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DESIGN EDUCATION

The value of Graphic Design as a process within Design and Education.

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by

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INTRODUCTION

In this dissertation I discuss many issues related to Design Education. I examine the overall value of Design Education and the place for a well structured Graphic Design programme within post-primary education. I examine design and graphic design to make a strong case for the expansion of the art curriculum, to involve more construction, visual communication and computer skills, to develop and prepare the student for the future.

In chapter one, I ask the question, what is design? and what is design education? I examine what the design process offers and involves, and finally the importance and benefits a well structured design education can provide and enhance.

Chapter two begins with the importance of design education in the post-primary curriculum. It examines the Junior Certificate aims and objectives within both design and graphic design education. I examine the benefits of and similarities between design and graphic design education. And finally I stress the importance of support studies, as being more than just support, and the need for support studies to become more inventive.

Chapter three deals entirely with graphic design. I examine graphic design in terms of communication and its essential role in society. I investigate its true potential in education and determine its place as a functional as well as an aesthetic medium. I discuss graphic design support studies and their many uses, and finally the chapter looks to the future and discusses the position of and absolute need for a futuristic look to the art and design curriculum in our schools, incorporating graphic design as a primary skill necessary for survival.

Chapter four begins with an introduction to the practical work of the first year group in St. Benildus College, Kilmacud, and methodology of design education. A description of the project and all it involved follows, including the schemes of work that were explored.

Chapter five begins with an introduction to the pupils practical work that was carried out in the classroom. Provided in this chapter are images which illustrate the design process and progress attained by the class. The images should be viewed through this chapter and kept in mind when pupil participation, results and findings and the success of the project are being discussed.

CHAPTER 1

DESIGN EDUCATION

A REVIEW OF LITERATURE

DESIGN EDUCATION

> Design is that area of human experience, skill and knowledge which is concerned with mans ability to mould his environment, to suit his own material and spiritual needs. [1]

The field of design continually grows in style and complexity in tandem with technology and computers. For the purpose of this dissertation design will be explored as it may relate to the art class and as it may be used as an activity through which to discover, create and experiment.

Design education incorporates architecture, engineering, textiles, fashion, graphics, theatre etc., make up the significant core of design education work.

> To-day nothing less than the progress of man is dependent upon the development of this ability. It is here that design finds its distinctive educational role; for the essential activity is to initiate and pursue by the rational application of knowledge and experience to a given situation. In other words to design.[2]

Design education is not about imposing good taste or buying wisely, it is more concerned with developing a critical understanding of human needs

and gaining experience in evaluating whether these needs have been met adequately. Designing is a human activity in which everyone is involved; it is a process of identifying problems.[3]

> Design is parallel to the universal design process and helps place design education as a central, all embracing activity in extending our creative frontiers.[4]

DESIGN PROCESS

Art education is a process in which the quality of development is the amount of information stored. This is very evident in relation to the design process.

> Design is not a thing. It is a process. It may involve any kind of media in its expression of ideas. It is more concerned with why and how.[5]

The design process is one which seeks to resolve the interplay between the person, materials and the environment. It calls upon the human faculties of intelligence and the interaction of perceptual, analytical, technical, manual and communicative skills.

> Designing is an activity that engages all human faculties. There is no human activity that is not facilitated or enhanced by its application.[6]

The design process advances these human faculties and activities and transforms them into skills which are fundamental to design awareness and ability.

.....such a process is clearly close to the fundamental processes of creative education and our daily lives. [7]

The processes of designing and making are fundamental amongst the many arts and skills that make up the span of human abilities. [8]

Central to the process of designing and to creative and critical education, is the process of problem solving. Each time a student is faced with a design problem, he or she must combine new ideas, approaches and techniques to solve the problem. The design process and or problem solving requires definite levels of enquiry and production. These are:

1. To identify a problem.

This involves asking 'what the purpose of the design is?' and 'who is the target audience?' More importantly it requires the student to investigate, interpret, translate, initiate ideas and brain-storm.

2. Collecting and analysis of appropriate material.

This involves browsing, referencing and interaction with historical and modern support studies.

3. Inquiry and experiment to test validity.

This involves combining all research to form rough solutions or thumbnail drawings and critical analysis of each solution with use of typography.

4. Propose Solution.

This involves choosing / selecting the appropriate and most promising solution.

5. Make finished product.

This involves an overall accurate and professional standard of presentation combining good use of material and typography.

6. Test and evaluate solution.

This involves evaluating the effectiveness of the solution.

Teachers of art, craft and design must encourage problem solving activities and in doing so encourage the capacity for constructive criticism and evaluation of their own work and the work of others. Because, the 'maximum learning within problem solving occurs at the evaluation stage'. [9]

> Critical activities are the meeting ground between art and language.[10]

The design process involves the students abilities and demands their assimilation with all the art elements.

WHAT DESIGN EDUCATION CAN PROVIDE

With the speed at which our society is advancing, students must cope in the space of their education and development,.the kind of adaptation which used to occur as one generation passed into another. This advancement includes the increase of technological methods, and visual imagery which surround us everywhere we go.

Visual education can support this adaptation in terms of perception, communication, function, structure, appearance, choice and problem solving. These cannot be experienced solely through drawing and painting. However, Peter Green believes that visual and design education have been seriously neglected.[11] Now more than ever a strong design education is necessary. The basic urge of to be imaginative, to make things and to draw are to be found in most children.[12] It is upon these basic urges that design education should be built.

> The experience of design in secondary education contributes to the development of the individual and is part of his or her equipment for life. [13]

Design can help children develop lively enquiring minds; giving them the ability to question and to argue rationally and to apply themselves to tasks.[14] The real essence of design is its use of practical studies and exercises as a means of helping students to understand the society in which they live and to increase their visual literacy.

> What is now required is a visually literate community capable of understanding the visual communications and forms that surround us. [15]

The need for visual literacy to complete a balanced educational structure is clearly evident.[16] Although this is difficult to achieve when the education system in Ireland is so concerned with words and figures, the art teacher must be original and forceful in applying design to increase the students awareness of colour, texture shape, line and form in society, and their use in communicating endless impressions and ideas.

> Designing activities introduce young people to the notion that there are different solutions to a problem. [17]

Design provides tremendous opportunity to involve the child in an activity which is personally valuable in terms of development, providing exploration and determination. In doing so, design also provides motivation. Motivation is also enhanced by giving the student the opportunity to discover and develop through the contentment of personal involvement in designing and producing something that actually satisfies a stated need, through the use of their own ideas and imagination.

> Implicit in the idea of design studies is the educational value of individual participation and response..... the necessity for the child to observe, evaluate and create.[18]

Design education can create an environment where an individual can discover something of himself, his aptitudes and most importantly the relevance of his own ideas and those of others. This environment should exist in every art classroom and not just in relation to design, so that the students can become aware of their surroundings outside the classroom and to explore and experiment without fear of failure. The student must be aloud to formulate his / her own artistic and visual literacy of their surroundings and not that of the teachers.

> The key to achieving these aims lies in a thorough understanding of the educational potential of design, and its relevance to the various stages of a childs development.[19]

FOOTNOTES - CHAPTER 1

1. John Eggleston, Developments in Design Education. (London: Open Books, 1975) p.9.

2. Ken Baynes, Attitudes in Design Education. (London: Croom Helm, 1985) p.86

3. Peter Green, Design Education : Problem Solving and Visual Experience. (London : BT Batsford, 1978) p.89

4. Ibid., p.11

5. Bernard Aylward, Design Education in Schools. (London: Evans Brothers Ltd., 1973) p.29

6. Peter Green, Design Education. p.89

7. Ibid., p.7

8. Peter Williams, Teaching Craft, Design and Technology. (London: Croom Helm, 1985) p.32

9. Peter Green, Design Education. p.13

10. Al Hurwitz, Children and their Art. (New York: Harcourt, Brace, Jovanovich Inc. 1979) p.296

11. Peter Green, Design Education. p.12

12. Design Education at Secondary Level. (London: Design Council, 1980), p.5.

13. Ibid., p.7

14. Ken Baynes, Attitudes in Design Education p.86

15. Peter Green, Design Education. p.9

16. Ibid., p.12

17. Peter Williams, Teaching Craft, Design and Technology. p.79

18. Ken Baynes, Attitudes in Design Education. p.86

19. Ibid., p.89

CHAPTER 2

DESIGN EDUCATION IN SECONDARY SCHOOL

> Education is a term only to be used of the kind of teaching which is genuinely aimed at producing autonomous human beings, people whose education has helped them to acquire the power to think for themselves and to make their own judgement.[1]

Pupils should be encouraged to look at their surroundings, think for themselves and examine the results of other peoples decisions, which are now shaping their lives. This can be achieved by increasing their design awareness and design ability, elements which are "inherent capacities to all human beings". [2]

> Design, as a major curriculum area, has the central aim of developing the intellectual capacity and practical skills of the pupil through process of designing, making and evaluating. This process requires a progressive accumulation of knowledge, intellectual and practical skill, experience and the ability to communicate in both verbal and graphic terms.[3]

Design education must induce.....

- A sense of enjoyment with understanding and insight into the world of places, products and images.

• An interest in the personal and public design education decisions that affect the students lives and the life of society.

• A sense of criticism of design at the students own level for their own material and spiritual needs.

• A sense of high standard of idea and execution.[4]

Throughout the education system there is a strong emphasis on literature, history, science and mathematics, but there is too little emphasis on the development of art and skills involved in designing making and doing. Our present responsibilities, as visual educators are concerned with defining a meaningful and significant role of art and design education in a rapidly changing technological society.

DESIGN EDUCATION IN THE JUNIOR CERTIFICATE SYLLABUS

The Junior Certificate was introduced in 1992 and replaced the poorer Intermediate and Group Certificate. Thus 'Art' became 'Art, Craft and Design'. The Junior Certificate divided art into these three inter-dependent disciplines. These disciplines are....

> .....fundamental to human existence, predating written language. They play a major role in human evolution and development. Each involves a different way of thinking.
> - Art emphasizes ideas, feelings and visual qualities.
> - Craft emphasizes the right use of tools and materials.
> - Design emphasizes planning, problem solving and completion, using drawing as a means of thinking.[5]

These unite in the basic human drive to shape the world, for functional purposes, and to express and communicate ideas and feelings. The aims of the art, craft and design syllabus are as follows:

- To promote in the student an informed, inquiring and discriminating attitude to his or her environment and to help the student relate to the world in visual, tactile and spatial terms.

- To develop a sense of personal identity and self-esteem through practical achievement in the expressive, communicative and functional modes of art, craft and design.

* To develop in the student an understanding of art, craft and design in a variety of contexts - historical, cultural, economic, social and personal.

- To develop in the student the ability to apply evaluate criteria to his / her own work and to the work of others and in his / her daily encounters with the natural, social and man-made environments and with the mass media.

- To promote in the student a practical understanding of and competence in the principles and skills underlying visual and constructional design and problem solving.

- To develop through structured practical work the student's aesthetic sensibilities and powers of critical appraisal, appreciation and evaluation and to enhance the student's qualities of imagination, creativity, originality and ingenuity.[6]

The word design as stated in the Junior Certificate syllabus is defined as:

> .....a problem solving experience in either two or three dimensions.[7]

In order for these aims to be achieved through design, there must be a balance between process and product in the teaching and learning of design. This can only become possible if teachers realize the importance and need for design education as a way for the students to explore and experiment in design skills and perception. If taught in this manner the student should be able:

1. • To identify, describe and analyse a problem or task and propose a solution to same.
   • To Identify and record information relevant to the task.

2. • To formulate a variety of ideas - examine feasibility of these.
   • To construct working drawings, plans, elevations, models and prototypes where appropriate.
   • To develop most feasible ideas which are appropriate to the solution.

3. • To implement or construct proposed solution, using appropriate knowledge, skills, techniques, equipment, material and research data.

4. • To assess and evaluate what they have made.
   • To suggest possible ways to alter or modify the process, the solution or both in order to improve it.
   • To support and justify solution(s) to a problem.

5. • To develop an understanding of the communicative function of design.
   • To develop critical, evaluate, discriminative aspects through support studies.[8]

The Junior Certificate syllabus consists of a core syllabus with a minimum of one option for ordinary level or two options for higher level. The core is made up of three areas: Drawing; two dimensional and three dimensional art, craft and design. Design plays an important role in all three and should be very much in evidence in first and second years work, in preparation for the Junior Certificate as a primary concern and secondly to become familiar with the overall process of design including research, history and most importantly support studies. The students should become used to a certain method of working to ensure maximum educational value from the experience of each medium and element. For example, design education should teach the child how to analyse problems, to plan and research to use design processes appropriate to the task in hand, to clarify ideas through the use of working drawings to carry work to completion, and finally to evaluate their own work and the work of others.

GRAPHIC DESIGN IN THE JUNIOR CERTIFICATE SYLLABUS

The major traditions in education revolve around literacy and numeracy. There has been little emphasis on the need to develop a genuine educational language of vision. The need for visual literacy to complete a balanced educational structure is clearly evident. The scope and character of design as a dimension of the curriculum needs to be extended and place a higher

importance on graphic design and visual literacy. Visual literacy education should be part of the common experience of pupils of all ages.[9]

> This sort of approach might pave the way to the presentation of briefs by which pupils might be encouraged to develop an enquiring attitude, develop their ability to formulate and communicate.... These qualities are surely among the most important long-term objectives any design education programme can offer to a pupil.[10]

Graphic design is concerned with these essential aims through images, symbols, lettering and display. Graphic design in the Junior Certificate is described as, image making, image manipulation and development, lettering and lettering and image. As a unit it involves the study and application of design principles and processes. Unless, graphic design is given a more significant role in education it will remain a very basic cause in the curriculum. The biggest problem facing graphic design in the classroom is in relation to teachers who lack confidence when teaching it. This must change, as students receive only half the essence of graphic design, a basic version of its full potential. However, graphic design is improving in Irish education, but at a slow pace. It needs a fresher and more understanding approach to encourage an interest and hence a competence in the subject.

SUPPORT STUDIES

One definite answer to this for more emphasis to be placed on support studies. Support studies for the Junior Certificate are listed as:

- Modern advertising and visual communication.
- Manipulation of images - clarity, distortion, meaning, psychology etc.
- Reproduction, printing process.
- Origins of ideas - influences.
- Collection of source material - packaging, posters, adverts, prints etc.
- Display and presentation. [11]

Support studies can awaken in the student.....

> .....an interest in the whole field of visual communication and in the local environment. [12]

Support studies should be used and developed along with the practical work in a systematic way that complements visual research. The student should become familiar with sequential imagery and still imagery, including analysis of operations, activities and results. Graphic design and support studies if used correctly can hugely increase the students perception of and interaction with society. Therefore, the importance of graphic design and support studies as a part of the art curriculum and design process cannot be understated. This importance is highlighted in the following chapter.

FOOTNOTES - CHAPTER 2

1. Iseult McCarthy, Solas: Defining the Educational Value of Design in the Post Primary Curriculum. (Dublin: 1996) p.94.

2. Design Education at Secondary Level (London: Design Council, 1980) p.5.

3. Peter Williams, Teaching Craft, Design and Technology. (London: Croom Helm, 1985) p.9

4. Design Education at Secondary Level. p.5

5. National Council for Curriculum and Assessment. Chief Examiners Report - Examination 1992; Art Craft and Design : The Junior Certificate. p.1

6. Ibid., p.2

7. Ibid., p.10

8. National Council for Curriculum and Assessment. Chief Examiners Report - Examination 1992; Art, Craft and Design : The Junior Certificate, Guidelines for Teachers. p.10

9. Design Education at Secondary Level. p.10

10. Bernard Aylward, Design Education in Schools. (London: Evans Brothers Ltd., 1973) p.36

11. National Council for Curriculum and Assessment. Chief Examiners Report - Examination 1992; Art, Craft and Design : The Junior Certificate. p.10

12. Ibid., p.10

CHAPTER 3

GRAPHIC DESIGN

GRAPHIC DESIGN AND COMMUNICATION

> Some philosophies emphasize the instrumental values of art, placing major criteria for judgement on its usefulness in our lives and its power to communicate to many people. [1]

Our of all the artistic mediums graphic design is the most verbal and visual form of communication in art.

> Graphic design is the design of things people see and read. Posters, books, signs, billboards, advertisements, commercials and brochures.... it should attempt to maximize both communication and aesthetic quality. [2]

Graphic design is about the communication of ideas and feelings or the stimulation of reactions.[3] Graphic design is concerned with clear communication through image, symbols, lettering and display. This involves the study of art elements, basic principles and processes. There is no better way to teach the design process. The student learns to follow a process through to the end, and if taught correctly becomes skilful and proficient in the use of all the elements in complete harmony and composition.

GRAPHIC DESIGN AND EDUCATION

Graphic design and art education need to advance in....

> .....an environment dominated by the media where the child is surrounded by signs and symbols at home, at school.... it is vitally important that all students should become proficient at graphic communication and should regard the activity as a normal part of the information seeking and transmitting process. [4]

It is up to the teacher to use graphic communication as effectively and imaginatively as possible and to combine all the art elements.

> Graphic design should encourage creativity and develop the skills of problem solving, decision taking and evaluating, all of which are valuable in adult life, while generating an awareness of the qualities of our society. [5]

Therefore, graphic design must hold a legitimate place in a balanced art programme, and in doing so develop along side modern technology. Therefore, the opportunity must exist to develop in secondary schools a visual and design education which fits the pattern of a modern curriculum. The teacher must create this opportunity. It is important to provide more teachers who are qualified in design, and computers.[6] This could be done quite easily as art teachers are already centrally concerned with the issues and certainly possess the skills and experience that handling design and graphic design involves. All it may take is structured investigation and exploration by the teacher and student together, of our visual environment and the methods used to communicate, to look to the future.

> At an advanced level, the activity of graphic communication is every bit as important as literature, history and maths. [7]

In fact it may be more important. Literature, history and mathematics are academic and presuppose criteria of factual accuracy and right or wrong. Graphic design on the other hand, and communication require the successful use of many art elements as a statement of creativity and exploration. Therefore, graphic design can be used successfully in teaching composition and communication and in doing so improve the students own perception and confidence.

The process involved in graphic design is similar to that of general design. It involves problem definition, research, idea generation, illustration, typography, layout and finally the finished piece. Each stage is as important as the next, but illustration, typography and layout are the stages which make a graphic design interesting and visually stimulating.

• Illustration is the art of clarifying and communicating an idea, mood or story in an image.

> In investigating a communicating problem and in searching for possible solutions..... the pupil will produce usual ideas, sometimes fleeting in nature, which will be forever lost if they are not encouraged to capture them in an illustrative form.... as it is the ideas which are important.[8]

• Typography is the art of designing and organizing letter forms appropriate to a purpose.

> In graphic design it is mental images rather than words which enables successful communication to be developed. However,

words are the image aid, a further design element which must work with the image and not against it.[9]

• A layout is a preliminary composition showing the basic idea and major elements of the final work. The value of layout is in teaching pupils to define, to discriminate, to execute to a high standard and finally to evaluate. [11]

AESTHETICISM VERSUS FUNCTIONALISM

Many art historians distinguish the fine arts of painting, sculpture and architecture from the 'minor' arts, such as craft, drawing, print making and graphic design. The Gestalt psychologists point out.....

> .....that the human organism acts in totality when people are occupied with an act of artistic expression, both their feelings (impulses) and intellectual (ideas) are involved. [11]

If this is true then all media are equal. However, fine art enjoys more autonomy, more freedom and more uniqueness than graphic design, this is simply because the latter is more functional.

> Efficiency cannot always be identical with aesthetic quality since functionalism, as required in graphic design, place limitations upon the personal choices that are necessary to artistic acts.[12]

Children want to know about ways that artists handle the problems of overlap, size, placement relationships and convergence of lines, text and

shapes for representing space and depth.[13] Since the function of art is ultimately social, then graphic design is ultimately art. Therefore, art and design should prepare students through the experience of all media and elements equally in relevance to their time and what they experience. But there is....

> no reason why there cannot be room in their life for both the 'integrity of a fresco by Michelangelo and the multi-media art of today'. [14]

SUPPORT STUDIES

Support studies are defined as involving critical appraisal, history and appreciation of art, craft and design and related studies.[15] Support studies need to be on-going, complementary and enhancing to each stage of practical work and evaluation. This is one category of support studies; the other two are: critical support studies which develop the aesthetic awareness of the students and cultural support studies which show art in relation to its cultural context.

> Support studies provide a means of organizing and making sense of our experience that parallels the functioning of the art work.[16]

Support studies should encourage the knowledge, understanding and enjoyment that practical participation alone cannot achieve. Support studies are the meeting ground between art and history. David Thistlewood believes that.... design history has a role in developing a sense of cultural literacy, that is the acquaintance of a culture with its means of communication, its history. Support studies acquaint students with this

history. Support studies are divided into two categories, primary and secondary. The primary support studies are the study of:

- Museums
- Galleries
- Craft Centres
- Environment
- Students Own Work
- The City
- Graphic Design Agencies

The secondary support studies are usually the study of reproductions or two dimensional moving images. The study of:

- Photographs
- Billboards
- Television
- Videos

More and more information and ideas are available to us in visual form. We seen an increasing number of signs, symbols, advertisements, magazines etc. The students head is full of these images. So it is important when teaching a graphic design that good support studies are used:

- To stimulate classroom discussion.
- To clarify what the designer was trying to achieve.
- To inform the student about freedom of choice and criticism.
- To create ideas.
- To see what is happening in other countries in the field of graphics.
- To inform the students about computers and offer experience in using them.

LOOK TO THE FUTURE

Graphic design and art in general must become more dynamic, responding to the changing needs and experience of young people.[17] This fact must be taken as a major consideration in the establishing of the new Senior Certificate for Art. Because.....

> .....our ideas of what constitutes 'art' and what makes up the coverage for art education are expanding and new fields of technology explode the range of materials in which ideas can be communicated.[18]

What is needed, is a Junior Certificate approach combined with technology. Technology must become a part of the art curriculum to aid the production, standard and style of graphic design. C.A.D. or computer aided design must become a recognized art medium in the curriculum.

It is not unreasonable to suggest that every student is entitled to education in twentieth century design aesthetics and technology. In doing so the student is given the opportunity to design and to control by using computers it would ensure that his or her response to the world of design and computers may be influenced rather than arbitrary.

FOOTNOTES - CHAPTER 3

1. Peter Williams, Teaching Craft, Design and Technology. (London: Croom Helm, 1985) p.79.

2. Laura Chapman, Approaches in Art Education. (New York: Harcourt, Brace, Jovanovich Inc. 1979) p.13

3. Peter Green, Design Education : Problem Solving and Visual Experience. (London BT Batsford, 1978) p.57

4. Peter Williams, Teaching Craft, Design and Technology. p.86

5. Design Education at Secondary Level (London: Design Council, 1980) p.5

6. Iseult McCarthy, Solas : Defining the Educational Value of Design in the Post Primary Curriculum (Dublin : 1996) p.98

7. Peter Williams, Teaching Craft, Design and Technology. p.viii

8. Peter Williams, Teaching Craft, Design and Technology. p.85

9. Ibid.

10. Laura Chapman, Approaches in Art Education. p.26

11. Al Hurwitz, Children and their Art. (New York : HBJ. Inc., 1979) p.297

12. Ibid., p.280

13. Ibid., p.88

14. Ibid., p.271

15. Elliot Eisner, Educating Artistic Vision (New York : Macmillan Publishing Co., 1972) p.26

16. David Thistlewood, Issues in Design Education (United Kingdom: Long,man Group, 1990) p.63

17. Peter Green, Design Education p.9

18. Ibid., p.125

CHAPTER 4

METHODOLOGY

INTRODUCTION TO PRACTICAL WORK

> The educational experience of Craft, Design and Technology is a preparation, and in parts a rehearsal, for how the future generation will order their environment. It is the beginning and development of a set of enabling skills and knowledge to increase human potential.[1]

This statement was written in 1985 in England by Peter Williams, twelve years ago. The true potential and need for a structured and combined graphic design and design education has yet to be fully realized in Ireland. This and the constant technological development in our society make up the main reasons why I chose this area to explore academically through my dissertation and practically through my teaching. In doing so, I have stated the need for and advantages of a well structured design education for the art room closely combined with visual and graphic design education.

Other reasons for this dissertation are:

- As we get closer to the millenium, children are not receiving a true constructive and explorative education in design and visual communication or graphic design.

- Support studies in graphic design are uninventive and do not take full advantage of the rich visual environment that surrounds us.

- A lot of the work done by secondary and especially first and second year students hold no relevance whatsoever to their life outside school.

- Students were not given the opportunity to experiment freely and explore as an adventure, the future, our modern society and visual language.

- Art, Craft and Design as experienced through drawing, two dimensional and three dimensional are treated as three independent disciplines, when they should be used to promote and combine skills and processes across all three as a constructional and explorative experience.

The previous three chapters laid out the importance and need for a futuristic, modern and human design and visual education. The following project suggests and shows the results of a well structured, well thought out sequence of lessons combining two-dimensional and three-dimensional activities which compliment and reinforce each other. The project was introduced to a first year class of thirtyone students of mixed ability in St. Benildus College in Kilmacud.

DESCRIPTION OF PROJECT

The project was an optimistic one, in that it was carried out with a group of first years. It endeavoured to introduce over fifteen weeks all the principles involved in two and three dimensional studies to thirteen year old students, a lot of whom had little if any, art and design education in primary schools. By providing direct experience in two and three dimensional activities the project introduced and stimulated constructive, co-operative, tactile and form experience to the student. The project was

divided into two parts. The success and understanding of two and three dimensional relationships in design, drawing and graphic design, determined the success of each part and the overall result.

The theme for the project was RECYCLEROBOT. The students were informed of everything the project was to involve and the amount of design that was necessary.

Part 1 of the project which was to last for seven weeks began with life drawing exercises using sport as a sub-theme. The purpose of these exercises was to get the students to capture and recreate the movement of the figure through silhouette using paint and brushes to create movement of line. For the whole of part one, I took a team approach with teams composed of six students. Each team was allocated parts of the body to focus on, examine and record through drawings.

I then introduced the concept of recycling and its importance for our survival and showed several contemporary artists who have availed of previously used materials in their work. After a lot of discussion and collection, we assembled as a group an outstanding accumulation of rubbish - cans, radios, hub-caps, transistors, razors, cables etc. Each team developed with the purpose of building a giant, but proportionally correct robot, designs for the making of their body part. Each team held regular crits. about what materials would be best to use and the feasibility of the ideas and designs. The following classes were spent exploring, combing and making, with the aim of creating a futuristic Robot. Communication and design were major factors in this part of the project. Not only inside the teams but also between all the teams as the body parts had to be consistent so as to be joined effectively and successfully. Another major

concern was that of weight, the lightest possible materials had to be used, but they also had to be visually and textually interesting. The robot was then assembled and a great unveiling followed creating much excitement.

Part 2 of the project which was to last for nine weeks, one week more than I had planned began as a direct continuation of Part 1. Using what the pupils had already learnt, they had to draw the robot, reinforcing life drawing and proportion and realism. A discussion followed about topics such as where this robot could be from? In what period of time does he exist? Was he a friend or foe? etc. I then introduced the idea of imaginative composition and brought the students to the audio-visual room where we watched some futuristic science fiction films. This was to create and entice ideas for a futuristic cityscape, which was to be used as an impressive back-drop for the posters. The following class was spent learning how to create depth and perspective on two-dimensions. This was done, and the robot drawings had to be combined somehow in the foreground, middle or background. For the two classes which followed, the class learned typography. Typography as shape, and its importance in graphic design were looked at. A design for a poster was formulated, first through thumbnail sketches and then layout and a finished piece it combined everything which the pupils had learned from day one including design skills and constant self evaluation.

AIMS OF PRACTICAL PROJECT

When developing the following aims, I took two major considerations into account. **(i)** that first years needed to be introduced to the design process as an explorative, enjoyable, creative and interactive form of art from day one **(ii)** the boundaries of what is expected artistically from first year

students must increase, with less emphasis being placed on the ability categorizing media such as drawing and more placed on, practical hands on construction and design.

The aims of Part 1 were as follows:

- To explore movement, proportion and structure of the human body through the additive sculpture of a robot.

- To provide an understanding and practical experience of materials and techniques and the relationship of these to design.

- To provide opportunity for children to participated in decision making and problem solving activities within realistic and active conditions.

- To gain and understanding of preliminary design before the finished piece.

- To promote in the student an informed, inquiring and discriminate attitude to human waste and the environment.

The aims of Part 2 were as follows:

- To explore type, balance and illustration through poster design.

- To develop an awareness of the historical, social and economic role and value of graphic design and aspects of mass media.

- To develop a sense of criticism of design at their own level.

• To gain an understanding of the role and communicative function of graphic design in our society.

• To help children to become aware of man's technological development.

As a whole, combining both parts one and two, and the different techniques, skills and media used in both, my overall aim was:

• To promote reactions to ideas, surroundings and problems of design through the use of all the senses.

• To promote in the student a practical understanding of and competence in the principles and skills underlying visual and constructional design and problem solving.

• To develop a sense of personal identity and self esteem through practical achievement.

• To help the student relate to the world in visual, tactile and spatial terms.

• To develop the student's aesthetic sensibilities and powers of critical appraisal, appreciation and evaluation.

• To enhance the students' qualities of imagination, creativity, originality and ingenuity.

SUPPORT STUDIES

The importance of support studies has been well pointed out in chapter two in relation to the Junior Certificate and their necessary involvement in critical appraisal, art history and appreciation of art, craft and design. There is no doubt of the significance they hold in art education, or the significance they held in this project. It is essential that the students also realize their importance at an early stage, and become used to using them when exploring themes, media and activities.

In Part 1, support studies and historical references were used for three important reasons. **(i)** To support life drawings, through the work of Dega (Fig.2) to inform the students about movement of the figure and line. The life drawings and anatomical studies of Michelangelo (Fig. 4) played an important role in introducing the students to the uses of art and drawing process in recording and representing objects and in showing the students how to focus on parts of the body. **(ii)** To support sculpture, through the work of Rowan Gillespie (Fig.7) to inform the students of pieces of sculpture that can be seen in Dublin, and to support the three types of sculpture: additive, substractive and constructive (Fig.8) **(iii)** To support constructive sculpture using recycled material to inform students of the effects and artists who practice this form of sculpture, and to support their own project to entice ideas and materials (Fig.9)

In Part 2, support studies and historical references were used for five important reasons. **(i)** To support futuristic technology and society, to inform students of film directors (Fig.19) and artists who portray the future (Fig.20). **(ii)** To support illustration in graphic design, to inform students of the importance of illustration as a visual communicator (Fig.22)

and also of its properties (Fig.23). **(iii)** To support the typography as illustration, to inform the students of its importance and power (Fig.26) especially through word association (Fig.24) and colour (Fig.25). To support the students own work and ideas (Fig.28) and finally to show the dependence of both typography and illustration on each other (Fig.29). **(iv)** To support poster design as a combination of typography, illustration, colour, layout and overall design to form a unifying composition (Fig.30). **(v)** To support computer generated images, to inform students of present day computer generated graphic design (Fig.33) and the effects that can be produced (Fig.34) To support the students' ideas and concepts of what graphic design is, and the role it and the computer plays in our society (Fig.35)

Support studies were very important in this project. Two dimensionally they provided a look at the historical importance of drawing and the artist in society. Graphically they awakened the students' interest in the whole field of visual communication, its importance in society and provided motivation through understanding. Three dimensionally they provided an introduction to sculpture, its history and its aesthetic importance and impact in our society.

FOOTNOTES - CHAPTER 4

1. Peter Williams - Teaching Craft, Design and Technology. (London: Croom Helm, 1985) p.3.

CHAPTER 5

RESULTS AND RECOMMENDATIONS

INTRODUCTION TO PUPILS WORK

In chapter four, I stated my aims and gave a description of my overall project in two parts. This chapter visually represents the results and methods used along with my recommendations for an improved design education in the Irish curriculum. The following are visually represented:

- Research Work
- Design Work
- Support Studies
- Work in Progress
- Finished Products

These images portray the design process and progress throughout both parts of the project. They incorporate a selection of support studies and historical references used throughout the scheme. It is important to see the progression visually to believe the high standard of work and interest achieved by the students. The project from beginning to end was one of discovery, inventiveness, design and exploration. The interest and motivation had to be high in order to last from class to class. The excitement and challenge of building our Giant Robot, followed by designing a poster for its exhibition achieved this motivation. They explored and created using newly learned skills and elements, and channelled them together as a whole group made up of smaller groups through the design process.

Part one was primarily concerned with developing three dimensional design and problem solving experiences on a large scale. Part two was

concerned with taking the three dimensional design process, research and drawings, and applying them to a more communicative, two dimensional form of design. Together, they offered an all encompassing look at and understanding of design, its process and the importance of it in our society.

Figure 1 - Students Work

Life Drawing

Figure 2-Support studies

Life Drawing

Figure 3 - Students Work

Life Drawing

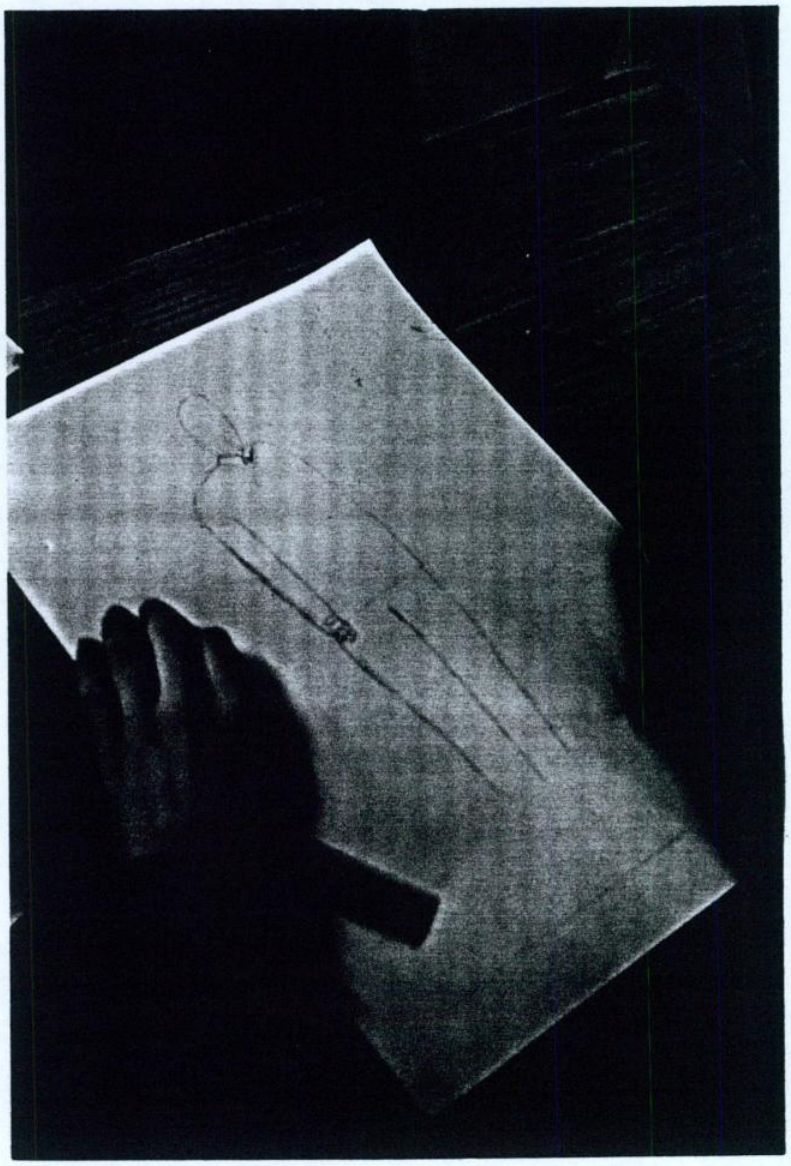


Figure 4 - Support studies

Life Drawing

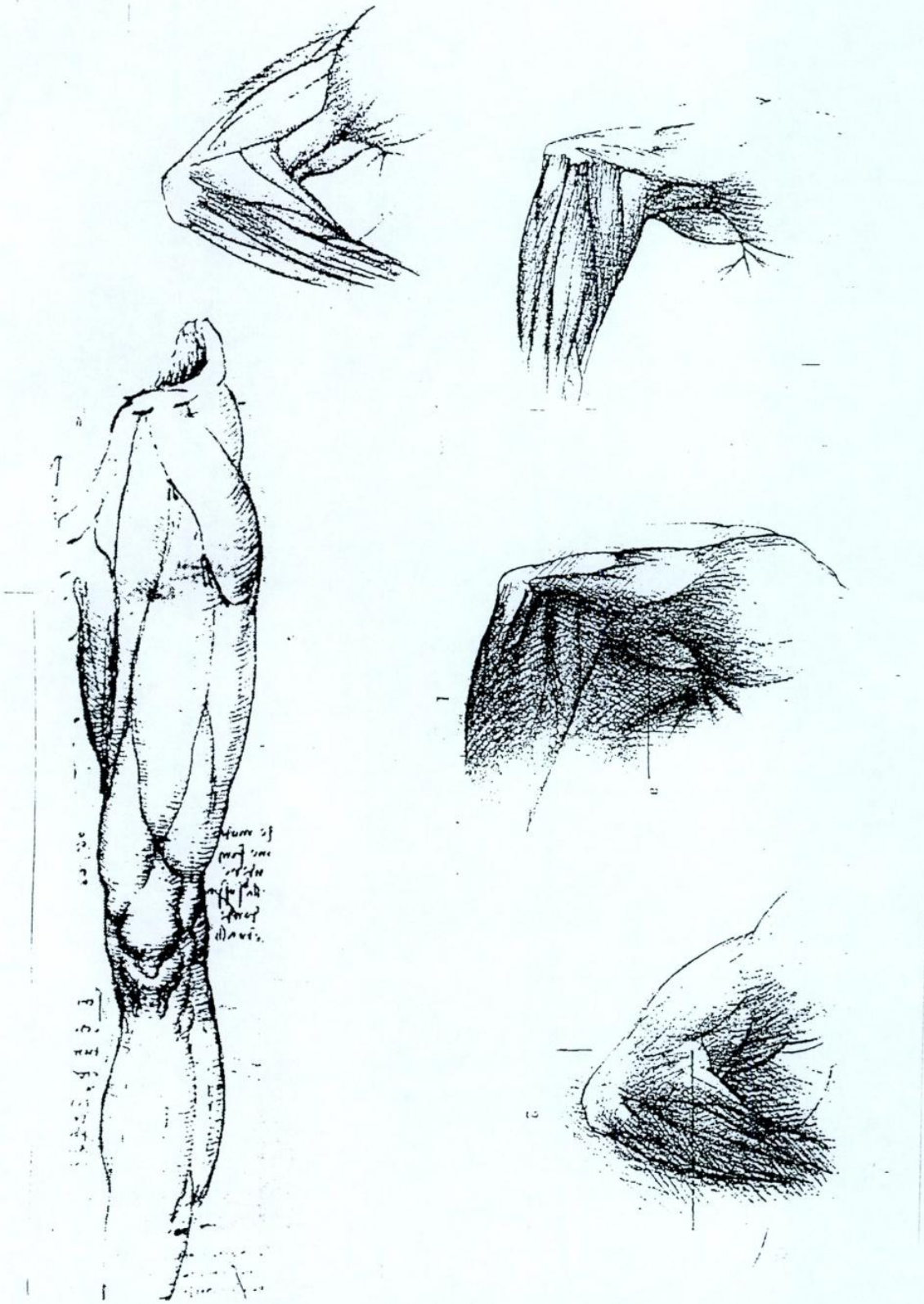


Figure 5 - Students Work
Silhouette

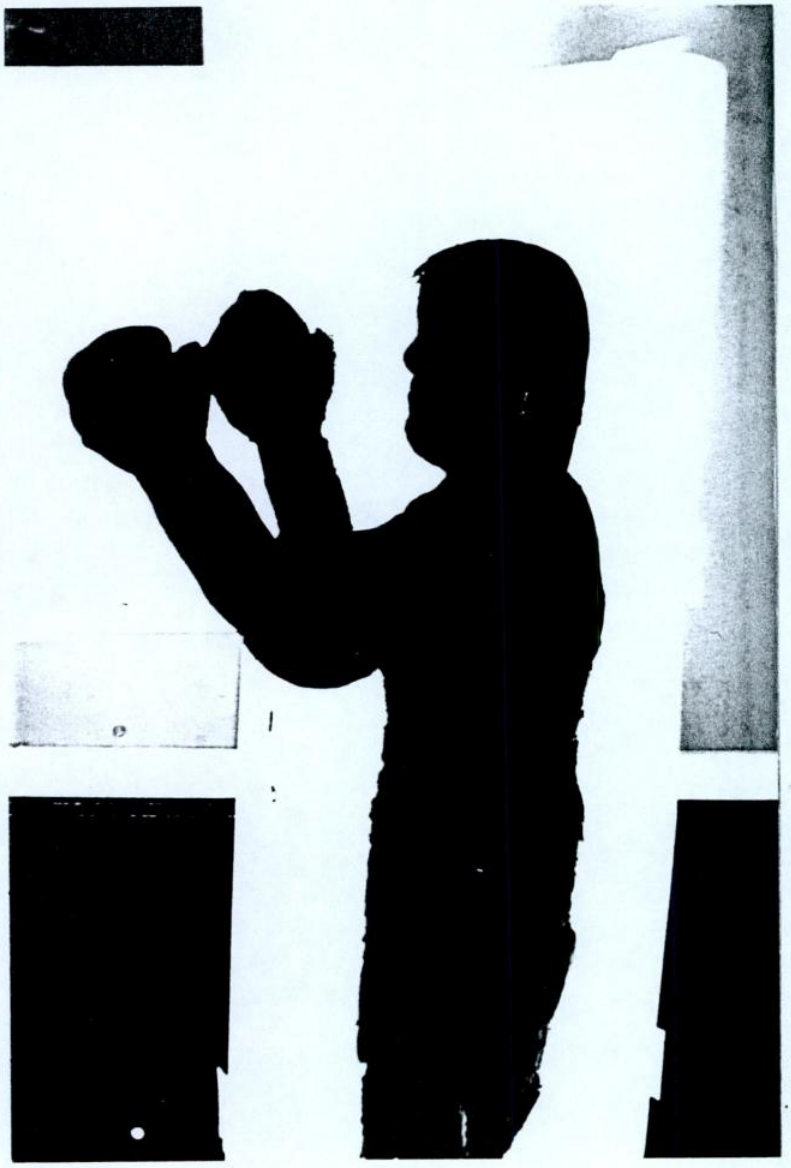


Figure 6 - Students Work
Body Parts

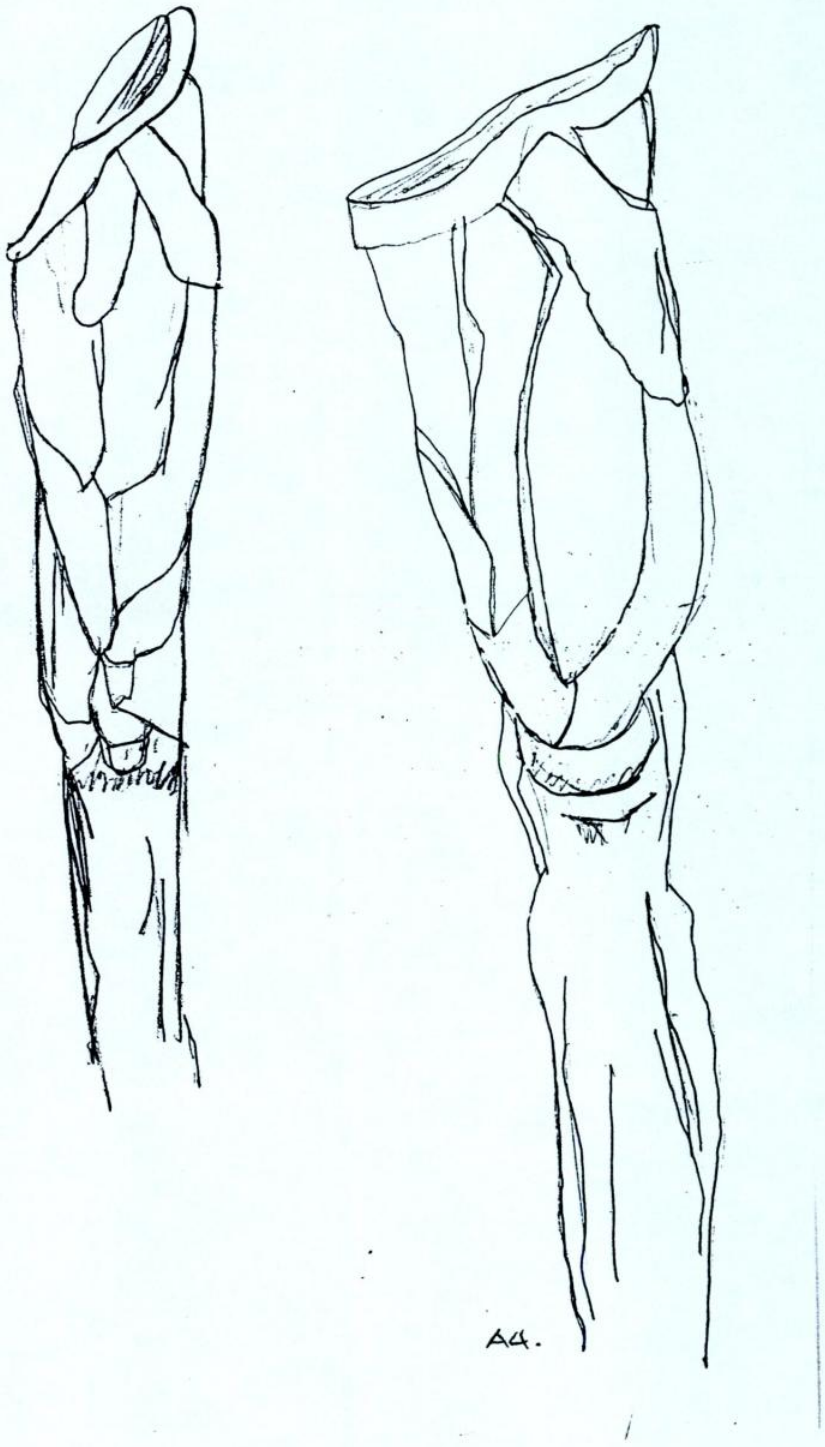


Figure 7 - Support studies

Sculpture

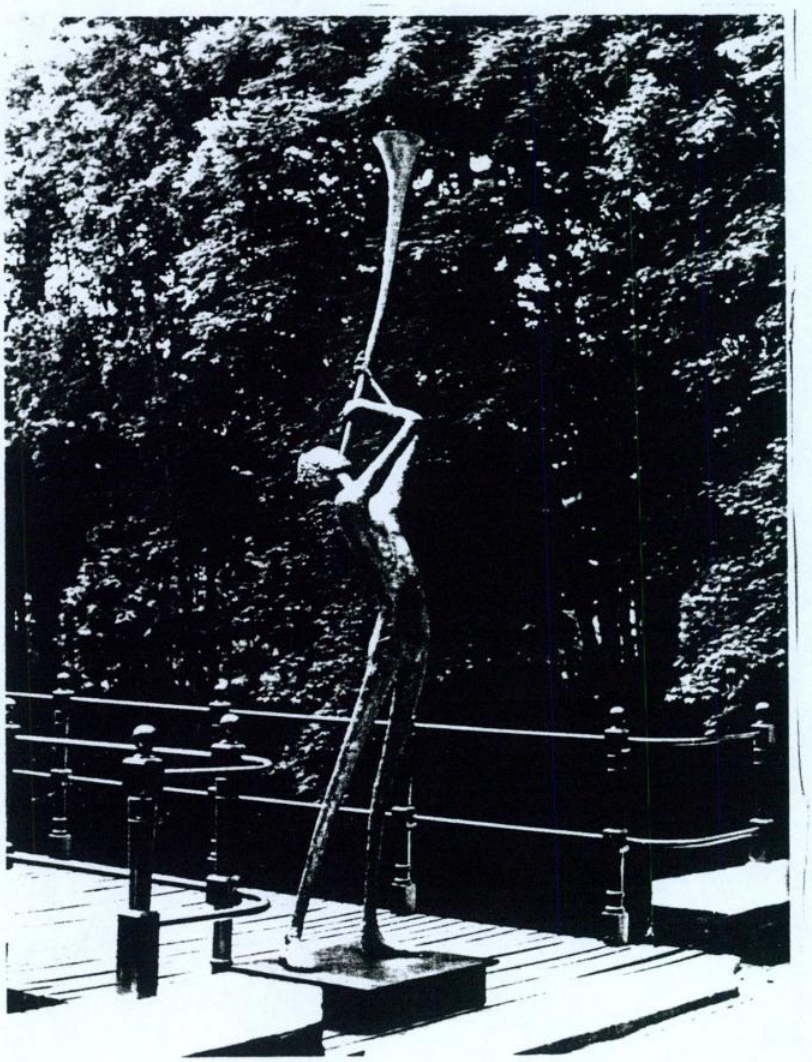


Figure 8 - Support studies

Recycled Sculpture

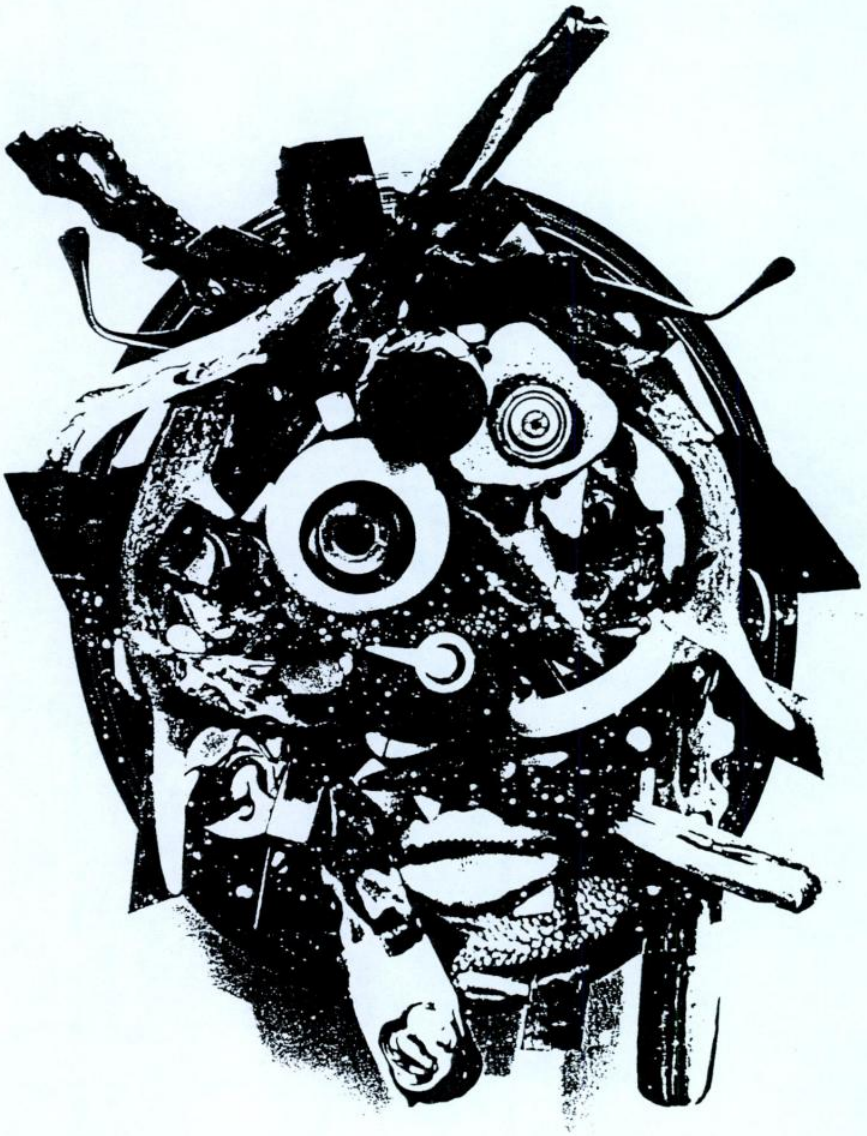


Figure 9 - Support studies

Recycled Sculpture

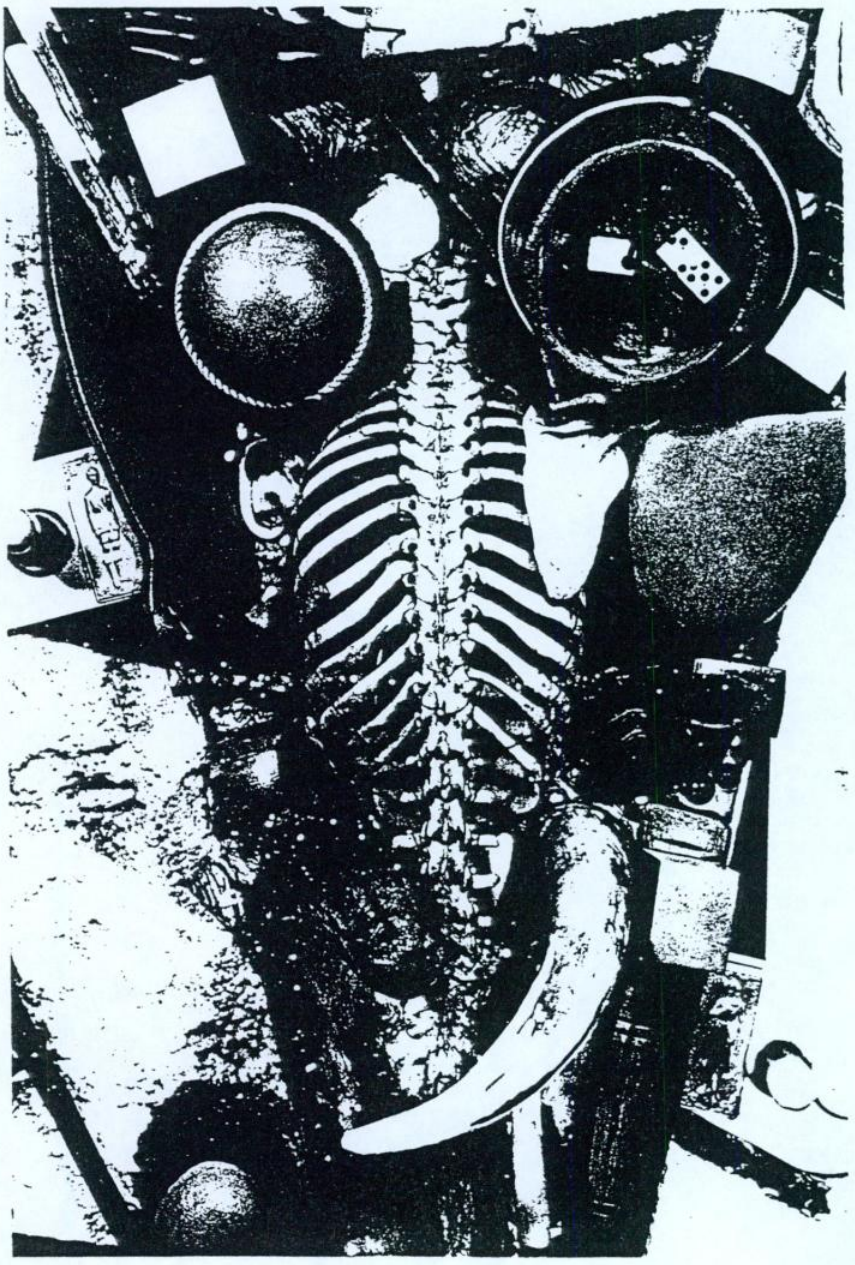


Figure 9A - Students Work
Design

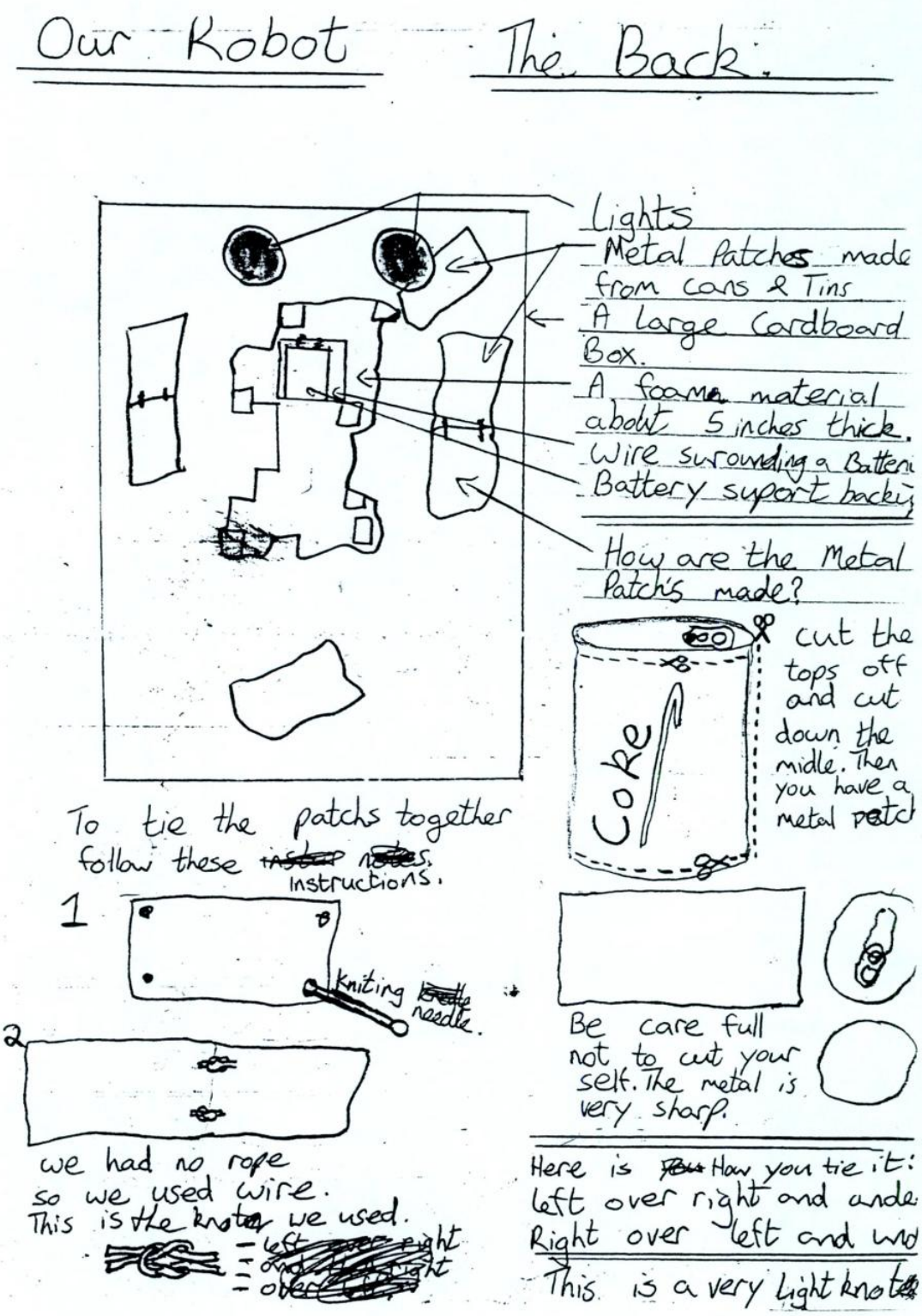


Figure 10 - Students Work
Robot Segment

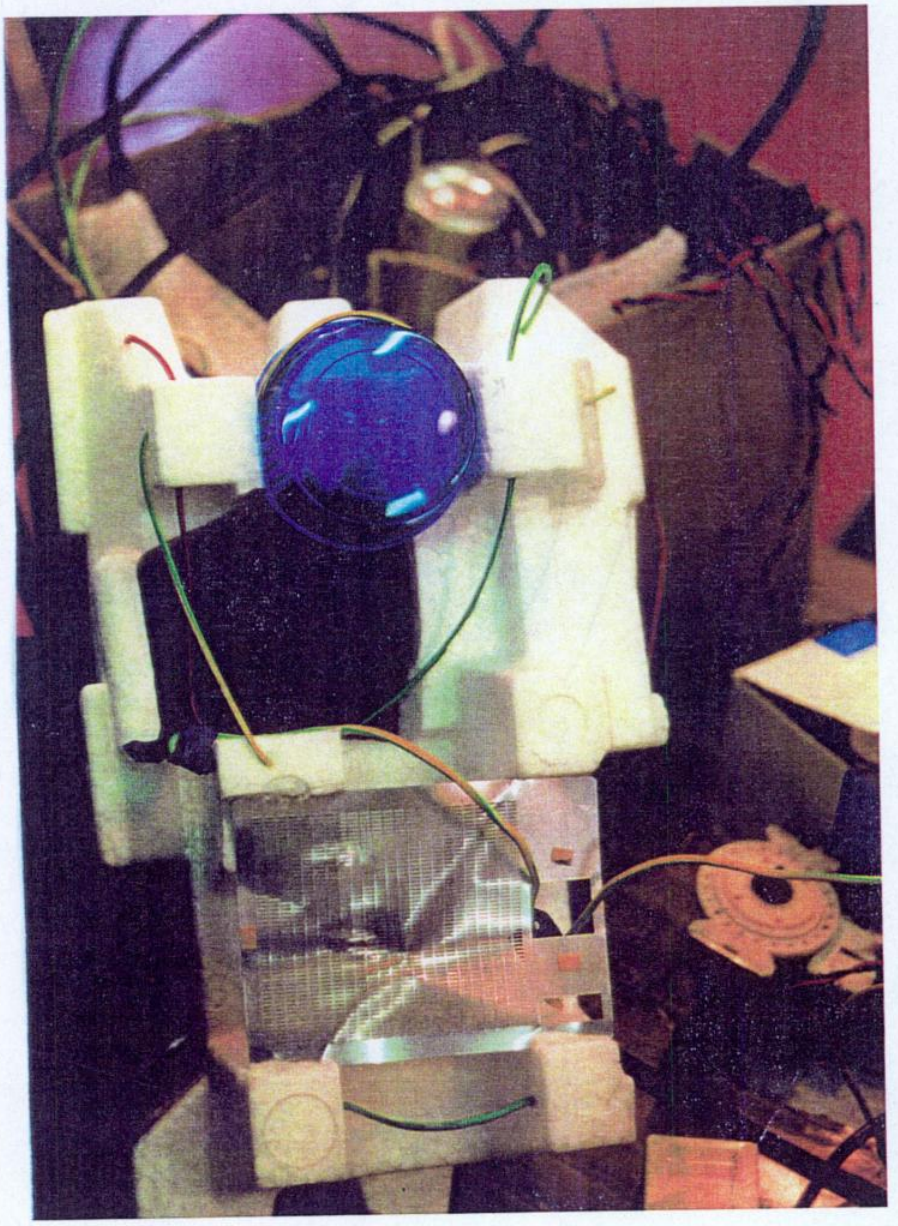


Figure 11 - Students Work
Robot Segment

Figure 12 - Students Work
Robot Segment

Figure 13 - Students Work
Robot Segment

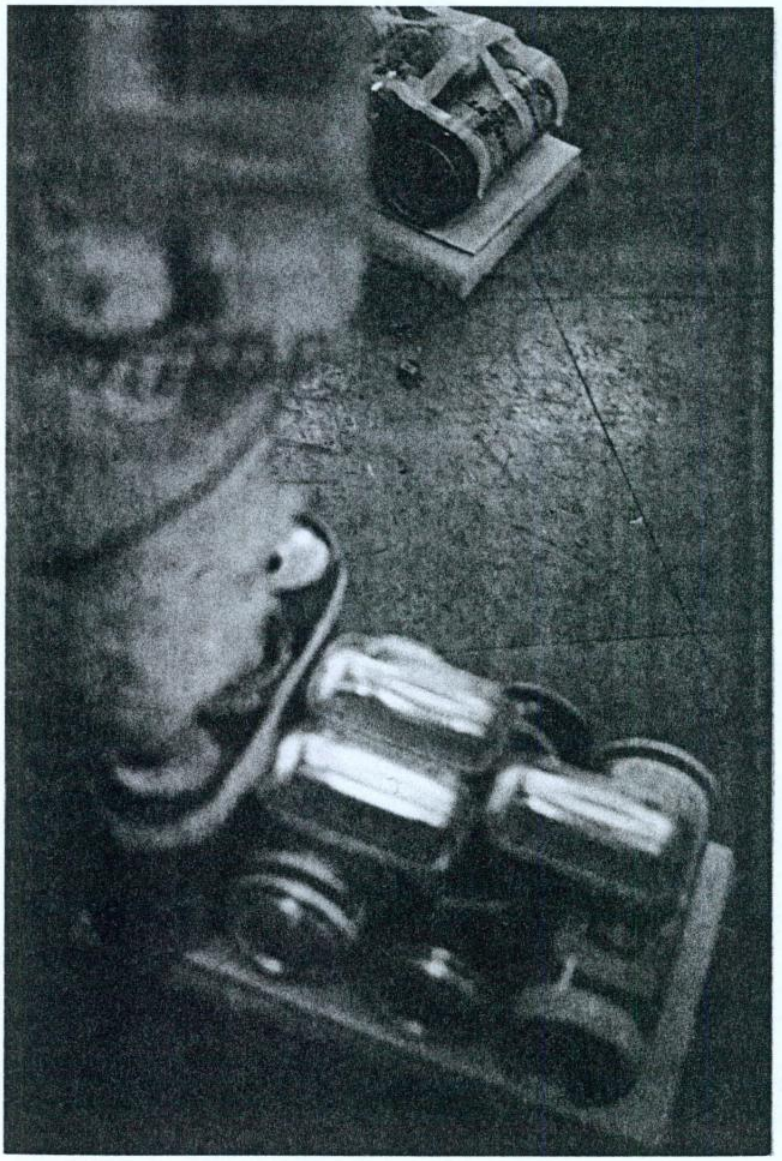


Figure 14 - Students Work
Robot

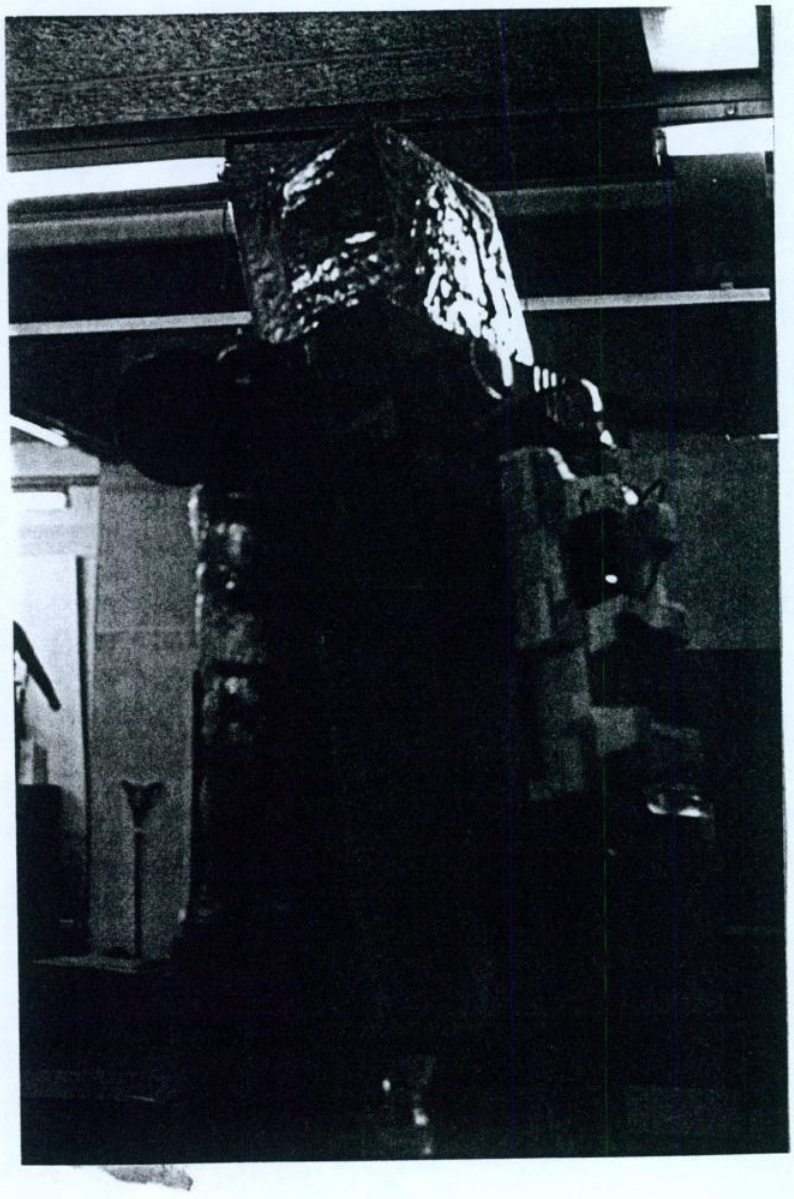


Figure 15 - Students Work
Robot

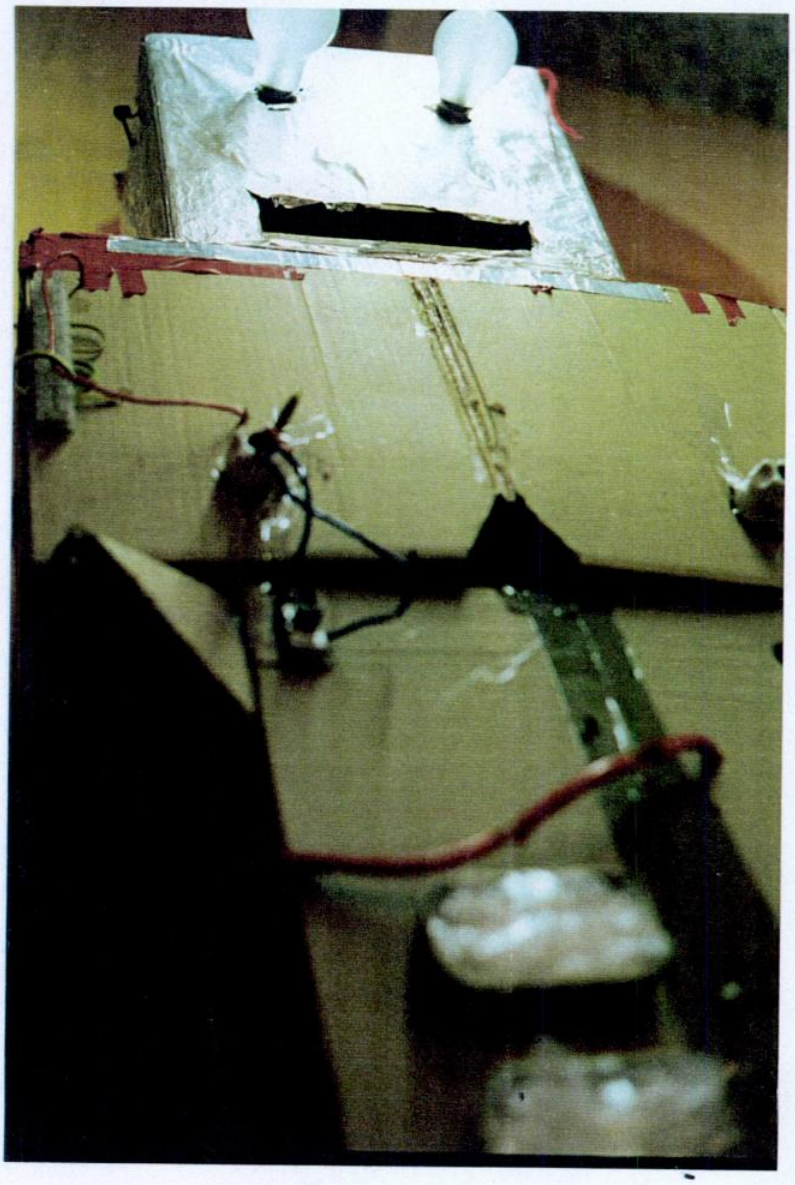


Figure 16 - Students Work
Robot

Figure 17 - Students Work
Robot Drawing

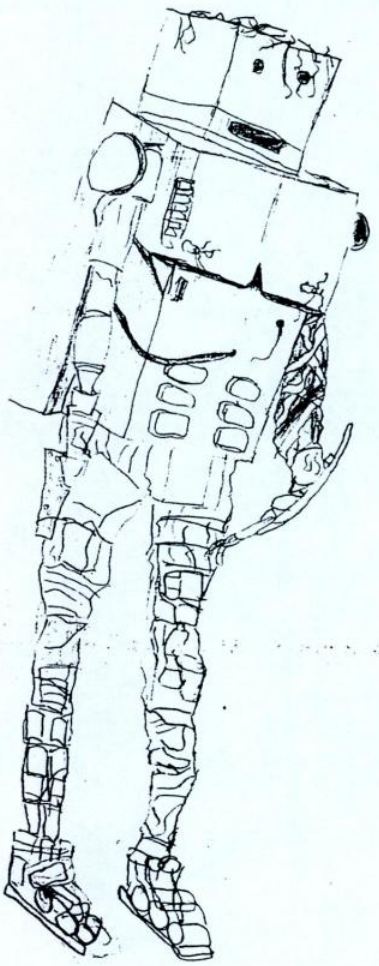


Figure 18 - Students Work
Robot Drawing

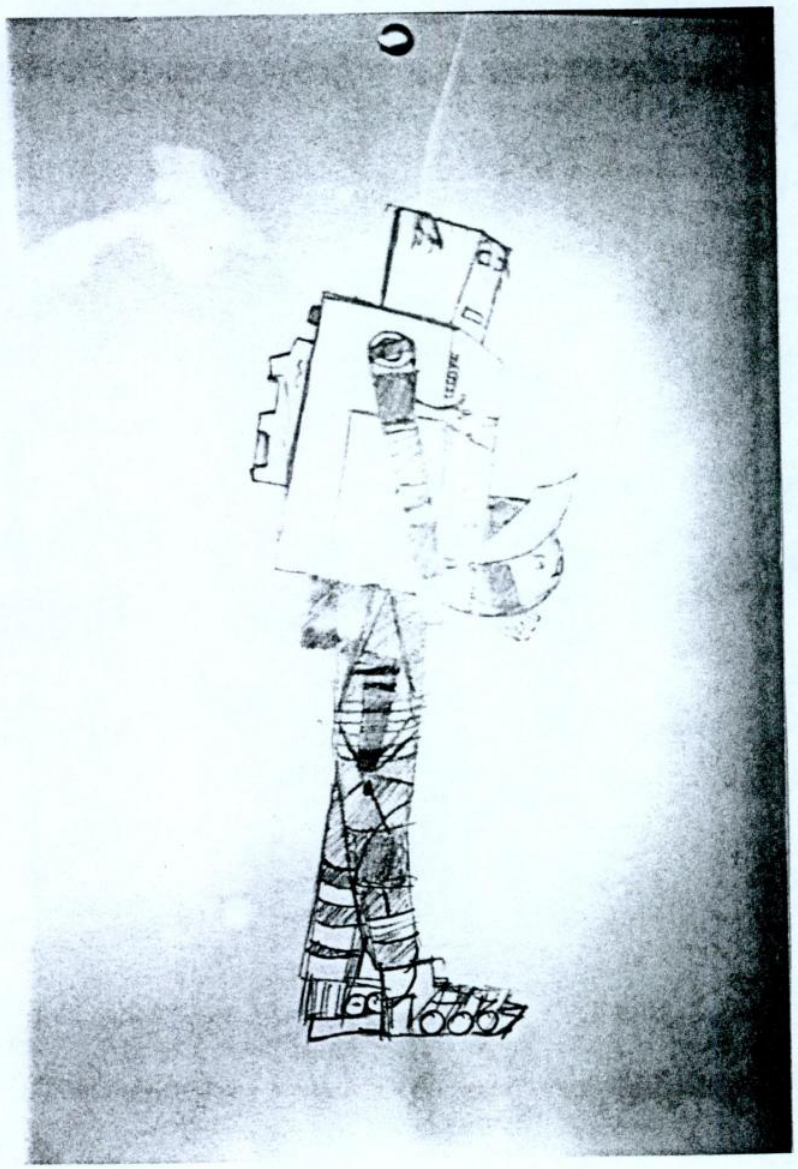


Figure 19 - Support studies

Imaginative Composition

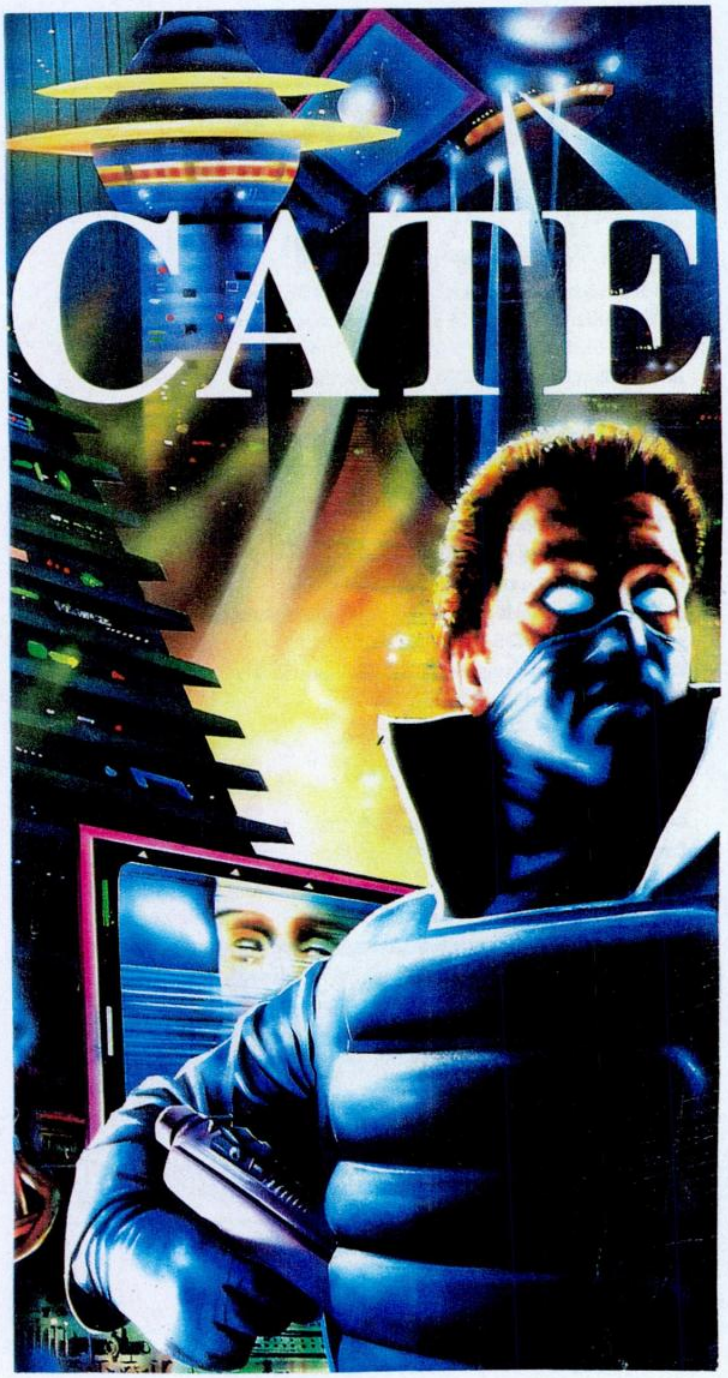
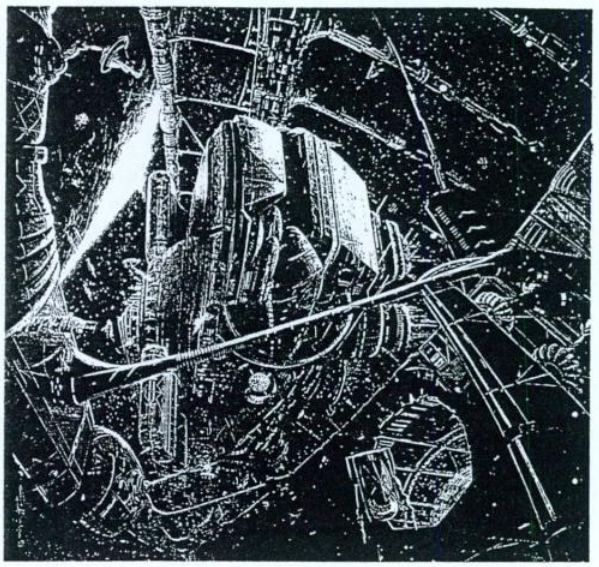


Figure 20 - Support studies

Imaginative Composition



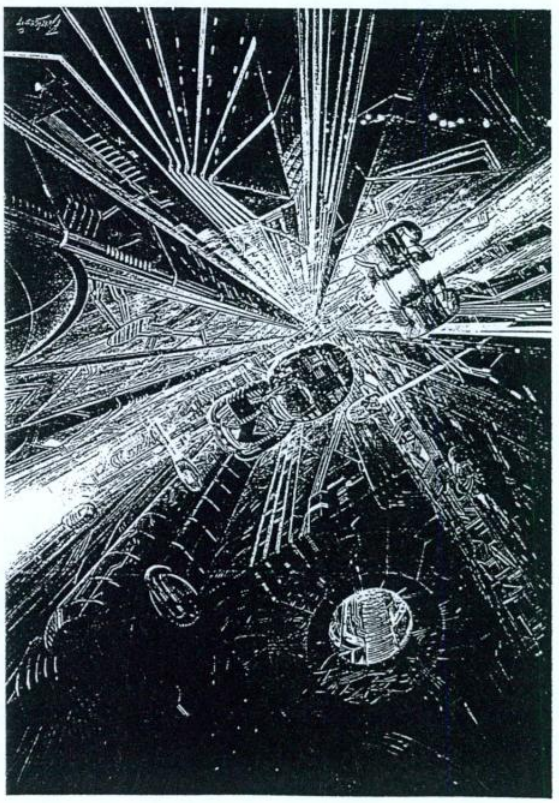
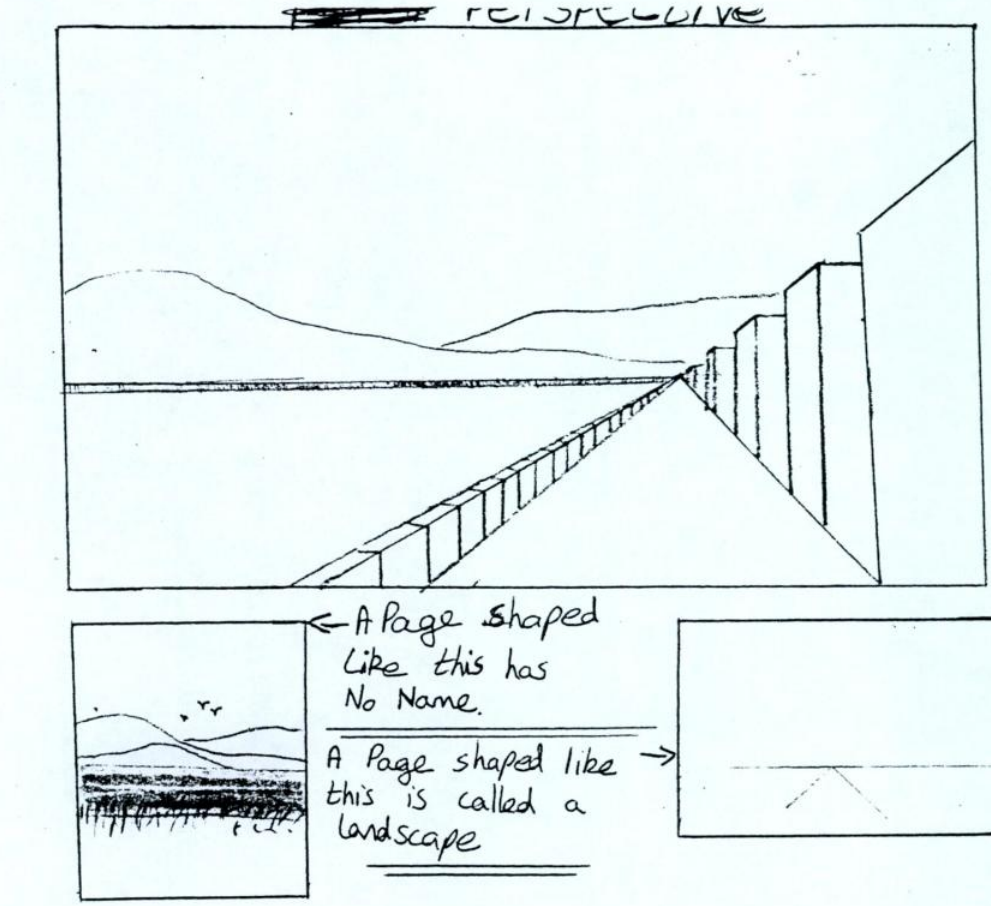


Figure 20A - Students Work
Research



It does not matter where you place your harizan. The harizan ~~is~~ is alway eye hight in real life.

The road is the main item that gives the Perspective in the Picture above.

Important Note: NEVER Use the bottom of the page as your harizan. The ~~picture~~ picture will Look more real.

3-D is also very usefull in Perspective A 3-D Box. Shade also helps.

Ash.

Figure 21 - Students Work
Imaginative Composition

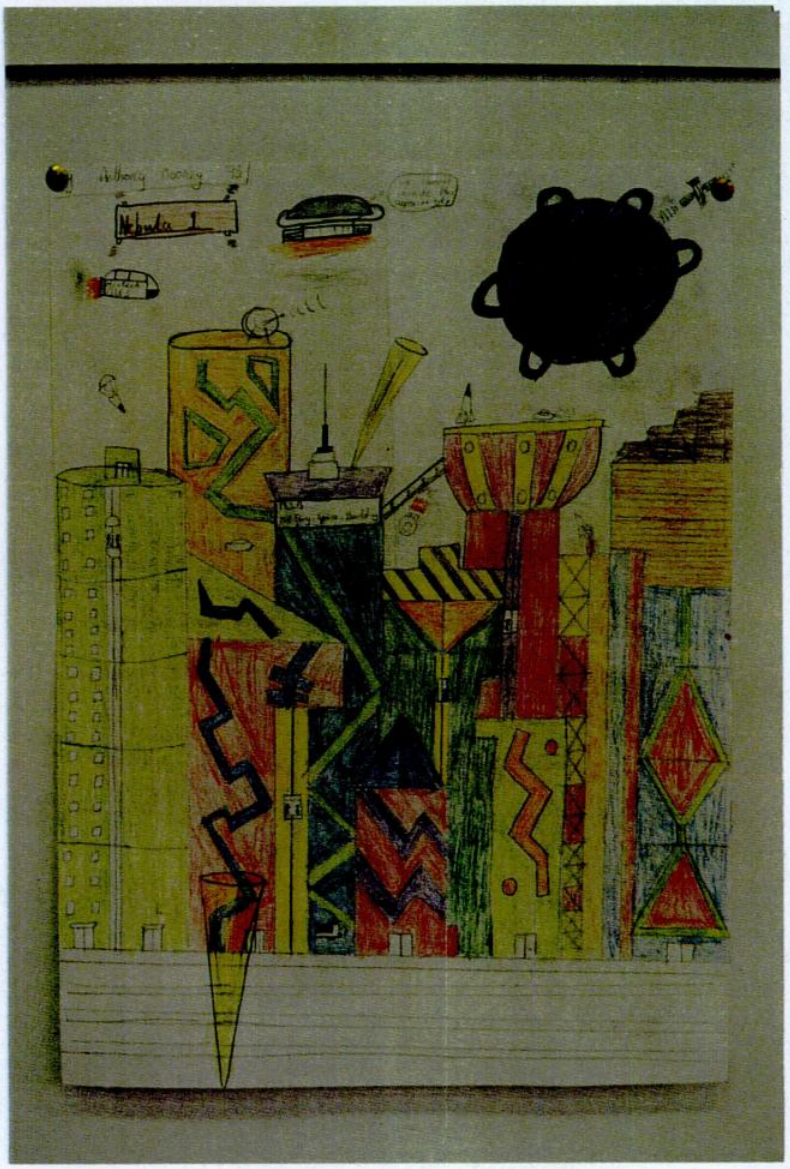


Figure 22 - Support studies
Illustration

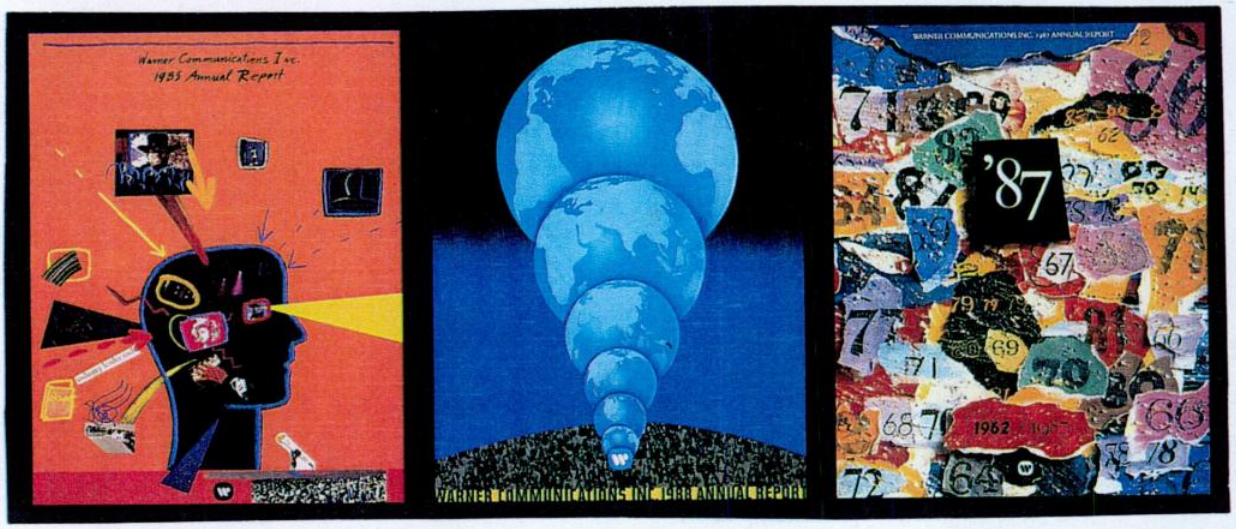


Figure 23 - Support studies
Illustration

Figure 24 - Support studies
Word Association

Figure 25 - Support studies
Typography

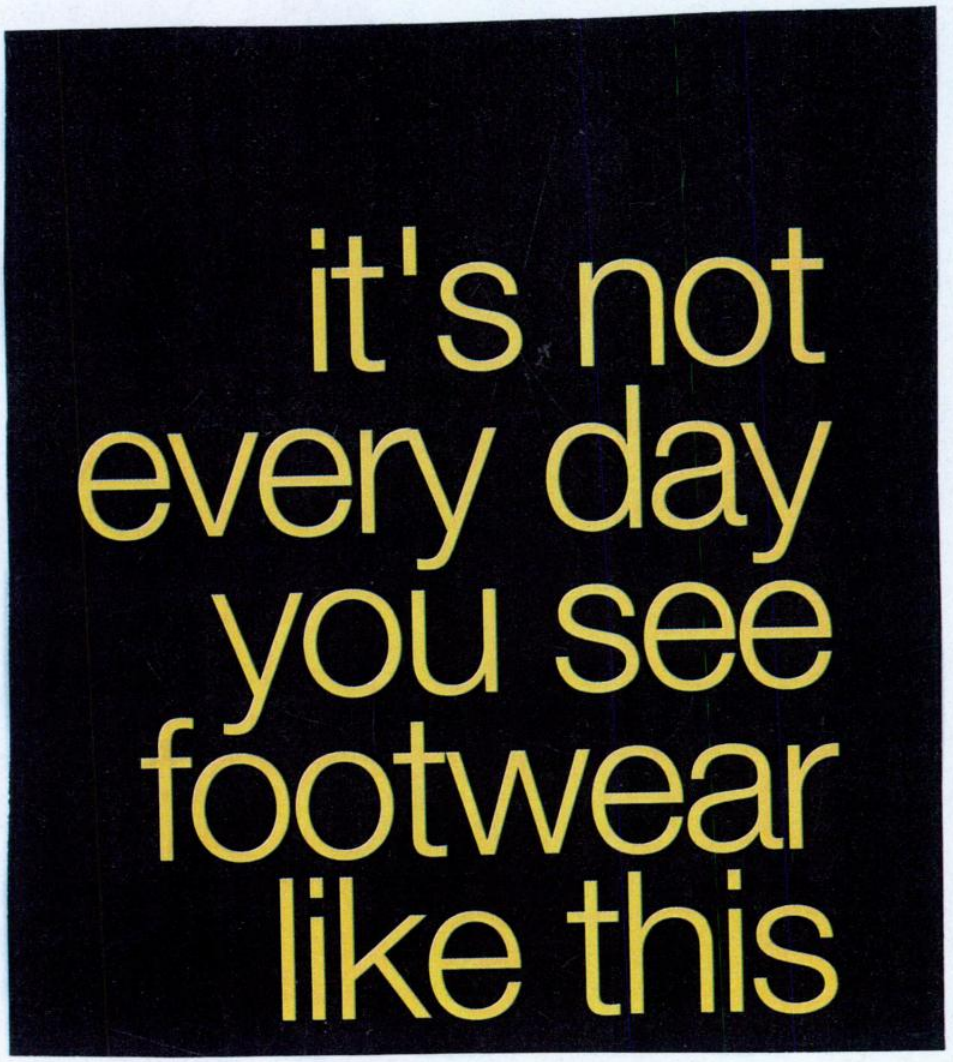


Figure 26 - Support studies
Typography

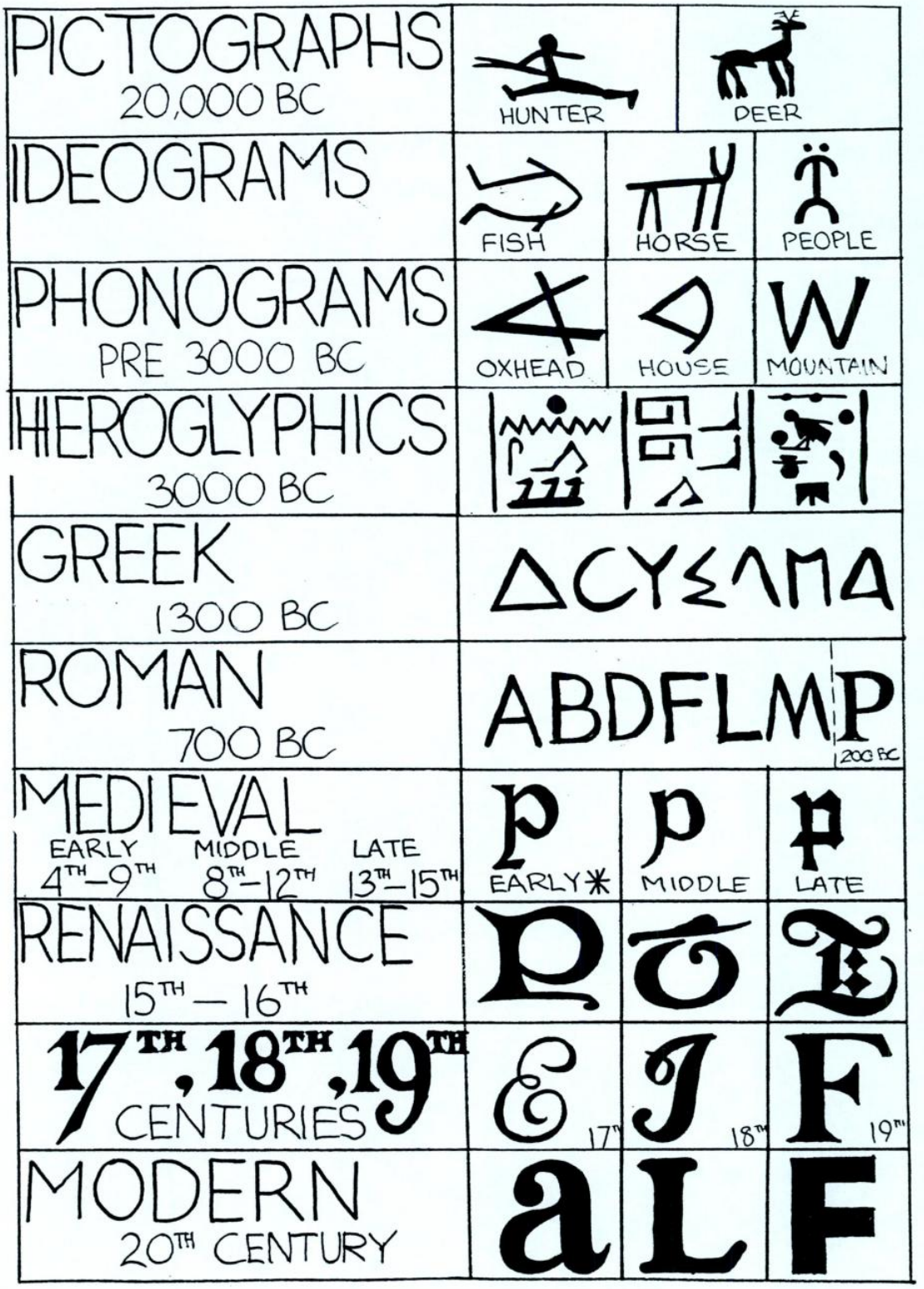


Figure 27 - Students Work
Typography

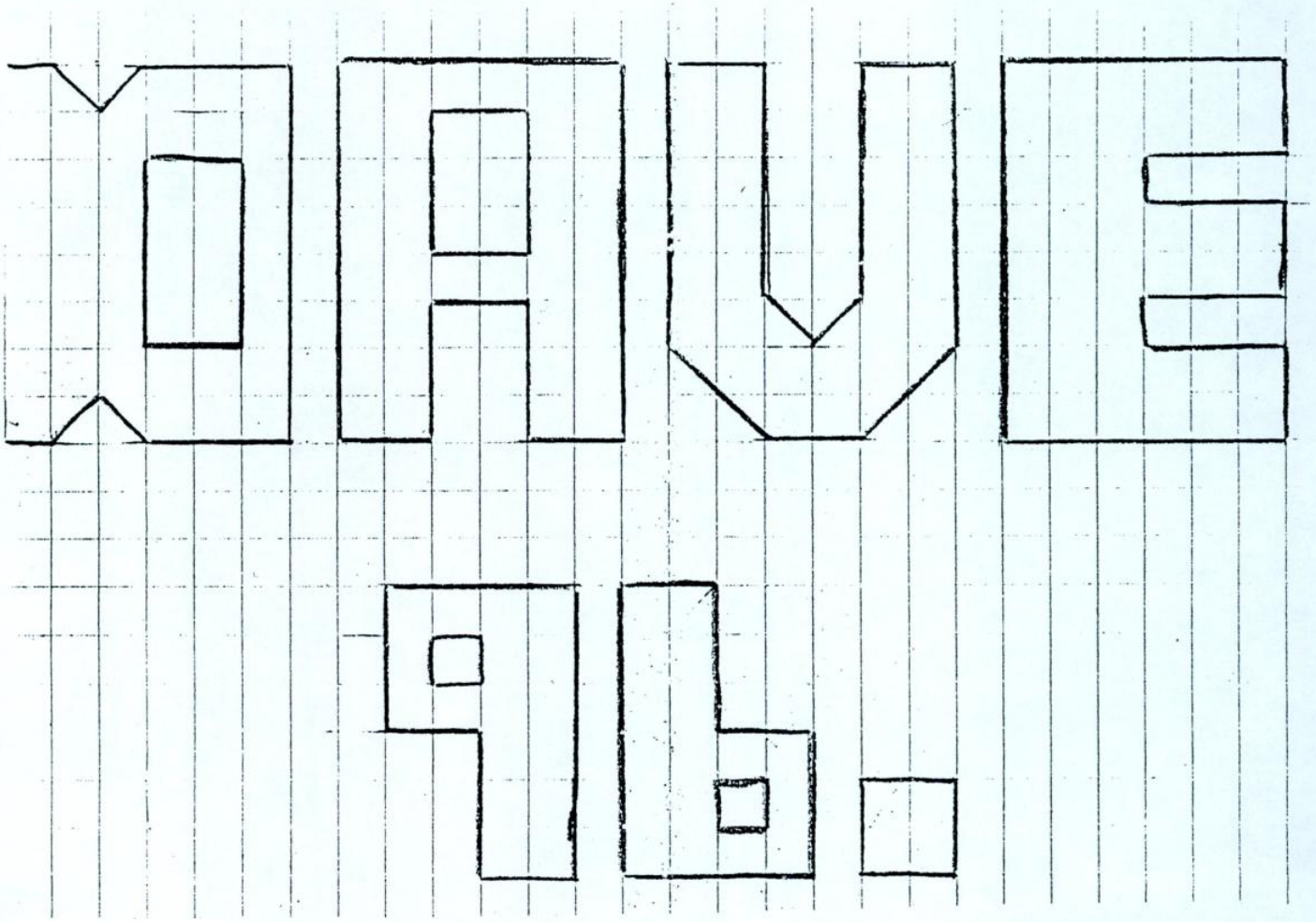


Figure 28 - Support studies
Typography

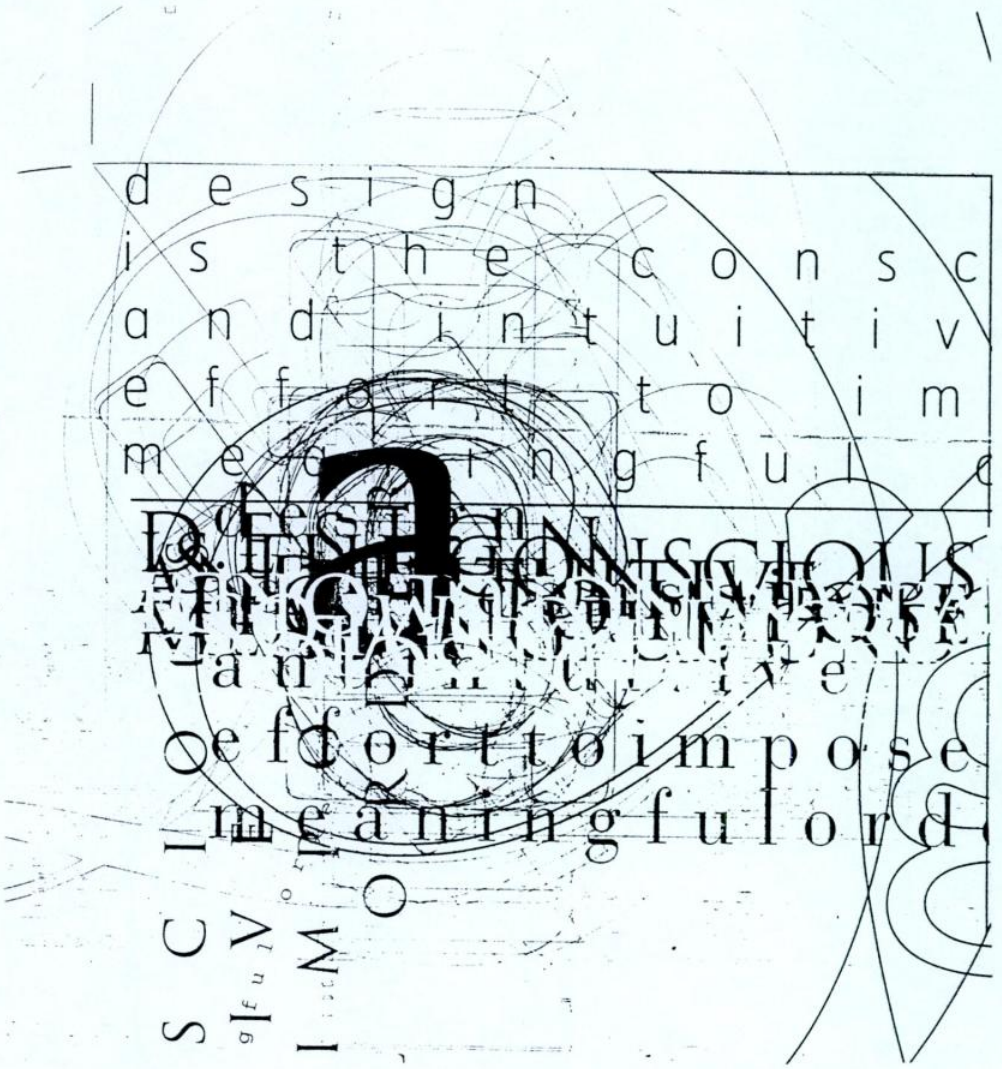


Figure 29 - Support studies
Typography

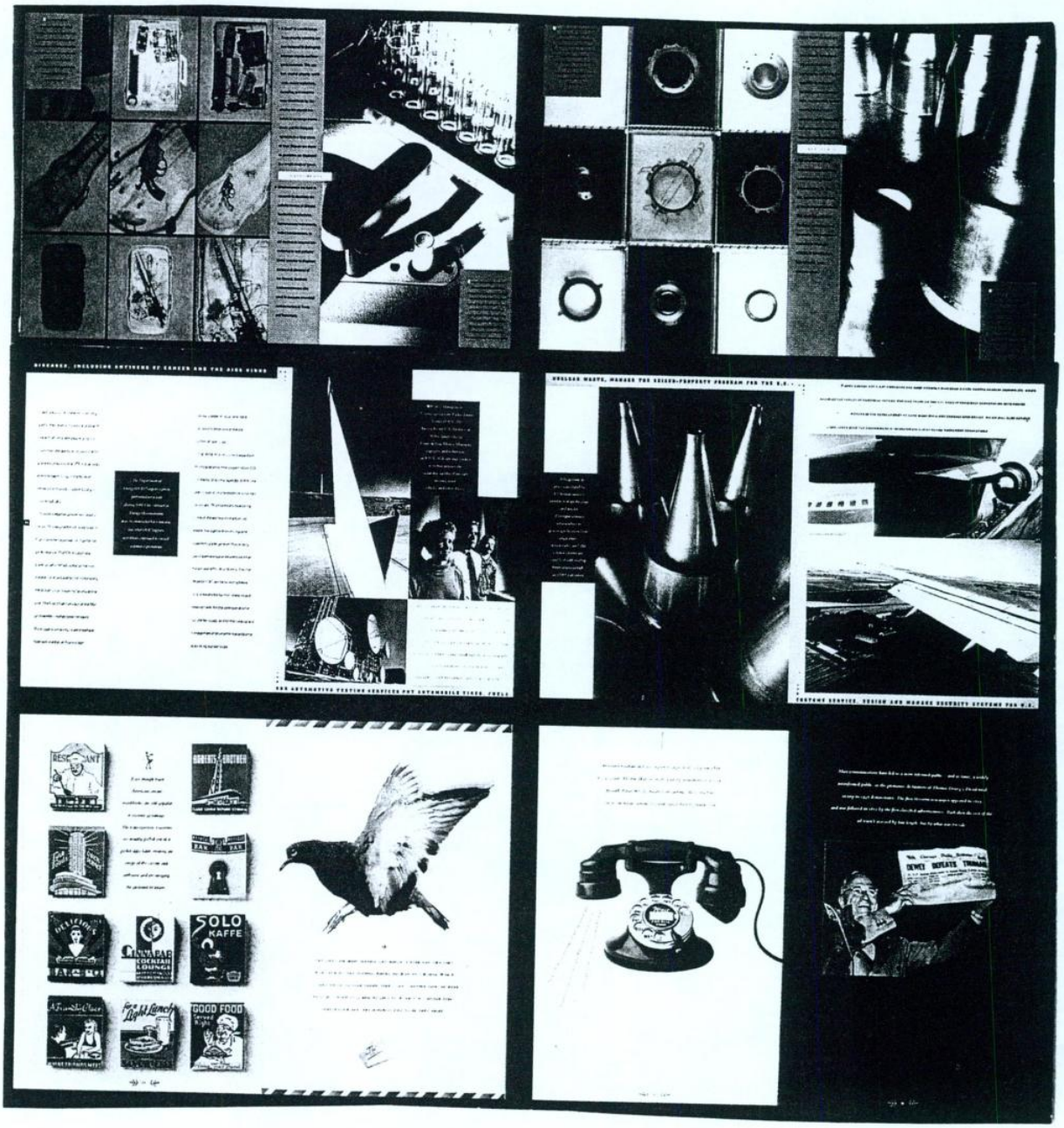


Figure 30 - Support studies
Poster Design

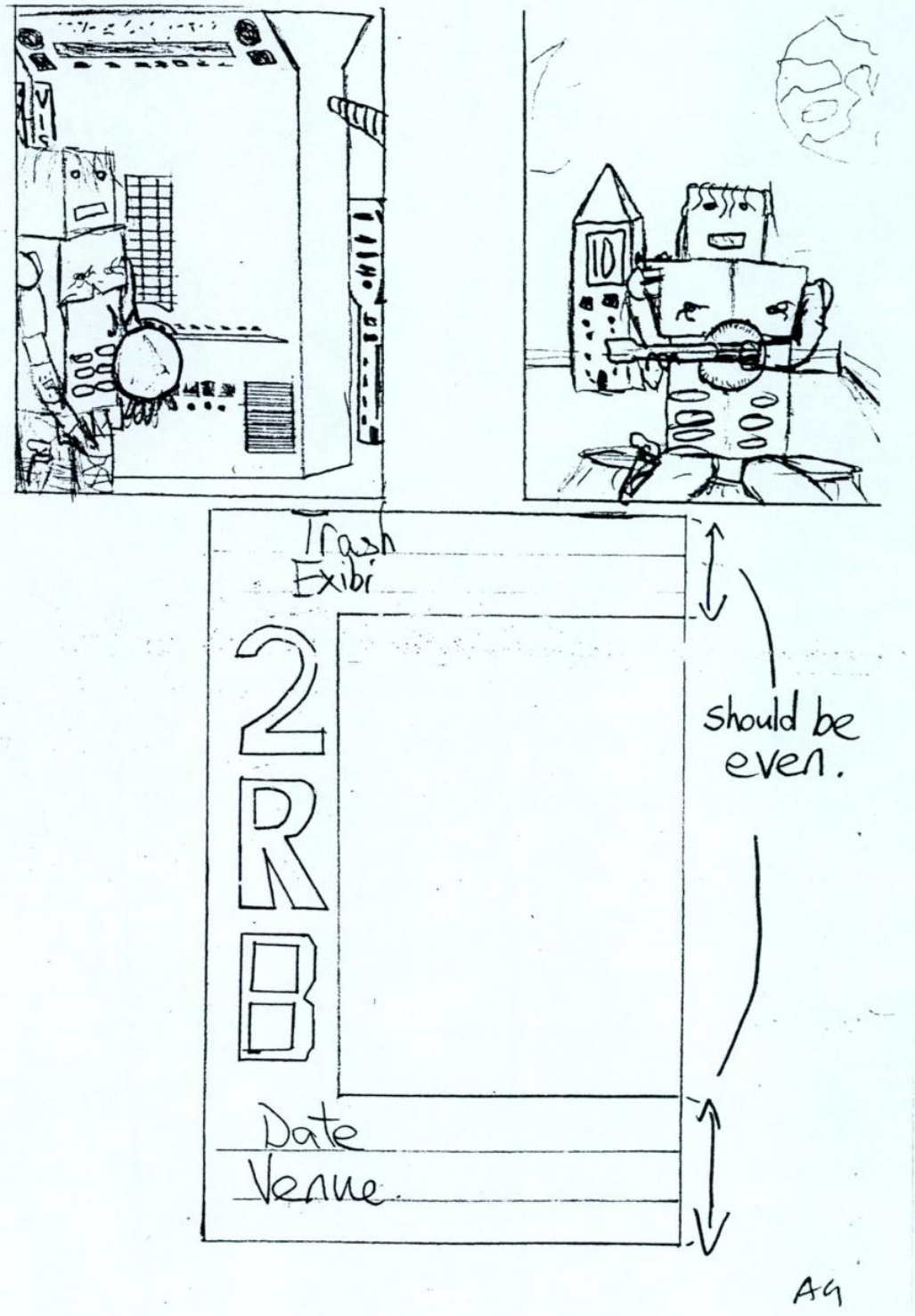


Figure 31 - Students Work
Poster Design

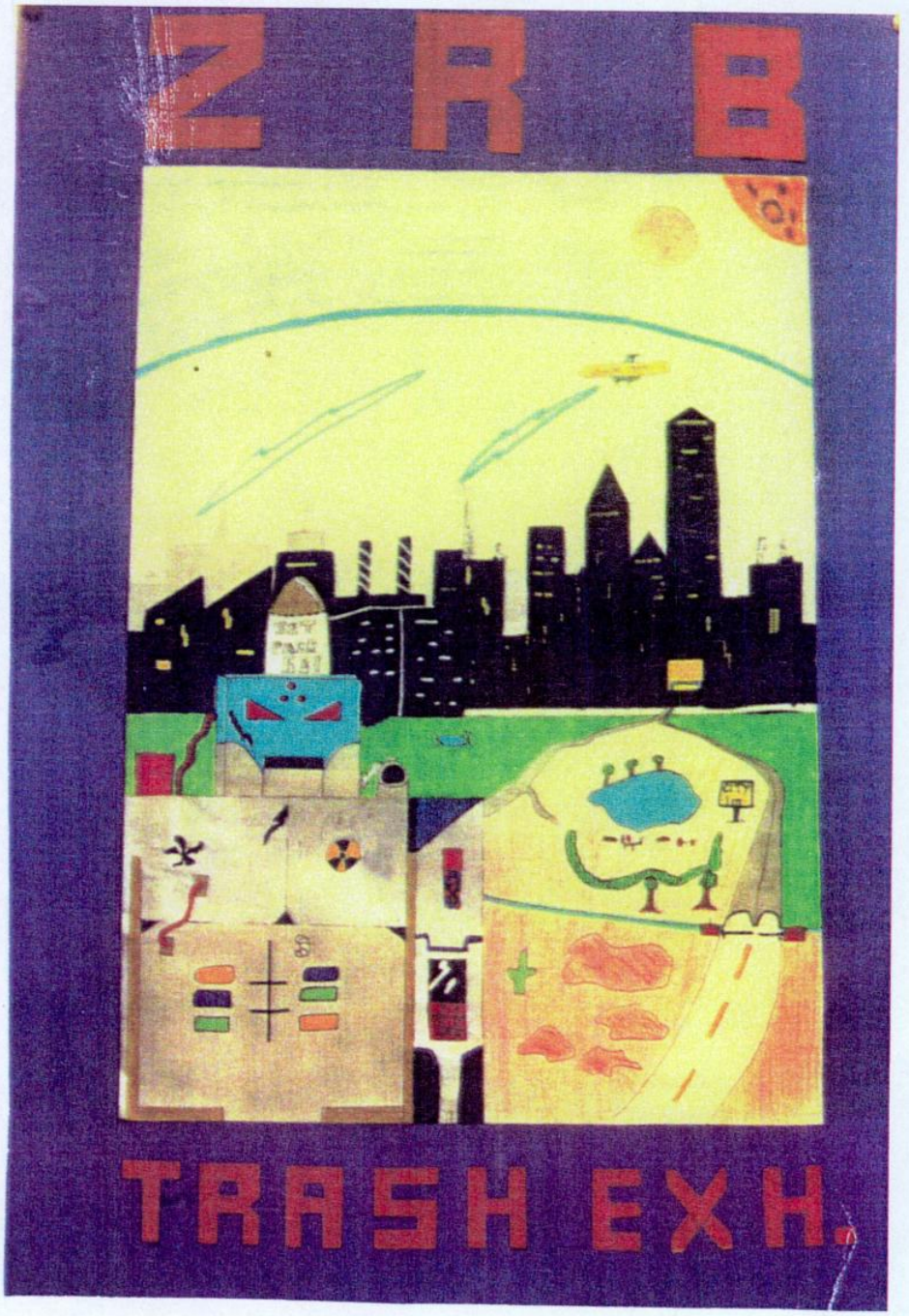


Figure 32 - Students Work
Poster Design

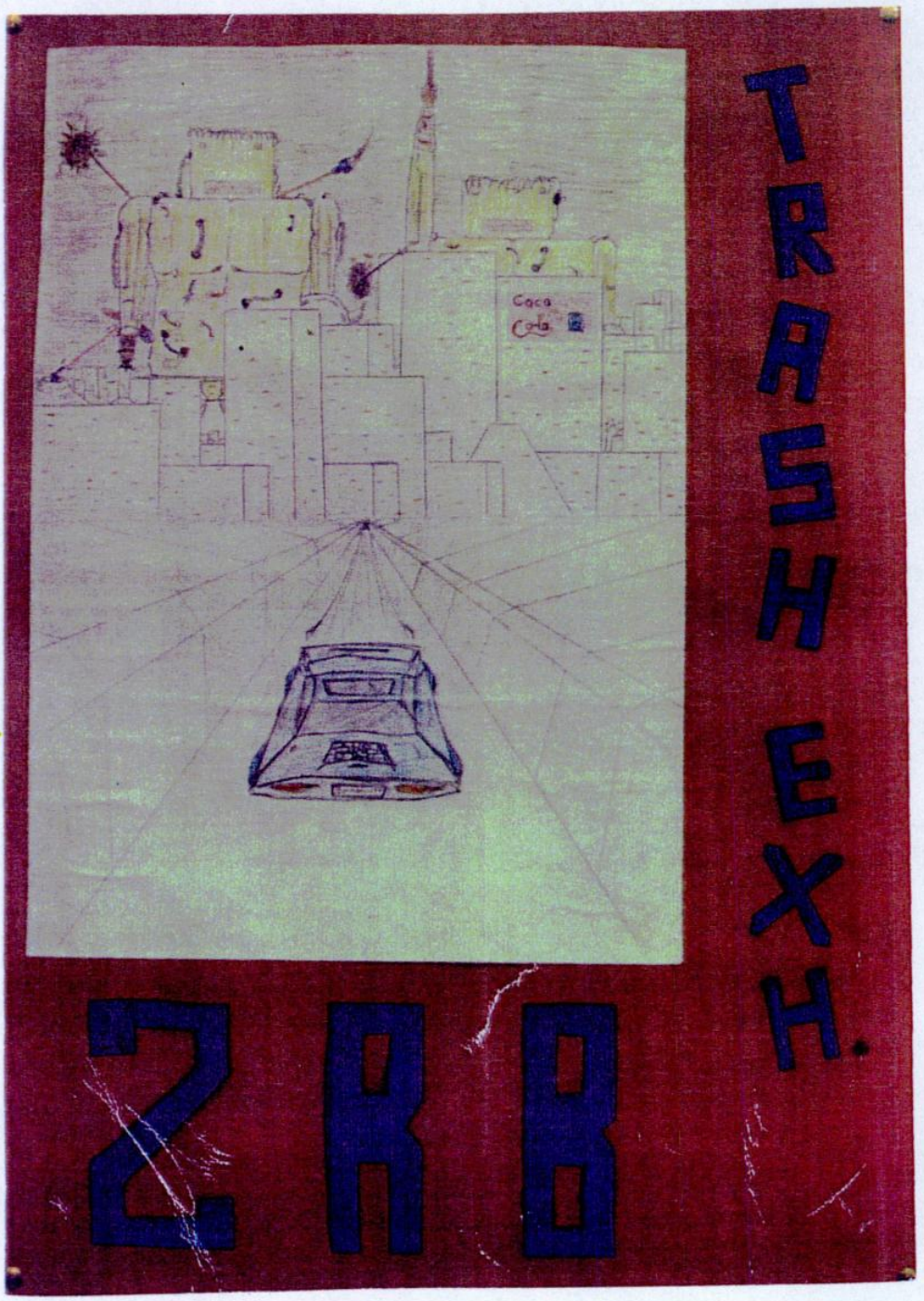


Figure 33 - Support studies
Computer Generated Images

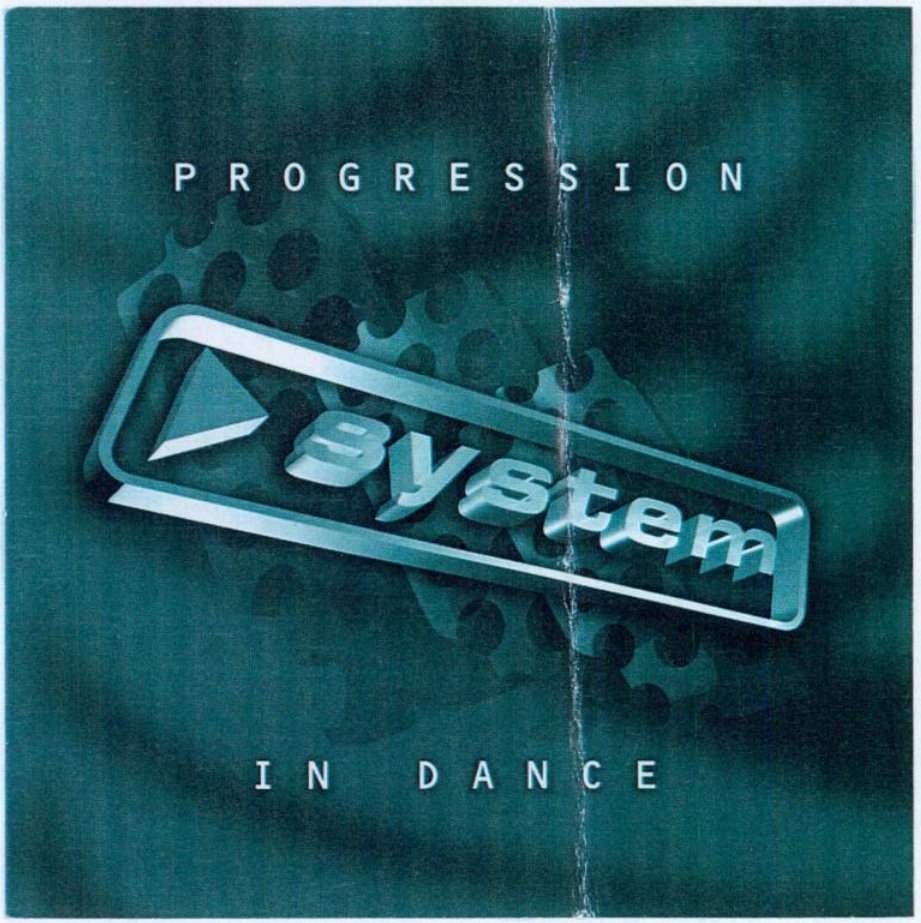


Figure 34 - Support studies
Computer Generated Images

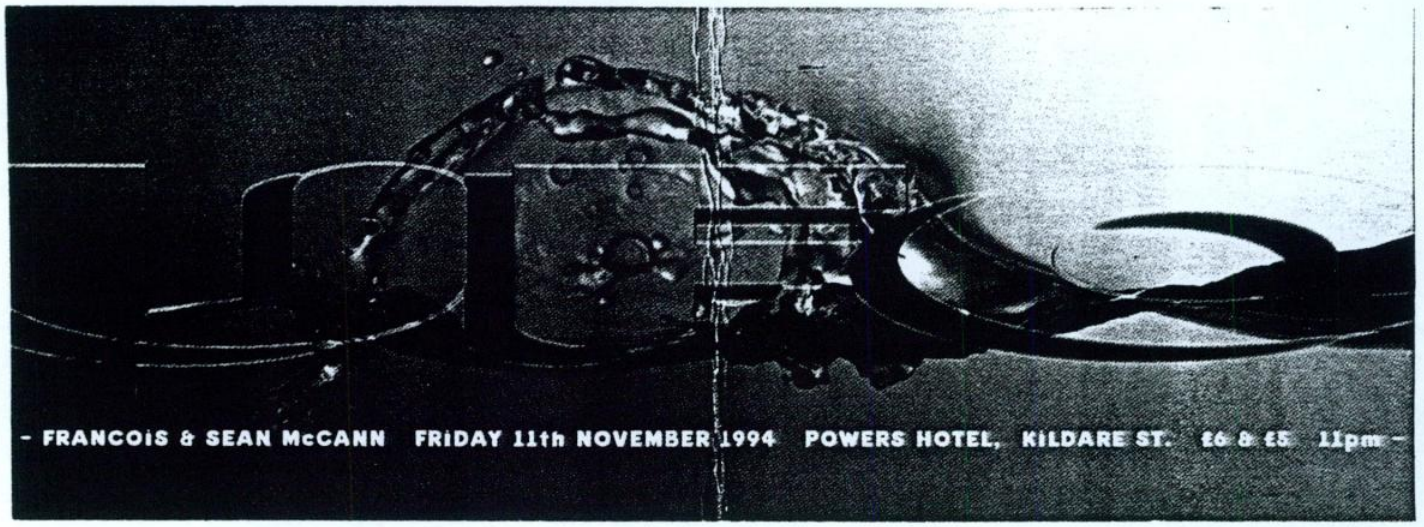


Figure 35 - Support studies
Computer Generated Images

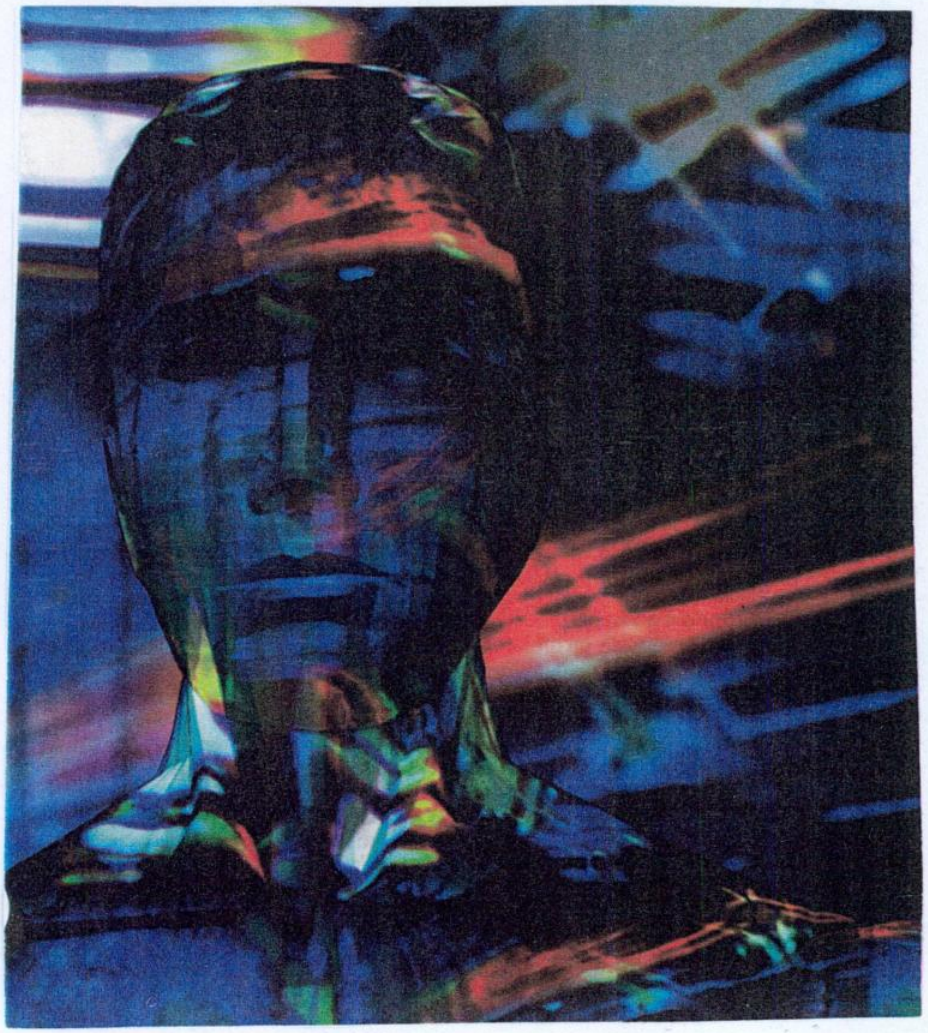


Figure 36 - Support studies
Computer Generated Images

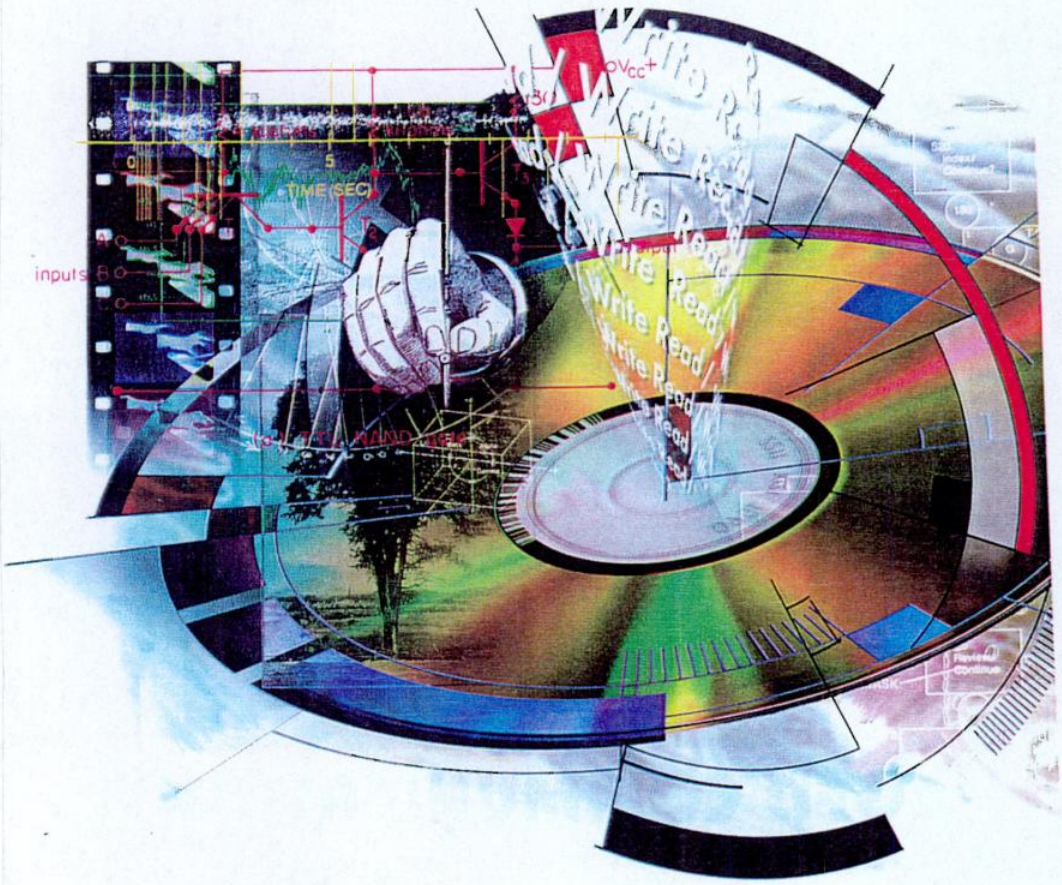
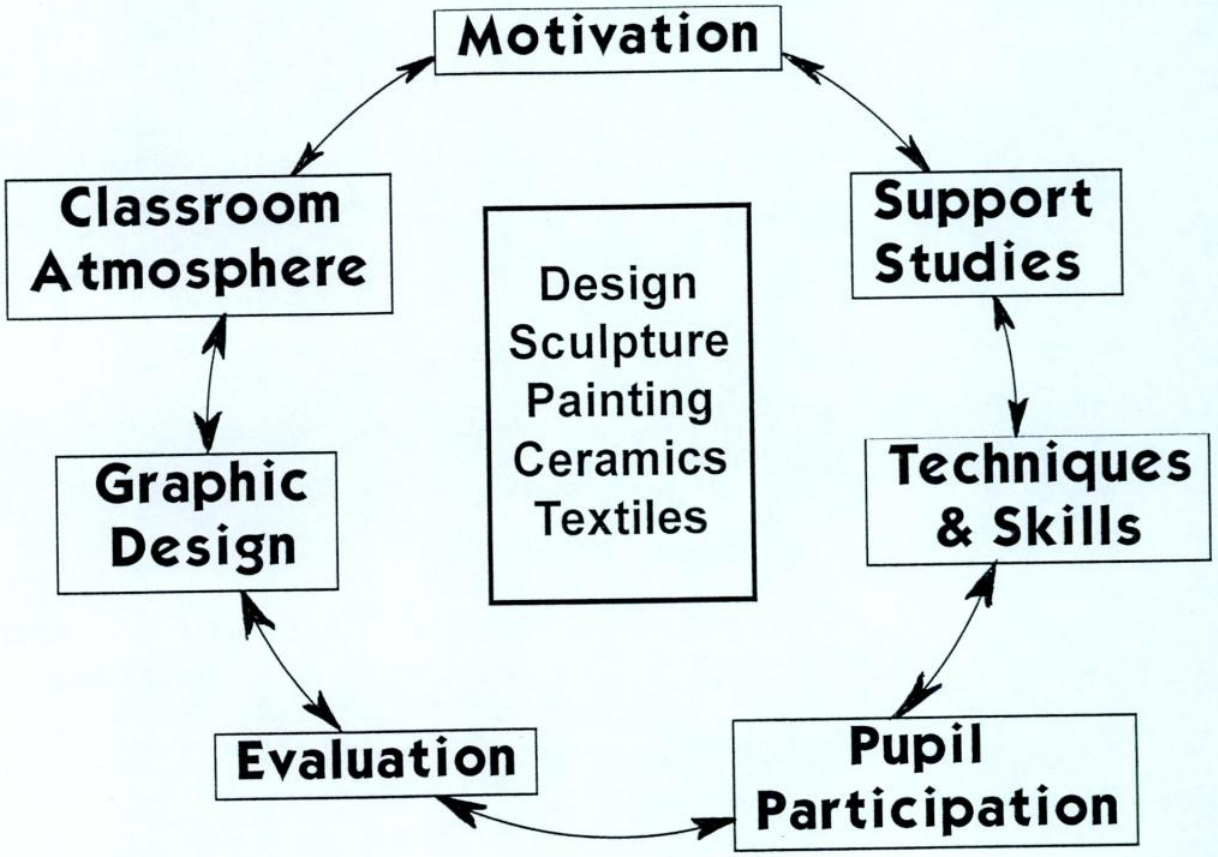


Figure 37 - Methodology
Personal Theory



PUPIL PARTICIPATION

One hundred percent pupil participation was evident throughout the whole project. This was largely due to a continuous and increasing sense of experimentation and success not only in activities but also in the process of design. The students were made aware at an early stage what was to be expected from them. They picked up the stages of the design process far quicker and better than I had expected.

Pupil participation was brilliant and students attained a very mature approach to design and problem solving. As the project went on, participation increased on a group level, as the weaker students realized that they could be as creative and knowledgeable as the more capable students in the class. This was achieved by group evaluations where students talked about their design decisions and problems and technical aspects of their work as opposed to aesthetic ones. However, I feel that the overall reason for such participation was the fact that the whole class where involved in one overall large and optimistic project. This was done purposely as I felt that first year students must enjoy what they do. Also, the fact that in a group project, no student can be better than another and each student receives equal satisfaction. The student attains equal understanding of process and of the skills needed. Most importantly the students must all experience early success.

Pupil Participation was achieved through group discussion, an area which proved very successful in encouraging communication and co-operation. Through good pupil participation, the students felt they could speak freely of their ideas and use constructive criticism to aid each other in their exploration and construction.

The success of this project relied on a good interactive pupil participation with each other with the media used, with myself and with the practical activities. The reciprocal relationship of each of these to art in the classroom should guide the planning of art instruction, regardless of the medium being explored.

RESULTS AND FINDINGS

The results and findings attained from this project are numerous. I have selected the results and findings which I feel are the most important for the purpose of backing up the need, importance and benefits of a well structured design education. These are:

- In my opinion, too much emphasis is placed on drawing, especially in first year. I have found that, all this approach achieves is to categorize students into their ability. This approach is unfair as the students come from different artistic backgrounds through home, primary schools and experience. The other artistic elements and media, such as design and colour must rise to equal importance of that which drawing processes in the art curriculum.

- In teaching art, the design process including drawing, visual research and relevant support studies must be made an important part of all learning situations.

- The process of exploration, evaluation and experimentation is more important than the exclusive pursuit of finished products.

• Challenging design tasks can offer to first years especially, a confidence in achievement and problem solving to a greater extent than drawing can.

• The importance and need for activities and themes to reflect young culture and interests cannot be stressed enough.

• Teachers developing design in the future have to be encouraged and permissive so that pupils are allowed a genuine sense of discovery. The Aim should be to arouse a fascination for the material and to give only as much guidance as is necessary.

• Pupil participation equals interest and motivation.

• It is the quality of the pupils, unified experience of designing, through idea, planning, making, testing and evaluating that is of fundamental importance rather than any ability he or she may acquire in a specific area. This is probably the most important finding from my work with the students as it can be carried into all media and schemes of work as the most important aim - development.

SUCCESS OF PROJECT

As well as pupil participation, the success of this project was due to 5 main factors which interacted together to create an overall experience of design and the design process (Fig.37)

MOTIVATION

From the beginning of this project the level of motivation was high. Motivation was achieved in many ways. **(i)** Motivation through discussion

about the future, and T.V. programmes e.g. Power Rangers which influenced and enhanced ideas for the project. **(ii)** Motivation through the process of the collection of found materials to be formed and moulded into body parts. **(iii)** Motivation through recycling exhibition of the Robot and best poster, in the new Civic Offices in Wood Quay. **(iv)** Motivation through the size of the task. **(vi)** Motivation for part two through using the Robot as a major source. My aim was to provide great motivation and interest through an original project incorporating the importance of recycling as well as an activity involving the creation of a giant eight and half foot robot.

TECHNIQUES AND SKILLS

The techniques and skills introduced to the student within this scheme were numerous. Most importantly they incorporated design and problem solving. The students being first years had to learn everything from scratch. The students learned slowly at first, but they soon gained confidence and began enjoying the design process. This I feel was due to the interest and motivation of the project which relied on the built in motivation of a child to learn, experiment, create and construct. I organized each lesson so as the student would learn a new technique or skill during each class. The students learned the techniques of:

Typography	Graphic Design
Construction	Creative Forms
Assembly	Texture
Co-operation	Life Drawing
Evaluation	2D Properties
Drawing	3D Properties
Perspective	Composition

My aim was to develop these skills on an even level so as to avoid categorizing students on their level of ability. This aim was successful in achieving a co-operative class were students felt comfortable in seeking help from fellow students. This was due to the fact that each student learned the same basic skills during a very interactive project.

SUPPORT STUDIES

Support studies played a very important role in this project. Support studies, including historical references were used in four different ways, to achieve the same aim, to support **(i)** Through futuristic and animated movies the students gained a visual and moving insight into the future. **(ii)** Through the work of artists who design and construct sculpture using mass media, especially recycled and found materials. **(iii)** Through re-using the students own work, and results gained from new skills and techniques to support the following stage in each part of the project. **(iv)** Through modern and computer generated images and technology, the students gained an understanding of what was happening in modern day graphic design compared with the graphic design of the early and middle twentieth century. These support studies were used to provide a source for critical appraisal,. and develop in the student an eye for visual balance in pieces of design. The support studies in general were used to complement every stage of the project and of the design process. The incorporated old and new developments, but most importantly they incorporated computer aided design as well as animation and video, in doing so students experienced more than two-dimensional slides and posters.

EVALUATION

The building of this robot was a huge project, it involved a lot of well designed individual pieces which attached together to create the finished piece. Because of this, the design process was very important. But, of equal importance was the skill of evaluation within each team and all the teams together so as to create a unified and well designed Robot. The graphic design work involved using everything the students had learnt and evaluated in Part 1, they then adapted this knowledge to use a two dimensional project in Part 2. Continuous evaluation plus evaluation sessions were held at the end of each class for both myself and the students. Evaluation was used by the students to compare, to discuss, to inspire, to criticize constructively and to admire with more emphasis placed upon technique, idea and success of design rather than aesthetic qualities. It is for this reason that I feel the students benefited greatly, for they succeeded equally in achieving a great sense of design, construction, perception and communication.

GRAPHIC DESIGN

Part 2 of the graphic design (poster design) stage of the project was the most difficult, it offered a medium (i) in which I could see how much the students had learned from the design process in Part 1, (i) in which all students had learned and achieved could be re-used. Graphic design is a very difficult process. It must be aesthetic to catch the viewers eye and hold his / her attention and effectively communicative to portray a message, graphic designs' functional aim. I feel that the two pieces of students work I have shown (Fig.31) and (Fig.32) portray a great understanding of graphic design and its process, principles and aims.

A knowledge of **(i)** illustration was achieved by combining the robot drawings with the imaginative composition **(ii)** typography was achieved through type, shape, spacing, practice, support studies and historical references and **(iii)** layout was achieved through thumbnail sketches, experimentation and a skilled eye attained through trial and error.

I was pleasantly shocked to see the high quality of all three, illustration, typography and layout in the finished pieces. For graphic design to compete with more popular media such as drawing and to achieve what it is capable of, especially at a young age in education, graphic design must be taught as a real activity, visually communicating the childs expressive side. This can only be achieved through projects and themes which reflect either something the student has built himself / herself or something he / she feels strongly about and a part of.

CONCLUSION

My aim in this dissertation was to assemble facts, professional beliefs and results from a variety of sources to highlight one major point. This is, to elevate the importance and status of Design Education including Graphic Design in the Irish Post Primary, Art Curriculum.

> .....design education could achieve and needs to achieve a central role in the art room, where in the past it has often been neglected. [1]

The teachers aim should be to encourage students to think objectively about the factors governing design and graphic design, such as visual communication (both functional and aesthetic), economic, social and technological.

> It is within fresher and more understanding forms of education that encourage an interest and hence a competence in design can begin. [2]

It should not be too optimistic to demand for the future, that students be entitled to a design education in the Art Curriculum. Students must learn to develop a personal, genuine and reasonable understanding of the complex world of design and become visually literate. This is because....

> The role of the artist in the 20th Century is clearly changing. The romantic concept is almost gone, and the role of the designer as mass communicator in our society increases.[3]

The crucial test for any curriculum, especially Art will be its effect upon the individuals ability to enter society as a well informed and confident individual. I feel that design education can offer a great foundation for such an individual. However, I also feel that design cannot achieve this alone, or even develop alone. As, effective learning in Art, Craft and Design will only be achieved by a teacher with optimistic, interesting and inventive planning and teaching. Teachers must learn to translate the stated guidelines and objectives and know the full potentials of Art, Craft and Design. We as teachers must look to the future, not to forget the past, but to create on historical as well as modern experience of Art, Craft and Design to develop inventive and creative individuals.

FOOTNOTES - CONCLUSION

1. Ken Baynes, Attitudes in Design Education. (London: Croom Helm, 1985) p.81

2. W.H. Mayall, Principles in Design. (London: Design Council, 1979) p.31

3. Ken Baynes, Attitudes in Design Education. p.86

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