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breaking boundaries

Eileen Adams

the architecture centre

Foreword by The Rt. Hon. Alan Howarth, CBE, MP

Architecture should concern everyone, for it powerfully determines the environment in which we live. The Government supports the development of local and regional architecture centres because they can encourage the involvement and understanding of ordinary people in architecture and planning issues.

But people often ask: "What sort of things does an architecture centre do ?" Here is part of the answer. Through the Sight Specific residency programme, the Kent Architecture Centre has created opportunities for artists, designers and teachers to work together to develop a programme of architecture studies in Kent schools. It is an initiative that encourages artists and architects to go into schools, not just to talk about their professions, but to work with pupils. This can help their own professional development but, more importantly, it brings their skills and thinking directly to the young people, bringing a live element to their learning and to the development of their abilities in critical study and design. This collaboration with creative people opens up exciting opportunities for young people.

I saw an early stage of the programme when (as Minister for the Arts) I visited Hextable school in 1998. I was impressed by the enthusiasm and commitment of the visiting experts and how they drew an equally enthusiastic response from the children and from the school's own teachers. There was an atmosphere of creative energy, clearly apparent even on a brief visit. So I am delighted that the programme has continued successfully through three other schools.

Artists and designers are working increasingly with communities. Schools are seeking ways to extend and enrich learning and teaching. Education needs to include Citizenship and Sustainable Development - the ways in which we share responsibility for decision-making and make the best use of precious resources. Only thus will we prepare the next generation to make wise choices for the future.

Breaking Boundaries shows how the interplay of art and design, and of design and technology can be used to address these issues. The book makes the work of a pioneer group available to a wider audience. It provides a framework upon which others might build. I commend it to readers in the county and beyond.



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The Rt. Hon. Alan Howarth, CBE, MP,

Preface

Design, as both an activity and a process, is undervalued in so many schools, yet pupils of all abilities can benefit from the wide range of skills involved. The cross-curricular nature of work that focuses on shaping the built environment is its great strength, albeit not without difficulties, for schools and the subject-based curriculum.

This document is the culmination of a three-year programme in which teachers, students, architects and artists explored a wide range of issues concerning our surroundings. I believe it reflects well on their experiences, and more importantly, I hope this book will serve as a starting point for teachers in schools across the country, helping them look afresh at how our surroundings can inspire all kinds of art and design related activities.

The programme provided students, and indeed teachers, with an insight into the working lives of design professionals and artists. The Kent Architecture Centre would like to thank everyone who has been involved with the Sight Specific residency programme. Most particularly, I would like to thank Eileen Adams, whose enthusiasm has inspired us all. Under her guidance, we will be able to take the work in Kent to a wider audience.

The freshness, creativity and sheer vitality of the young people who worked with this programme should inspire many more design professionals and artists to engage with their local schools.

Barry Shaw, MBE Chief Executive, Kent Architecture Centre

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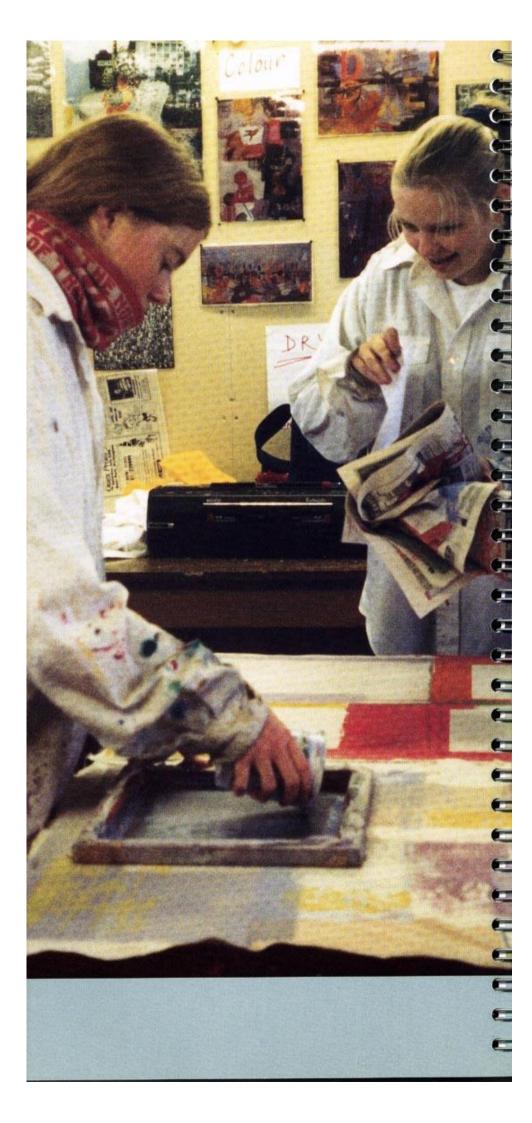
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Introduction





This book is based on the work carried out in four secondary schools in Kent as part of the Kent Architecture Centre's Sight Specific Residency Programme, funded by the National Lottery Arts 4 Everyone Scheme from 1998 to 2000

We hope that lessons learned from the Residency Programme will be of use to other schools. The aim of this book is to draw on the skills, ideas and knowledge that were gained and suggest how a similar approach could be successfully developed in any school.

Eileen Adams, who has written this book, was the Programme's evaluator, and is ideally placed to bring together both its outcomes and ways in which they can be developed further. Eileen has also written several other books on education and the built environment.

All photographs and illustrations contained within the pages that follow are of the students, teachers, artists and designers who worked on the residency programme and the work they produced.

The book is divided into three parts:

Process explains the optimum sequence of learning activities, providing a framework for structured built environment education studies in relation to art, design and technology.

Projects identifies study ideas derived from ten of the projects developed in the Kent schools. These are described briefly and suggestions are made as to how these ideas and study methods might be adapted and used by other schools.

Partnerships reflects on the relationships between teachers and the artists and designers who work with their students, their respective roles as educators and the management implications for schools.

The Kent Architecture Centre



The Kent Architecture Centre was set up in April 1995, with a brief to work alongside a range of bodies from the public, private and voluntary sectors, to support improvements to the built environment in Kent.

Its aims are to:

- promote innovation and a high quality of design in Kent
- create a wider understanding of the importance of design
- provide an education resource
- enhance Kent's natural environment, built environment and heritage
- provide a focus for conferences, workshops, lectures, exhibitions, seminars and a forum for debate
- address the role of art and architecture in the quality of our built environment.

The Architecture Centre is consistently developing new ways of bringing together architecture, planning, design and the visual arts in a range of partnerships to raise visual awareness of the built environment.

One such partnership was that forged with teachers, designers, artists and students during the Arts 4 Everyone "Sight Specific" residency programme.

Sight Specific

The aim of the Sight Specific Residency Programme was to enhance visual literacy in four secondary schools in Kent through a partnership between teachers, artists and designers. It sought to:

- inform and educate the public, particularly the young, about the built environment
- create a wider understanding and greater acceptance of urban design
- enable people to participate more effectively in judgement making and decision-making about environmental quality
- identify issues and encourage discussion and debate

Artists, architects and a landscape architect worked in partnership with teachers and their students to develop their environmental awareness, discriminatory and critical skills and design capability.

The work was based in art/design and design/technology departments. Schemes of work were planned by artists, designers and teachers and developed with their 11-18 year old students.

Each project drew on the students' own experience of the built environment and use was made of the local area and the school environment as an educational resource. Both class and individual projects were carried out, which satisfied the requirements of the National Curriculum and examinations.

The work extended students' understanding of the nature of art and design and showed how these might relate to a study of the built environment. Students were introduced to ideas related to contemporary practice in art and design and to the professional roles of artists and designers. Novel kinds of learning experiences and different working relationships were established. The learning activities exposed students to new ideas, language and techniques of working, extending the boundaries for art and design education.

Students were encouraged to investigate and experiment, to see art and design not only as individual and personal, but also as public and collaborative activities. They were helped to develop a range of thinking skills and encouraged to take a questioning, critical stance, both to the environment and to their own work.

There developed a healthy debate about art and design and their relationship with the built environment.











Breaking Boundaries

Breaking Boundaries refers to redefining the limits and limitations we set in schools on education in the built environment, art, design and technology. Built environment education should not only be about buildings, it needs to be concerned with the spaces between them and the people who use them. It needs to incorporate the study of architecture, planning, highway engineering, landscape architecture and interior design.

The boundaries created by the National Curriculum, examinations and the school timetables are not fixed and immutable. From time to time, it is important for schools to nudge these boundaries, to create new approaches to learning and teaching and for teachers to extend and develop their professional practice. This can be done through experiment and the development of new projects and programmes of work, through alliances and partnerships that introduce new ideas and ways of working.

Breaking Boundaries also refers to the borderlines we set between learning and teaching and between learners and teachers. For everyone involved, it should be a learning experience. In both art and design, the outcomes are not known at the outset of a project, and there will be ideas to explore, questions to answer and problems to solve.

Breaking Boundaries creates links between art, design and technology and redefines the learning environment. Learning does not take place only in the art studio or the design workshop. The shopping centre, the bus shelter and the school grounds can all provide a focus, a setting or a subject for study. Techniques from different disciplines can be used to create a framework for investigation, exploration and experiment. The work requires a range of intellectual, practical and social skills. Projects involve work in two and three dimensions in a variety of media, involving both individual study and collaborative group projects.

Both art and design are involved in Breaking

Boundaries. Art is essentially about making meanings. Design is essentially concerned with the process of change, imagining possibilities and anticipating the likely impacts of proposed changes or interventions.



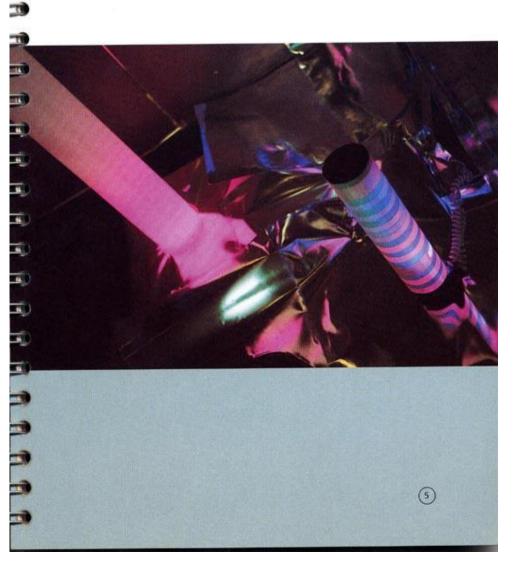
Both art and design can be used to explore how the environment impacts on us and how we in turn might impact on the environment.

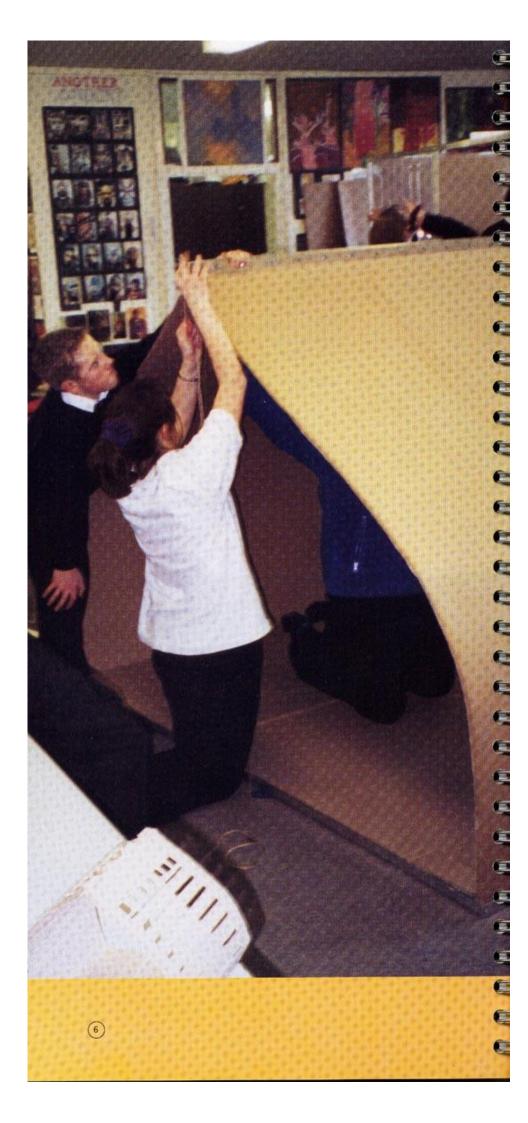
Breaking Boundaries introduces students to contemporary practices in art and design, new learning experiences and different kinds of working relationships. The use of unfamiliar media and new technologies extends what is possible in schools. Both art and design are not only individual activities. They can involve collaborative working and group effort. The work cuts across the boundaries of subject disciplines and addresses wider curriculum concerns, such as citizenship. It offers opportunities to develop the key skills now required, particularly at sixth form level.

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It is possible to develop a framework for study, utilising methods and techniques that will aid this process of exploration and investigation. Teachers, artists and designers can all demonstrate a variety of approaches to learning in art and design, and in the following section we explore the learning processes and tools that can be applied.





Process







The learning processes described here show different routes through the various projects. Regardless of age, students will very likely be involved in:

- planning a project
- research and investigation
- artwork
- critical study
- design activity
- presentation
- installation
- evaluation

Planning a project should relate to the needs of the students. Projects should build on their existing knowledge and skills, but also develop their thinking in new ways and new directions.

Research and investigation will generate the ideas and raw material that will form the basis of students' work.

Artwork will be based on the use of the environment as a stimulus, a setting or a focus for study. Students' work will reveal their perceptions of the environment and may indicate an emotional response.

Critical study is where students are asked to make value judgements about aesthetic and design qualities, form opinions and discuss them with others.

Design activity is where students are asked to make proposals for change and improvement to spaces and places.

Presentations allow students to share their work with their peers and teachers.

Installation might be a possibility in some instances, for students to realise their ideas as a temporary or ephemeral work.

Evaluation of the project is vital to both maximise its benefits and provide lessons for the future.

Students should be helped to develop a range of thinking skills, including perceptual, investigative, analytical, reflective and critical. They need to be exposed to ideas and practices current in the work of artists and designers. They should be encouraged to look again at the ordinary and familiar aspects of their everyday environment and see it afresh.

They will learn technical and manipulative skills in using media, tools and technology to shape their ideas. They must also learn language and social skills to collaborate with others to develop their ideas. Both art and design are not necessarily personal and individual activities, but can also be public and collaborative.



Planning a project

The framework for study needs to be clear, yet flexible. Learning activities should involve a variety of strategies to accommodate a wide range of experience and ability. Planning should focus on the project's content, the learning methods that the students will use and the teaching strategies and tools that will be at the teacher's disposal.

There are many questions that need answering before a specific project is selected.

- What do you aim to get out of the project, and more importantly, how will your students gain from it?
- How old are your students; how many of them are there, and what are their precise skills and experience. Will the project build on these experiences, and will it add new skills or enhance existing ones?
- What ideas or concepts will be explored? Does the project build on other work or introduce new ideas? What skills and capabilities will students develop, and what knowledge will they acquire?
- What ideas from contemporary practice in art or design will be introduced?
- What resources will be required? What materials or equipment will students need? What space will they need to work in? What are health and safety requirements?
- What organisation will be necessary in advance?
 Will you need any professional input? What will be the costs of the project?
- How will the students be introduced to the project and how will they be motivated? How will the built environment be used as an educational resource?
- How will investigations be organised? How will students develop ideas? Will they work as individuals or in small groups? How will homework be used for independent study? How will experiment, making and critical study feature? What techniques and methods of working will be new to students?
- How will students be encouraged to critique their work? What form will the critique take? What will be the criteria for evaluation?
- How will the work be recorded and shared with others? What documentation will be retained, and who will be able to see it? What kinds of final presentation and celebration are possible?





Research and investigation

The first steps in any project are likely to include an element of research and investigation. Projects can be stimulated by an exploration of abstract concepts such as space, form, light or sound. These can be aided through the exploration of materials and technological process. The research and investigation may also involve an exploration of the built environment itself.

Investigations may be sparked off by any number of questions:

- What did you see on your way to school?
- What is the palette of colours used on the exterior of buildings in the surrounding area?
- What is the experience and impact of sound in the shopping centre?
- What landscape elements are visible in the local neighbourhood?
- How is the history of the town reflected in the built environment? What symbolises the spirit of place?

The school environment itself might prompt the following:

- What are the best views of the school?
- What are the key focal points?
- How do visitors find their way around? What is the quality of signage?
- How might the approach and entrances to the school be improved?
- What changes might be made to the school grounds to create better spaces for social interaction, rest and relaxation?

It is always advisable to do an initial investigation to record, analyse and appraise the existing situation as a basis for more detailed study of particular aspects. Annotated sketches and photography, the use of digital cameras and tape recorders can help with recording information.

The information gained in this way should be recorded, analysed and discussed in class to create a basis for the development of the project. Indeed, the results of this activity may well lead to the project as originally envisaged changing quite dramatically as the investigation leads you and your students in new and interesting directions.

Artwork

Drawing, painting, collage, photography and sculpture all permit students to reflect on their experience and to understand it more fully. Art also enables them to communicate their ideas to others in ways far more vivid than words alone. By its very nature artwork encourages a personal, emotional response to place.

Direct experience can be extended and enriched through reference to imagery derived from the work of artists. Postcards, books, film, television, advertising and the Internet are all useful sources.

Experience and ideas can be reworked to evoke places seen or represent those that exist only in the imagination. The combination of memory, fantasy and experimentation can create images to connect the inner life of the student with the outer world of the made environment.



Critical study

The word 'critical' is derived from the Greek word 'kritos' - judge. It implies weighing evidence. We make judgements about the built environment all the time, whether we are aware of doing so or not.

Critical study involves the use of words to explain the thinking that underpins our judgements.

- How do we arrive at these judgements?
- What influences us?
- What are the criteria on which we base our judgements?
- What kinds of knowledge do we bring to bear on our judgement making?
- How might we explain or justify opinions?

Annotated sketches, short written critiques or the explanatory text in an exhibition can inform the viewer and illuminate the background to a piece of work.

Live presentations or commentaries for slide programmes can also make use of the spoken word.

In critical study, students also need to talk to other students, to discuss their ideas and perhaps argue the case to justify their point of view.

These activities are valuable in shaping students' thinking and helping them become more articulate about art and design.



Design activity



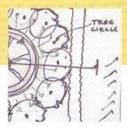
Design has been described as shaping and forming the environment. This can happen in relation to artefacts, communications, systems or places.

Design is influenced not only by economics, materials and technology, but also by precedent, cultural practices and education.

Much design activity is primarily concerned with thinking about change, formulating proposals for change and testing them out.

Environmental design includes specific areas of study such as architecture and planning, interior design, landscape design and highway engineering.





Some questions to prompt environmental design projects might be:

- How successful is a place, in terms of its appearance, its usage, and its interaction with people?
- How could these visual, spatial and social links be improved?
- What are key considerations in designing a space for people to work?
- How might characterless spaces become interesting places?
- What are key considerations in designing a school environment?
- What part does natural form play as an element in the built environment?

In design activity, students will probably need to work in teams. Each can bring different perceptions and skills. They can bounce ideas off each other in brainstorming. They can explore different facets of a problem to develop their thinking. They can challenge each other to solve problems more efficiently, and they can tackle more ambitious projects.

A variety of techniques and media can be used, including annotated sketches, plans, diagrams, photomontage, sketch models and computer simulations.

Presentation

What happens to students' work when they have completed it? Does it go into a drawer or their portfolio? Is it put on display? Is it discussed with the teacher? Is it critiqued by a group of students? Is it shared with students in other classes? Are other teachers invited to view it? Is there a photographic or video record of all of the students' work?

Critiques ("crits") are important in environmental design projects. They give students opportunities to explain their thinking and develop confidence to present their work and justify their opinions. A number of short, informal 'crits' may be carried out in the course of a project to help students stand back and view their work, to question their thinking and consider alternative possibilities.

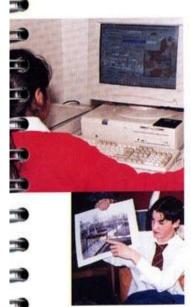
Or it may be a more formal session with the whole group and perhaps invited teachers for students to present a project, to consult with people, or to celebrate the completion of a major piece of work. Students will learn how to respond to questions and to criticism, and will be helped to adopt conventions of polite disagreement. They will learn skills of advocacy, argument and debate. All these will be useful in their personal and professional development.

Exhibitions of artwork or design studies create opportunities for students to display their work and for others to learn from it. Attractive labelling, explanation and interpretation will help viewers understand the ideas that underpin the work.

Students and their teachers might also create modest publications, such as leaflets or booklets,

or perhaps web pages, to report on their work and explain how they have gone about it. Images of students at work can show the different stages of development. Text or commentary can provide explanation of the processes involved.







Installation

Sometimes it is possible not only to develop an artwork or create a design, but also to install a temporary artwork or transform a design into reality.

Schools offer wonderful opportunities for this to happen. It is not only the art room that can become an exhibition area, other rooms and circulation spaces in the school building can be used to display students' work. The school grounds also have superb potential to become an outdoor art gallery.

The design/technology workshop should not produce only models and maquettes, prototypes and possibilities. Ideas should be tried out through the temporary positioning of large-scale mock-ups. Interventions should be made in the school grounds, so that students gain experience in dealing with the practical problems that their designs need to address.

However, there are costs involved, of money, time and labour. Every design decision has a maintenance implication, and health and safety issues need to be considered seriously.





Evaluation

In evaluating students' work, it is important to identify what learning outcomes were anticipated, to identify relevant criteria and to recognise evidence of these. Evidence of learning outcomes is to be found not only in the drawings, models or constructions, the tangible 'products' that result from students' efforts. Learning outcomes are also evident in an increase in students' interest in and enthusiasm for art, design or the built environment, in improved motivation, in their ability both to be independent learners and to be able to work collaboratively. Evidence of learning is to be seen in students having greater

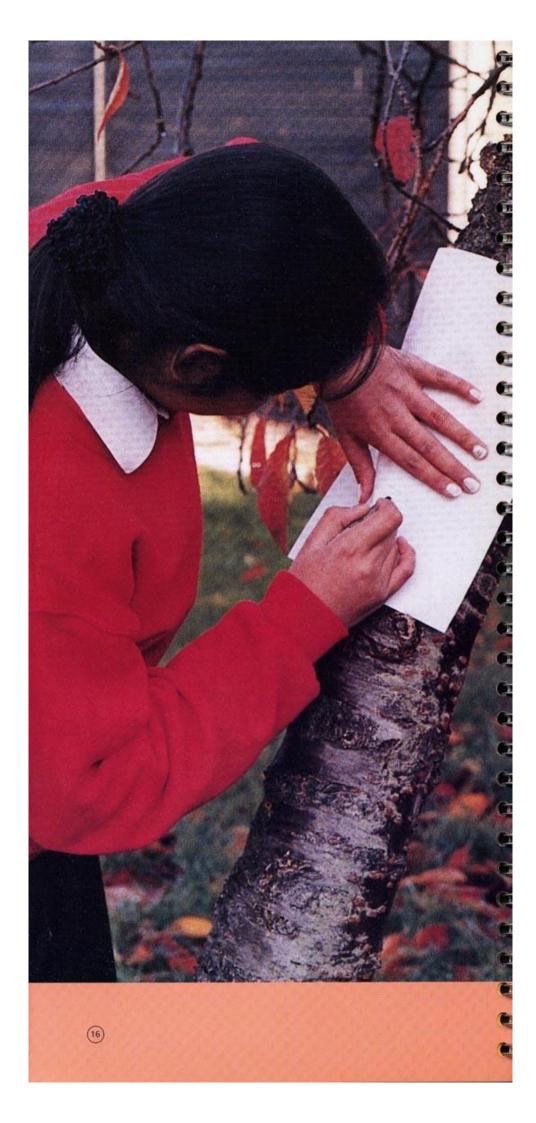
confidence to explore ideas and to investigate, to talk about them and to debate issues and share their work with

others.

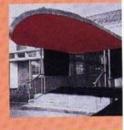
 How might students be encouraged to reflect on their work?

- What evidence will there be of the kinds of learning that have taken place?
- How are they expected to know that they have completed a good or a mediocre piece of work?
- What can the work tell us about what they have learned?
- What can students tell us about what they have learned?
- What does the work reveal about their knowledge or understanding of the built environment, art and design, and study techniques?
- What will be the criteria for evaluating students' work?
- How will it be assessed?
- What learning outcomes will be appropriate?

Students should be encouraged to evaluate their own work, to identify strengths and weaknesses, and to develop strategies for improvement. Teachers may also want to look at how a class has coped with a particular project and determine how learning methods and teaching strategies might be modified to progress the work next time.



Projects







The projects outlined in this section include:

- Sense of place
- Objects
- Natural form
- Structure
- Changing spaces
- Public space
- Landscape
- Light
- Sound
- Art and design

After describing the projects that we carried out, we list some ideas and variations that you may also wish to consider.

All of the projects suggested in this section are intended to explore interrelationships between structures, spaces and people. They permit the exploration of abstract concepts, but take direct experience of the built environment as their starting points.

The projects are not intended for any particular age group. The depth and complexity of study will differ according to the age, experience and abilities of the students.

The ideas can be developed in all kinds of ways. Students and teachers should negotiate a course of study, which may lead to the production of an artwork, a critical study, a design or some kind of intervention in the environment. This will involve students in some or all of the processes described earlier. Each phase can be complete in itself, or one phase can be used as the basis for the next. Drawings, diagrams, collages, photographs, models and computer-aided work can all help to give form to the ideas and enable students to work together.



Detail photographs taken at the Historic Dockyard

Sense of place

Visit a place of interest and find objects and structures which in your opinion give it its identity.

Woven Buoys

A large-scale three-dimensional textile work inspired by the Historic Dockyard in Chatham.

The Historic Dockyard proved to be an excellent source of inspiration, full of symbols associated with Chatham's maritime past. Students sketched and took photographs.

The artist in residence made a presentation to the students on three dimensional weaving techniques using materials such as metal, wire, rope and string, so that weaving was seen as a 'boy friendly' activity.

The students then developed their own smallscale three-dimensional structures using paper and card, experimenting with shapes and forms.

Large-scale work based on 'nautical' forms was started. Students worked in groups responsible for particular structures, as this encouraged team spirit, ownership and accountability.

Students explored their school grounds to decide on the best locations for their 'woven buoys'. They made drawings and photomontages of how their artwork might look in position. Students practised weaving techniques with rope and chicken wire before the final construction of the 'buoy' structures. Students gave feedback on each other's work.

'Buoys' were positioned in the school grounds. Students appraised their impact - on the environment, on themselves and on others. The work was photographed.

Students explore school grounds to decide on best location for the woven Buoys





Project Ideas

School Portrait

Explore the school and observe how different elements connect with each other. Look at angles, shapes, shadows, lines, forms and silhouettes. Using a viewfinder, choose one interesting part of a larger space or place. Using strong colour, exaggerate the shapes and angles you have discovered.

My home: public front and private back How does the front of your home differ from the back? What sort of image does your home present to the street? Is this the same or different from the private territory of the back garden or back yard?

If you live in a flat and do not have a front or back garden, are there any signs of personalisation, where neighbours create different window, door or garden treatments to differentiate their homes from those of others?

· Through the Keyhole

What do people see when they approach your front door? What separates the private space of your home from the public space of the street? What are the materials that surround the entrance to your home? What does the front door look like? What gives it a particular identity? What do visitors see when you open the door?

Make a series of small drawings that shows the sequence of how you move through the space from the front door to your bedroom.

Make some drawings to show: Your front door from the outside, and from the inside The view looking out The view looking in

Fantasy Place

If you had to design a place where you could escape to - your fantasy place - what would it look like? Would it have a particular theme? Where would it be? Would it be indoors or outdoors? What materials would be used to construct, protect or decorate it? How would you organise it?

Make an ideas sheet of cuttings from magazines and newspapers, photographs, photocopies, sketches and annotations.

Using recycled materials, make a model of your fantasy place. What are the elements or qualities that make it special for you?



Images of 'School Portrait'

Objects

Objects can be used as a creative medium to explore notions of identity that link people and place. Temporary installations can create opportunities to raise questions about the messages and meanings embodied in the objects we use and the environments we inhabit.

Identity

An artist took several art pieces for the students to see and touch and gave a short slide presentation. Students developed their own projects on 'identity', taking as their starting points their lives and themselves. One girl used a variety of found objects as well as others that she crafted. Using a frame to enclose important elements, but also working in and around this, she produced a very interesting piece of work, and was able to quote references to the work of other artists.

Reflection

This project encouraged students to think about how both they and the environment have been shaped by the past. Students brought into school items that had a particular meaning for them. The artist brought in bags of clothes, scarves, belts and bags gathered from a charity shop, which were used as a metaphor for the past and for memory. Students did drawings, wrote about the reasons for their choices and made individual assemblages.

They thought about where art works are placed, who sees them, how to make ideas accessible to people and practical problems linked to health and safety. It took art into a public forum. It involved a lot of discussion and negotiation, as it required both individual work and collaborative effort. The artist discussed the importance of life experiences to feed her work, how memories and reflections are important as a source of inspiration, and how objects can have significance as a repository of meaning.

Floral Suite

This project idea was to 'recycle' a broken chair to inspire the installation of a 'three piece suite' and to use natural form as a creative medium. The 'floral suite' was installed in the school grounds, complete with a carpet of bedding plants.

Reflection



Floral Suite project development

Students explored the school grounds to appraise possible sites for the piece. Following discussion, a vote was taken on the most suitable location. The bedding plants were a costly item, but a good price was negotiated with the local nursery. The proprietor gave students a tour of the nursery, taking them through the process from germinating seeds and making cuttings to the point of sale. They also studied other gardens to consider the use of plants and their potential as an art form.

To facilitate construction of the turf 'sofa' and the wire 'chair', students first measured furniture at home - it was important to learn that art involves a number of different skills, such as research and reporting.

The first few days were devoted to investigation into the practicalities of making the 'furniture'. The work was physically demanding as the turf was cut from a piece of raised ground behind the school. Part of each session was spent recording, planning and writing conclusions.

As well as providing a unique work of art as a focal point in the school grounds, the work caused a huge debate, the first time the staff had discussed the nature of art and its place in the school curriculum and the school environment.

Project Ideas

Cabinets of Curiosity

Installations can be used to reveal hidden histories or explore particular ideas that link people and places. What objects can be collected, arranged and presented to reveal something of the lives of the people to whom they belonged? What fragments and glimpses might communicate something of the experience, their hopes or their dreams? How could objects be used to interpret themes such as 'holidays', 'childhood' or 'loss'? How might other materials be incorporated? How should students manipulate and interpret the material? What media might be appropriate? Collections of boxes or small chests of drawers from junk shops can be used as the basis for an installation. Location and lighting will be important, as will health and safety and maintenance. It might be appropriate to create some interpretative material to raise issues and ask questions to help viewers look at the work carefully and reflect on the experience.















Natural form



It is difficult to find completely 'natural' environments, even in the countryside. Fields, forests and waterways have all been affected by the impact of people, through agriculture, transport and housing development. However, natural form can be used as an inspiration for art or design work related to the built environment. Art works can be inspired by relationships between natural form and built form. This might be the pattern of moss on a brick wall shaded from the sun, the planning of gardens or the selection and positioning of planting in a public space. Design studies can explore how natural form features as an integral element of the 'made' or built environment.

Beachcombing The artist was interested in the use of art, ecology and history within the design process, and to bring about environmental improvement in relation to local identity.

The artist wanted to give the students an experience of landscape, of observing and understanding it, using all of their senses. They went for a walk on the beach, making a record of the experience through a diary, using both written and visual notes. Students collected objects that had some significance for them. Afterwards, they made three-dimensional constructions to communicate their experience, using the objects and materials they had gathered. They did the walk once again and each student was asked to concentrate on one of the other students' structures, and try and relate it to the landscape.

Mud Glorious Mud Translucent mud panels were displayed over windows in an attempt to place more art around the school. They were designed to fit the glazed stairwell in the main classroom block, one set to be viewed from the inside and the other from the path leading towards the stairwell. They obliterated some light on the stairwell, but on a sunny day created a cathedral-like atmosphere. They generated a lot of both positive and negative comment.

Birds' Eye View This project demonstrated how to use the digital camera, scanner and PhotoShop and introduced students to techniques for using this equipment. Students experimented on the computer and used the scanner with 3D objects collected from the school grounds. They explored ways of combining photography with drawing and painting and experimental techniques in printing.

Project Ideas

Using natural form to explore the landscape

As you walk across a field, how high can you throw a bunch of twigs? What is the pattern when they fall? How can you record this? How can you make temporary markers from decaying plant material that you find along the way to trace your path?

Using natural form, create a line in the landscape to divide the space.

Natural form as a medium for artwork

Make a collection of natural form in the garden, the wood or the beach. Store this in a dry place. Use your collection as a stimulus for artwork. Start with pen and ink observational drawings. Start in the middle of the page with a carefully observed drawing of one thing. Add others one by one to build up a large drawing over a period of time. Think carefully how each element connects with those next to it.

Trees

Make a slide programme or power point presentation to show how trees are used as an element in the built environment. This may include consideration of:

- Colour, Seasonal change
- · Contrast in texture
- Screening
- Shade
- Sculptural form
- Marking pedestrian areas
- Focal points
- Division of space
- · Marking of territory.

You might consider a sound commentary music, poetry, a narrative, clips of voices of people talking about trees - or a combination of all of these.

> Translucent mud panels were displayed over windows around the school











Using natural form to explore the landscape





Students design and build full-scale structures using aluminium frames

Structure

The emphasis on 'Structure' aimed to help students become more aware of space and spatial qualities. Slide presentations are extremely useful here to help introduce architectural ideas related to structure, form, space and enclosure.

Creating Space

After seeing demonstrations of how to create space through folding card and making simple models, the students worked out how to construct small-scale models and then apply these skills to full-scale work. They developed a 'try it and see' approach with cheap, easily workable materials.

Some students worked in groups to design and build full-scale spaces. One group made an aluminium frame structure. The students had to mark up, centre punch and drill holes in the components, which were then bolted together. These had to be labelled so that the system could be deconstructed and reconstructed. Some students assembled wall panels and fitted cross members, while others cut corrugated panels and windows to size.

Other students worked with strong card to create a 'tent' structure. They learned about the limitations of the material and the complexity of design problems. The cardboard suffered from being creased too much, so the final version was a rather poor tent structure, but it did create an interesting spatial enclosure.

Project Ideas

Structures and Form

Using a variety of materials, create a series of small forms where it is possible to see spaces within. Display these so that both the form of the structure and the volume enclosed can be seen.

Enclosures and Space

Create a number of small assemblages using junk materials to show differences between different kinds of structure. These might include post and beam, arched constructions or tensile structures.

Package

Create strong and durable packaging to enclose and protect a delicate object in transit. This should be inspired by a study of natural form. Your final presentation should include

- ideas sheet showing how different kinds of plants create natural 'packaging' to protect fruit and seeds (remember to always keep your discarded ideas as well, they are an integral part of the design process)
- sheet showing design of packaging, with details of material used, measurements and notes on production process
- list of positive and negative qualities in your design
- 3D prototype

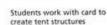
Animal Shelter

Create a living place for a small animal (perhaps a rabbit or a mouse), which can be placed in the garden and moved around. This should include a sheltered and protected place for the animal to sleep, space for it to run about, and offer protection from other animals and security so that it does not escape.

Your presentation should show:

- ideas sheet which shows inspiration list of positive and negative qualities in your design
- · design of animal's living space
- details of construction
- a series of sketches to show where it would be placed.







Changing spaces

The spaces around us are as much a part of the environment as the objects and structures that occupy them. But they should not remain the same - space should be flexible, being able to adapt to changes such as the different seasons, changes in temperature and light, and the differing needs of the people and objects occupying it.

Cube Room In a project to explore the idea of perspective, students made a small card cube 'room' and were asked to place a window, door and a picture on one of its walls. They were also asked to design patterns for the floor, walls and ceiling. Small objects were then suspended from the ceiling on a piece of cotton.

Students were then expected to work through a series of drawings of the room, working from different angles, starting with freehand sketches and moving towards more formal techniques involving drawing plans, sections, elevations, scale, pattern and perspective. This process was made easier by drawing a faint grid on the walls during the construction phase.

Bus Shelter Students discussed the various functions a bus shelter must perform. They then analysed the site of one particular shelter, taking account of different views, access and safety. Images of shelters from around the world were collected to demonstrate the wide range of materials used and how designs are modified to fit other climates. Students finished by creating 3D models of their proposals.

Atmosphere and Mood Students chose their favourite and least favourite spaces at school and at home. They described them in words and sketches and attempted to describe the mood and feel of the space. Was it bright, happy, dark, contemplative, sombre, dull or secluded? How did light alter the space? They revisited the spaces at different times to check and record through sketches the effects of changes in the quality of light conditions and changes in the mood or atmosphere.

Arts Café Students discussed with an architect his plans for a new Arts Centre for the school and how he could incorporate a new café within it. To produce ideas and help visualise how the existing space could be developed, students created sketch models, and took digital images, which they than manipulated on the computer to try out different interior treatments.

Bus shelter model





Arts Café sketch ideas



Project Ideas

Feasibility study: Community café

Discuss the need or potential for a community café in your school - where would be the best place for a meeting place with social activities.

Identify a possible space that might be used for the café in the school.

Study plans, sections and elevations of the space, concentrating on scale and volume.

Use tracing paper overlays to consider circulation patterns, daylight patterns and the difference between public and more private spaces.

Discuss which aspects of the space can be altered and which cannot, which are good aspects, what is the need or opportunity for change, what are the circulation requirements and what are good views looking into, within and from the space

Look critically at other cafés and meeting places. Decide what should be considered in the design. Create checklist of ideas to think about.

Brainstorm possibilities for the community café.

Send away to manufacturers for information on materials, fittings, furniture and colours.

Students should work in groups to visualise proposals for change, either using digital images of existing space or working with a scale model. They should consider the use of the space, its layout and circulation (including kitchen access, customer service area, eating area), and its visual impact.

Prepare an exhibition of different proposals for consultation. This should include:

- plan of existing space with annotations which identify opportunities and problems related to change of use.
- plans to show layout of the café, including kitchen and eating area. Particular attention should be directed to:delivery of food, storage of food and equipment, preparation of food, service of food, eating area, clearing up and
- plan showing patterns of movement and circulation
- drawings to show decoration, furniture, and materials
- a 3D sketch model

washing up



Cube Room Project

Public space

We tend to take public spaces for granted. By looking more closely at them we could identify aspects that we like, and those we do not. Our views of what makes public space work could be very different, but we would agree that they need to both identify with the local area and respond to the needs of the people using it.

School Courtyard

Students made an investigation of the school grounds to look at architecture and design qualities in the buildings and landscape. They identified a paved and stepped courtyard in the centre of the school as in need of improvement and wanted to suggest some radical changes to improve environmental quality.

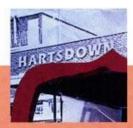
Investigations were carried out by means of annotated sketches and photography. The resulting photographs were photocopied and annotated to show the positive and negative aspects of the space. Students drew on other photocopies with felt tip pens and created collages to compare the impact of a variety of changes.

The group compared the results of their investigations and discussed possibilities for changing the space. Their ideas were developed and refined in more elaborate photomontages.

Another class used similar techniques to investigate routes and entrances. They felt that there was no sense of arrival on approaching the school building, that routes were not clear to visitors and that there was a lack of signage to help people find their way around. They considered the impact of colour, particularly at the school entrance, changes in the hard and soft landscaping, and improved signage.







Project Ideas

How others perceive your school

Imagine you are visiting your school for the first time, and try to see it through a stranger's eyes.

On a plan of the school grounds, show:

- entrances
- vehicle access
- parking
- pedestrian routes around the school
- design lines
- changes of level
- surface materials / colour / texture
- seating areas
- signage
- identity positive qualities
- identify problems
- consider possibilities for change and improvement, taking account of:
- spatial quality
- visual impact
- climate
- safety
- maintenance

Present your ideas on plan and as a series of photomontages to show a visitor's experience on approaching the entrance to the school building.

Connectivity

Look at each of your school's buildings and consider its position, style, shape, and how it forms part of the overall structure. Consider how you would change them and their linkages to each other.

What do the entrances to the school grounds look like? What about those to the school building? How do they mark the threshold between 'outside' and 'inside'?

Where is the main entrance positioned?

Is it clearly signalled?

What kinds of signage are evident?

How does the outside connect with the inside?

Make a sequence of drawings based on an experience of 'serial vision'. Make the drawings at six stopping points between the entrance to the school from the street and the entrance to the school building.











Photomontage illustrating positive change to the



Model to explore effects of landscaping

Landscape

It is important to view landscape as an integral part of the built environment. Buildings cannot be designed effectively without taking full account of their impact on their surroundings.

School Grounds

The building of a new arts centre at the school prompted a group of students to carry out their own feasibility study. This enabled them to look critically at the scheme prepared by the architect and to consider its impact on the site.

As a preliminary to this, students toured the school grounds to explore different qualities of space and light, recording their experience through the use of digital cameras. They were encouraged to record observations in research notebooks, with drawings, photographs and written notes, focusing on their favourite and least favourite spaces, giving reasons for their choices. In a studio session, selected images were chosen and annotated, with students identifying the positive and negative aspects of their chosen spaces.

The group identified alternative sites for the arts centre. The architect's scheme had placed it to the rear of the existing art block. Some students favoured this. Others identified a lawn space in front of the school as a possible alternative. Bubble diagrams explored circulation spaces and the relationships between them,

Students were shown how to carry out measured surveys incorporating the height measurement of buildings. Working in groups, they created scale models to show the impact of a new building on the school site. These represented the use of the space, changes of level and existing buildings. Students presented their designs to the headteacher who critiqued the various possibilities.

It was clear that many of the students' expectations, attitudes and knowledge of architectural design were based on the numerous 'makeover' gardening and interior design programmes on television.

Larger scale architectural concepts and ideas about spatial quality were unfamiliar to them.

Through this project, many students developed more refined analytical, discriminatory and critical skills to enable them to make judgements about design quality and fitness for purpose. They had a basic introduction to scale and a glimpse of the design process. They learnt a variety of techniques for presentation (visual, spatial and verbal) and they participated in group discussion and supported each other's work.

Project Ideas

Built and Natural Form

Make a collection of images (or use annotated sketches to collect ideas) to investigate the relationship between buildings and the natural form. Are gardens and plants used to create a pleasant setting or backdrop for the building? Is planting used to decorate, protect or hide the building? What impact does it have? Does it act as a contrast or an accent?

Make a study of a building in its setting. Look at it from different distances. How could you improve aesthetic and design quality by adding or changing three landscape elements? Think about form, colour, texture and pattern. Choose from:

- grass
- shrubs
- trees
- soft landscaping
- hard landscaping
- seating
- shelter (from sun or rain)

Present your 'before' and 'after' ideas as a pair of drawings or photomontages.

Seating

Where can you sit in the school grounds and talk to friends, have something to eat or relax for a moment during a busy school day and just survey the scene? Are there any places that could be better used for such activities?

Look at examples of outdoor seating in shopping areas, parks and gardens. Take photographs of these and make a collection of images as reference. Which are successful and which do not work so well? Give your reasons.

Identify an area in the school grounds with potential as a sitting area. Create a 3D model and a series of images showing it from different viewpoints to indicate how it could be adapted through improved landscaping, the introduction of outdoor furniture and possibly improved shelter.

Scale models to show the impact of a new building on













Light

Our experience of space and form is influenced by the nature and quality of light. This is evident in the orientation of buildings. If windows face south or west, they will probably admit more light and heat than those that face east and north.

The quality of light in a building changes in the course of a day. This impacts not only on the physical temperature inside the building, but also on the mood it creates.

The influence of light on our perception of space is particularly evident in stage design, where an illusion of space and change of mood can be effectively controlled by lighting.

The use of artificial light can have a profound effect on people's moods in the everyday environment, and in how people experience and perceive space inside a building or in the street. Different kinds of street lighting are used in shopping areas, in main streets and in residential areas. In the home, we choose different kinds of lighting to illuminate different activities. In the work place, there should be both general lighting and specific task lighting.

The quality of light is dependent on the light source, the power used, the size of the space that is illuminated and the surfaces that reflect the light.

Light Fantastic

Students transformed shoeboxes into mini architectural spaces, lit by means of torches or lamps. These were used to explore qualities of light and shadow, reflection, colour, mood and atmosphere.

They then attempted an ambitious project to make a light installation for the atrium. They used an aluminium frame made by another class and tried out different kinds of cladding to create a mini 'dark room'. They also made use of the blackout conditions on the stage area to experiment with different light effects to develop their ideas. Students experimented with paint, laminated materials, a fluorescent tube and coloured Perspex rings. As they developed confidence and some technical competence, they also tried out floodlights, opal polyester tubes, light boxes and coloured gels. The final piece comprised two opal columns, uplit as they sat on light boxes in a space lined with silver card.

Exploring the quality of light and ways of controlling it







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Project Ideas

Light Control

Student projects can explore qualities of light, ways of controlling light and using it as an active element in creating space.

Experiments with gels and different kinds of light can provide greater understanding of colour and tone to influence perceptions of space and the ambience.

Stage design offers wonderful opportunities for this, but there are also small-scale projects that can be carried out in the studio or workshop.

Windows, torches and fluorescent tubes can be used as light sources and photography can be used to document the process of experiment and investigation.

The work may result in sculptures or installations using light, or it may merely contribute to the research process, which will inform future design projects.

Changing Light

Make a series of plans that show how the patterns of light and shade change at different times of the day in the school grounds.

Take a series of slides of the same place at different times of day and at different seasons of the year. Make a slide presentation using two projectors, fading images in and out. Create a soundtrack or spoken commentary.

Light Boxes

Find or make a small cardboard box. Think of this box as representing a single architectural volume. Cut a series of apertures (windows) into the walls and roof of the box. Find suitable materials to glaze these apertures to demonstrate your understanding of the following qualities of light and surface:

- transparent
- translucent
- coloured
- opalescent
- reflective
- radiant

Make individual light boxes to explore how the location of openings affects light entering the box.



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Environmental documentary work involving digital sound recording, mixing, editing and CD-production

Sound

Sound is a major part of our environment. By means of simple sound technology, personal recordings, the web and the internet, we can explore sound to help us identify our immediate surroundings.

Sonic Sketchbook

Students were set the challenge of making an audio study of their immediate environment, through recording, editing and mastering of a CD, which would go into the school library. This project was intended as an environmental documentary work, involving digital sound recording, mixing, editing and CD production. It combined both technical and performance elements, and encouraged students to pursue lines of enquiry about their surroundings, using the sound recording as a creative medium rather than just an information tool.

Mobile equipment and three computers were prepared and configured, and a travel schedule to Bluewater Shopping Centre in Kent was organised. Demos and samplers were prepared from a variety of sources - audiotapes, video, radio, television and basic tunes.

Demonstrations of artists' works were necessary to indicate possible tones and flavours, with examples drawn from cinema, audio and photographic genres and demonstrated through video, CD, books and web sites. They were also useful to substantiate the existence of the genre that combines documentary and historical elements with story telling, humour, montage and attention to technical experimentation and innovation.

Students visited Bluewater Shopping Centre and developed a 'sonic sketchbook', recording sounds, commentary and interviews with shoppers and workers. Photographs documented work in progress.

Students then listened to the research material they had collected. They analysed and appraised it, taking into account content, quality, balance, emphasis and tone.

Students had the opportunity to be involved with a creative experimentation with new technology, with a real chance for them to ask some questions about their immediate surroundings and to consider ways that they might be able to improve them. Students discussed their

immediate environment, as well as personal empowerment issues concerning new technology, especially in relation to what levels of access they had at school. The artist introduced notions such as 'networks encryption', 'influence of radio', 'rap minimalism', 'conceptual art', 'Dome culture' and 'cathedrals of consumerism'.

Students worked collaboratively to create a piece which reflected the sonic background to a consumer environment and hinted at their experience of place.

Finally, they created audio CDs, an assemblage of sounds collected from speech, ambient sound in particular environments, recorded music, web based sources and sounds they created themselves.

Project Ideas

Sound Portrait

Students can develop short sound portraits or different environments using the same techniques of recording, analysis, appraisal and assemblage. These might adopt a narrative form, creating a sound picture of place. Or students might choose to explore abstract sound qualities, experimenting with form, colour, texture and tone, just as they might work with visual or plastic media.



Blue Water Shopping Centre 'Sonic Sketch-book'



Art and design

The boundaries between art and design are becoming increasingly blurred, with each discipline relying on the other. Nowhere is this more true than in the field of architecture.

Stumpy the Spider

The two-week summer term project involved students from both art/design and design technology. They worked on similar ideas and used the same materials, but interpreted the brief differently. The project was supported by teachers, an artist, an architect and a carpenter.

The brief was to design a structure to complement a line of elm tree stumps along the school boundary. It was also intended that the structure should:

- merge with the stumps
- provide an enclosed area
- · define a covered linear route
- frame a view
- create seating and
- contrast the gnarled organic texture of the log with the man-made quality of sawn timber.

This daily account by the architect reveals what was involved in the design and build project during two weeks in the summer term, when students were released from other lessons.

Day 1 Slide presentation to stimulate dialogue about ad-hoc architecture, gazebos, primitive huts, pergolas, garden furniture, and timber-framed structures. Everyone visited the site to view logs/stumps and consider possibilities.

Day 2 Introduction to photomontage techniques for thinking about change. Quick ideas and notes written and drawn onto photocopies of photographs of site. Design ideas worked up and refined. Two distinct ideas emerged: linear pergola-type structures, and gazebo or hut-like enclosures. The design/ technology group thought pragmatically about how the structure would be made and proposed a sequence of repeating vertical elements attached to each log. The art/design group considered more complicated and adventurous possibilities, but had no idea how to make them.

Day 3 The design/technology group produced a repeating set of 'gallows' frames, one to be fitted to each log and linked together with vine wires. The art /design group produced a giant 'spider' design with legs radiating from one log to the ground. Groups were expected to develop detailed proposals and find ways to share the decision-making.

Day 4 Designs finalised. Students were anxious to work directly with the wood, so experiment with construction techniques was necessary. With help, they made and fitted trial 'gallows' posts and "spiders' legs", Further development included:

preparation of materials, measuring wood stocks, planning cutting lists, introduction to marking out, recording the process in the sketchbooks.

Day 5 String lines to mark out the line for the construction of the posts. Finalised techniques for making up and fitting posts to trees. Schedule agreed. Cut wood components with the carpenter. Cut slots and housings in logs with artist. Finalised techniques for making and fitting spiders' legs to central log and ground. Worked with the carpenter to make complex cross-shaped bracket to receive legs on log top. Worked with artist, cut housing to receive bracket in log top.

Day 6 Assembled wood components with the carpenter. Worked out the geometry for the cross brace. Assembled the bracket to receive legs on the log top. Completed housings and prepared logs.

Day 7 Drilled components to receive coach bolts and assembly of first posts. Finished the housings. Fixed first of the legs to the spider.

Day 8 Worked in the workshop to complete assembly and drilled holes for vine wires. Fixed more legs and bolted them to brackets. Hammered posts into the ground with sledge hammer to secure them. Cut housing for attaching legs to adjacent logs.

Day 9 Fitted final posts to logs and ran string between posts to give an impression of what the wire would look like. Fixed final legs.

The finished work has proved to be a popular meeting place for students, who enjoy sitting and chatting beneath the Spider in its informal setting.

Project Ideas

Design and build in school grounds

There are opportunities in school grounds for some small-scale design and build projects. These might include seating areas or pergolas, projects with willow to create living sculptures or temporary installations with awnings and tent structures. Students in secondary schools might have an opportunity to work with a feeder primary school to design and build huts for the storage of toys or equipment or for children to use as play spaces.

Projects that link art, design and environment enable young people to understand how we shape our environment. Design ideas can be worked out on paper or through the use of a computer, they can be critiqued through discussion and debate, but they can only be thoroughly tested when they are made and used.



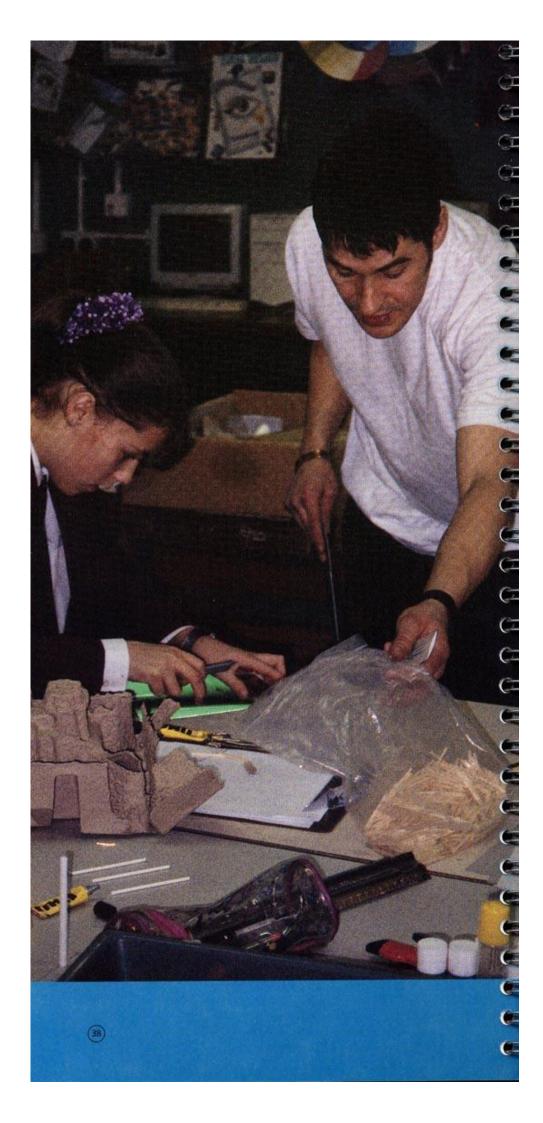








A design and build project 'Stumpy the Spider'



Partnerships

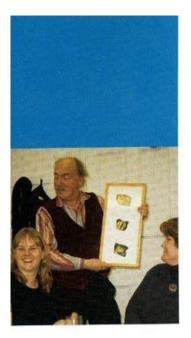




This section considers the roles and relationships involved in inter-professional collaboration in education. It looks at the positive aspects of teachers, artists and designers working together and identifies some of the problems that might arise.

There are several issues raised by the practical impact of students working with artists and designers in schools. Although working as educators, artists and designers do not necessarily have the pedagogic skills of experienced teachers. However, students welcome new working relationships and unfamiliar ways of working, and they will appreciate the opportunity to learn more about the professional roles of artists and designers.

The bibliography identifies useful publications that link art, design and built environment education, and the list of addresses identifies organisations that can supply further information.



Teachers, artists, designers

Teachers, Artists, Designers

Working partnerships between teachers, artists and designers create wonderful opportunities for school-based professional development for all those involved. Projects extend teachers' knowledge of art and design and give artists and designers valuable experience of education. They create opportunities to question previous assumptions and practices. It is possible to push boundaries of how art/design and design /technology can be used in schools and to consider new ideas and approaches to learning and teaching.

Roles and Relationships

Partnership in education will involve different kinds of professional experience, expertise and skills. It will require mutual respect and support, and the ability to take a self-critical stance. Roles should be clear from the outset. Teachers, artists and designers should all be involved in the initial planning of projects, although teachers may be responsible for the detailed organisation, as collaboration is not necessarily practical in all aspects of the work, which will include planning, resource preparation, teaching, documentation and evaluation.

Problems of scheduling, timetabling, accommodation and the burden of management will probably fall to teachers. While artists and designers can create useful resources and reference material, they are not expert on education. They are likely to welcome feedback however, and shared reflection about the nature of learning activities and evidence of learning outcomes are useful to evaluate the educational value of the activities.

National Curriculum

Teachers will probably emphasise the need for projects to fit into existing timetable and curriculum requirements. However, teachers' attitudes and previous experience will influence how the requirements of the National Curriculum are interpreted - you are limited only by your imagination.

Difficulties

It is not always easy to accommodate other people working in a busy art or design department, with extra demands on workspace, resources, teachers' time and attention. Partnerships are likely to challenge established relationships and accepted practices. The school timetable imposes practical limitations on time and classes available. Costs of materials and availability of equipment have to be taken into account in planning projects. The practicalities of organising visits, the need for adequate supervision when working outdoors or off-site and the opportunities for investigations to be carried out through homework all have to be built into the planning.

Schools can be very stressful places and sometimes the physical conditions and working environment in schools are less than ideal for artists and designers. Some visitors are ill prepared to work in schools and find it difficult to deal with the rigours, constraints and limitations of the secondary school environment. So, be prepared for some changes. Inviting artists and designers to work in schools will likely break the boundaries of accepted practice that teachers set themselves in the normal course of their work. Teachers bring to the partnership different kinds of professional knowledge: of the students, of art and design in education, of learning methods and teaching strategies and of the school.

Artists and designers can bring to schools a variety of skills:

- Professional experience and expertise in art and design
- Ideas derived from contemporary practice
- Knowledge derived from their own practice
- A fresh approach to study and new study techniques
- A critical vocabulary
- A positive attitude to change and problem-solving
- Reference material and other resources
- Contacts and access to networks
- · Questions about education
- Potential for creative collaboration.



Working together, teachers, artists and designers should achieve far more than individuals working alone and in isolation.

Working with students

Just like teachers, artists and designers will find the experience of working with students challenging, thrilling, frustrating, satisfying and inspiring. Students' attitudes and responses vary. For many, the experience of working with artists and designers is invigorating and enjoyable. It extends opportunities for learning. Some find the experience of collaborative working unfamiliar and challenging.

With the right kinds of encouragement and support, students are able to research and investigate ideas using the environment as a source of ideas, information and knowledge. They are able to use unfamiliar materials, media and techniques for art and design, for example three-dimensional work, photography and sound and visual work using digital technology. They learn the importance of different kinds of 'language' particularly visual, spatial and verbal. Students develop confidence in discussing their work and that of others, particularly through interaction and collaboration with their peers.

Students appreciate a direct working contact with professional artists and designers. Although working in an educational role, the artists and designers are not teachers, and do not necessarily have the skills to directly support students' learning - their professional skills are not the same as teachers'. However, they can take on the role of educator. They enjoy sharing their knowledge and enjoy the experience of supporting students' efforts to learn, and they generally find it easier to work with small groups and individuals.

Artists and designers can encourage students to work in a variety of ways to develop their ideas, both through art / design and design / technology activities. They can create situations to intensify students' experience of the environment, to focus their concentration and to provide a framework for observation and analysis. They will emphasise the importance of research and investigation as well as making things. They will ask students to make judgements about aesthetic and design qualities and to communicate their opinions. Often, they will ask students to talk and to write about related issues, which some may find difficult or unusual in art or design lessons.

A-level and GNVQ students particularly welcome the insight into how artists and designers work. They value a glimpse of professional practice,





and are generally eager to learn about the kinds of activities and difficulties involved in earning a living as a freelance artist or designer.

Artists and designers work hard to create positive working relationships, and sometimes are able to give individual attention to students that teachers are not able to do, because of the other demands made on their time. It should be made clear how students should address artists or designers and how they in turn should talk to students. Although the studio and the workshop permit less formal working relationships, visitors should not be overly familiar with students, but should maintain a professional distance.

It is not always easy for students to respond to people they do not know, with whom they have not worked before and whose working methods may be very unfamiliar. It is also difficult for artists and designers to work with young people they do not know and to develop appropriate working relationships in a short time. Some might find it difficult to find the right language to communicate their ideas. They might not know what are reasonable expectations. It might be difficult to motivate some of the young people they encounter.

For many students, architecture and design are unfamiliar areas of study. They do not often go out of school for investigations, except on organised visits to museums and galleries. They do not tend to use the local environment as an educational resource and some find it novel to study their school environment or a local shopping centre.

Although students learn skills of observation, analysis and appraisal in other work in art/design or design/technology, they are not necessarily sure how to apply these skills to a study of architecture, urban form or landscape design. Some students expect to be spoon-fed and are not comfortable when asked to deal with ideas or issues, as they find it difficult to adopt a questioning and critical stance. Artists and designers have found some students passive, discovering that some lack the necessary intellectual curiosity to fuel their work or to take responsibility for their own learning.

Sometimes, artists and designers choose to be very actively involved in helping to shape the artwork or to influence the design. This is different from what generally happens in schools, when teachers offer support and direction, but do not necessarily become a collaborator in the work itself. Collaboration is common in some contemporary art practices and certainly in design practices. However, it does pose some problems in schools in relation to assessment and how young people are able to take ownership and claim authorship.



Recruitment

If schools are considering engaging artists and designers to work in partnership with teachers, or are considering employing them on short-term residencies, it is helpful to clarify what the work involves. Job specifications should also include information on timescale, remuneration, equal opportunities and details of management.

Aims and objectives must be clear, and could include a statement such as "to raise awareness and understanding of the principles and practice of architecture and the built environment, and to help devise and implement projects in collaboration with teachers."

Applicants may be asked to send:

- an up to date CV, noting periods of study and academic or vocational qualifications, together with professional experience.
- Some form of illustration of their work (maximum of 6 slides or photographs).
- A brief statement of interest in the working partnership and what they might contribute.

The skills, knowledge, experience and aptitudes that might be desirable or essential can be detailed in the person specification sent to each applicant, and could include:

- Professional qualifications, with a minimum of three years' professional work
- · Communication and negotiation skills
- · Skills in project planning and evaluation
- Awareness of mainstream education and the National Curriculum
- Awareness of art in the environment
- Experience of working in educational or community settings
- Commitment to equal opportunities
- Flexibility and enthusiasm
- Willingness to contribute to team working

When the successful applicants are to be appointed, formal contracts should be drawn up to cover general terms and conditions, such as the resident's obligations, fees, insurance, termination, document ownership and copyright, management arrangements, waiver and dispute resolution.

Management

Induction

The success of the residency programme will be dependent on many issues, not least of which is the management of the process and of the residents themselves.

At the outset, it is important to introduce the resident to teachers and other staff, either at an informal get together over a cup of coffee or at a whole-school staff meeting. It is essential that they feel welcome as a member, albeit a temporary one, of the school community.

Information

A list of relevant teachers and telephone numbers, and a list of classes with students' names, plus a map showing the location of each room is helpful for residents.

Budget

The budget for the programme should be agreed at the outset and, if further funding is necessary to cover the cost of specific projects, it must be determined how this funding is to be generated. Residents are not always aware of the financial constraints that operate in many schools.

Resources

It should be agreed in advance what the precise levels of access that the resident has to the school's materials, books and other teaching resources are to be.

Working Environment

Residents will need to know where materials are stored and what are the responsibilities students have for looking after any tools, equipment and facilities. Always make sure that health and safety requirements are fulfilled during studio and workshop sessions and on visits outside school. Residents will probably not be familiar with these.

Scheduling

Build in time for planning, resource preparation, teaching, documentation, evaluation and celebration. The learning should not be confined to students. There is a need for time for sharing what has been learned and for critical reflection. It is also important to celebrate effort and achievement.

Teaching

Artists and designers are not professional teachers. Make sure that teaching is shared and collaborative.

Documentation

Documentation is necessary. Teachers will require it for inspection purposes. Students will need their work for their portfolios and examination.

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Sharp C. and Dust K. (1997), **Artists in schools: A Handbook for Teachers and Artists**, National Foundation for Educational Research.

Phyllida Shaw **Putting Art in its Place** The Kent Architecture Centre.

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Artists and architects

A selection of 20th Century artists and architects whose work has influenced the ways we experience and perceive the built environment.

Will Alsop (architect)

Ricardo Bofill (architect)

Le Corbusier (architect)

Gordon Cullen (architectural draftsman)

Edward Cullinan (architect)

Ralph Erskine (architect)

David Gentleman (artist, illustrator)

Terry Farrell (architect)

Norman Foster (architect)

Hans Hollein (architect)

Hundertwasser (artist)

Antonio Gaudi (architect)

Andy Goldsworthy (artist)

Walter Gropius (architect)

Philip Johnson (architect)

Kisho Kurokawa (architect)

Richard Long (artist)

Edwin Lutyens (architect)

David Macaulay (artist, illustrator)

Charles Rennie Mackintosh (architect)

Mies van der Rohe (architect)

Richard Rogers (architect)

Eero Saarinen (architect)

Richard Siefert (architect)

James Stirling (architect)

Robert Venturi (architect)

Sarah Wigglesworth (architect)

Frank Lloyd Wright (architect)

Useful Addresses

Arts Council of England

14 Great Peter Street London SW1P 3NG www.artscouncil.org.uk

CABE

Commission for Architecture and the Built Environment

16th Floor, The Tower Building 11 York Road London SE1 7NX www.cabe.org.uk

Council for Environmental Education

94 London Street Reading RG1 4SJ www.cee.org.uk

Design Council

34 Bow Street London WC2E 7DL www.design-council.org.uk

Kent Architecture Centre

Historic Dockyard Chatham Kent ME4 4TZ www.architecturecentre.org

Learning through Landscapes

3rd Floor, The Law Courts Winchester SO23 9DL www.ltl.org.uk

National Association for Urban Studies

c/o ETP, 9 South Road Brighton BN1 6SB www.pobox.com/-streetwise

Architecture Centres

Architecture Centre Network www.architecturecentre.net

Architecture Centre

Narrow Quay Bristol BS1 4QA www.arch-centre.demon.co.uk

Architecture Foundation

60 Bastwick Street London EC1V 3TN www.architecturefoundation.org.uk

CUBE

113-115 Portland Street Manchester M1 6FB www.cubeuk.org

Hackney Building Exploratory

Professional Development Centre Albion Drive London E8 4ET www.buildingexploratory.org.uk

Kent Architecture Centre

The Historic Dockyard Chatham, Kent ME4 4TZ www.architecturecentre.org

The Lighthouse

56 Mitchell Lane Glasgow G1 3LX www.thelighthouse.co.uk

Liverpool Architecture and Design Trust

16 Vernon Street Liverpool L2 2AY www.merseyworld.com/ladt

London Open House / Architecture Link

Linton House, 39/41 Highgate Road London NW5 1RS www.architecturelink.org.uk

Northern Architecture

Blackfriars, Monk Street Newcastle upon Tyne NE1 4XN www.north.org.uk

RIBA Architecture Centre

66 Portland Place London W1 www.architecture.com

Web sites

The Internet has developed into an invaluable source of information. Web-based publishing contains visual, textual, audio and video material, ideal for learning about links between art, design and environment. The websites listed below focus on public art activities and give an idea of the range and quality of some of the sites currently in operation. However, these are likely to change and might not always be in operation.

Art in Partnership

www.art-in-partnership.org.uk/aip/

Artists Newsletter www.anweb.co.uk

Art Public Promotion www.art-public.com

AXIS www.lmu.ac.uk/ces/axis

DAER Middlesex University www.dareonlione

DEG@S at University of Strathclyde www.strath.ac.uk/degas

Dundee Public Art Programme www.sol.co.uk/j/jgray/dpap/dpaphome.htp

Foundation for Art and Creative Technology www.fact.co.uk

Gallery of the Future, Loughborough University Gallery.of.the.Future@lboro.ac.uk

Institute of International Visual Artists (inIVA) www.iniva.org

Public Art on the Internet: David Harding www.gsa.ac.uk/publicart/

Public Art South West www.publicartonline.org.uk

Public Monuments and Sculptures Association www.gofast.to.PMSA

Sheffield Hallam University Public Art Links www.shu.ac.uk/serbices/lc/slidecol/ weblinx.html www.shu.ac.uk/schools/cs/ slidecol/pubart.shtml

Sculpture at Goodwood www.sculpture.org.uk

James Turrell: Roden Crater Project

www.rodencrater.org/cnstruct/p1/index.htm

David Wilson: Sculptor

www.users.globalnet.co.uk/-dfwil/toc.htm

Acknowledgements

Teachers, schools, colleges

Chatham Grammar School for Boys

Chris Whitehead, Head of Faculty, Art and Design / Technology Will Fielder, Head of Art Heather Haythornethwaite, Art Teacher

Hartsdown Technology College, Margate

Nick Neenan, Head of Art

Hextable School, Dartford

Paul Allam, Head of Art Jill Eddis, Textiles Teacher Glynn Smitherman, Photography Teacher Richard Bentley, Art Teacher Kevin Reilly, Head of Design and Technology

Sittingbourne Community College

Jo Chester, Head of Art, Alan Barham, Head Teacher

Artists and designers

Keith Bothwell, architect
Chris Dorley Brown, multimedia artist
Nick Edwards, architect
Mike Fletcher, landscape architect
Annette Hards, architect
Mehr Shah, textile artist
Helen Ward, photographer
Jacqui White, conceptual artist

Kent Architecture Centre

Barry Shaw MBE, Chief Executive Ruth Gage, Architectural Programme Manager, Co-ordinator of Sight Specific Vanessa Bone, Cultural Programmes Consultant Deborah Rawson, consultant, Arts in Education

Kent Advisory Service

Paul Shallcross, Curriculum Consultant for Technology Ivor Rushforth, Curriculum Consultant for Art

Photographs

Photographs have been taken by participants in the Sight Specific Residency programme.

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South East England Development Agency the **architecture** centre Kent Focus on Urban Regeneration



The Kent Architecture Centre

Tel: +44(0)1634 401166 Fax: +44(0)1634 403302 E.mail: info@kentarchitecture.co.uk www.architecturecentre.org

Historic Dockyard Chatham Kent ME4 4TZ

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