

Craft, Design and Technology at Whelley Middle School

Concentration

Why Middle School?

The School provides a stepping stone from Primary to Secondary Education; a period of transition from general studies to specialisation. This poses the question of curriculum and type of course to be offered during this period.

The design of the course would depend upon a number of factors.

- (a) The number of children to be catered for at any one time.
- (b) Staff available.
- (c) Type of room and equipment.
- (d) Degree of choice to be offered.

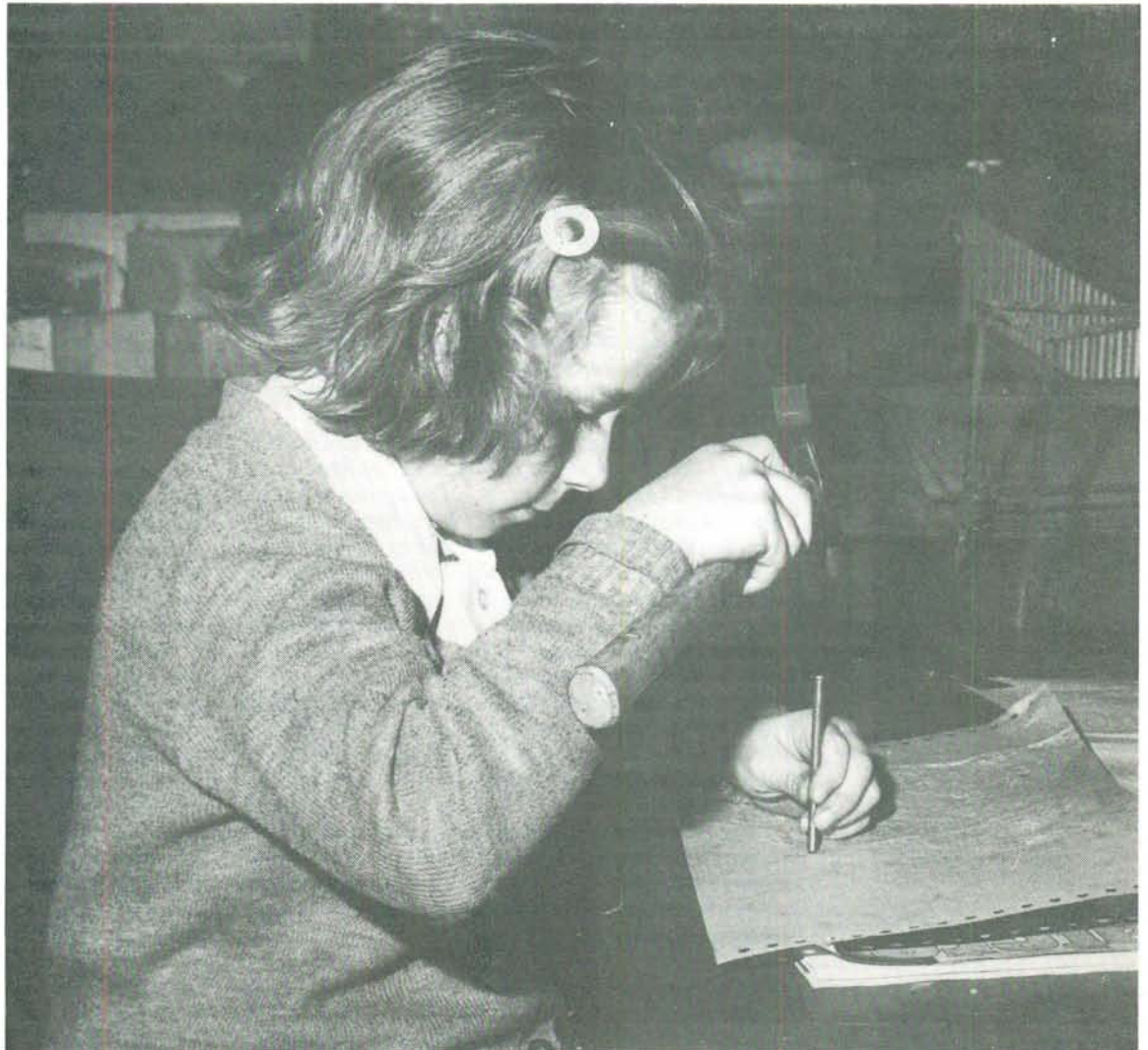
These are just a few typical considerations about which some sort of compromise must be made.

Much of the criticism of Middle School Courses in Craft Design and Technology is centred round the degree of commitment to examination syllabuses. But the question must be asked 'How realistic can

a course be for children in the Middle Years, if it is initially orientated to an examination syllabus?'

The whole curriculum hinges on experience and it is, therefore, most important that the experiences are meaningful and appropriate to the mental and physical ability of the children.

Concentration.



General View of Studio 3.



For many children the Middle School will provide a first time, time-tabled approach to learning through the use of materials and, for most children experience of a purpose built studio with facilities for working with more resistant materials such as wood, metal and acrylic. With these facts in mind it is essential that the Craft, Design and Technology studio is well founded as an integral part of the school curriculum and that the philosophy of the department is in keeping with the school philosophy as a whole.

Whelley Middle School is a six form entry school and courses during years one to three for children aged 10-13 are designed to encourage individual thinking and decision making, at the same time attempting to maintain standards and good presentation. The courses also pose common design problems which produce many solutions and interpretations, dependant upon the individual child. But one of the major problems in designing rotational courses is continuity.

The Department offers six traditional areas of study:— Art, Needlecraft, Housecraft, Pottery, Metalwork and Woodwork. It is faced with the dilemma of organising half termly visits to each area, selection by sex, or some type of option system. Half termly visits make continuity very difficult, selection by sex is just as unfair in a creative subject as it would be in any other subject, and with any option system the children would need to have some knowledge of the study for which they are opting. Whelley, in choosing courses based on an option system, has attempted to give the children the opportunity to progress with the subjects at which they have the highest level of achievement.

The department is divided into three studios. In the first and second years the system of rotation allows all the children to make regular visits to each studio, so that there is reasonable continuity with all the areas of activity.

General View of Studio Three

The Studio environment is a reflection of the children who work in it, providing an exciting and

stimulating atmosphere conducive to good design and presentation.

Studio One Two and three dimensional art work with paint, crayon, inks etc.

Studio Two Experimental and traditional work with food and fabrics.

Studio Three Collage and constructional work with clay, metal, wood and plastics.

All the children in school visit the Creative Studies Department for six periods each week (thirty-five minutes each period). The majority of children attend in two blocks of three lessons, but one small group in the second year visit the department three times for two lessons each visit. (Note Second Year is only five form entry).

Time Table of Lesson Blocks and Staffing

The first year children rotate through each studio consecutively on each visit for the first half-term, in order to become familiar with each studio as quickly as possible. Following this they choose two studios to work in each week for one half term period, one studio for one block of three lessons and another studio for the other block of three lessons. The next half-term session involves a compulsory visit to the studio which was missed in the previous half term, with a choice of studio for the other visit. This system of rotation continues for the remainder of the first year, changing each half term.

Within the studios, in order to cover the different areas to be studied, withdrawals are made for short-term projects. An example of this would be that children working on a project in wood, which could be designed to cover a period of ten or twelve lessons, would be withdrawn to attempt a short term pottery project. This could last in the initial stages, according to the child's ability, from one lesson to three lessons. On the completion of this project the pupil would return immediately to the project in wood. The second year rotates in the same manner as the first year, but changing studios at the end of each term instead of each half-term.

The third year children choose two studios to work in when they visit Creative Studies, the length of time spent in each area being dependant upon

MONDAY			TUESDAY			WEDNESDAY			THURSDAY			FRIDAY		
A M PM			A M PM			A M PM			A M PM			A M PM		
FIRST YR.	1M1													
	1M2													
	1M3													
	1M4													
	1M5													
	1M6													
SECOND YR.	2M1													
	2M2													
	2M3													
	2M4													
	2M5													
THIRD YR.	3M1													
	3M2													
	3M3													
	3M4													
	3M5													
	3M6													
ST	D10													
	U2													
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	3													

A= Art Specialist
B= Housecraft Specialist
C= Pottery Specialist
D= Craft D & I Specialist
E= Enthusiast

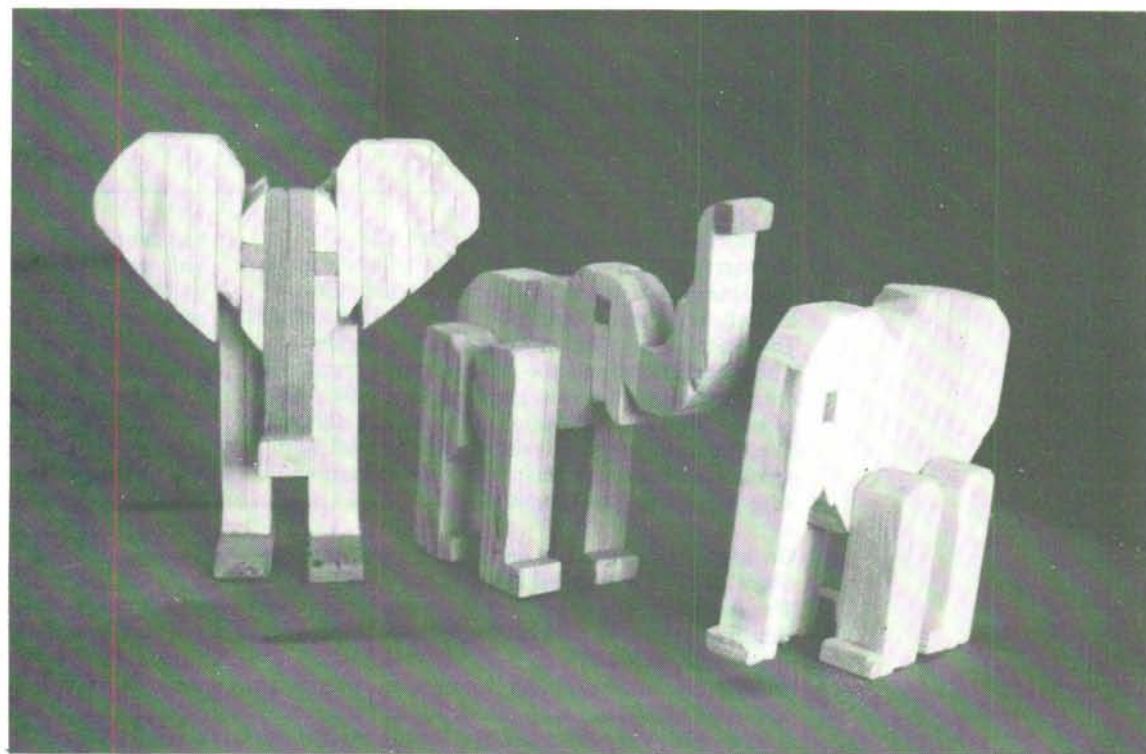
the amount of progress made. This is monitored by the teachers in charge, using a studio register of attendance and assessment, and an individual Record Card kept by each child.

The attendance and assessment register is used to produce two reports a year for each year and to record work of merit by individual children. The Personal Record Card tabulates work done in each area and materials used in each project, with an account of merit points gained; these points are used in the School House System 'Worker of the Month' Award. This is an award to be won by the girl and boy in each class who gains the highest number of merit points in the particular month.

Third Year

Following discussion with the teacher in charge, the children are expected to discriminate regarding the choice of materials, and to make decisions as to their suitability for purpose. This allows for a wide area of study, a typical example of which is a transport project requiring the production of a working drawing.

The drawing shows front and side elevations of a transport model. From this drawing pupils construct a three-dimensional model using wood as the main constructional material, together with other appropriate materials for accessories and fittings. Frequent use is made of the full size dimensions of the drawing.



FIRST YEAR (10 YEARS OF AGE)

Activity	Materials	Operations
Repousse Tool Collage	Mild Steel (Nails) Aluminium Sheet .12 mm	Sawing, Filing, Raising Pattern with home made Repousse Tools
Collage	Assorted Stripwood Section 6 mm thick and various widths up to 4 cms.	Planning, Cramping, Squaring, Sawing, Bevel Work, Glueing
Mask	Aluminium Sheet .12 mm	Planning, Cutting with Snips, Repeat of previous skills
Stripwood Animals	Softwood Strip 2 cm x 1 cm the thickness cut to match English Ruled paper	Planning on ruled paper, Repeat of Sawing, etc. Finishing with Shapers, Rasps and Sandpaper

*Brief outline of the
basic course.*

SECOND YEAR (11 YEARS OF AGE)

Activity	Materials	Operations
Cart Project	Stripwood 12 mm x 6 mm 12 mm x 12 mm	Planning, repeat of basic operations and the introduction of constructional work using glue and nails. Drilling and Cutting Wheel Discs on hand Drilling Machine
Knights Helmet with Hinged Visor	26 swg Aluminium	Planning, repeat of Marking and Cutting. Pop Rivetting and Edge Folding
Shaped and Rounded Form	6 mm Plywood	Planning Form and making Templates. Coping Saw to curved shapes. Rasps, Sandpaper, Mounting Frame for this item is optional
Shaped and Rounded Form	24 swg Copper Enamel Powder	Planning Form, repeat. Cutting, Filing of Copper, acid pickling and cleaning. Enamelling with small kiln
Scraper Tool	Hacksaw Blade Wooden Handle	Filing and sharpening blade, glueing and rounding handle
Imaginative Wood Shapes and Natural Forms	Selected shapes from wind blown branches	Scraping and smoothing the natural branch shape. Polishing and Mounting Screwing

To assist pupils, a selection of books with photographs of a wide variety of vehicles are made available and preliminary ideas are sketched from these to the approximate size of the finished model. The sketches are then measured to the nearest whole centimetre and the measurements transferred onto centimetre squared graph paper, in the form of a front and side elevation of a working drawing. The dimensions of the finished drawing will be in whole centimetres, so that they may correspond with the lines on the graph paper.

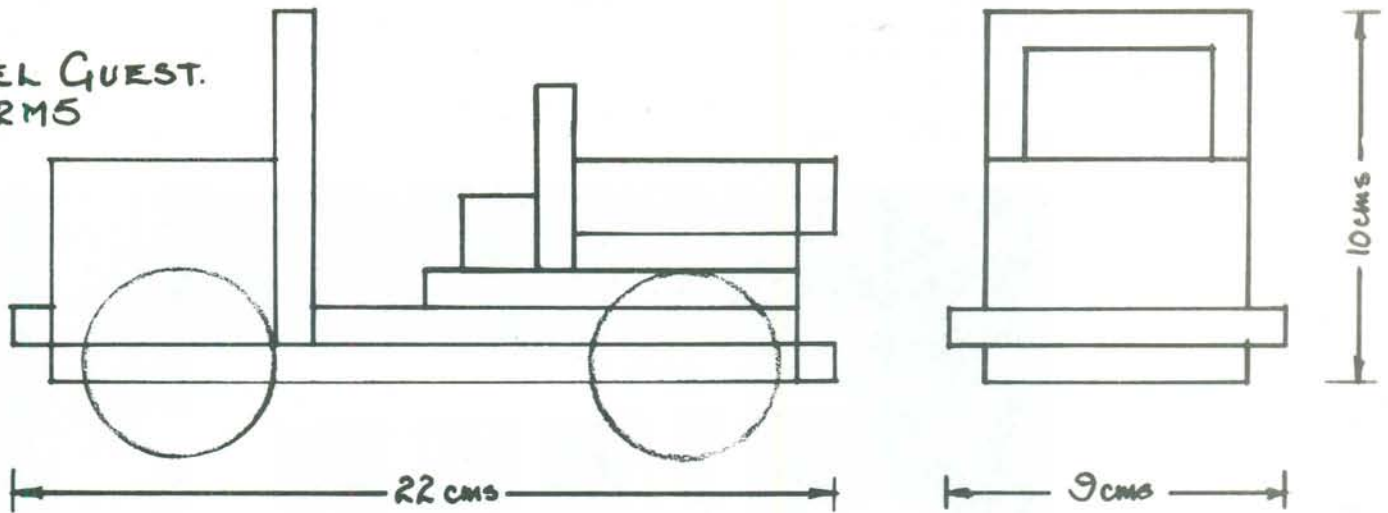
Orthographic Projection on One Centimetre Squared Paper

This is a most important feature of the project as it eliminates some of the initial confusion encountered in the production of a technical drawing, when three-dimensional thinking has to be transferred to two-dimensional drawing. Softwood strips sawn to one centimetre thick are provided in multiples

one centimetre wide. That is, one centimetre square one centimetre by two centimetres, one centimetre by three centimetres, and so on up to say four centimetres wide.

The stripwood is then measured and squared according to the working drawing. It is then cut to length with a tenon saw. The main body of the work is constructed using only P.V.A. type (Resin 'W') adhesive, with the one centimetre wide edges providing a good surface for butt joinin. Some angled work can be introduced and marked with a bevel and, at a later stage, the smoothing plane may be used to round edges or provide bevelled corners. Trim, such as mud guards, headlamps, radiator grills, wheels, etc., in proportion and in keeping with the original design, can be attached to the main body with nails and screws. These also provide ample opportunity for simple metal work, lathe work, soldering etc.

NIGEL GUEST.
2M5

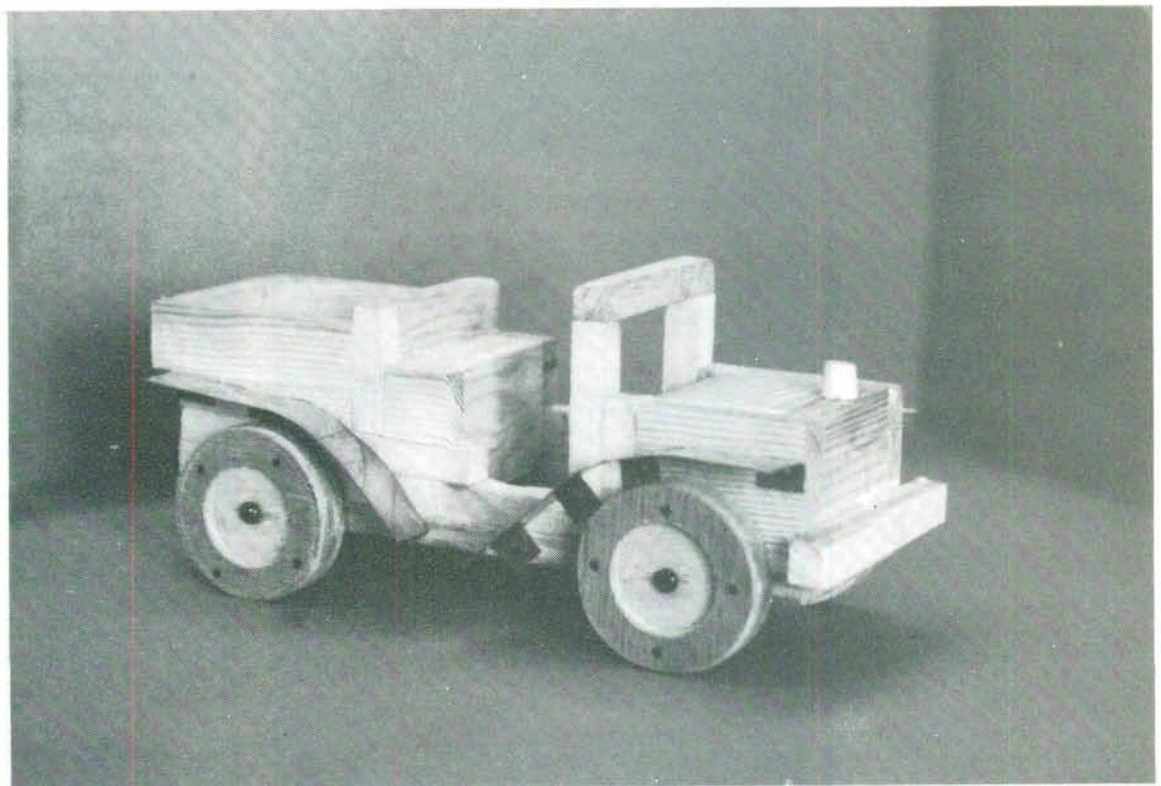


Final Model

As the model begins to take shape, it may be necessary to make modifications to the original working drawing, with the proviso that any such alterations are not of major constructional

importance. Such an exercise provides an excellent learning situation, both in the value of a working drawing and in the solving of simple design problems.

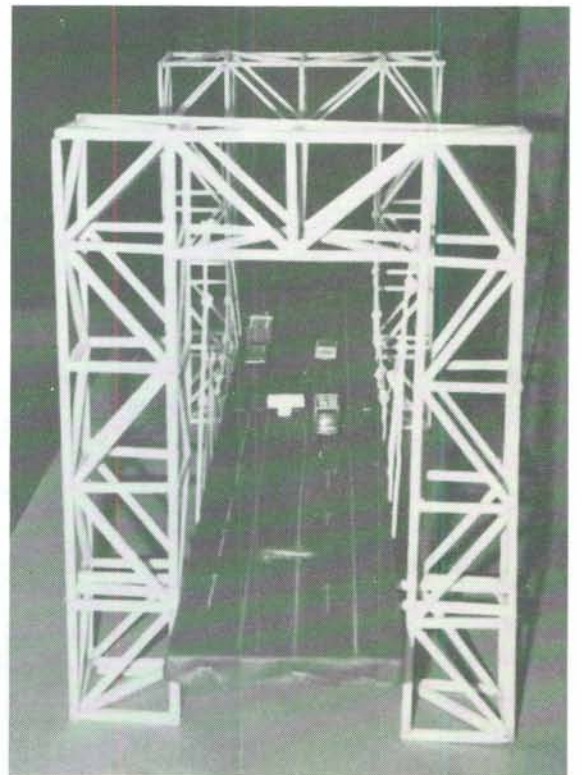
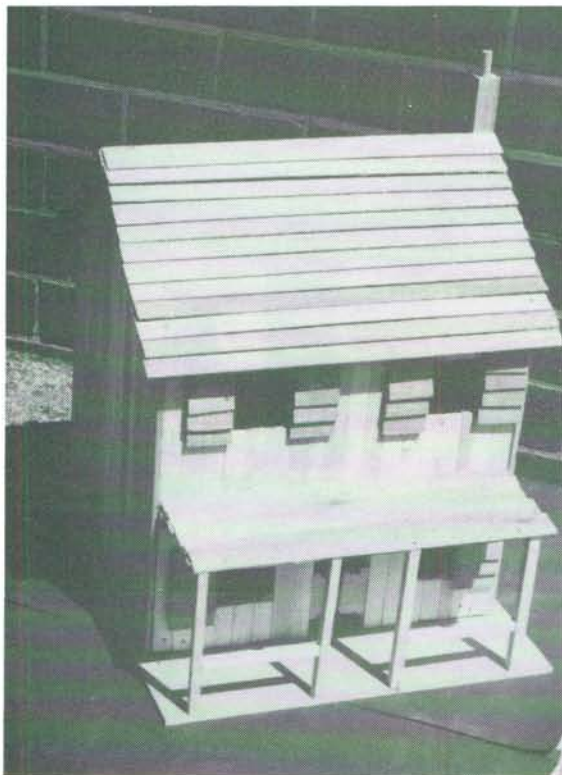
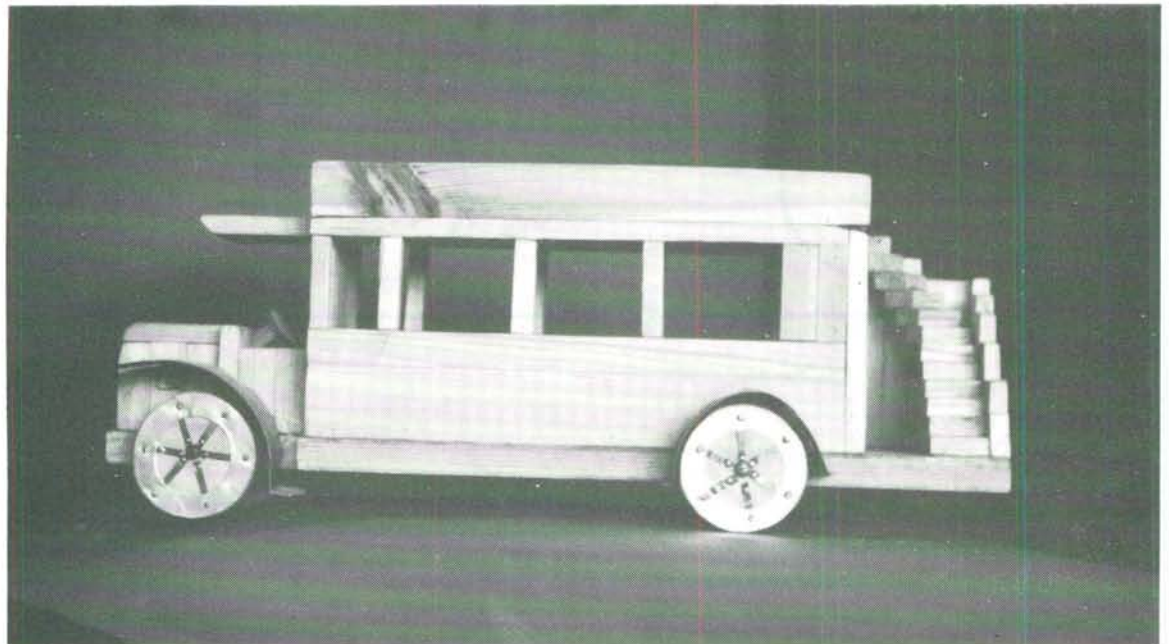
Final model.



Third Year Work 12 Years of Age

This project is just one of a number included in a curriculum, which has been designed so that children of varying aptitudes and abilities can explore the same skills and concepts.

There are many fundamental manipulative skills which overlap the range of materials used.





A Work Station Used for Enamelling Copper

The underlying philosophy for this curriculum requires pupils and staff to have a wide experience of materials and a less 'clear cut' division of materially defined subject areas, so that a child with inventive imagination can be engaged on a project, which use a variety of materials. Initially, we need to consider the physical ability of the children and provide them with materials of suitable thickness of section. Design problems can then be posed, which have solutions balanced between the degree of experience already gained, and the amount of experimentation necessary to arrive at a progressive conclusion. In this way many of the difficulties associated with designing for craft and technology can be overcome.

From the teaching point of view the reciprocal of this is a constant demand for consultation and expertise, and 'on going' curriculum development which should make provision for new materials and innovation.

Acknowledgement

The section dealing with the transport project in this article was first published by the Metropolitan Borough of Wigan in 'Education News and Views'.