The Panel Room

This room was empty. The wooden floor and blue carved panelled walls were all bare. The mystery and motivation lay behind the secret panels which, when opened, revealed intricate and colourful storage shelves, or staircases that led to other parts of the house.

The Fireplace Room

This room was situated high up the winding narrow staircase of the house, in the attic. Here, amongst the wealth of roof beams, an assortment of fireplace surrounds was displayed, all having been gathered from the other Merchants’ Houses.

The Door Room

This room comprised a selection of doors, mounted in a row, and freely swinging as if part of a poster collection. The children were able to move through these doors, studying differences, and selecting a favourite.

The Courtyard also had to be explored, since the fifti and cobble stones were fascinating, together with the intricate brickwork patterns of the building’s walls. Having decided upon our favourite, we began to share our plans and ideas with the children, and prepare them for the visit. Preparation also had to take place for the filming. The children were warned of the bright lights, the cameras, the sound equipment and ‘that fluddy caterpillar on the pole!’ Everything was explained in detail, and the filming commenced.

As the children began to prepare for their visit, they were asked to make comparisons of old and new buildings in which sequences exercised, slides and signposts were used. The children learnt at building styles and designs, and looked for signs which would indicate the age of the building. The observation and handling of domestic objects taken from a kitchen of today, and of those of a seventeenth century kitchen, led to further comparison, and thoughts of ‘what you would use in the future’.

The study of costumes and what were underneath caused interest, and with the use of textiles and fabric, costume collages were developed. The school computers were equipped with concept keyboards and the ‘House Journey’ program enabled the children to move around an ancient house and put in appropriate furnishings, furniture and lighting.

Following detailed discussions and the standard preparation procedures for any school visit, the day of the trip came. Armed with our teaching resource packs, lunches, and our ever-valued parent helpers, we set off. On arrival, the children had an opportunity to tour the house, and look at the locations in which it stands. The children were then divided into groups and dispatched to the chosen rooms.

In the Panel Room, the children studied the panels and guessed that they may be very old. “But what will you find behind them?” we asked. As imaginations began to flow, thoughts were written down into stories. Colour matches were also made for work on returning to school.

In the Fireplace Room, the children were on the floor looking up into the roof, studying the beams. To assist them, large mirrors were laid upon the floor, and the children drew the reflections on equally large paper. The fireplaces were subjected to the children’s fingers tracing the intricate patterns and shapes, and then rubbings were taken. These rubbings were collected together by the children and used in a later collage of a fireplace of their own design.

Finally, in the Door Room, the children, having selected their favourite door, set about recording their observations in clay. A special spark was added to the day when the custodian of the house shared with the children the story of ‘Montague Mouse’, a former resident of the building.

The Key Stage 1 Curriculum is the second year of the National Curriculum, and is the setting for the next two years of school. The core subjects are English, Mathematics, and Science, and students are also introduced to other subjects such as Art, Design and Technology, History, Geography, and Physical Education.

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As we left the building we knew that we had achieved our aims and that not only did the children have a better understanding of life 300 years ago, but that they had all enjoyed their experiences.

The follow up work was easy to develop since the children’s interest had been stimulated and they were keen to transfer observations into model and design work. Displays began to appear, books were written, roof’s reproduced, and merchant signs painted on glass. The return of the camera teams tested the children’s knowledge and understanding, and brought the project to a close as we shared our stories and thoughts of Montague Mouse. Further evaluation took place in the service evaluation interview, which was subsequently used for much of the dialogue of the film.

The end conclusion was, without a doubt, that the experience was both valuable and worthwhile. The History Key Stage 1 Attainment Targets had been developed and were understood and meaningful to the children. Many cross-curricular links had been made, giving the children a better understanding of past and present, and new ideas about future. By examining the site, they had identified the importance of the past in influencing the present, and prepared a set of questions that could be used in the next Key Stage 2 target.

The School Boardman and Jean Doling

The Saffron Walden County Primary School

Losemotto

Suffolk

Your School Building as an Historic Resource

Planning a local study project

Look no further than your own school building. It’s full of opportunities and there’s no need to wait for an anniversary to happen!

In 1992 a number of schools responded to an appeal in Remnants for information about projects which used the school and its building as a resource. As expected, most replies were from teachers organising anniversary celebrations. They were preparing displays about the school’s history to commemorate some significant date in the history of the school, usually twenty-five or fifty years since it opened. Others were marking the move from old to new buildings by publishing books and in one case, at Reydon in Suffolk, the school was closing altogether. The library, Julie Jordan, had been asked to compile a booklet about the life of the school, something that would add weight to the school’s history. Reydon was an interesting example of a site which had adjusted to every change in the history of education for over 150 years. It had started as a tiny rural school attached to the church in 1806. The first building could still be seen near the present school, now integrated into a new building. Over the years the name of the school alone had been changed four times this century from “Council” to “County” to “Modern” to “High”. As the building, the school took over as a primary school, and in 1952 a new building was added. ROSLA was shortlanded in 1959 for Rating of the School Leaving Age. The number of the people at school today did not remember this, the name of the block remained. In cupboards in the school there were old books and some photographs. Sports trophies from the 1920s remained in the school and a particular request to former pupils in the area had produced some personal memorabilia, including a school exercise book started in 1911. Hitchinbrook Junior and Infant School in Sibbald was another interesting case study. They let us know that they were celebrating their Golden Jubilee in...
Shaping up to the National Curriculum

Maths is not just for the classroom. It is all around us, both in the natural world and in the structures people have built.

Wherever you are when you read this article you can be sure of several things:
- you are surrounded by aspects of the historic environment: structures or artefacts for the past;
- you are working with a mathematics system to locate how far back in the past the structures or artefacts originated, that is to date them;
- you could use some aspect of mathematics to describe those structures and artefacts, for example counting, measuring, using the language of shape, drawing a plan or making a graph;
- mathematics could help you interpret and explain how the structures or artefacts were used;
- since mathematics was used in building the structures or in creating the artefacts, you might use the same mathematics to discover how they were made and why the designer’s mind.

The diagram shows how we use the present evidence to discover the maths used in the past and find explanations for the uses of the site or objects.

Mathematicians might call the statements above generalizations and they would ask for some ‘specialisations’ to show exactly how maths and the historic environment relate to each other, what you and I might call ‘for instance’. The number of examples that could be cited are limited, so it is best to find an aspect of the historic environment that might be frequently used in the curriculum to help illustrate the implications of mathematics for it.

Places of worship are all around us in the shape of churches, chapels, churches, mosques and synagogues, as well as the remains of medieval abbeys and monastic churches.

Places of worship feature at many points of the history orders. In KS1 they might be part of the ‘historical sources’ or a background to stories from the past. In
Symmetry
Symmetry has been used in places of worship for a number of reasons. Humans seem to have an in-built need to make things symmetrical because it is pleasing to the eye. There are however, structural reasons why symmetry was used in churches—it enables equal numbers of people to be placed either side of the aisle and therefore gives equal vision to and from the altar, particularly by making equal spaces either side of the main aisle. The most pervasive use of symmetry in the plans of churches is the form of the cross, also a powerful Christian symbol. In the vertical plane the rows of arches that we see lining a nave have to be symmetrical to spread the weight of the roof evenly otherwise the structure would collapse. Butresses fixed to the external walls of the church, also to take weight, are placed symmetrically for the same reason.

The structural aspects of the building might be the best place to find fine symmetry, but it is in the decorative parts of the church that both line and rotational symmetry can be recognised. Windows, doors, arches and much of the ceremonial furniture are covered with designs that have many orders of rotational symmetry from which the axis of symmetry, and their number, can be ascertained.

Identifying the types of symmetry in a church, both the horizontal, in the plan, and the vertical, in the walls and decorations, can lead children to an appreciation of both the structural and decorative need for the form.

Transformations
Within symmetrical shapes we find particular designs repeat themselves but in a variety of positions. These are known as transformations. Many features, a window, for example, may have the same shape repeated on opposite sides as a reflection, or it may be turned and become a rotation, or made bigger and become an enlargement. It is surprising how few shapes are actually used but in a large number of translation formats. Look at the tracery of a window, or the columns of arches, the decoration around a font, or the face of a screen. Children can design their own windows and try to use as few shapes as possible but transform as many times as they possibly can.

Tessellation
Shapes, particularly those found in the floors of the aisles and in the windows will fit together without leaving any space between them—they tessellate. What sort of regular shapes, triangles, squares, rectangles, and other polygons, are used by the masons to achieve tessellation? Which shapes would they not have used and why? The windows will have shapes that are likely to tessellate. What sort of shapes are these? Do they have straight or curved lines as their edges?

The Golden Rectangle
Section or Golden Rectangular. The diagram shows how to make a Golden Rectangular. A square with side length a is placed so that a divides it into two equal parts with a line EF. Point E is used as the centre of a circle whose radius is the diagonal FC. An arc is drawn, CG, and the base line AB is extended to intersect it. This becomes the base of the rectangle. A new side HG is drawn at right angles to the new base, with line BH brought out to meet it. You might get your class to make Golden Rectangular detectors by cutting a rectangle of the required dimensions out of a piece of card. This can be held at the required distance from the eyes to locate the Golden Rectangle in church plans, elevations, windows and doors.

Planning
Because churches are designed on a rectangular basis there are many right angles to identify. This simplicity has its benefits in other ways: churches are generally easy to plan because of the right angles and errors are readily identifiable because of this. Although sometimes the shape is not as regular as might be thought at first sight due to masons’ errors. A set of string baselines in the rectangle around the church will enable simple planning using offsets, again the right angle, to be undertaken. The measurements of the building will almost certainly be in the system set up by Edward I in 1203 which formed the basis of imperial measurements: inches, feet and yards. Here is a useful exercise in the equivalence of metric and imperial units. It may be though that the measurements are not always accurate to the nearest whole unit. Perhaps the system being used was the personal measurements, paces, of some long dead architect? Younger children might even measure using their own paces in the footsteps of the past.

Sequencing
Many changes have altered their shapes during the past. Unless the structure was built all at one time, such as some of the Victorian churches in industrial suburbs of towns, the building tended to be added to or parts demolished as the numbers of people grew or shrank. This population growth or decrease can be related to periods of growing and shrinking wealth in the area.

The guide book will probably have a plan with the building phases and dates included and this provides a great opportunity for discovering the shape of a church at a particular time, and, perhaps, to see whether there was always an attempt to achieve symmetry. The individual phase plans might be put in a timescale.