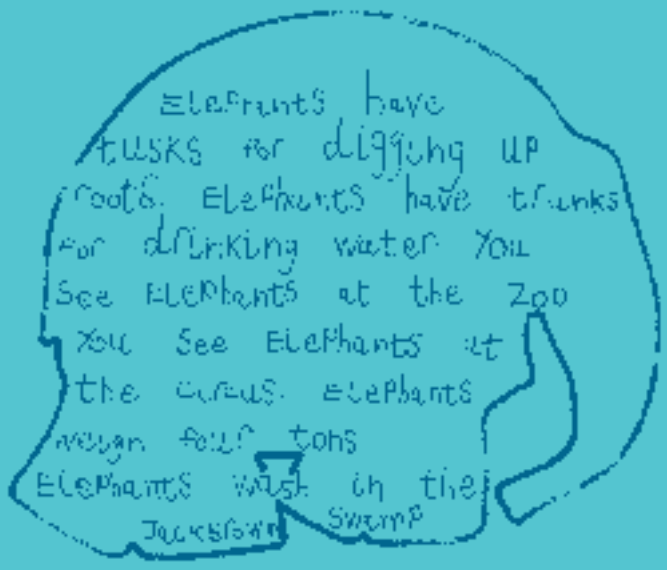
Although all schools started from a similar point - the visit to the museum - the resulting work shows how individual teachers took the project and developed it in ways that were meaningful and relevant to their own needs, and those of their children. This was fully supported by the museum staff *'There was a sense of ownership. We'd been to the gallery, our work was on the wall. I liked that.'* (Sandra Brickley, Usher Street Primary School).

Laycock Primary School chose Mughal as its inspiration. During the visit to the gallery the pupils captured images in their sketchbooks, prepared word banks, and explored feelings. Back in school, the artwork was used during literacy hour as a focus for investigating adjectives and developing creative writing - what can you see? who lives here? How do you know? Where are they now? In art, patterns and shapes, colours and textures in Mughal (a silk textile inspired by Indian architecture and textiles) were explored, culminating in the children making their own silk screen versions. Their teacher, Mrs Palfreyman, was enthusiastic about the benefits of working in such a way: *'It captured their imaginations, which is difficult to do with this class... I was really pleased at the way they stuck with it, and produced a finished piece of work.'*

At Eastburn Primary School the pupils concentrate on the painting Heart of the West Riding, which reminded them of the scenery near their own school up on the moors. Their teacher, Jane Law acknowledged: *'I chose the Heart of the West Riding as I knew it linked in to various cross-curricula areas.'* During literacy they wrote poems and discovered how to integrate photographs they had taken with the digital camera during ICT. In art they experimented with colours and feelings inspired by Heart of the West Riding: *'We've gone quite a way from the original painting but its what the children wanted, its developed their interest.'* (Jane Law). At the end of the project, work was shown to the rest of the school using a power-point presentation.

Many had never used a gallery as a stimulus for work before yet working within the remit of the National Curriculum they were able to follow their own interests, and to seamlessly incorporate the project into many areas of classroom activity.





...Literacy, History and Art in North Devon

In North Devon, where many of the primary schools are small and geographically remote, the project North Devon on Disk aimed to produce a high-quality online resource and to create stronger links between museums and schools. The initial bid to the MGEP was rejected, but smaller funding was offered at a later date. This meant possibilities had to be scaled down to fit the lower budget and shorter timescale. The resourcefulness of museum education was at full stretch here, where the project had to be up and running in approximately two weeks! Three pilot schools were involved and each had the benefit of a visit to the Barnstaple Museum or Burton Art Gallery and Museum, Bideford, a handling session in school and the opportunity to develop ICT skills while preparing materials to go on the web. The project was kept deliberately open-ended in order to respond to the needs and interests of the individual schools. An unusual selection of artefacts from the museums' collections - calling cards, shells, an elephant skull - formed the basis of the handling collection.

Using the National Curriculum as a framework, and referring to QCA schemes in art and ICT, activities were devised focusing on history, literacy and art. The children's own interests were followed where possible, and at East the Water School, the children brought in their own collections to be explored alongside the museum's artefacts. At Forsches Cross School the emphasis was on acquiring history skills: *'Anne [the project co-ordinator] taught me a lot about ways of using artefacts - she showed me how to look historically, question historically... Those kids learnt such a lot, it was so interactive, you don't always get that from rigidly following the system, but it pulled in so many curriculum areas.'* (Theresa Winters, class teacher). Using the artefacts as a springboard, the class focused on history, combining it with literacy (creative writing, investigative research, descriptive writing) and art (observational drawings). The only area that did not live up to expectations was ICT. Due to the short timescale of this project, the schools never really got to grips with uploading material for the web and the digital camera refused to work.

...History, Technology and Literacy at the Fleet Air Arm Museum

Flying High at the Fleet Air Arm Museum offered students opportunities to explore design and technology using its unique collections and the Physics of Flight Laboratory. Students learnt how to design, build and make an aeroplane fly. Problem-solving and investigative activities were used and gave children hands-on experience too.

PSHE and citizenship

...Local History, PSHE and Citizenship at Liverpool

The Bevington Street project at the Museum of Liverpool Life started off as a local history project. The museum wanted to have contributions from local schools to give children's voices to the exhibition City Lives. The project was devised to focus on Bevington Street, model housing put up in 1912 to replace slums, habitable until the 1970s but now derelict. Year-six classes from the local primary school were initially recruited, but as the project developed the whole school became involved.

One important aspect of the project was to explore what Bevington Street meant - to former residents and to people living in the area today. The children devised questionnaires and visited residents to ask their opinions. *'The citizenship aspect was particularly strong... how to behave, how to receive lemonade gracefully when visiting!'* The museum was overwhelmed with the response and the community interest and feelings of ownership it generated. *'All sorts of people got roped in - volunteers (55 to 85 year old women) sharing stories with the children... The reminiscence group also got involved.'* (Dilys Howich, project manager). The children's writing shows how their attitudes towards older generations and their local environment changed, and how they developed greater understanding for the past and with this more respect for the area and for older people.

Once data was collected, the children became involved in preparing for the exhibition. Paul Browne, the senior audio-visual officer for the National Museums and Galleries on Merseyside (NMGM) put together a simple training package to enable the children to use audio equipment to edit their interviews and put them on audio handsets for use in the gallery. *'Within the museum, audio-visual tends to be a bit samey. This was quite an opportunity, but not without reservations. I thought the children might struggle, they had to be fit for the purpose, it was easy for things to go wrong... I did a spoof interview with Dilys, not open-ended, then we did the same but open-ended, they picked up on this straight away! I took them through to the editing suite – the children picked that up really easily! I was pleasantly shocked!'* (Paul Browne).

The exhibition design team were invited into school to meet the children. Having initially been terrified, they warmed to the experience and even took heed of the children's recommendations!

Alyson Green, literacy adviser sums up the whole experience: *'It's the best example of curriculum enrichment, it hit so many areas... It's a stunning example of literacy across the curriculum, so good for speaking and listening. They've seen real-life application, they have seen how skills can be applied.'*

The research was presented in a big book format, displayed in the museum and used in literacy training sessions.

Vocational education

...Tourism and Travel in Norwich Castle Museum

Many projects focused on the vocational aspects of the curriculum followed by students studying a General National Vocation Qualification (GNVQ).

GNVQ subject specific guidance. QCA.
Pupils' commitment and motivation to the course is enhanced when they can see the relevance of their studies and where schools set the course securely within the vocational context. Pupils benefit by being nearer to the world of work. The opportunities within the local area to develop the vocational context will be an important consideration when making decisions on the courses on offer.

Norfolk Museum Service, in its role as a venue for tourism, assisted local secondary schools and colleges to deliver GNVQs in Tourism and Travel, and Leisure and Recreation. Working in close collaboration with teachers, resources were developed on human relations, budgeting, marketing, interpretation and access, and customer care. Students visited the museum, worked with the resources and used this to inform and develop their own assignments.

The website (details available from katrinasiliprandi.mus@norfolk.gov.uk) contains practical information about job descriptions, personal specifications, appraisal forms, organisation charts, and information about trade unions.

Many of the projects described have forged strong partnerships, have been incorporated into teachers ' planning, or have produced resources that will ensure sustainability. More information and advise on planning is available in section nine.

Summary

Using museums and galleries to deliver non-core and cross-curricula activities can:

- Meet the requirements of the National Curriculum
- Enhance the National Curriculum
- Provide infinitely rich resources
- Provide open-ended activities
- Create pathways for individual interest
- Develop the potential of ICT as a cornerstone of project work
- Open doorways into the wider world
- Provide planning opportunities.

Section 5

New technologies, new challenges

(National Curriculum: ICT:96)

'Information and communication technology (ICT) prepares pupils to participate in a rapidly changing world in which work and other activities are increasingly transformed by access to varied and developing technology. Pupils use ICT tools to find, explore, analyse, exchange and present information responsibly, creatively and with discrimination.'

Introduction

New technologies, broadly defined here as information and communication technologies (ICT) such as the internet, email, and digitisation, can open up learning possibilities that many students find highly accessible and motivating. ICT is unusual in the National Curriculum in that it is a subject in its own right but there are also statutory requirements to include ICT in all subjects, apart from PE (this is discretionary at Key Stage 1). Many of the projects in the MGEP have recognised the importance and potential of using new technologies and have used them in diverse, innovative and creative ways.

Many projects used new technologies to explore different ways of presenting and creating artworks. Digital cameras, camcorders, videos, interactive whiteboards, animation packages and websites were experimented with, creating some lively and innovative results.

Video

...SWAP at the Whitechapel Gallery

The Whitechapel Gallery's Schools With Artists Project (SWAP) involved six schools in three boroughs working with six artists. The intention was for the students to make a video for other students, introducing them to the art gallery and its exhibitions. A visit to the gallery was followed up by a two-and-a - half day workshop in schools led by an artist. The initial visit was an eye-opening experience in itself, as one student discovered: *'from my visit to the gallery I've learnt there's something here for everyone and I don't think anyone could come here and not find something they'd like'*. Using videos and camcorders, the students explored, commented on and recorded the artwork around them. The self-portrait by Frida Kahlo (1940) drew these comments from one 16 year-old: *'Her facial expression and her eyes convey a sense of pride and determination but also she's not satisfied, as though there's something bothering her...'*

It was an intense, energetic experience, involving huge personal gain of knowledge about the gallery and artwork, as well as developing considerable technical and presentational skills. The students grew in confidence and co-operation as they saw themselves communicating successfully and eloquently in a public gallery. The exhibition videos feature only the pupils, their voices and the artwork - no adults, teachers or museum staff. Copies of videos were distributed to schools planning a visit to the gallery and were on display in the gallery itself as an introduction to the exhibition.

Interactive smart board

...Discovering Ourselves at Drumcroon

The Drumcroon Wigan Website Project was a partnership between the education art centre in Wigan, local schools, the LEA and a web designer. Working with secondary, primary and special schools, a series of pilot outreach projects was developed. Each project was supported by computer hardware, digital cameras and a resident artist. A website was developed to give schools a resource base for the art curriculum containing schemes of work, resources and an online virtual gallery.

At Mere Oaks School, a special school for children with physical or medical difficulties, students explored the theme of Ourselves. One part of the project involved children using an interactive smart board to create electronic images. The children first took a self-portrait using a digital camera, then loaded the image on to a computer, and finally 'painted' it on to a whiteboard using their fingers. This technique opened up huge possibilities for students, particularly for Joe. Joe has virtually no gross motor control and very limited fine motor skills, but using the interactive smart board he was able to produce some stunning images.

The work Joe is doing through the project has contributed directly to his GCSE coursework and means that he can be entered for the Art and Design syllabus F (photography). Due to his condition, Joe is not able to access creative art via the traditional

Art Materials Color

methods but is now able to create real art using a camera and computer - an art form now recognised by the QCA.

Using the web

Many projects incorporated websites but not all used them in the same way. Some were used as a celebration or documentation of the project; others were an integral part of the project and developed simultaneously; some offer virtual visits to museum sites or give advice about preparing for a real visit, some are packed with interactive games, others ask leading questions. All have the potential to reach huge audiences and be useful learning tools. Here are a few examples (a list of websites is available in appendix 2).

Web bites:

- Solve problems based on core curriculum with Eureka! www.letsdiscover.org.uk
- See the original Ancient Egyptian artefacts and the children's work it inspired at www.leedslearning.net/makingconnections
- See how projects developed from the initial visit to the end products at www.clothofgold.org.uk/inafrica/
- Pour over original documents from the Second World War at www.westallswar.org.uk
- Learn how to make your own sculpture at www.accessart.org.uk
- Send an e-postcards and play e-games with the Virtual Victorians at www.tivertonmusuem.org.uk
- Learn about the wild and fierce Celts and puzzle over question of the month at www.museums.ncl.ac.uk/reticulum
- Find out what the students really thought of art at www.whitechapel.org.uk
- Watch an animated collage at Wolverhampton www.wolverhamptonart.org.uk/web_page/get_creation.htm

Virtual visits

...Learning on the move with five transport museums

This ambitious project involved five major transport museums: National Tramway Museum, Crich; National Waterways Museum, Gloucester; National Railway Museum, York; London's Transport Museum; and National Motor Museum, Beaulieu. The project enabled primary and secondary schools to make a 'virtual' visit to their sites and access their collections through LEA intranets and the National Grid for Learning. Working with two pilot schools each museum trialled activities on site and produced material to go on the web (www.learningonthemove.co.uk).

Although the website was the culmination of the project, the processes by which it was achieved were equally valuable. The lead partner, the National Tramway Museum worked with two primary schools in Derby. Both schools were from disadvantaged areas with low levels of attainment and one had just received a disheartening OFSTED report. Neither had worked with a museum before. The schools visited the site with a certain amount of scepticism, however teachers were amazed at their pupils' reactions and the value they got from the experience: *'Going there, seeing it all happening, is far better than anything that could have been done in the classroom.'* (Alex Scalon, Nightingale Junior School, Derby). On site, children made sketches and took photographs using digital cameras, the basis for work back in the classroom. Although both classes were experienced ICT users, the project allowed them to reinforce skills already acquired and to learn new ones - preparing work for uploading on to the web, inserting photographs into text, presenting their work on PowerPoint.

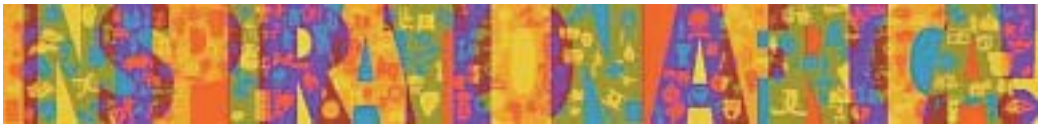
As Alex Scalon acknowledged: *'It's fitted in with Britain since1930, literacy and ICT. We've also used the internet for research. It's reinforced the Design and Technology QCA scheme.. We're working at level four - we've just done a PowerPoint presentation... I wanted something cheery for us and the children to do while we were struggling to get through [post-OFSTED]. This is something that has made a difference.'*

Internet classroom

...Inspiration Africa! at the Horniman Museum

Inspiration Africa! a project developed jointly by the Horniman Museum and Cloth of Gold, an arts organisation, worked in partnership with 12 secondary, primary and special schools, focusing on the museum's African collections. Two schools entered the project each term. Initial visits were made to the museum followed by four intensive days in school where the focus was on art (drawing from objects, and silk screen); literacy (creative writing) and ICT (web-based work). Work in school was supported by professional artists, story-tellers and poets, as well as museum educators and an ICT specialist and silkscreen artist from the Cloth of Gold.

It was the intention that the web should be up and running on day one of the project and that children's work be added as it was completed. The web was seen as 'an internet classroom' or 'contact room' where pupils could display their work, chat to pupils from other schools or project leaders about their work and leave messages on the bulletin board. This gave the work an immediacy and made it so much more meaningful: *'I think the internet is a good idea because you can look up and learn more...You can go back and look at the work you've done. You can look back on yourself when you're older.'* remarked a year-five pupil from Christ Church Primary School. Another child at Raglan Primary School commented: *'Tony taught us how to screen print; we used the squeegee to do it. All our work is now on the computer because Jacqui taught us how to put it there. It was a good idea*



because we could show our family... and because nearly 600 people emailed us.' One relative living in Australia was astonished to see their niece on the website and emailed the school!

The website designer and ICT co-ordinator, Jacqui Callis, also found it had unexpected bonuses: *'Each day had an ICT part, a simple creative process to go through, or search for links on the key objects. They sent work to me at home - loads of stuff, quite sweet, especially secondary children who didn't always say much, but these were complimentary things they may not have said in the session.'* ICT was also used to inspire creativity and all children from each school participated in designing a virtual banner full of images from the project. This had unexpected benefits: *'One secondary school linked up with a special school... they were working together to design their virtual banner. The theme was a harmony, they were very caring.'* (Jacqui Callis).

The web was used to record the development of the project as it happened, in a very interactive manner, and is now used as documentation and a celebration of the project. (www.clothofgold.org.uk/inafrica/).

Online resources

...Virtual Victorians in Tiverton

The aim of this project managed by Tiverton Museum, was to provide an online multimedia resource suitable for Key Stages 2 and 3. The site is presented by a virtual Victorian, a young girl called Alice Poslett and contains objects and photographs from the museum's collection grouped into themes such as everyday life; childhood and public health, all relevant to the history syllabus. There are teacher's notes and suggestions for lesson plans. There are also lots of e-games - imaginative interactives - dress a Victorian doll, build with Victorian bricks, complete a jigsaw.

You can even send e-postcards to your friends! (www.tivertonmuseum.org.uk)

Video conferencing

...Making Connections in Leeds

The bid for Leeds Making Connections was initially rejected but later offered in the second phase of funding. As Tim Corum, the project co-ordinator explained: *'We had to move incredibly quickly into an unknown area.'* Working in partnership with, among others, Leeds Learning Network (LLN), responsible for the Intranet; Parallel Interactive, web designers; and Creative Partners in Education (CAPE), the intention was to produce an online learning resource which would promote the museum's collections, much of which was inaccessible due to the closure of the City Museum. Bryan Stitch, keeper of archaeology was enthusiastic about introducing ICT into the project: *'I was excited about using digital technology... I wanted to promote the Egyptian collections. Since the closure of the City Museum they haven't enjoyed much attention... I wanted to make the material available digitally.'* The website was to be 'attractive, extendable and easily navigable' but otherwise the project was left deliberately open-ended - negotiation, discussion and participation with local schools determining how it developed.

Participating schools were invited to the Resource Centre for a handling session delivered by museum staff. Back in school, follow-up work was enhanced by visits from story-tellers. Children's work was then uploaded on to the web.

There was a desire to be experimental, in particular in the use of bulletin boards and video conferencing. Bulletin boards were set up so schools could communicate together, and reach 'experts' in the museum. Video conferencing was also tried, where schools could have Ask the Expert sessions with the keeper of archaeology. This was a steep learning curve for everyone involved as the new technology had to be tamed and understood! What was the etiquette for video conferencing? How would the children react to a talking head? Would the expert know all the answers?

This was very much a project where everyone learnt as they went along but the end result is an accessible website where the children's work is displayed alongside the original artefacts. *'It's a good tool. I'd use it now for other subjects. Some have emailed the curator... at parents' evening they were showing off their work and the website... its raised their ICT skills and the awareness of how you can use it... it was a fun thing to do.'* (Carla White, class teacher).

(www.leedslearning.net/makingconnections)

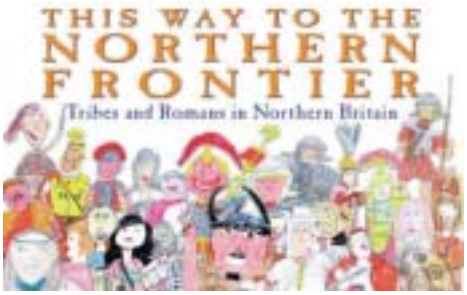
Email updates

... Walking through time with the Reticulum Project

The Reticulum Project, a partnership between the Museum of Antiquities in Newcastle upon Tyne and first schools in Northumberland, experimented with contacting its schools through video conferencing and via email. Using the museum's impressive Roman collections the project explored life in Romano-Britain. One school used the project as a focus for its literacy work, the museum sending the school Roman sources for example extracts of text from Caesar and Cicero via weekly emails.

Children at St Andrew's RC First School prepared questions to ask the museum education officer and museum technician prior to their visit to the museum. When they returned to school they designed their own leaflets to encourage other people to visit the museum. The museum staff were so impressed that they produced a professionally printed leaflet that incorporated the children's ideas and illustrations.

(www.ncl.ac.uk/reticulum).



Difficulties and overcoming them

...Lively moments!

Because so much of the work being done with new technologies was fresh ground, there were inevitably problems. Many people delivering and participating in the projects did not necessarily have skills in these areas. Timescale, particularly for those entering in the second phase of MGEP, meant they had to learn very fast! Some found being faced with new equipment, whether it was a digital camera or a new computer programme, or having to learn new skills - uploading/downloading - too daunting. Some hardware and software were not sufficient to do the job, others struggled with passwords, some found their computers were not compatible with the local intranet. Many found setting up a website more problematic than envisaged - finding the right web designer, agreeing on needs, understanding the technology, deciding on the purpose of the web, getting contributions delivered on schedule - all caused frequent headaches!

Jacqui Callis, the web designer and ICT co-ordinator from the Cloth of Gold, summed up a few common problems: *'There were lots of hardware issues, also we were having to do a lot of policing. It had to be very carefully planned... They all came in and wanted to start straight away - some were incredibly experienced computer users, others didn't know anything. Some primary schools only had one computer, others had their own suite. There were some lively moments!'*

Developing new skills

However, many people rose to the challenge, reinforced skills or discovered new capabilities. In Bradford, many of the schools taking part in the ArtIMP project, had received new computer suites and found the project an excellent way to explore them as Liz Hatton from Shibden Head Primary School acknowledged: *'We've covered a lot of skills... lots of learning. It's helped us find our way around the ICT suite just introduced.'* For other people, familiar with new technology, it was an opportunity to refine and expand skills: *'We've done a lot of work on PowerPoint, scanning in photographs and entering questionnaire responses. This is my area of responsibility in school and so I found it easier to develop even though we have only had our computer suite for a few months. We're still working on this. It will be useful for our school as a whole.'* (Jane Law, ICT co-ordinator).

It was not just the children learning, many teachers and museum educators also found themselves rising to the challenge of new technologies: *'I hoped to become more computer literate - the intranet is fairly new, year three has never used it before - it was a challenge! BT were slow with coming up with passwords but once they did we were cruising! We learnt to overcome problems.'* (Jane Harrison, class teacher, Leeds).

There was a strong feeling of everyone being in the same boat, where new technologies presented opportunities that were challenging, frustrating, exciting and ultimately immensely worthwhile and rewarding.

Summary

New technologies have the potential to:

- Provide rich, interactive learning experiences
- Encourage creativity and innovation
- Be stimulating and challenging
- Promote feelings of worth and self-esteem
- Encourage and develop new skills
- Develop and extend ability
- Reach large audiences
- Push the boundaries
- Appeal to all sorts of students
- Reduce the sense of isolation
- Provide contact and sustainability.

Section 6

Entitlement

'Of particular importance to museums is the commitment to the participation of children from all backgrounds in their activities... The challenge for both the museum and school sectors is to ensure that every child visits a museum regularly, and has an enjoyable, successful educational experience in every museum they visit.'
(A Common Wealth: 36/81)

(National Curriculum KS1/2, KS3/4: p12)

To establish an entitlement...
The National Curriculum secures for all its pupils, irrespective of social background, culture, race, gender, differences in ability and disabilities, an entitlement to a number of areas of learning and to develop knowledge, understanding, skills and attitudes necessary for self-fulfilment and development as active and responsible citizens.'

Introduction

Entitlement in this guide is defined as the right of every child, irrespective of background or ability, to take part in and benefit from learning experiences in museums and galleries. For many projects, entitlement was a priority - the approach being led by the needs of schools in particular areas. Some museums ensured that the project benefited all schools within local LEAs. Others chose to focus on social inclusion and targeted schools working within Education Action Zones or those in disadvantaged areas struggling to raise standards. Others aimed to integrate cultural inclusion in their objectives by recognising the children's multicultural backgrounds. A large number of projects worked with children with specific needs. Sometimes a particular group was targeted but mainly the projects reached out to include all children, making sure that all, whatever their ability or background, benefited from what was on offer.

Open to all

Many projects tried to ensure that as many children as possible benefited. The Museum of Science and Industry in Manchester, for example, offered free visits and accompanying literacy packs to all primary schools in Salford LEA, hoping to eventually extend into Manchester. Similarly all secondary schools in six LEAs in Tyne and Wear received free Westall's War literacy packs. The Museum of London targeted all primary and special schools in the capital.

...Roman loan boxes for all at the Museum of London

In 1998 the Museum of London's strategic plan identified one of its key aims to make its collections more accessible to Londoners, particularly London schools. This project provided 200 primary and special schools in all London boroughs with a 'mini museum' of Roman materials. Apart from increasing access to the museum's collections, it alleviated the oversubscribed Roman gallery which annually turns away 170 school groups. The boxes contain real and replica artefacts and come complete with teacher's packs and a video. INSET was also provided. It has been estimated that 9,300 children have already benefited from having access to the boxes. Eventually the scheme is to be extended to all 2,200 primary and special schools in the London area.

...Entitlement at The New Art Gallery Walsall

The New Art Gallery Walsall called its project Entitlement it was designed to increase awareness among secondary schools of their entitlement to access the collections in local museums and the art gallery. Secondary schools were specifically targeted as they made least use of the collections.

Working within the National Curriculum, teachers were trained in using the collections. Nine study programmes were developed with associated resource packs and handling collections. An unusual aspect of this project was the 'buddy' teachers - they were teachers recruited from other schools who were trained how to use a study programme by the teacher who had developed it. Further dissemination is planned through INSET, a website and CD-ROM, to ensure that each child in the area has access to the collections through their school.

Targeting Education Action Zones

Many projects worked with schools within EAZs (details in the glossary). This was usually intentional, schools or areas were selected with help from advisers and inspectors within the LEAs. The Football Museum in Preston aimed to 'engage disaffected pupils in an EAZ through the subject matter of football and help get them back into mainstream education. I thought it would bring an extra dimension to the children, who find it difficult to access the curriculum because of behavioural, emotional and social problems' (Liz Locke, inclusion co-ordinator, Moor Park High School, Preston).

One part of Brighton & Hove Museums project, Whole School Strategy for Museum Learning, involved 'special' weeks, a one-week programme for disadvantaged pupils using the museums and artists - in-residence. The head teacher of St Bartholomew's Church of England Primary School explained the sort of children this project was trying to reach: ' *The first year we tried to draw out those children who never went out or needed challenging. The second year we chose children who were disappearing into the hurly burly of classroom life... These are the children who produced the sculpture on display which are of very high quality, a real talking point.*'

...Supporting rural schools with Hereford Heritage Services

Some projects reached out to schools that were often excluded due to geographical and social reasons. At Hereford Heritage Services many of its potential visitors are from very small schools, widely scattered. Travelling to the museum can be prohibitive - so can an overall fee for a handling session. Working with 18 schools in an EAZ, and schools within the South Wye regeneration area, the project developed loan boxes and handling sessions to be delivered in school by freelance educators. The charge was per child, ensuring very small schools (one has only 14 pupils) were not excluded.

...The Fleet Air Arm Museum

At the Fleet Air Arm Museum, based in a similarly rural location, small schools within a 20 mile radius of the museum were targeted and part of the project budget went into providing transport. This was much appreciated: 'Museum visits are not always part of the culture of the families of children in this school, so some children do not have a chance to visit museums. The reduced entrance fee and transport being covered have been real incentives. Also each child was given a special offer for a family discount on tickets.' (Rupert Lovesy, Curry Rivel School).

Special educational needs

Many children with special educational needs benefited from the MGEP. A different environment, the opportunity to work with a variety of people in a non-school situation, using different equipment and materials allowed children who can find traditional schooling difficult the opportunity to shine. This was frequently recognised by teachers who welcomed new

and stimulating ways of getting children with learning difficulties involved. In Devon, for example, a child with Down's Syndrome was brought into the project, even though he was not in that class, because teachers knew he would benefit from learning in a hands-on, experimental way. Many projects worked with special schools - not necessarily creating a project designed for children with specific problems, but allowing them the same access as other students.

...Signing at the Courtauld Institute of Art

The Courtauld Institute of Art's project, however, did cater for the needs of a specific group and provided a signed interpreter to work with hearing impaired children in the galleries. Jenny Leach, interpreter for deaf children, was keen that hearing impaired children could fully explore the paintings, as well as their own creativity: *'The objectives were that the children should make contact with the artworks and really look. In making, the children should learn to be bold... One of the things that worries me about art in schools is that children get worried how it looks and creativity becomes subsumed by detail and how the thing looks.'*

Drop-in sessions for the children and their families were organised, and the gallery trail leaflet rewritten. The children's confidence and knowledge was increased, and the museum educators viewed working with hearing impaired pupils as an exciting prospect rather than an uncomfortable risk.

...Creation Animation at Wolverhampton

At Wolverhampton Art Gallery the Creation Animation Suite project set out to see how art and ICT could be used in the personal and social education of pupils with special educational needs, and to investigate barriers to learning ICT skills. Building on previous digital art residencies it examined how digital art could be used to enhance formal education, particularly in special schools.

This project revealed a need for intensive training and updating of skills in art and ICT for many teachers, and for specialised resources for pupils with special educational needs.

A major outcome of the project was the permanent digital suite within the gallery. The suite has shown how digital technology can shortcut many of the conventional skills necessary to produce traditional art, allowing pupils who could not acquire drawing skills to experiment and create meaningful and exciting images. *'It [digital art] makes you aware of different ways of communicating, subtle indications, through their art and what they are doing, especially with those who can't communicate in the more traditional ways.'*
(Laura Regan, project co-ordinator).

... Does Art Make a Difference?
at Dulwich Picture Gallery

This project worked with young people with exceptional needs, young offenders from Orchard Lodge Resource Centre, a secure unit for 11- to 16-year-olds with extreme behavioural and emotional problems. The aim of the project was to show how learning through visual arts in long-term teaching relationships can really make a difference to the lives of individuals - not only in terms of their academic achievement but also in emotional and behavioural development. The group recreated old masters from the gallery's collections in contemporary style, exploring ideas of conflict, good and evil. Maria Brotolo, an artist-in-residence, felt there had been *'real dialogue, real sharing of ideas and an interesting expression of ideas, all among peers. There was a strong sense of teamwork emerging'*. This is backed up by the evaluation of the project:

The young people developed new confidence and self-esteem. Clem Earle, 14-16 curriculum co-ordinator, believes the project was directly responsible for encouraging more students to take art and English GCSEs. He was moved to discover that one student, returned to Dulwich Picture Gallery to show some of his new friends around. This was *'very unusual'*.

Cultural inclusion

Several projects ensured that the multicultural backgrounds of the students were respected and built on. Rochdale 2000 and Counting worked in areas with a high Asian population translating family resources into Bengali and Urdu. At Cartwright Hall, leading artworks by Asian artists were an important part of the project ArtIMP. Inspiration Africa! at the Horniman Museum used African collections to dispel stereotypical views and to foster feelings of pride and heritage in the multicultural communities it serves. Where possible African artists were chosen to work with the African artefacts and the expertise of Nigerian parents was drawn on as an important part of the project.

Pride which is passed down from generation
Round the world it goes in jubilation
In and out of countries fair
Down into each person's lair
Everyone be PROUD!

...Black History Project in Lambeth

The Lambeth Archives Black History Project employed two researchers to delve into south London archives to identify all records relating to black and Asian people. Findings were put on to a database for use by schools. A teaching pack is currently being produced which could complement English and History at Key Stages 3 and 4, and could also be used to tackle Personal, Social and Health Education (PHSE) questions. The intention is to dispel stereotypical views of black people and to foster interest and pride among local communities.

Promoting self-worth

A great many projects described how motivation, confidence, concentration and feelings of self-worth and belief have emerged among participants. One of the places where this was most evident was the Drumcroon project. The difference to students at Mere Oaks School has been described in the previous chapter but huge changes were also made at Leigh Central Primary School. Approximately 50% of the year-six children are statemented and the headteacher was anxious to find a project that was meaningful to them and would promote feelings of self-esteem and pride. They took the theme Out of this World, exploring fantasy, machines and recycling. The children designed robots, then using PhotoShop, an image manipulation programme, they built on their original designs and created 'collaged drawings'. These were later used as a basis for imaginative sculptures. The project extended into literacy where the robots also inspired creative writing.

The metal plated robot stood on ginormous feet. He started to look around the laboratory with his magnificent glowing eyes, wondering what he was going to do. He looked down at his two polished sparkly hands and saw the colourful reflection of his metal face in his shiny metal hands. He put his hands down and started to walk gingerly forward....

(Extract from Out of this World by class eight, Leigh Central Primary School. For the full version of this story visit the website www.drumcroon.org.uk)

The head teacher was astonished and delighted by the achievement of his pupils: *'You can pump and pump those basic skills into them and only get them to level two but just see what they can do on the computer with this project - it's astounding! The whole thing was a shock. It's been a delight to see... children who can be so challenging sitting in a self-controlled way - children who would have previously destroyed their work... having total and utter pride in their work.'* The class teacher Rachel Britner was impressed with the way the project also helped the children develop personal skills in many areas: *'The children may have poor communication skills but in this project they can communicate visually, it encourages all pupils no matter what their aptitude or ability. They are so on-task. We are trusting them, giving them something to do... developing their social and interpersonal skills. The standard of work has been phenomenal. This is their chance of a lifetime.'*

One of the pupils, Jared, an 11 year-old with extreme educational and behaviour difficulties, statemented at level five (complex needs) seemed to have found something meaningful and absorbing in Out of this World: *'I'll remember pretty much all of it. I feel pretty confident about computers. I'm really into art.'*

Perhaps one of the most significant things to have emerged is the awareness that museums and galleries are places that welcome all students: *'Kids were learning that galleries are accessible and that they can use cultural organisations in general. Security staff are not keeping them out, they are there to look after artworks.'* (Artist, the Whitechapel Gallery)

07

Section 7

Professional Impact

'The partnerships seemed to be an opportunity to give people a role... we all gelled really well... it was all good for professional development.'
Sue Ball, project manager, Making Connections, Leeds

Introduction

The MGEP offered enormous potential for different groups of professionals to come together, to discuss, negotiate, plan, practice, review, evaluate and spark off each other! Inevitably there were difficulties along the way but huge developments were made in understanding, respect and learning from each other.

Real partnerships: new relationships

A strength of many of the projects was the powerful and meaningful partnerships that arose, at many different levels. Due to the often complex and multi-layered nature of projects, frustration and confusion did occur, but so did mutual respect and appreciation, tolerance and support, discussion and an exchange of ideas. Projects inevitably worked best when partners were equal, when they consulted each other, listened to each other and were prepared to be flexible.

...A genuine meeting of minds in Leeds

Making Connections in Leeds Museums and Galleries had a diverse partnership including Leeds Learning Network; six schools (although the two secondary schools were forced to drop out due to timescale); Creative Partners in Education (CAPE); Artemis, the Schools' Loan Service; and Parallel Interactive, web designers. One strong feature of the project was the involvement of so many people within the museums, not just education staff, but outreach officers, curators and the registrar. The project was left deliberately open-ended and flexible. Sue Ball, a former director of media arts but now freelance, was brought in to actively manage the project. She insisted on regular meetings and working to a tight timescale.

Many people in the team had not been managed before and for some it was initially a shock, but by the end of the project most appreciated how useful it had been to have to meet deadlines and attend regular meetings - it made their contributions feel valued. Most shared Maggie Pedley's sentiments: *'I enjoyed being managed once I got over the shock of deadlines meaning something. I didn't like it at first.'* Due to Sue *'wielding a big stick'* all were focused and clear as to where the project was going and what was expected of them individually. Each partner was valued for the expertise and new perspective they could bring to the project.

...Active partners, schools and museums

Where projects were not so rigorously managed, much depended on the personality and commitment of project leaders, their relationship with partners, and clarity of vision. Many successful projects regarded schools as active partners rather than 'recipients' of the project.

It's crucial to pick the right school in the first place and have a genuine partnership. Sitting down and having dialogue with the teacher, so they are not passive recipients and have ownership. I think we have a unique relationship with the teachers.' (Tim Corum, Leeds).

At Hereford Heritage Services the project manager, Siriol Collins, worked with and consulted teachers at each stage of the project to make sure she was delivering what they wanted. This in turn was appreciated by the teachers who felt *'like consultants'*. They were also pleased to see that where they had made suggestions they were listened to - the end result was a useful and useable product.

In Devon, the project co-ordinator, *'just ran with it!'*. Ann Davey, a former teacher now working freelance, was specifically recruited for the job. Her enthusiasm and commitment meant each school received a custom-built project. She made herself available for support, advice and reassurance. This was particularly useful in an area where there is no trained education officer and where education in the 11 rural museums is usually delivered by volunteers. Ann also devised training packages for them, Working with Schools, which increased their confidence.

The feeling that expertise and ideas were being exchanged resulted in a greater awareness and respect for each others professionalism, as well as an increase in personal confidence: *'You often come up with a good idea and no one takes any notice. This meant that we shared, we were noticed... People listened to us - I feel I've made an important contribution. It's given me more confidence...'*
teacher in Brighton.

A flexibility to adapt and modify was also welcomed, on both sides: *'The objectives were agreed between the centre and schools, it's a very dynamic project - it changes all the time.'* (Drumcroon, Wigan).

Ultimately, many projects allowed teachers to feel valued and consulted, and museums had to rethink what they were offering to schools, and refocus if necessary. Both partners were able to share their expertise. Both groups understood more clearly how each operated and the constraints and opportunities that were available: *'It's changed the teachers' perceptions of us - they see us as professionals and expect us to be professional.'*

...Improving credibility, LEAs and museums

Many LEAs realised the potential of partnerships and took an active role in the projects, helping select suitable schools: *'The LEA was a partner. We were offered two schools by the LEA, those they knew would be enthusiastic about the projects. They were selected by an adviser who had links with them.'* Some LEAs ran INSET or offered assistance in using the intranet. Advisory teachers were often crucial in making sure that project planning was designed to meet the needs of the schools they were serving.

Many museums found their standing had risen by the end of the project, as in Leeds where Tim Corum, the project manager, recognised that the museum had much more credibility.

...Improving relationships, children and teachers

Teachers and their students also had the opportunity to see each other in a different light, working outside the constraints of the classroom. Teachers and students were in the same boat: *'It's a non-competitive, more relaxed environment. They see me making a mess of it too, It's confidence building... they could see me in a different light and vice versa,'* explained Christine Evans, a teacher from Brighton. This feeling was reinforced by a teacher taking part in the Dean Heritage Centre's outreach project: *'I saw the kids in a different light during this project. The relationship with the kids is key - supporting them in different ways improves relationships.'*

...Shared professionalism, in museums

Some projects involved many museum professionals, not just those working in the education department, and by doing so raised the profile of museum education generally. In Leeds the curator of archaeology became actively involved in sharing his expertise not only with the students but with his colleagues. In doing so his eyes were opened about the benefits of learning in a museum.

Hereford Heritage Services worked in partnership with, among others, Hereford Record Office. This was mutually beneficial, as Sue Hubbard, manager of the record office explained: *'Working on this project meant working with the heritage services - a trial experiment if you like... I learnt from their expertise how to work more closely with schools, asking them what they wanted... It taught us a lot... A nice example of sharing. It showed us how objects and written evidence inform each other.'*

The Museum of Liverpool Life collaborated with other colleagues in the National Museums and Galleries on Merseyside and used combined skills involving the audio-visual team, designers and marketing in order to produce a good project. Partnerships were also formed with the City Record Office, the project budget allowing the luxury of a researcher. Even the attendants were fully involved and explained to visitors the children's contribution to the gallery.

Full-scale involvement by all staff was also happening at the Brontë Parsonage Museum. The education officer met a museum attendant on the door just as a group of Bradford schoolchildren were leaving. The attendant said: *'This is good isn't it. This is what we should be doing.'* In Manchester, two of the Power Hall demonstration team found themselves reincarnated as Forgetful Fireman Fred and Engineer Eric. *'Incorporating the demonstration team into our work has been a good link... we will use them in future. There is no them and us feelings.'* (Chris Chadwick, project manager, Literacy in MSIM).

Fiona McKay, lifelong learning officer for Devon County Council, sums up the difference the project North Devon on Disk made to those involved: *'To the museum it has demonstrated what a positive role education has to play within the museums, It's possibly demonstrated to local authorities the crucial role the museums have in supporting local communities. For the volunteers themselves, it has increased skills and confidence, showing they have a part to play in delivering education.'*

...Using creative professionals

Many projects included creative professionals as their partners, often working with groups for the first time. Artists and story-tellers, poets and drama specialists introduced new ways of working with collections. *'For me - the project altered and affected the way I teach... it has added approaches I can use. Working with artists made me look at things in a different way and the content of my teaching has changed. KS3 teaching is now based on projects that come through the Schools Working With Artists Project (SWAP).'* (Secondary teacher participating in SWAP project at the Whitechapel Gallery).

Professional web designers were also used to make projects come alive online, and to bring in their own technical and creative expertise.

Explore these web sites to see very different approaches to web design:
www.clothofgold.org.uk/inAfrica
(Horniman and Cloth of Gold)
www.education.bl.uk
(Words Alive! at the British Library)
www.ncl.uk/antiquities
(Museum of Antiquities, University of Newcastle)
www.westallswar.org.uk
(Tyne & Wear Archive Service)
www.whitechapel.org.uk
(SWAP)
www.magic-carpet.org.uk
(Sussex Arts Marketing)

Research Consultants were brought in to advise on planning the learning needs and expectations of the pupils, making sure the project was directly related to the National Curriculum. Reading Museum's Loans for the New Millennium project employed an educational consultant to give extra professional support, as did the National Transport consortium Learning on the Move.

Family and community involvement

Some projects deliberately set out to attract new audiences, including families. Nottingham enlisted the help of Kate Stubbings, the basic skills programme manager from the Berridge Centre, New College, to help deliver the family learning section of its project Focus on Literacy. The intention was to help parents develop skills in literacy, in order to assist their children. Parents, carers and children worked together with staff from the museums and Berridge Centre. *It gave me insight how we could use museums, generate ideas and resources.. the parents all went away with the feeling that the castle was somewhere they could go back to,*' (Kate Stubbings).

Few families had worked with the museum before, and the education and outreach team had to frequently reconsider its position - what were they trying to do and why? *'It taught us about starting points, we asked them to tell us, we weren't limited by funds.'* (Sharon Thomas, outreach officer).

Learning new skills

Almost everyone involved with the MGEP seems to have learnt new skills. Some were deliberately targeted through INSET and other training sessions. Many projects included INSET - ICT, art, literacy, were often delivered by LEA advisers and museum staff. In North Devon, training sessions and training packs were prepared on Working with Objects and Working with Schools.

The first step in Recreating Cheshire was to hold special skill-sharing days where all participants, teachers, artists and museum educators, were invited to discuss and pool expertise and recognise each others talents: *'Teachers found the skill- sharing days really useful - they met the gallery staff and saw the potential and met the artists - it was really precious,'* (Pauline Harrison, senior art adviser, Recreating Cheshire).

Creative Connections, the project developed by the V&A and the Institute of Education provided seven teachers with an accredited course module, that aimed to give them the confidence and skills needed to achieve good practice through the use of museums and galleries as a learning resource. *'The learning is coming through in my teaching, I'm more aware of museums than I was, before it was just galleries. I'm more aware of curating issues.'* (Sally Clifton, Fortismere Secondary School).

For others just the opportunity to get out of the classroom, or museum, allowed familiar areas to be viewed with new eyes: *'I learnt a lot about Haworth and the Brontës and their novels... it was really important to take a step out of the classroom and look from a new viewpoint.'* (Alex Fellowes, Scotchman Middle School).

Most importantly, many projects were highly enjoyable. When asked what had been most valuable to her, Maggie Pedley, registrar at Leeds Museums and Galleries replied: *'The opportunity to play! Play around with the job I've been doing for 17 years, to come at it from a different angle.'*

Working through difficulties

Although the projects had a huge impact on professional development there were difficulties, most of which seemed to have been worked through, possibly bonding partnerships more securely. This is just a brief look at some of the most common problems that occurred.

...Defining roles

The workload involved in most projects was often greater than initial planning suggested. Problems occurred when it was not completely clear who was responsible for what.

Learning on the Move involved five national museums spread across the country with a considerable number of professionals at each venue trying to work together. *'There are five big museums, it was a broad remit... unrealistic expectations were a big problem,'* (Robin Clutterbuck, consultant). Initially there was some confusion as to who should be doing what - should the educational consultant be devising and delivering activities in schools, or was that the job of the museum educator? Should schools be uploading materials on to the web, or was that the responsibility of the web designers? As Chris Warren from Actis, the web designers, acknowledged: *'The original scheme didn't match reality, we had to adapt, make sensible use of time. It needed to be applied slightly differently.'* Tight management, regular meetings and flexibility did something to smooth out difficulties.

This need for clear organisation and understanding of roles was also an issue between schools and museums, particularly over 'policing': *'We did have some really difficult pupils. The situation at one school was diabolical. They said we'd have 20 children, we got 30; they said we'd have a teacher, we got no teacher. We got all the "bad boys"... they just assumed they'd benefit. If things are more organised in school it makes things easier.'* (Horniman Museum).

At Nottingham, a team of 15 freelancers were employed to deliver sessions in schools. The museum staff recognised that many of the sessions would be challenging and offered their full support: *'We talked to teachers and freelancers together, we talked to teachers after the visit, we also went in to schools to discuss things, it was a two way process.'* (Helen Crowfoot, literacy consultant).

Being sensitive to each other's situations was also crucial: *'...bringing the project into schools which are very stretched, having to bring in something that supports rather than distracts from what they are doing. In mainstream secondary schools it was an enormous challenge, without giving teachers extra grief. The way to do it properly would be to release teachers, more cross-departmental work, give the teachers a chance to incorporate it into their planning... You have to tame your own ego.'* (Tony Minnion, project co-ordinator from the Cloth of Gold, Inspiration Africa!).

...Inadequate budgets, not enough time

For many museums this was the first time they had to work with large budgets. Inexperience with bidding sometimes meant that budgets were inadequate. Materials, consultants and 'time' in general was often more expensive than anticipated: *'We needed to cover teacher's time in our bid - maybe adding £5-6000. I thought I would be giving my time free but I didn't realise it would be the same for the other two [partners].'* (Tyne & Wear).

Management time required to run the projects was also frequently under-estimated. In Walsall, the freelance co-ordinator, working with over 18 schools found that project management time had been under-estimated by 100%, resulting in personal stress. Many managers, co-ordinators and members of the project team worked much longer hours than they had originally thought would be necessary. This was not helped by considerable staff turnover. The extraordinary and unpredictable loss of staff at the New Art Gallery Walsall (all going on to better jobs following its success) and teachers stressed by moving, workload, school failure, staffing changes and illness all took their toll at Walsall.

Some projects did not enter MGEP until the second phase of funding, which resulted in shortened timescale and the extra effort that entailed.

Shelagh Hirst from Eureka's project Let's Discover! was in a slightly different situation: *'I came in as a seconded teacher much later. We didn't hear about the money... until Easter – [it was meant to start in January], so straight away the project was behind schedule. The schools were enthusiastic but there wasn't enough time - it meant when I needed the schools it was school holidays and I was unable to get the necessary feedback. We set up a virtual community to help the relationship but that didn't really work. The timing would have been better if it had started in September. We could have been more supportive.*

Other difficulties relating to timing included projects coinciding with SATs or GCSEs, or coming at a time when the LEA itself was in upheaval. The foot and mouth epidemic also affected fieldwork in some rural areas.

...Changing the ways of thinking

In spite of difficulties, the overall impact of the MGEP on professional development has been considerable. Many people, in museums, schools and other professional areas, describe how they now view the educational potential of museums very differently. Alison Mills, project manager in North Devon admits: *'It's completely changed the way I think about museum education. I was scared of it. The National Curriculum arrives. I had no staff. I spent the money buying in expertise. Once schools were here they were not doing work related to our collections or North Devon... it could have been anywhere ...I'm still a bit scared, but rather of administration and organisation rather than content... [education] is now a core part of museum work.'*

Over in Leeds, Tim Corum, is enthusiastic about the impact of the Making Connections project: *'it's changed the way we work with education... It's taught us a lot about development and project partnership... there's been an impact on so many levels, we can now sit round the table and say its been a success from top management to micro levels, a huge learning experience... It's been an enormous success - promoting the service in a contemporary, cutting edge, relevant way... the exact position we need to be seen in if we are to continue to exist.'*

Summary

Through their involvement with the projects, many professionals:

- Gained new skills, particularly in project management
- Learnt to tackle constraints such as time and money
- Learnt about working with creative professionals
- Gained respect for the expertise of other professionals
- Gained knowledge about partner institutions on many levels
- Gained improved relationships, developed through partnership working
- Gained new and fresh approaches to familiar teaching or museum topics
- Gained more confidence and self-esteem from recognised achievements
- Gained a greater appreciation of the potential of educational projects

Section 8

08

Long-term Impact

'There has been a reassessment of museum education; museums are portrayed as not just places you can visit, but centres of expertise that can be used creatively.'

Tim Corum, Leeds Museums and Galleries

Introduction

The MGEP allowed many ambitious projects to take place. Funding was generous and for many this was a wonderful opportunity to explore, experiment and reach out to new audiences. For Jim Grevatte, the project manager of Focus on Literacy at Nottingham, funding was crucial in allowing him: '*to have an objective, the freedom to achieve it, to evaluate it and have the momentum to carry on*'. Substantial funding also had other benefits. One museum manager suggests: *'The money from the DfEE [now the DfES] almost overnight changed people's perception of museums and galleries... coming from central government it had the stamp of approval.'*

When all projects have finished in March 2002, will the museums and galleries, the schools and other partners feel any long-term impact or were the projects one-off experiences? Will museums and schools feel they have achieved all they can or are resources, expertise, partnerships, commitment and enthusiasms now in place to allow projects to evolve?

Disseminating good practice

Through the MGEP changes have been made in the way people in many different areas of education now regard the potential of museum education. Many projects are being used to disseminate good practice. The Museum of Liverpool Life's Big Book, containing children's work, is being used by the literacy adviser and project manager, to demonstrate what can be achieved by working in partnership and to inspire future projects.

A greater awareness of possibilities has informed all levels from LEAs to museum attendants. As Debbie Stevens, class teacher at Woodlands Primary School, Bradford exclaimed: *'It's cascaded down into school, everyone's keen to come and have a look.'*

Many are keen to maintain partnerships with LEAs and other professionals. Closer relationships between museums and schools are also being built on. The Museum of Science and Industry in Manchester and Epping Forest District Museum, for example, have set up teacher advisory groups to ensure continuing contact and exchange of ideas.

...New posts in museums and galleries education

Some projects have ensured sustainability through the creation of new posts. At Newlyn Art Gallery the education officer post became full time. Funding also allowed the gallery to refurbish and equip a vacant room in the nearby primary school, to be used for educational activities. This project, focusing on lifelong learning, aimed to reach the 'broadest spectrum' of visitors. The Epping Forest Archaeological Access project also saw the appointment of an education assistant post; and the freelance educators employed to deliver teaching sessions in schools for Hereford Heritage Services are now permanent.

Written into planning

Many projects are now included in schools' yearly plans and teachers' Schemes of Work, recognising their value in enhancing many curriculum areas and ensuring long-term sustainability. These comments were very common: *'I've already put it into my scheme of work.'* teacher from Hereford; *and 'it's designed to fit in with existing practice.'* (Teacher, Manchester).

In Norfolk, one secondary school rewrote its Scheme of Work for year seven in order to take advantage of the resources generated by Norwich Castle Museum's 1,000 years of Norwich Castle, past, present and future. Kim Slade, class teacher at Christ Church School, London used the Horniman's Inspiration Africa! project to enhance her work on the Benin and has included it in future planning: *'I knew it would cover art, ICT and English. It absolutely delivered the National Curriculum. I intend to adapt the QCA schemes in future and use them as a framework so I can include this project.'*

Other schools have made sure that all colleagues understand the value of a museum visit and how to make the most of it. At Middle Street Primary School in Brighton: *'... we now have a visits folder in school, to help teachers plan ahead and plan together. Visits for the right time for the syllabus, well planned, work best.'* (Vanessa Dyer, class teacher).

Professional development

Some projects investigated professional practice and ways that could be developed to meet the requirements of the 21st century.

...Loan Service for the Millennium Project at Reading Museum

Reading Museum has had a loan service for 90 years. Its Loans for the New Millennium project aimed to bring the loans into the 21st century by finding what their users wanted through extensive and intensive evaluation and research. '*Evaluation and customers are the core. Obviously it was great to have 90 years of boxes behind us, but it has been new to have someone to do it for two years and write it up formally.*' (Joy McAlpine, project manager).

- Twenty-four teachers from primary and secondary schools were interviewed. The questionnaire included inquiries about access to loans (display and handling); how loans could support the curriculum; which skills were developed through using them; and the different kinds of learning taking place using objects.
- Children were also observed using the loans. Once the data was collected Focus Days were held where teachers were given the opportunity to discuss their needs.
- Children were interviewed seven to ten months after they had initially used the loans to see what impressions and memories remained.
- Self-completion questionnaires were also sent out to gauge progress and success.

The evaluation was used to develop new loans, thereby ensuring they are what teachers and pupils want and that they will continue to be used in future. A recommended strategy for the design of loans has also been developed for use by other museums. By building on their long heritage and experience, Reading Museum has laid the foundations for sustainable development based on precise knowledge of current classroom practice and has turned itself into a regional centre of excellence.

Several museums developed loan boxes, ensuring that a greater number of students benefited from using objects to enhance learning. The New Art Gallery Walsall prepared resource boxes on the theme of Portraits, containing copies of drawings and paintings from the gallery's collections, and with related documents such as letters with suggestions on how to use them. Ditchling Museum's School Loans Project redesigned its existing boxes and developed new ones on themes requested by local teachers.

The V&A and Institute of Education worked in partnership to formally research the key factors that determined how art and design teachers make effective use of museums and galleries as a learning resource; and investigated which areas of current professional development contributed to this. Research was carried out in London and the south east, involving questionnaires and focus groups. Findings suggest that the most effective way forward is through a strategic framework which will ensure that teachers, including trainees, receive regular opportunities to develop appropriate skills and knowledge in order to use museums and galleries effectively. In addition it was discovered that museum educators need to reconsider their provision of INSET and ensure content meets teachers' needs.

...Online learning

As has been already seen, many projects included websites. Some used the web to record or celebrate projects, others have ensured sustainability by making them online resources with the potential of reaching new audiences in the future.

The Recreating Cheshire website (www.salt.cheshire.org.uk/links) is specifically designed for art and design students and teachers. Although it records how the project developed, it also includes online learning resource packs - units of work written by teachers, information about museums and images of artefacts from museums' collections. There are also downloadable documents and book lists relating to the art and design curriculum. Recreating Cheshire involved four museums, ten secondary schools and ten visual artists working in a huge variety of media, to explore local industrial heritage themes on salt, cotton, crafts and canals.

A further exciting example of an online resource is Accessart (www.accessart.org.uk) from which two MGEP projects can be accessed. I See What You Mean, developed in partnership between the Fitzwilliam Museum and Kettles Yard, facilitates teaching of language and literacy through works of art. Accessart disseminates the best of arts education practice in an active and engaging way with innovative online workshops and arts - based educational activities for use by teachers and students of all ages. Workshops included drawing, sculpture, photography, looking and thinking.

In the Sussex Arts Marketing project Magic Carpet seven partner museums combined in the south east to produce a useful resource for primary, secondary, and special schools, and further education colleges. This site is full of information for teachers planning a visit to a museum or gallery and contains information on nine museums, (opening times, collections, who to contact); and links to other useful websites. It also examines the wider impact by looking at requirements of the National Curriculum and QCA schemes and how to meet them, as well as ways of developing skills and enhancing professional development. Case studies pull all the information together. (www.magic-carpet.org.uk).

(A full list of all websites is available in Appendix 2).

Resources

...Written resources

Many projects produced resource packs, often to be used in conjunction with a museum visit. Some were provided free to all schools in the LEA, such as Word Power in the Power Hall and Westall's War. Others offered suggestions for follow-up work back in school, usually closely linked to the National Curriculum. The Brontë Parsonage Museum's pack The Door to Wuthering Heights offers activities designed to enhance English at Key Stage 3.

...Resources by schools for schools

Some schools have produced resources that are suitable for use by other schools, again disseminating good practice.

Nick Braunch from Buxton Community School worked with Buxton Museum and Art Gallery to prepare a package of materials that could be used with other schools, working in science and media studies. The focus is on creativity and problem-solving, and includes sometimes neglected areas such as geology and archaeology.

Brighton & Hove Museums 'A Whole School Strategy for Museum Learning' worked in partnership with eight schools to raise awareness of the value of museum learning and developed museum sessions which would correspond to the demands of the National Curriculum. It includes training opportunities for learning support assistants and parent helpers and is intended to be a useful tool for museums/school partnerships.

The videos produced by students taking part in the Whitechapel Gallery's Schools With Artists Project, described in section four, aimed to encourage students to view art more favourably by using students as presenters and interpreters in the gallery.

...Investing in equipment

Many museums benefited from new equipment allowing the initial project to be developed and extended into the future. Buxton Museum's small grant enabled the purchase of the museum's first and only computer.

The Drumcroon Wigan Website project was designed to be sustainable from the outset. By buying moveable technology the centre ensured that the project could be used over and over again, moving it around to different schools as requested. Cartwright Hall in Bradford was also anxious to develop a permanent resource. ArtIMP, a multimedia pod, will be placed in the galleries, available on site to those who wish to use it. The animation suite in Wolverhampton Art Gallery is also a valuable and permanent feature.

Issues

There are serious concerns about the sustainability of some projects when the funding and support ceases. Many projects were managed by freelance co-ordiantors. Their contracts have now finished - is there someone in place to take over from them? Will the momentum keep going? Inevitably there has also been considerable staff turnover, with the danger of some projects simply fizzling out. The absence of long-term funding also poses concerns - some projects paid or contributed towards transport costs- if they are no longer able to do this will schools still be able to come in?

Janita Bagshaw, head of education and visitor services for Brighton Museum and Art Gallery expresses her fears: *'Something needs to happen structurally, or in five to ten years' time we'll be back in square one. Why aren't the training courses for teachers - PGCE - using us? Museum learning needs to be a statutory part of training... We need enthusiastic museums champion/co-ordinators in every school... we need advisers for museums and galleries, like LEA subject advisers.'*

However, many projects, such as Making Connections in Leeds, have grown strong through clear structure and planning, excellent partnerships, good management, flexibility and clarity of vision and are destined to continue. Tim Corum reflects on the MGEP and looks forward to the future: *'We shall have similar projects every year. The education officer is now taking over from Sue [the freelance co-ordinator] ...we will develop other areas - chat rooms, discussion rooms. The key is to retain Sue's ability, maintain the partnerships, work in a discursive way based around [but not exclusively], museums and galleries. We'll continue to develop online activities delivered by people such as artists and teachers. We'll learn lessons, develop partnerships, ferment a bit.'*

09

Section 9

Developing effective projects

What is a project?

The MGEP involved 65 projects. We all use the word 'project', but how many of us stop to think about what it actually means? A project is a sequence of activities that are managed in order to achieve a defined change by a specific time, and often within a budget. Projects have a beginning and an end – there is no such thing as an ongoing project.

All projects can be divided into a sequence of steps that need to be managed – it is helpful to compare these to the stages of a car journey:

Developing your idea – what is the purpose of your journey?

Identifying your partners – who would you like to travel with?

Agreeing your aims – what is your destination and what time do you need to arrive?

Planning – what route will you take, who will drive and how much can you spend on fuel?

Delivering – you will need to keep to the route and keep up your required speed.

Adjusting – you may need to make changes to your route because of road closures or to avoid traffic jams.

Completing – you arrive at your destination at the time planned.

Evaluating – you take stock of your decisions so that you can plan future journeys more effectively. Evaluation is often seen as something that is done at the end of a project to measure success – this is important, but evaluation can play a vital role throughout the project.

Developing and testing ideas

All projects start with an initial idea or number of ideas. Develop the ideas by holding brainstorming sessions and consultation meetings with colleagues, potential partners and other stakeholders. Look for examples of similar initiatives elsewhere – what can you learn from their experience?

Test the quality of the idea by asking questions about it such as:

- why do you want to do it and what do you want to achieve?
- how does it fit in with the aims and objectives of your school/museum?
- how might it relate to the aims and objectives of potential partners?
- how does it fit in to your long-term programme of work?
- how will it meet the learning needs of pupils and other participants?
- how relevant is it to the National Curriculum?
- how relevant, accessible and appealing will it be to pupils and other participants?
- how innovative is the idea?
- what are the health and safety issues involved?
- how much will it cost?
- who are your potential partners?
- are the required resources (people, time, money, space and equipment) available?
- how attractive will it be to potential funders?
- do you and your potential partners have the necessary skills and experience?
- what are the main risks – what might go wrong?
- what are the main internal and external threats?
- how sustainable is it?

Sustainability is a key issue – although by definition projects have a defined end, this does not mean that projects can not have long-term benefits – indeed, successful projects often have elements that can be integrated into future work and can help you to access further funding. This is more than just repeating the project – think about how you might build on it and how you might work with project partners in new ways in the future.

Working in partnership

Working in partnership can have huge benefits – it can provide access to new ideas, expertise and experience, and can open up opportunities for funding. It can provide a network of useful contacts for the future and make connections with new sections of the community. In short, working together enables you to achieve more than working alone.

Partnerships are often stimulating and rewarding, but successful partnerships are not quick or easy to establish and it is important to recognise how much time and effort this aspect of the project is likely to demand.

The term partnership is widely used, but it should not be used lightly. It is often used to describe an arrangement where two or more organisations are working together on a project. However, using the term partnership can lead to an expectation that all partners should have equal influence (eg in decision-making), which is often not the case. This may not be a problem in many cases, but it is worth bearing in mind – partnerships can break down if an organisation feels exploited or overwhelmed by a more powerful partner in the project.

Partnerships are much more likely to succeed if all partners feel active and valued, and are not simply consulted or are passively in receipt of a service.

Successful partnerships

- Are of benefit to all partners – before approaching a potential partner ask yourself why they should want to be involved and be prepared to spell out the benefits. Partners should not feel coerced into collaborating, and the perceived benefits must outweigh the time and financial commitments required.
- Have enough time to become established – do not try to rush a partnership and make sure your project has a long enough lead-in time to allow relationships to develop.
- Are based on shared understanding and trust – make sure that partners understand the nature of each organisation, how they work and what their motives are in taking part in the project. It is vital that each partner is aware of the project aims and objectives, and understands its own role in the project, what is expected of it and how it will work with fellow partners.
- Involve all partners in planning and decision-making from an early stage – it is important to establish a sense of shared ownership and responsibility.
- Are flexible – circumstances can change in projects, especially long-term projects, so it is important that partners are able to respond positively to change.
- Are involved in realistic projects – make sure that your project is achievable and adequately resourced, and does not put unexpected or undue pressures on partners.
- Depend on effective communication – good systems of communication are vital to all projects but are especially important when more than one organisation is involved. Poor communication can quickly lead to a lack of trust and resentment. Transparency and honesty are essential.
- Require strong leadership – this is especially important if a number of partners are involved. It is vital that a democratic approach to decision-making is adopted and that there is a commitment to acknowledging problems and resolving them through consultation and consensus.
- Are based on mutual respect – participating organisations need to have trust in the ability of partners to deliver on time and to the required standards.
- Have the potential for future collaboration – there is likely to be shared interests and ways of working that open up possibilities for further joint initiatives.

The project team

Once you have your partners on board you can put together your project team – this should be representative of the partners involved but should not be too large (say up to eight people). Roles should be clearly defined and a project manager identified.

The team will need to meet regularly throughout the project and will be responsible, under the leadership of the project manager, for agreeing project aims, defining objectives, putting together the project plan, allocating resources, and directing the delivery, monitoring and evaluation of the project.

Planning the project

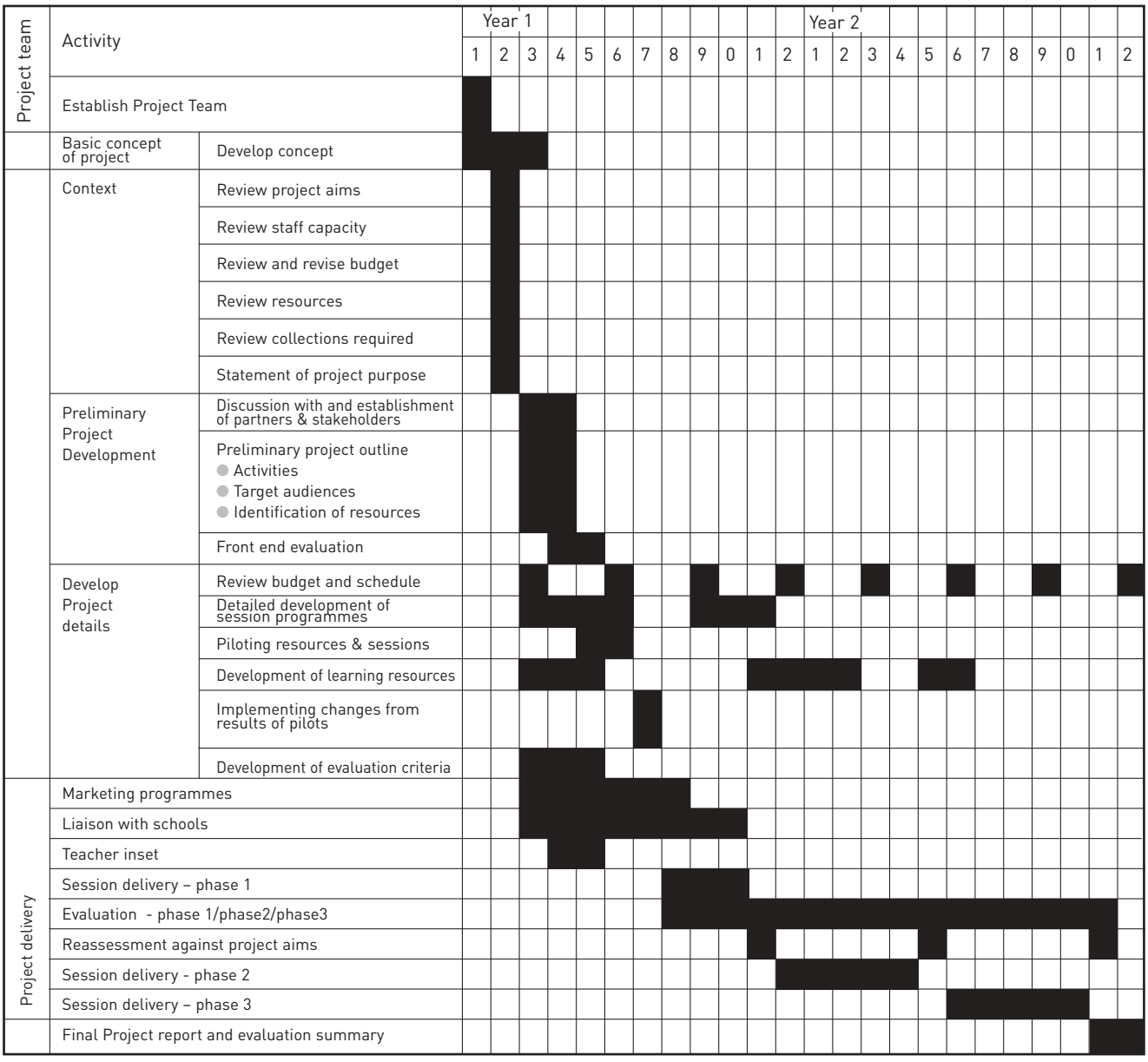
The first step in planning a project is to identify its aims – what you wish to achieve through the project. These should be clearly communicated to everyone involved to achieve a shared vision and sense of direction. You will need to think about the project's outcomes (the difference and benefits the project will make) and its outputs (what the project produces or delivers). Effective planning is critical to success, and sufficient time and resources should be allowed for this stage.

Objectives – what you intend to do to achieve your aims – can then be produced. You will need to take into account and consult colleagues and project partners on the availability of staff and their skills, and any training needs highlighted by the project, and the availability of other resources.

Once objectives have been agreed, the project can be costed. This is a crucial stage that requires thorough research. New projects are often under-costed, perhaps to emphasise their value for money, but this invariably leads to problems later in the project.

You will also need to develop a set of performance indicators that specify what you want to achieve in terms of time, cost and quality so that you can monitor progress during the project. They should be realistic and measurable, and ideally prioritised to enable effective decision-making during the project. For example, changes in circumstances in the project may require you to increase spending in order to meet deadlines, or to compromise on quality if costs increase. Your scheme of evaluation should be considered and sufficient resources allocated.

The next step is to produce a project plan – a document specifying the tasks that need to be done, who will do them, and when they will need to start and finish. Gantt charts are often used as a way of presenting a project plan – these set out tasks in the project on a bar chart across a time scale. They are very useful as they show the whole plan graphically so that milestones, concurrent activities and interdependencies between tasks can easily be seen, and progress can be tracked quickly.



The Gantt chart fulfils a number of purposes. It can be used to:

- schedule activities
- communicate the project plan to others
- mark milestones in the project sequence
- determine the minimum project duration, given that some resources may be limited
- record resources and staff responsibilities
- enable decisions for action to be taken at the right time and in the right order
- monitor progress against planned performance of activities.

Delivering the project

Delivering the project is about putting your plan into action and keeping it on track. You will need to monitor progress on an ongoing basis and make adjustments to the project plan accordingly. This will require thorough and systematic record keeping and collection of information about what has been achieved by when (using your project plan as a check) and how much money has been spent. Make sure that progress is effectively communicated to all partners and that the achievements of staff, for example in meeting project milestones, are acknowledged.

If changes to the project plan are needed, weigh up all the options and think about their likely effect on your project objectives before you make a decision. Make sure that any changes to the project plan are quickly communicated to the whole project team and those involved in delivering the relevant aspects of the project.

It is important to mark the completion of the project – to review what has been achieved and to thank everyone involved for their contribution. This is often neglected due to the pressures of other work.

Evaluation

Evaluation can, and ideally should, be carried out throughout the life of a project and time for it needs to be built in to the project plan.

Before you begin to evaluate you will need to decide what you want to find out – this will determine when and how you carry out the evaluation. You should think about why you want to find out the information – there is no point in spending time and money on evaluation if you are not prepared to act on it. You will also need to consider how the results of the evaluation will be used and who will see them – this will influence how you present your findings. Remember that evaluation is a means to an end, not an end in itself.

Evaluation can be carried out before, during and after the project.

Evaluation before the project – front-end evaluation or preliminary research – can tell you whether your proposed project is likely to appeal to potential participants and whether you are on the right track. It can tell you what they already know or feel about the subjects you plan to cover and what they think about your general aims and ideas. Evaluation at this stage is probably more important than at any other point in a project – as it takes place at such an early stage, it

ensures that you have time to make adjustments to the scope and content of the project before investing large sums of money in it.

If you would like to measure impact or change as a result of the project, you will need to carry out some *baseline* evaluation before the project begins. It is important to establish what the current position is so that the change can be measured. For example, if you wish to assess how participating in an activity changes the attitudes or skills of pupils, you will need to know what their attitudes and skills are before the activity.

Evaluation **during** the project – *formative* evaluation – can tell you whether activities, publications, exhibits, text, images etc will work and how you need to improve them. It is vital to allow adequate time for formative evaluation as it involves trial and error and ideally should be repeated until you are certain that the changes will work.

Evaluation at the completion or **after** the project – *summative* evaluation – can tell you whether the project has achieved it aims (its outcomes and outputs), and to what extent it has been effectively and efficiently managed. This is the most common form of evaluation, but is not necessarily the most useful as it takes place when it is usually too late to make any changes. The findings of summative evaluation can be very useful securing internal and external support, and can inform future projects.

There are a number of evaluation methods – these can be qualitative (ie they provide data in the form of attitudes, feelings, perceptions or behaviour) or quantitative (ie they provide numerical data that can be analysed statistically).

Methods of evaluation:

- *Observation* – this involves watching participants and recording what they do or say. This can provide useful information about behaviour, but it does not tell you why people behaved in a certain way, what they were thinking or feeling, or what they learnt.

- *Interviews* – ideally interviews should be structured (ie in a questionnaire format or based on a set of predetermined questions) to enable comparison and analysis. Questions can be a mixture of closed questions (and so can be analysed statistically) and open questions (which can reveal opinions and feelings etc). Interviews enable the questioner to ask for clarification or expansion, although care must be taken not to influence responses.

- *Focus groups* – these offer the opportunity to explore issues in depth and can provide valuable qualitative data, although it is only possible to consult a small number of people. Focus groups should ideally be made up of around eight to ten people and should not last longer than 60 – 90 minutes. The discussion should not be led by anyone involved with the project as this could influence how questions are asked or what people are prepared to say.

- *Self-completion questionnaires* – these are often used because they are seen as less time-consuming and less expensive than interview-based evaluation. The main disadvantage of self-completion questionnaires is that they usually have a very poor response rate, often no more than 10%. There is also a risk of the sample being self-selecting – the people who choose to reply may hold particularly strong views or may simply enjoy completing questionnaires. It is important to keep the questionnaire as short as possible and make sure that it is clear and easy to use.

- *Products* - reviewing the work produced during projects such as art work, creative writing, drama or role play- can provide evidence of knowledge, skills, or attitudes.

Choosing which evaluation method to use

The choice of methods is dependent on the objectives of the evaluation. Once you have decided what you want to find out about, then you can decide how to find it out. A combination of methods is generally useful, and each will be tailor-made to suit your own situation. Limit what you want to do, as it is not difficult to gather data, but is more difficult to analyse and interpret what you have collected. You can be creative in the way in which you select, design and use evaluation methods the most difficult think is to focus the evaluation objectives.

Where to go next

If you are interested in working in partnership with museums or galleries or schools and LEAs you could:

- Contact your local museum – your local library will have information on museums in your area.
- Speak to the appropriate LEA advisers or inspectors – they may have experience of working with museums and may have useful contacts, or may be able to help you develop your ideas.
- Visit the 24 hour museum at www.24hourmuseum.org.uk – this has a section aimed at teachers and is the gateway to over 2,500 museums and heritage attractions in the UK.
- Visit Museumnet at www.museums.co.uk to search for museums by name or region.
- Contact the appropriate LEA advisers or inspectors who will explain the educational context and needs of schools, and will be able to suggest relevant partners.
- Contact local authorities for details of education and community initiatives like Education Action Zones.
- Look at the Group for Education in Museums (GEM) newsletter and Journal www.gem.org.uk and the National Association of Gallery Education (engage) newsletters info@engage.

Further reading

Lawrie, A, *The Complete Guide to Creating and Managing New Projects*, Directory of Social Change, 1996

Lewis, J, *Fundamentals of Project Management*, Amacom, 1997

Michael, N and Burton, C, *Practical Guide to Project Planning*, Kogan Page, 1994

Appendix 1 List of DfES MGEP Projects

24 Hour Museum
Arts Exchange Education (Cambridge)
The Beacon (Whitehaven)
Bolton Museums and Art Gallery, Arts and the Under Fives – Unlocking the Creative Potential of Young Children
Brighton and Hove Museums – Developing Whole School Strategy for Museum Learning
British Library - Words Alive!
Bronte Parsonage Museum - The Door to Wuthering Heights
Buxton Museum and Art Gallery
Cartwright Hall Art Gallery, Bradford MBC – Art Interactive Multimedia Project
Cheshire CC – Recreating Cheshire
Chiltern Open Air Museum - Challenge Projects
Courtauld Institute of Art
Dean Heritage Centre - Education Project
Ditchling Museum – Museum Loan Boxes
Dorset County Museum, The Dorset Schools and Museums
Drumcroon, Wigan Website Project
Dulwich Picture Gallery - Does Art Make a Difference?
Epping Forest District Museum - Archaeological Access Project
ETS Birmingham – Birmingham Squared
Eureka! Museum for Children – Lets Discover!
Exeter CC – Art Access Project
Fleet Air Arm Museum - Access to Rural Schools
The Football Museum (Preston)
Harris Museum and Art Gallery – Digital History for Preston Schools
Herefordshire – Museum Education Resources in Rural Schools in Herefordshire
Hertfordshire CC – Hertfordshire Archives and Local Studies
The Horniman Museum and the Cloth of Gold – Inspiration Africa!
Kettle's Yard and Fitzwilliam Museum – I See What You Mean
The Kids Club Network
Killhope Lead Mining Museum - Outreach programme
Lambeth Archives - Black History Project
LB Bromley – Keeping Reading
Leeds CC – Making Connections
Museum of Antiquities, University of Newcastle upon Tyne and Blyth Neon.Net - Reticulum Project
Museum of Liverpool Life - Bevington Street
Museum of London - Roman Boxes for Schools
Museum of North Devon – North Devon on Disk
Museum of Science and Industry in Manchester - Literacy Project
Museums in Lancashire - Big Books Literacy Scheme and Museum Objects
National Tramway Museum (and partners) - Learning on the Move
Newlyn Art Gallery – Developing an Education Programme
North Tyneside Museums – Education Liaison and Development
Nottingham City Museums - Focus on Literacy
Norwich Castle – 1000 Years of Norwich Castle, Its History, Present and Future
The Old Operating Theatre Museum and Herb Garret
Oldham Museum and Art Gallery
Park High School – Virtual Doorway to a Reality of Opportunity
Reading – Loan Service for the Millennium
Rochdale Art Gallery- Rochdale 2000 and Counting
Rotherham Museum - Developing Museum Loans
Sandwell Museums Service – Home Front in Sandwell
Science Museum/ Hackney Museum - Supporting Science and Numeracy in Hackney Museums
Southampton CC – Medieval Realms Project
Study Gallery, Poole
Sussex Arts Marketing – ARTpackeED-online
Tiverton and Mid Devon Museum – Virtual Victorians
Tyne & Wear Archives - Robert Westall's War
Tyne & Wear Museums – Journey Project
V&A/Institute of Education
Walsall - Entitlement Project
Whitechapel Art Gallery – Schools with Artist Project
Wiltshire Archaeological and Natural History Society (Devizies Museum)
Wingfields Arts
Wolverhampton Art Gallery – Creation Animation Suite Project
Yorkshire Craft Centre

Appendix 2 Project information, contacts and resources

Access Art, Cambridge (includes the Kettles Yard, Fitzwilliam Museum project I See What You Mean)
www.accessart.org.uk/index.html

Birmingham Squared
www.birmingham2.com

Brighton & Hove Museums: Developing Whole School Strategy for Museum Learning
Schools and Museum Learning Pack, available from: Education Officer, Brighton and Hove Museums Education Service, 4-5 Pavilion Buildings, Brighton BN1 1EE

Bronte Parsonage Museum: The Door to Wuthering Heights
Key Stage 3/4 Resource Pack for Students Visiting the Bronte Parsonage Museum available from: bronte@bronte.prestel.co.uk tel: 01535 642323

Bolton Museum & Art Gallery: Arts and the Under Fives - Unlocking the Creative Potential of Young Children
www.bolton.gov.uk/artsinregeneration/index.htm

British Library: Words Alive!
www.education.bl.uk

Campaign for Museums
http://www.24hourmuseum.org.uk/ (resources - curriculum navigator)

Cartwright Hall, Bradford: ArtIMP
ArtIMP Teacher's pack Key Stage 2 from: Education Team, Cartwright Hall Gallery, Lister Park, Bradford BD9 4NS.
Costs: £4, postage and package 50p per copy
www.bradford.gov.uk/artimp/

Cheshire County Council: Recreating Cheshire
www.salt.cheshire.org.uk/links/recreate-cheshire/

CLMG: Campaign for Learning through Museums and Galleries
www.clmg.org.uk (information on many of the projects)

Dean Heritage Centre Education Project
www.dean-heritage.demon.co.uk

Devizes Museum: Local Studies
www.wiltshireheritage.org.uk

Dorset County Council
www.dorset-cc.gov.uk/

Drumcroon: Wigan Website project
www.drumcroon.org.uk/homr.htm

Dulwich Picture Gallery: Does Art Make a Difference?
www.dulwichpicturegal.org.uk

Epping Forest District Museum: Archaeological Access Project
www.eppingforestdistrictmuseum.org.uk

Eureka! Museum for Children: Lets Discover!
http://www.letsdiscover.org.uk

Exeter Museum and Art Gallery: Art's Access Project - Realise
www.telematics.ex.ac.uk/molli/realise

Fleet Air Arm Museum: Rural Schools Access
www.fleetairarm.com

Harris Museum and Art Gallery: Digital History for Preston Schools
www.followtheyarn.org.uk

Hertfordshire Archives and Local Studies: The Victorians Online Investigation into Life Hertfordshire
www.thegrid.org.uk/learning/hals/victorians.htm

Hereford Heritage Services: Loan boxes and handling sessions
Further information contact: Molly Blake, Herefordshire Heritage Services, Hereford Museum and Art Gallery, Broad Street, Hereford HR4 9AU

Horniman Museum and Cloth of Gold: Inspiration Africa!
www.clothofgold.org.uk/inafrica/

Kettle's Yard & Fitzwilliam Museum: I see What You Mean
www.accessart.co.uk

Killhope Lead Mining museum, Durham: Outreach Project
www.durham.gov.uk/killhope

Leeds City Council: Making Connections
www.leedslearning.net/makingconnections

Museum of Antiquities, University of Newcastle upon Tyne and Blyth Neon.net: The Reticulum Project
http://museums.ncl.ac.uk/reticulum/

Museum of North Devon: North Devon on Disk - Learning Links
www.ex.ac.uk/northdevonondisk

Museum of Science and Industry in Manchester: Literacy Project
Word Power in the Power Hall: KS 2Literacy packs available from: The Administrator, The Learning Centre, the Museum of Science and Industry in Manchester, Liverpool Road, Castlefield, Manchester M3 4FP
www.msim.org.uk

National Tramway Museum: Learning on the Move
www.learningonthemove.co.uk

Newlyn Art Gallery: Development of Education Services
www.newlynartgallery.co.uk

Norfolk Museum Service: 1,000 years of Norwich Castle - its History, Present and Future
www.norfolk.gov.uk/defaultframe1.htm

Nottingham City Museums: Focus on Literacy
Education Packs Medieval Realms, Environmental Science - a day of exploration and discovery at Wollaton Hall, and Ways of Seeing available from Education and Access Team, Castle Museum, Nottingham NG1 6EL

Reading Museums Service: Loan services for the Millennium
www.readingmuseum.org.uk

Rochdale 2000 and Counting, resources on numeracy
artgallery@rochdale.gov.uk

Science Museum: Supporting Science and Numeracy in Hackney Schools
www.sciencemuseum.org.uk

Southampton City Council: Medieval Realms Project
www.southampton.gov.uk/education/

Sussex Arts Marketing: Magic Carpet
www.magic-carpet.org.uk

The Old Operating Theatre Museum and Herb Garret
www.medicalmuseums.org/museums/oot.htm

Tiverton Museum of Mid Devon Life: Virtual Victorians
http://telematics.ex.ac.uk/virvic/welcome.html

Tyne and Wear Archives Service: Westall's War
Westall's War: 01.05.1941: A Resource Pack for Teachers of History and English
Free, P&P £5
www.westallswar.org.uk

Whitechapel Art Gallery: Schools with Artists Project (SWAP)
www.whitechapel.org.uk

Wolverhampton Arts & Museum Service: Creation Animation Suite Project
www.scit.wlv.ac.uk/university/sles/gallery/web_page/creation_what.htm

Resources and information correct at time of going to print

Appendix 3 Glossary

BECTa	British Educational Communications and Technology agency http://www.becta.org.uk
CLMG	Campaign for Learning through Museums and Galleries, a consortium of museum and gallery organisations, that has championed the cause of learning in and through museums, CLMG provided support officers for MGEP projects.
Citizenship	Introduced in 2002 as a statutory requirement of the National Curriculum, covering a framework to help pupils become informed, thoughtful and responsible citizens
Cloze	The exercise of supplying a word that has been omitted from a passage as a test of readability or comprehension
Core curriculum	Maths, English and Science make up the core curriculum
DfES	Department for Education & Skills, formerly Department for Education & Employment
Differentiate	To be aware of different educational needs of group/class and provide methods and activities that are appropriate
DT	Design and Technology, a foundation subject in the National Curriculum
EAZ	Education Action Zone; currently around 99 in designated areas, designed to support groups of schools ranging from,15-25 and their partners in deprived urban and rural areas to ensure that children have a chance to succeed
Enhancement	Beyond what is a statutory requirement in the National Curriculum
Evaluation	The assessment of a project in relation to its objectives; a judgement about the value of the achievements of a project. Evaluation can take place at the end if a project (summative evaluation), but can also take place during the project (formative evaluation) to test whether the developing ideas or plans for activities, exhibits, texts, etc will work. The preliminary research prior to the beginning of a project is also sometimes called evaluation (front-end evaluation).
engage	National Association of Gallery Education which promotes understanding and enjoyment of the visual arts through gallery education 1 Herball Hill, London EC1R 5EF info@engage.org
Foundation subjects	Non-core subjects in the National Curriculum
GCSE	General Certificate of Secondary Education
GEM	Group for Education in Museums, promotes The importance of learning through museums and galleries www.gem.org.uk
GNVQ	General National Vocational Qualification
ICT	Information Communication Technology
Inclusion	Providing effective learning opportunities for all pupils, including meeting the needs of specific groups and individuals
INSET	In service education and training with reference to teachers
Key Stage	National Curriculum is organised into four key stages, based on year groups: KS1 5-7 year-olds KS2 7-11 Year-olds KS3 11-14 year-olds KS4 14 -16 year-olds
MA	Museums Association; the professional organisation representing Museums and Galleries in Great Britain www.museumsassociation.org

MGEP	Museums and Galleries Education Programme; phase one launched in 1999-2002 for museums and galleries to explore learning in new and exciting ways
National Curriculum	Applies to pupils of compulsory school age (five-16) It sets out programmes of study and attainment targets for each key stage.
NLS	National Literacy Strategy; provides a framework for teaching literacy from Reception to year six which all Primary schools must follow; recently implemented into year seven for KS3
NNS	National Numeracy Strategy; provides a yearly framework for teaching maths from Reception to year six which all primary schools must follow
New Technologies	Broadly refers to information and communication technologies and includes internet, email, world wide web, digitisation and video
Partner	Individual or group which had equal sharing in the development, running and evaluation of a project
PSHE	Personal, social and health education. Non-statutory guidelines for teaching this area is provided in the National Curriculum
QCA	Qualifications & Curriculum Authority. Provides exemplar Schemes of Work in each curriculum subject www.qca.org.uk
Re:source	The Council for Museums, Archives and Libraries, a strategic agency working with and on behalf of museums, archives and libraries www.resource.gov.uk
Resource pack	Collection of information/activities designed to enhance work done in museum/gallery or as an integral source of information for a project
Statement of Special Educational needs	A statement of a child's special education needs, these will be based on specific individual needs, and will range from level one to five (most complex) a legal statement that is reviewed annually
Summer School	Literacy workshops designed for children in years six/seven who have not yet reached level four in English. Operate during the summer holiday
Sustainability	Not simply to prolong, support or maintain a project, but to integrate the project themes and issues into the mainstream provision of the organisation

Appendix 4 Illustrations

Cover — Left: Christ Church Primary School, Perry Vale, London
Part of the Inspiration Africa! Project at the Horniman Museum

Right: Allerton Primary School, ArtIMP Project at Cartwright Hall
Photograph by Tim Smith

Page 4 — Supporting literacy through the Words Alive! Project at the British Library, Photograph by Chris Lee

Page 5 — Fortismere School at the V&A, part of the Creative Connections Project

Page 7 — Nottingham City Museums: Summer School, part of the Focus on Literacy Project

Page 8 — Top: Fortismere School at the V&A, part of the Creative Connections Project

Top middle: Holme Lacey School, Herefordshire

Bottom middle: Whitecross Secondary School taking part in the water wheel challenge at Dean Heritage Centre

Bottom: Reading Museum's Loan Service for the Millennium

Page 9 — Left: The Horniman Museum Inspiration Africa! Project
top to bottom:
Shona headrest, Horniman Museum
Brent Knoll School, Forest Hill, London
Drawings of the Shona headrest by Brent Knoll School

Right: The Bradford ArtIMP Project at Cartright Hall
The Bell Metal Lamp
Digital images by Usher Primary School, Bradford

Page 12 — Word Power at The Museum of Science and Industry in Manchester
Children's drawing, St Anne's Roman Catholic School, St Helens

Page 13 — Pond dipping at Nottingham City Museums' Focus on Literacy Project

Page 14 — Resources from the Westall's War Project,
Tyne and Wear Archives Service

Page 15 — There was a scary scene with a branch banging on the window...
Woodcut illustrating a scene from Wuthering Heights, the Bronte Parsonage Museum, The Door to Wuthering Heights Project

Page 16 — Resources for numeracy from the Rochdale 2000 and Counting Project

Page 17 — Science workshops with Berger School, part of the Science Museum and Hackney Museum Supporting Science and Numeracy in Hackney Schools Project

Page 19 — Learning from Objects, Holme Lacy School, Herefordshire – Museum Education Resources in Rural Schools in Herefordshire Project

Page 20/21 — Sculptures from natural materials, part of the Expressive Arts Environment and Sustainability project with Whitecross Secondary School, Dean Heritage Centre, Education Project

Page 22 — Work from Laycock Primary School, inspired by 'Mughal', Silk textile dyes and hand painted silk by Sarbit Natt, ArtIMP at Cartwright Hall, Bradford Photograph by Tim Smith

Page 23 — Elephant, Museum of North Devon, North Devon on Disk Project

St Peter's Church of England School, Exeter building radar towers and testing them to destruction, Fleet Air Arm Museum

Bevington Street 1912, Liverpool (Courtesy of Liverpool Record Office, Liverpool Libraries) the Museum of Liverpool Life Bevington Street Project

Page 24 — Ellie Mae writes about Bevington Street in the past, Museum of Liverpool Life, Bevington Street Project

Page 26 — Self portrait by Joe, Mere Oaks Schools, for theDrumcroon,
Wigan Website Project

Page 28 — Virtual banner Images created by participants for the Inspiration Africa Project! at the Horniman Museum
Figure created by Christ Church Primary School, the character sits on top of the huge 'Pride' mask

Virtual banner created by schools participating in the Inspiration Africa! Project at the Horniman Museum
Creative responses to the Inspiration Africa! Project, Horniman Museum

Page 29 — Images from the Reticulum website
Left: Queen Boudicca
Right: Claudius himself leading an army of four Legions
Bottom right: Julius Caesar

Page 31 — Left: Christ Church Primary School, Perry Vale, London

Right: Designs from the 'Dream Tram' project by Nightingale Junior School, Derby working with the National Tramway Museum as part of the Learning on the Move Project

Page 32 — Reaching out to small rural schools, a whole school photograph, Holme Lacy School, Herefordshire – Museum Education Resources in Rural Schools in Herefordshire Project

Page 33 — Top left: Courtauld Institute of Art
Sign interpreted session in the gallery

Bottom left: Using digital art to enhance formal education at Wolverhampton Art Gallery. Creation Animation Suite
Models by Penn Fields School

Right: A student from Orchard Lodge Resource Centre exploring ideas of conflict at Dulwich Picture Gallery, part of the Does Art Make a Difference? Project . The evaluation from one of the students.

Page 34 — Left: Igele the largest mask in Africa, made very occasionally to commemorate special events, from the Inspiration Africa! Project at the Horniman Museum

Right: Robots made by Leigh Central Primary School for Out of This World, Drumcroon, Wigan Website Project

Page 36 — Top left and right: Children and Parents participating in science workshops at the Science Museum and Hackney Museum, Supporting Science and Numeracy in Hackney Schools Project

Right: Adult print workshop at Newlyn Art Gallery, part of the Education Programme

Page 38 — Visiting the Imax cinema at the Science Museum to encourage parents' involvement in learning, part of the Science Museum and Hackney Museum Supporting Science and Numeracy in Hackney Schools Project

Page 40 — Left: Family learning at The Berridge Centre, part of the Focus on Literacy Project, Nottingham City Museums

Right: Resources Pack from the Westall's War project, Tyne and Wear Archives Service

Page 43 — Allerton Primary School, ArtIMP Project at Cartwright Hall
Photograph by Tim Smith

Page 44 — Allerton Primary School, ArtIMP Project atCartwright Hall
Photograph by Tim Smith

Lifelong learning at the Newlyn Art Gallery, part of the Education Programme

Page 46 — Family learning at The Berridge Centre, part of the Focus on Literacy Project, Nottingham City Museums

Page 48 — ArtIMP Project at Cartwright Hall

Page 49 — Museum of North Devon, North Devon on Disk Project

Page 50 — Family learning at The Berridge Centre, part of the Focus on Literacy Project, Nottingham City Museums

department for
education and skills
creating opportunity, releasing potential, achieving excellence

RCMG
Research Centre for
Museums and Galleries

University of
Leicester

LEARNING THROUGH CULTURE

The DfES Museums and Galleries Education Programme: a guide to good practice