COLAISTE NAISIUNTA EALAINE IS DEARTHA
NATIONAL COLLEGE OF ART AND DESIGN
FACULTY OF EDUCATION

The importance of design process in the Junior Certificate Art, Craft and Design Syllabus

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by

Charles M Diver

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INTRODUCTION

Design, is something that we encounter every day of our lives, but it is seldom that we recognise or properly appreciate it. Design not only shapes our environment, it also dictates our lives; on this planet, in our homes, our vehicles, utensils, clothes, and appliances, in fact; everything that is manmade has been designed in one way or another. The problem is, that few people can recognise the importance or even the relevance of design in our lives.

Design education offers a solution to this problem. By introducing and developing the various "aspects" of design at various age levels, design education aims to nurture and guide design potentials and capabilities, to a stage where we will become articulate in the ways of design and learn to appreciate its importance and relevance to the development of mankind and our environment.

This dissertation aims to research the importance of some of the more importance aspects of design and design education; the most important of which, is proposed; as "Design Process".

Research for this dissertation will based upon the use of design process in the Junior Certificate Art, Craft and Design Syllabus, From this information I hope to be able to assess the importance of design process in Junior Certificate Art, Craft and Design.

CHAPTER 1

DESIGN AND DESIGN PROCESS

A REVIEW OF LITERATURE

Design

Our lives on this planet are effected everyday by various aspects of design. The places we dwell and their contents, the utensils that we use, the clothes that we wear, even the ways in which we get around, have all been designed for a purpose. We live in a man-made environment, and someone is responsible for the form of things around us and consequently the very quality of our lives.

"Design" is concerned with meeting human needs efficiently, with helping human beings to exist in the environment more comfortably. In the world that we live in, our needs are constantly changing and these needs must be addressed. *"Design"* is an activity in which all human beings are involved, it is *"a process in which problems and needs are identified and dealt with through the exploration of new possibilities or finding new solutions to old problems."* (1) All design decisions relate to the problem solving process, which according to Peter Green is a *"process of identifying a problem in the environment and then testing proposed solutions to this problem."* (2) This is known as the *"Design Process"*.

It is this process that links up all areas of design, because it is a factor that is common and crucial to all areas of design. For example, it is difficult to see what a graphic

designer and a person who designs jet engines have in common, except maybe that they are both referred to as *"designers"*. Philip Theil points out to us that what both of these designers share is the *"Process"*. Each of the designers start off with a particular problem and each arrive at solutions within *"a context such as money limitations, materials available, and skills and tools at hand."* (3) At the end of the processes both designers must have a solution which must work; the graphic design must visually communicate a message and the jet engine must drive the plane.

John Mattic has divided the design process into several stages.

(a) Identification of a need.

(b) Analysis of its qualities.

(c) Researching factors that relate to them.

(d) Envisaging of various solutions and taking decisions about them.

(e) Planning and making.

(f) Testing and evaluating the outcomes.

Design therefore calls into action a number of high order skills such as analysis and evaluation. (4)

Bruce Archer has also identified different stages in the design process and has summarised them in eight definite stages.

(a) Identification of the problem and its contextual restraints.

(b) Specification of the goals and of the criteria for an acceptable solution.

(c) Hypothesis or invention of possible alternative solutions.

(d) Simulation or production of a testable representation of the proposed solution.

(e) Testing or application of the acceptable criteria to the proposed solution by the appropriate person.

Archer states that at this stage when all acceptable solutions have been generated, the process continues with the implementation and operation stages which begins with:

(f) Comparison and rank – which is the ordering of acceptable solutions.

(g) Implementation of the most suitable alternative solutions.

(h) Evaluation of the implemented alternative, in use in the real world. (5)

It is quite apparent that these stages of design happen in an order of occurrence. Philip Theil identifies these stages in five phases of design occurrence.

(a) Preliminary design: At this stage the designer is presented with a problem and sets about identifying whether a solution is possible. The designer does this through schematic and abstract representations of solutions, which the designer will develop into more specific representations in analytic and iconic form to test the

responses of those concerned with the outcome of the design solution.

(b) Detail design: At this stage the designer will have become more aware of the design constraints and criteria, through the responses obtained through preliminary proposals of a possible design solution. The designer can then move on to develop the design.

(c) Approval: At this stage the developed design solutions will be reviewed by all who are concerned with the outcome of the design solution, and after any necessary revisions, the designer will be authorised to proceed with the proposed solution.

(d) Implementation: Construction commitments are arranged and made, and the modification of the environment begins.

(e) Evaluation: It is at this stage that the newly modified environment takes its place as part of the real world and it is also at this stage that the design process is subjected to its final and ultimate test; Does the design fit comfortably into its new environment. (6)

At the end of these design stages, the designer will come to realise whether or not the design solution is successful. If the designer has followed the design process and has implemented the process correctly then the design solution should therefore be successful and thus fit comfortably into its environment.

"A well designed object should fit naturally into its environment, it can also sometimes bring out and create certain desirable features in its environment which would otherwise either not exist or be noticed." (7)

Peter Green believes that *"there is no such thing as good design or bad design, but rather appropriate or inappropriate, efficient or inefficient, solutions to problems."* (8)

Effective design is making the best of what we have in respect to realising that the design solution has to *"fulfil a practical as well as aesthetic function."* (9)

Everything designed effects, to some degree the environment and by resolving the interplay between Man, Material and the Environment, by *"Developing a critical understanding of human needs and gaining experience of evaluating how these needs effect the environment as well as adequately meeting man's needs"*, (10) we will then develop a true understanding of the purpose of design.

FOOTNOTES

Chapter 1

1. Bernard Klien, "Design Matters, Design *Matters*". London, Scafer and Warberg, 1979 - p 16

2. Peter Green, "Design Education - Problem solving and visual experience." London, Anchor press ,1979 - p 7

3. Philip Theil, "Visual Awareness and design" in "Design and Designing". University of Washington press, London, 1983 - p3

4. John Mattic, "Is it designing?", in "The best of craft design and technology". Edited by John Eggleston, Theiton, Chambridge, 1988 - P62

5. L. Bruce Archer, "An overview of the structure of design process". Cambridge, MET press 1988 - p 86

6. Philip Theil, "Visual Awareness and design", in "Design and Designing". University of Washington press, London, 1983 - P4

7. Peter Green, "Design Education - Problem solving and Visual Experience". London, Archer press, 1974 - p 7

8. Ibid. - p 7

9. Bernard Klien, "Design Matters, Design *Matters*". London, Scafer and Warberg, 1976 - p 11.

10. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor press, 1974 - p 10

CHAPTER 2

Design Education

"The ultimate aim of all education should be to help one achieve a full and satisfying life." (1)

The satisfactory solution to a design problem demands consideration of certain factors, such as the knowledge of materials and the ways in which they can be worked. Bernard Aylward believes that the nature of man and his requirements must also be learnt, along with other considerations such as the sensitive understanding of the colour, texture, form and processes should be developed. This would ensure that education is relevant to present-day society and prepares the pupil for a place in a worthwhile society. (2)

Richard Langdon believes that design should not and is not just a *"desirable educational priority, but is a critical priority."* (3) The development of design ability is important to our evolutionary progress and design education can trace its ancestry back to mankind's very first attempts to create shelter, tools, images and utensils. (4)

Doctor David Thistlewood, in his paper on design education, has stated that there are two existing models of design education, *"The Utilitarian Model and the Liberal Model"*. (5) Thistlewood suggests that individually, none of these models represent an adequate solution to achieving acceptable educational and socio-economic objectives. Therefore he proposes an alternative to both existing models of design education. The cultural model, he states, *"does not intend to replace the two existing models but rather annexes their redeemable features to more acceptable educational*

and socio-economic objectives, than they had individually represented." (6) This, he suggests, will bring design closer to art and design and will include creative reciprocation between individuals and communities. (7)

The Utilitarian model focuses on the conjunction of technique and materials and lays its value on assumed needs, by refining materials simply and efficiently thus enhancing their commercial value. The Liberal model on the other hand proposes that designing should be concerned with refining designs aesthetically and functionalism is merely a constraining factor. (8)

A cultural model of design education reflects on two principle definitions of culture, one is the state of (usually advanced) progress and the concept of improvement by developments. A cultural model's implementation into design education requires that ...

(i) Each part of the curriculum should be associated with that which is understood as a culture.

(ii) Pupils should develop an awareness and appreciation of a culture's construction and values.

(iii) That teaching and learning should be aimed at improving various aspects of the perceived culture. (9)

This cultural approach is different to both the utilitarian and liberal models in so far as the cultural model recognises the specific needs of people and issues concerned with them. It takes these issues and values from these perceived cultures, improves

them and then offers them back to improve the community's circumstance. (10) Thistlewood believes that the cultural model would best identify with an older age group. For a younger age group, such as early schooling, the most effective cultural approach must recognise that young children apprehend and reflect their understanding of communities in their surroundings. They interpret and develop these views in such a way that art making and design become, or rather are indistinguishable from each other, this he believes should be capitalised upon as pupils progress through formal education. (11)

Design education rests on the concept that design capacity is a fundamental attribute of all human beings. Ken Baynes and Phil Roberts have distinguished two diametrically opposed views of design and designing.

(i) That design is highly specialist, complex and is only understood by a small number of people with special knowledge, which can only be attained after a long apprenticeship.

(ii) That design ability, like language ability is something that everyone possesses to some degree. (12)

Baynes and Roberts take the second view to be the common sense view. They justify their hypothesis by looking at the development of children and how they develop an understanding of such things as space, how they arrange tools and materials in a purposeful way and most importantly, how they first begin to deliberately use cognitive modelling. They found out that all young children display some design ability and incorporate it into activities such as building blocks and

mark-making, even when it is neglected in formal education. (13) As we develop, some sense of design is always apparent in everyday things that we do, such as …

… *"The arrangement of utensils in the kitchen or clothes in drawers, so that they can be easily retrieved."* (14)

Baynes states that cognition involves all the processes of perception, attention, interpretation, pattern recognition, analysis, memory, understanding, and inventiveness that make up human consciousness and intelligence. (15) In the case of evolution, the human brain deals with categorisation from which is developed rational, sequential thought along with digital, symbol systems which construct language rationalities and recognises forms of notation. The right side of the brain has learned to specialise in pattern recognition, and has developed representational symbol systems to construct images, diagrams and other spatial forms of representation. It is understood that the combination of the two halves permits the pursuit of thought both in the highest levels of abstraction, and to the furthest reaches of practical planning and design. (16)

Green believes that there are two specific factors which affect design education today, that is the …

"Change brought about by scientific and technological developments and the increasing range of human choice making which naturally follows." (17)

Richard Langdon expresses a worry about the effect that this *"Industrialisation"* brings with it. He states that the *"design process in industry seems to be becoming more and more dependent on technology such as the computer."* (18) He questions the fact that the computer seems to be making design and designing easier and that

computer aided design is *"casting doubts on the role of the designer and the need for his creative genius."* (19)

The resolution of this problem, he believes, is that design education must increase its efforts to stimulate intellectually its students, to excite, to challenge and to reward them with the kind of experience that is becoming rare in the professional environment. (20)

Traditional education systems whereby a teacher represented a body of knowledge to be learned are no longer viable. Instead, Green suggests that …

… *"Both pupil and teacher require learning relationships based on mutual discovery and experience." (21)*

Teachers should try to promote in young people thinking which is flexible, fluent and imaginative, which will in turn enable a pupil to make connections between experience and ideas in new and original ways. (22) Green agrees, stating that the role of education should be *"concerned with the response we make to our surroundings. Experience, knowledge, and understanding can change the nature of our response. An articulate and responsible active response can only be made by a visually articulate person."* (23)

Bernard Klein stresses the importance of visual literacy as *"Good education"*. If children could evolve a better sense of visual awareness and values, then the recognition of *"good"* design can *"Uplift the soul and help people feel better about themselves, about others and about the world."* (24)

DESIGN EDUCATION – IRELAND

Primary education

The primary curriculum review body states that the arts and crafts at primary level should be concerned with …

(i) Materials and techniques: To develop each child's ability to handle an increasing range of materials.

(ii) Perception: To help the child to see the world with increasing degrees of depth and analysis, as well as take delight in what they see.

(iii) Visual Knowledge: To provide the child with the basic vocabulary of line, colour, shape, texture and an awareness of the work of artists in their own, and in other cultures.

(iv) Creativity: To develop each child's capacity to produce original ideas and solutions that reflects his or her uniqueness.

(25)

The primary curriculum serves as a basis for design education. The essential principles of design education should be consciously addressed in terms of *"Problem-solving, creativity and personal response to phenomena."* Green reiterates that *"problem-solving is central to any creative critical education of vision."* (26)

The *"Design Symposium"* held in the National College of Art and Design in 1995 addressed primary school education and found that there are perhaps two particular aspects of curriculum that can be seen to have a particular relevance to the promotion

of design education. *"Social environmental"*, and *"Scientific"* education, which if combined can develop a pupil's awareness and experience in the study of natural and built environment and arts education, which if combined can develop a pupil's awareness and experience in the study of natural and built environment and arts education which sets out an approach to materials, process, and visual literacy upon which development of design must be founded.

In the past ten years, many changes have taken place in the Irish education system. The white paper on education has been published and it documents new aims and objectives to be introduced to our education system which will hopefully improve areas which have been up until now neglected or not given as much emphasis as they properly deserve. One such area is that of Art, Craft and Design.

The paper states that the present model for primary school teacher training will remain the same for the present and even though the primary school curriculum itself is under review, it is apparent that Art, Craft and Design will be treated the same as it was.

The primary school curriculum has specific guidelines for teachers in the area of art and design education. Their guidelines are divided up into two age levels:

(a) Infants up the third class. (4 years to 8 years.)

(b) Third class up to sixth class. (8 years to 12 years.)

(28)

At the first level, the teacher is expected to suggest to and guide the pupils to possible solutions to problems, having done all he/she can do to stimulate and inspire the children – the teacher should allow the pupils to go on to produce their own individual work. The guidelines suggest that it is not possible or desirable to lay down any absolute norms for what may be done at any specific age, finger painting, for example, which was generally thought only suitable for infant classes, can well be carried on right through the primary-age range, achieving more sophisticated levels of creative and design possibilities with higher age groups. The same is true of blob or smudge patterns, potato, stick, leaf printing, rubbings, colar patterns, three dimensional compositions and constructions; in fact the guidelines suggest that the teacher's main should be to give pupils experience of as wide a range of media as possible. An appreciation of pattern and design is more evident in the middle and senior classes. Pupils become more critical of their own work and may reject activities that might *"appear"* too simple and insufficiently challenging. It is suggested that at this stage, pupils should be guided toward an understanding of the basic principles of design by introducing activities that can be attempted in a variety of ways. By doing this, problems such as arrangement, order, spacing, repetition, alteration or balance and colour contrasts will gradually arise and will be dealt with. Pupils should also be encouraged to look for pattern and design in their environment and get a wide experience of materials and their qualities. (29) Green reiterates this by pointing out …

"If design is concerned with the function and appearance of the man-made environment, largely manifest in three dimensions, then we should have experience in the widest range of structural and three-dimensional materials an of problems that concern function and appearance." (30)

Post-Primary Education

Junior Cycle

At post-primary level in Ireland, major reforms have been implemented with the introduction of the new 'Junior Certificate' syllabus to replace the old 'group' and 'Intermediate' certificates. The junior certificate programme involves activity-based learning that is essential to ant design education course. There are specific subjects that can be more directly associated with design education than others. Subjects such as, Art, Craft and design; technology, Materials technology, metalwork technical graphics and home economics lend themselves more to the area of design and the syllabi and examinations in these subjects have all been in recent years, revised to take specific … *"Cognisance of the design process and awareness in pupils."* (31)

(JUNIOR CERTIFICATE – SEE CHAPTER 3)

Senior Cycle

The senior cycle has also undergone major changes with the introduction of a three-year course instead of two. This includes a "Transition year", where pupils are offered the chance to take a break from 'formal' studies and embark upon a year of interdisciplinary study where they also gain experience of working in industry. The senior cycle also offers an alternative to the leaving certificate. This course is called the leaving certificate applied and lays a greater emphasis on the relationship between school and industry. Pupils who take up this course would acquire skills that would prepare them for direct entry into industry; therefore the skills acquired would be attained in an activity-based situation. This offers great possibilities for design education specifically because pupils will be required to study specific areas related to practical design.

The leaving certificate applied offers a Craft and Design syllabus which has been developed as a 'Vocational' specialism to suit particular requirements of the course. The area of craft and design in schools at all levels (as previously mentioned) is concerned with how well conceived images, forms and environments can be made in order to meet human needs and in so doing, enrich the quality of human life. Craft and design disciplines at leaving certificate applied are concerned with developing

understanding of procedures and processes employed in the services, mass media and manufacturing industries. The importance of quality craft and design in the economy is highlighted; the course aims to create an environment for collective approaches to the study of real life problems. Pupils will ...

(i) Develop skills such as 'visual communication', 'problem-solving', 'design and making' skills.

(ii) Develop competent and safe practice in the use of tools, equipment, materials, techniques and processes.

(iii) Identify the relationship between aesthetic and functional aspects in the production of work.

(iv) Develop critical judgements of their own work and effort, and that of contemporary life and culture.

(32)

The 'established' leaving certificate course in terms of Art, Craft and Design has remained the same in terms of design education. It is a course where design skills and developments are acquired depending on enthusiasm and ability of both pupil and teacher. In fact the framework of this course is dictated by an exam at the end of the course and is therefore in dire need of revision. Work on the revision of subjects in the established leaving certificate is ongoing by the National Council for Curriculum and Assessment (NCCA). Revised syllabuses in Gaeilge, French, German, Spanish, Italian and Accounting were introduced in September 1995. Revised syllabuses in other subjects, including 'Art' will continue to be introduced on a phased basis, having due regard for the implementation issues in schools. (33)

FOOTNOTES

CHAPTER 2

1. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor press, 1974 - p 9

2. Bernard Aylward, "Design Education in Schools". London, Tiling press, 1973 - p15

3. Richard Langdon, "Design Policy - Volume 5". London, Design Council, 1984 - p10

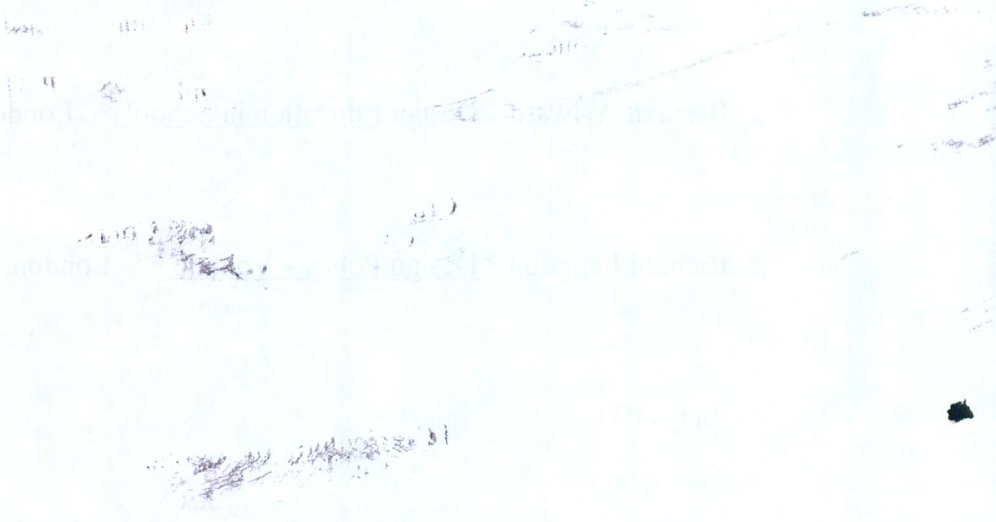
4. Ibid. - P11

5. Dr. David Thistlewood, "Design Issues" in "Design Education for Schools Symposium".Edited by Professor Iseult Mc Carthy, National College of Art and Design, 1995 - p 15

6. Ibid. - p 11

7. Ibid. - p 8

8. Ibid. - p 10



9. Ibid. - p 13

10. Ibid. - p 14

11. Ibid. - p 15

12. Ken Barnes, "Art and Design topic work (8 - 13)". London, Butler and Tanyer, 1989. - p41

13. Ibid. - p 43

14. John Mattic, "Is it designing", in "The best of craft design and technology". Edited by John Eggleston, Theiton, 1988. - p 62

15. Ken Barnes, "Art and Design topic work (8 - 13)". London, Butler and Tanyer, 1989. - p 16

16. Ibid. - p 17

17. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor press, 1974. - P 8

18. Richard Langdon, "Design Policy". London, Design Council , 1984 - p 46

19. Ibid. - p 46

20. Ibid. - p 47

21. Peter Green, in "Developments in Art Teaching". By Terence Wooff, London, Open Books, 1976. - p 8

22. Terence Wooff, "Developments in Art Teaching". London, Open Books, 1976. - p71

23. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor press, 1974. - p13

24. Bernard Klien, "Design Matters, Design *Matters*". London, Scafer and Warberg, 1979. - P23

25. An Roinn Oideachas - The Primary School Curriculum Review Body, "The Primary Curriculum"., Stationary Office, Dublin 1995

26. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor press, 1974. - p8

27. Kieran Meagher, "Art, Craft and Design Syllabus". In "The Changing Curriculum - Perspectives on the Junior Certificate" Edited by Tony Crooks, Dublin 1992. - P 21

28. Ibid. -p 22

29. An Roinn Oideachas, "Primary School Curriculum - A teachers Handbook - Part 1". Stationary Office, Dublin, 1994. - p(292 - 295).

30. Peter Green, "Design Education - Problem solving and visual experience". London, Anchor Press, 1974. - P 14

31. Gary Granville, "Rhetoric and Realities". In "Design Education Symposium ". Edited by Professor Iseult Mc Carthy, National College of Art and Design, Dublin 1995. - P 31

32. An Roinn Oideachas, "Leaving Certificate Applied - Craft and Design Draft Course Outline". Dublin, N.C.C.A., 1995. - P (1 - 5)

33. An Roinn Oideachas, "Senior Cycle - The Restructured Curriculum for Second level Schools". Dublin, Stationary Office, 1995. - p (1 - 4).

CHAPTER 3

THE JUNIOR CERTIFICATE

The Junior Certificate outline

In 1992, the Junior Certificate was introduced into the Irish post-primary education system. This new course replaced the then existing 'group' and 'intermediate' certificate, to try to bring Irish education in line with the progression of other European Union countries.

The general aim of the Junior Certificate programme is to contribute towards the development of all aspects of the individual, including aesthetic, creative, critical, cultural, emotional, intellectual, moral, physical, political, social and spiritual development; for personal and family life; for working life; for living in the community and for leisure. (1)

The Junior Certificate is very much so, a 'modern' course and pivots on the amalgamation of the old and new in the sense that it revitalises subjects that are considered dated and inadequate in terms of meeting educational goals of today's society. The Junior Certificate programme sets down various principles that emphasise the importance of education in the context of the 'Cultural', 'Economic' and 'Social' environment.

The principles are:

(i) Breadth and Balance: Post-primary schooling is the final phase of compulsory schooling so it is important that every young person should be introduced to a wide range of educational experiences. Areas such as social and environmental education, science and technology and modern languages should be emphasised and the development of skills such as numeracy, literacy and oracy must be reinforced.

(ii) Relevance: Curriculum provision should take into consideration the needs of young people in the context of the cultural, economic and social environment.

(iii) Quality: Every pupil should be encouraged to achieve the highest possible standards of excellence, in the context of different aptitudes and abilities.

(2)

Each Junior Certificate syllabus must incorporate these principles into its structure and will thus cater for the needs of pupils and will provide them with a firm foothold as the environmental ladder.

THE JUNIOR CERTIFICATE

Art, Craft and Design

The Art, Craft and Design syllabus replaces the old subject that was simply known as 'Art'. This new syllabus offers a comprehensive set of aims and objectives. The framework as a whole consists of two main sections.

(i) The core syllabus.

(ii) An optional study section (SEE TABLE 1)

The 'core' syllabus is intended to be a foundation for the entire course, it is divided up into four main areas …

(iii) Drawing.

(iv) Two-dimensional.

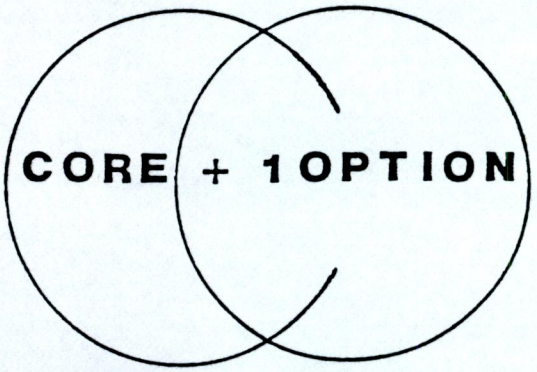
(v) Three-dimensional.

(vi) Support studies. (SEE TABLE 1)

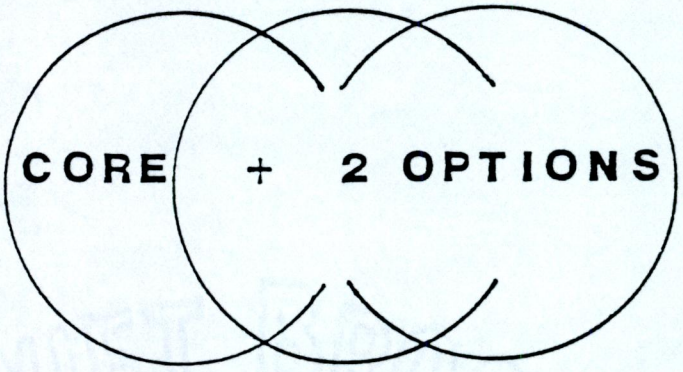
The optional study section provides a choice of optional areas that are studied in a more focused way. These options are illustrated in TABLE 2.

Due to the wide area of study available, the syllabus offers a number of guidelines related to the formal elements of the subject, (SEE TABLE 3) and starting points to the subject matter appropriate to the subject (SEE TABLE 3). It also emphasises the critical and contextual nature of support studies and the use of design process in study.

D1



ORDINARY LEVEL



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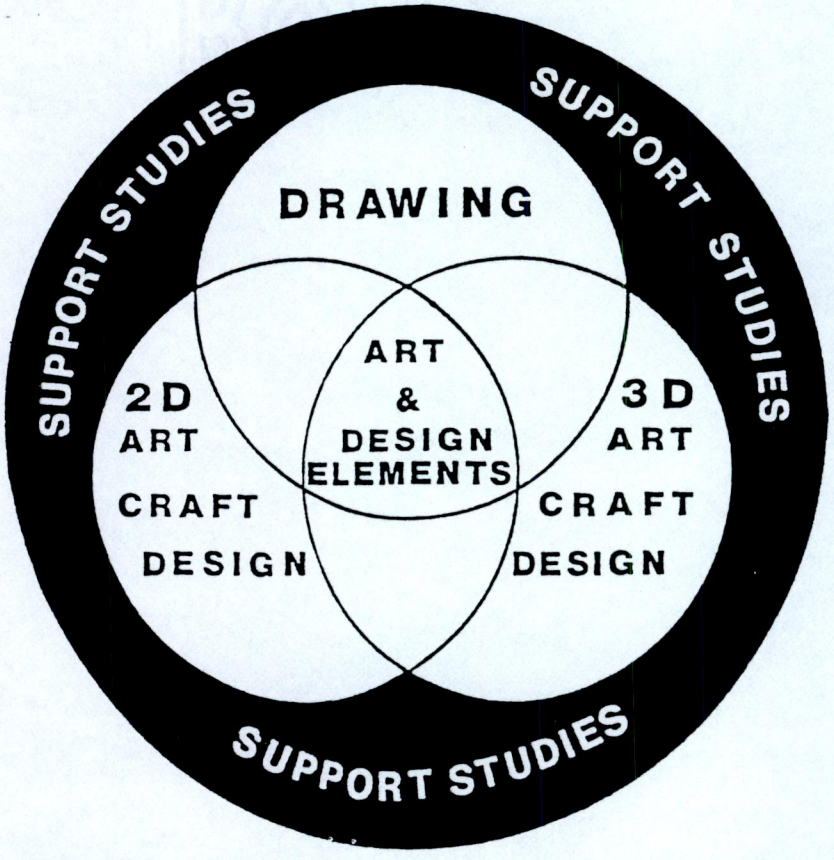


CORE OF THE COURSE

TABLE 1

4. COURSE STRUCTURE

4.1 The core syllabus

Drawing				
Observation/analysis	]	Drawing	]	
Recording	]		]	
			]	
Two-Dimensional Art, Craft & Design			]	Art and
			]	
Image making	]	Painting	]	Design
Image manipulation and development	]	Printmaking	]	
	]	Basic photography	]	Elements
Lettering	]	Graphic design	]	
Lettering and image	]		]	and
			]	
Three-Dimensional Art, Craft & Design			]	Support
			]	
			]	Studies
Additive	]	Modelling/Casting	]	
Subtractive	]	Carving	]	
Constructional	]	Construction	]	

The core syllabus is described in more detail in sections 5 - 7.

4.2 Options

In addition to the **core syllabus** a minimum of one **option** for Ordinary Level, and two for Higher Level students, will be studied. The treatment of each option should reinforce and develop the core experiences.

Choice of options from the following (each option to include Drawing and Support Studies as relevant):

Animation	Film-making	Screenprinting
Art metalwork	Graphic design	Soft sculpture
Batik	Jewellery making	Strip cartooning
Block printmaking	Leatherwork	Tapestry
Bookcrafts	Mixed media sculpture	Theatre design
Calligraphy	Modelmaking	Toymaking
Carving	Modelling/casting	Traditional crafts
Computer graphics	Packaging	(e.g. lace, hedgerow
Embroidery	Photography	basketry etc.)
Fabric print	Pottery/ceramics	Videomaking
Fashion design	Puppetry	Weaving

4.3

In teaching any option, the appropriate design process, including drawing and visual research, and the relevant Support Studies must be part of the learning situation.

TABLE (2)

Kieran Meagher suggests three distinct rationales for art education; one of these rationales is the Design education rationale, which *"Provides pupils with an opportunity for individuality in creative-problem-solving, which involves decision making in terms of 'design process'."* (3)

Pupils should be encouraged to encounter social, technical, economic and aesthetic factors and functions, they will also discover the potential and limitation of materials and they will be encouraged to approach a design brief in an interdisciplinary manner.

Elliot Eisner states that artistic learning is not a single type of learning, but in fact depends on the development of abilities to create work, with the development of aesthetic perception and with the ability to understand Art, Craft and Design as a cultural phenomenon. He has thus identified these three aspects of learning as:

(vii) Productive

(viii) Critical

(ix) Cultural

(4)

According to Meagher, the production of a work of Art, Craft and Design is a 'complex experience' and it requires pupils to employ practical, sensory and intellectual skills. It involves visual analysis, the skill of acute visual perception and visual discrimination. (5)

It also involves powers of invention, combining and extending the limits of materials and processes. Wooff reiterates this by stating that teachers should be concerned with visual communication in the man-made world and the design decisions that are demanded by its problems. They should regard the language of sensory experience as a fundamental facet of identification, communication and solution of problems related to place man in his environment. (6)

Another area that the Junior Certificate tries to promote is the area of 'focused personal response' and developing a critical problem-solving aptitude to compliment this response. Green states that …

"Problem-solving is central to Art and Design activities and to learning and discovery, but more than anything else, it is part of everyday life." (7)

Meagher points out that design and natural problem-solving inventiveness is not normally promoted in post-primary education, but that the new Junior Certificate syllabus may have an important influence on changing this. The syllabus guidelines state that "Design should not be regarded as a mere decoration or embellishment of finished products." (8) This is a sharp contrast to the intermediate syllabus where design was considered a 'free invention of colour and pattern and should be carried out in some specific crafts.' This thinking has been 'rethought' and put aside in favour of design education promotion to be taught using a more comprehensive set of problem solving skills which are based on 'real-world' needs.

Professor Iseult McCarthy stresses the importance of design education at secondary level by referring to a report that was published in Britain in 1980 concerning design education in schools. The report stresses that design should be an essential part of the education of all children at all stages of secondary education up to the age of sixteen. (9) The report suggests that "Design Education contributes to the development of the individual and is part of his/her equipment for life." (10)

The Junior Certificate syllabus promotes the importance of design process in education and deals with this issue to prepare the pupil to be an active member of society where the pupil can contribute his or her informed judgement to the environment as Green observes:

"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 or not these needs have been met adequately." (11)

FOOTNOTES

CHAPTER 3

1. An Roinn Oideachais, "The Junior Certificate - Art, Craft, and Design". Dubllin, Stationary office, 1992. - p 1
2. Ibid. - p (2 - 5).
3. Kieran Meagher, "Art, Craft and Design Syllabus". In "The Changing Curriculum - Perspectives on the Junior Certificate". Edited by Tony Crooks, Dublin, 1992. - p 21
4. Elliot Eisner, "Educating Artistic Vision", New York : Macmillan 1975.
5. Kieran Meagher, "Art, Craft and Design Syllabus;". In "T he Changing Curriculum - Perspectives on the Junior Certificate". Edited by Tony Crooks, Dublin, 1992. - p 23
6. Terence Wooff, "Developments in Art Teaching". London, Open Books, 1976. - p 69.
7. Peter Green, "Design Process" In "Art, Craft, and Design Syllabus" - Kieran Meagher in "The Changing Curriculum - Perspectives on the Junior certificate", Edited by Tony Crooks, Dublin, 1992. - p 28
8. An Roinn Oideachais, "Art ,Craft and Design Guidelines for the Junior Certificate". The Stationary Office, Dublin 1992
9. Kieran Meagher, " Art, Craft and Design " in " The Changing Curriculum - Perspectives on the Junior Certificate". Edited by Tony Crooks, Dublin, 1992. - P 39
10. An Roinn Oideachais, " Design Education at Second Level", The Stationary Office, Dublin, 1994/5
11. Peter Green, " Design Education - Problem solving and Visual experience". London , Anchor press, 1974. - P 14

CHAPTER 4

DESIGN PROCESS – RESEARCH

School profile

For my Fourth year teaching practice, I am placed in a school that is located in North County Dublin. The pupils who attend the school are mostly from the locality, but a fair amount travel from nearby areas such as Ballymun. Therefore the socio-economic backgrounds of the pupils are greatly mixed.

The school itself is run by the Dublin Vocational Educational Committee (VEC). The school is single sex (female) and has about four hundred pupils currently on its role books. Apart from myself, the teaching staff members are also all female, and are quite dedicated to both the running of the school and the welfare of the pupils. Absenteeism and early dropout is fairly common in the school, the latter leaving class size a little below average for senior cycle classes, (about 16 per class).

The subjects available to pupils at the school are limited in terms of 'design education', to Art, Craft and Design courses, Home Economics, and to a point, Computer technology; all of which are available at junior cycle and senior cycle. Therefore, in terms of second level design education, these pupils would not have been exposed to as much design experience as their neighbouring school for boys, which provides courses such as Technology, Engineering, Technical Graphics, Construction studies as well as Home Economics, Computer studies and Art, Craft and Design at both junior cycle and senior cycles.

Another factor to be taken into consideration is the ability of the pupils. I have discovered, over the duration of my teaching at the school, that the classes are streamed, but all of which are of mixed ability, ranging from very weak to very good ability (this varies from class to class depending on how they are streamed.) Also to is should be noted that the time allocated to Art, Craft and design in this school was distributed over a number of single class periods each with a forty minute duration. This thus limits the possibilities that can be realistically pursued.

Class Profile

I have completed two schemes of work with two junior cycle classes, one of which will be sitting the Junior Certificate exam at the end of the final term of this school year.

First Year Profile

The first group is a first year group consisting of twenty girls whose average age is thirteen. The class is of a mixed to high ability. From individual discussions with the pupils, I have discovered that very few of them have attended the same primary schools and thus they do not have the same primary education in design. This became apparent in their working strategies throughout the scheme, some pupils enjoyed experimentation and did not seem to mind exploration and coming up with a variety of solutions to a problem. Other pupils, on the other hand, did not at first seem to comprehend experimentation or exploration and expressed impatience by producing a single solution of which they believed was the 'best' solution possible. From this I observed that pupils seem to think that the 'product' was far more important than the 'process'. My job with this class was to try to make pupils realise that a 'process' is of vital importance to an effective and acceptable 'design' solution.

Second Year Profile

The second group is a mixture of a third and second year group. There are about twelve second years and six third years in the class, the average age of the second year group is about fourteen, and the average age group of the third year group is fifteen years. Both classes are of a mixed to weak ability, with some of the pupils being of very weak ability.

These pupils have come through both two and three years of post-primary education, and should at this stage be aware of a process taking place within a scheme of work, the third year should have a year's more experience than the second year group and therefore should be more advanced. This was, as I found out, not so; in fact the second year group proved to have a better understanding and were more motivated and dedicated throughout the whole scheme of work.

SCHEMES OF WORK

First Year Scheme

The 'aim' of this scheme of work was …

"To develop an understanding of three dimensional form and of modular construction, by designing and making/constructing a vessel based on the theme of fruit and vegetables."

The end product was to be a vessel/container that would have modular constructions, such as a base, or stem or handle, etc. This 'vessel' would have to reflect the theme of fruit and vegetables in some way, for example, from, texture and colour must be taken into consideration. Therefore, as is clearly seen, this scheme is going to result in a three dimensional product, but the process or more precisely the 'Design Process' involves working out a design on a two dimensional format as well as experimentation and exploration of materials and media. The design process was divided up into several stages …

Stage 1

Before pupils were presented with the problem, we first had to establish what a vessel was. The best way I thought to do this was by showing pupils actual vessels and relating what they saw to their own home environment and culture. This was done by means of a slide show ad actual vessels where pupils were presented with …

(i) The history of vessels.

(ii) The function of vessels.

(iii) The modular construction of vessels.

During this stage, pupils discussed vessels that they have seen in their homes and environments, they discussed and learned of different 'Types' of vessels and their different modular constructions and purpose. They also discussed similarities in vessel design and why the vessels were designed to look

as they did. Pupils also discussed the aesthetic quality of vessels, they then discussed whether or not the vessel would function to its greatest potential regardless of decoration. As part of the pupils' research they had to find examples of vessels from magazines and newspapers and keep them in their support study notebook, with each modular part labelled.

The pupils moved onto experimenting with actual fruit. The pupils experimented and explored construction possibilities at this stage by investigating actual Fruit constructions and recording their constructions by means of simple line drawings. (See diagram 1 &2). Pupils seemed to enjoy this exercise and produced a variety of vessel constructions that showed inventiveness, creativity and displayed an aptitude for creative exploration of the media and construction in a modular way. These constructions were recorded by means of simple line drawings. These constructions were evaluated in terms of function and modular construction as well as how well the construction reflected the theme of fruit and vegetables.

Stage 2

The next stage was to choose their most appropriate design solution from their recorded drawings. For this particular stage they had to choose a solution which fitted a particular criteria. The criteria was in two parts ...

(i) The vessel had to use its modular construction to its most effective ends.

(ii) The vessel must reflect the theme to its most effective ends.

This stage involved class discussion on the appropriateness of each vessel design and then a process of eliminating solutions to finally reach the most effective design solution within the given context. Once the design solution was chosen, it was labelled as 'Proposed design solution' and pupils had to render the design showing and labelling modular construction, recording as much information about each individual module as possible via a detailed colour drawing. (See Diagram 3).

Stage 3

The next step in order of occurrence was to present their final design proposal to the client (teacher). At this stage pupils must draw out their vessel design from a variety of angles. This is done via a presentation drawing. (See Diagram 4). The presentation drawing was assessed by both the client (teacher) and the pupils themselves, by means of discussion; those who had not reached a acceptable solution had to reassess their proposed solution and to identify why the solution had not been successful, and then alter it to make it successful.

This stage was a very important stage, as the pupils learned whether the design solution had adequately researched, explored and resolved to fulfil the given constraints and criteria. They understood this quite well and reassessed the design solution and compensated for its faults, by going over the process again. Pupils kept a record of all this work by putting their drawings in order of sequence in their notebooks/folders.

Stage 4

The next stage was the construction stage. Pupils used their design solution drawings as a guide to constructing the actual vessel. In this stage, pupils dealt with the constructional aspects of the design process. They first of all experimented with construction techniques, by using a variety of media such as, cardboard, plastics, papers, foam, etc. and explored their structural qualities and limitations by making a variety of experimental free standing structures using masking tape and glue as their binding material (See Diagram 5). From this, the pupils chose the materials that they felt would be most appropriate for their vessel construction in terms of form and manipulation. They then had to document why they chose their particular materials and how they intended to use the material in their actual construction.

Stage 5

The next stage was to construct their vessel structure using their chosen materials and techniques. The vessel structure was an elaborate armature of which the final layer would be built onto using different media – i.e. papier-mache. Pupils were encouraged to use their presentation drawings as a guide for construction – (See Diagram 6)

The next and final stage was to build up the surface of the vessels to resemble the fruit and vegetables that their designs were based upon. To do this, pupils had to reflect back on the surface quality of the fruit that was in question, by using their detailed colour drawings as well as the actual vegetables: then they began to build up form and texture by manipulating papier-mâché and tissue paper along with other materials to obtain the desired effect. Once this had been done, pupils painted the vessels to emphasise surface quality, using their coloured studies as a guide. The vessels were then displayed and evaluated (See Diagrams 7, 8 & 9).

Outcome/Findings

The outcome of this scheme has been quite successful with almost all of the pupils producing a finished product which reflected the theme of 'fruit and vegetables', as well as using modular construction to a level which showed an understanding of three dimensional modular construction.

This particular scheme was an ambitious scheme for a first year group and was a bit of a gamble on my part in terms of pupil ability. However my gamble probed to work, and the pupils worked with this scheme and the results were quite good, in fact some of the vessels produced showed the true potential of the pupils.

In terms of 'design process', I feel that a lot has been learned by both the pupils and by myself. Pupils became aware of the importance of experimentation and of exploration in order to obtain a fuller understanding of the potentials of what they can actually do, or produce. This was obvious in the first stage of the scheme, where pupils experimented with actual fruit and vegetable constructions and recorded this information through drawing. The also saw the relevance of choosing the most

appropriate design from a selection of other solutions and then presenting this chosen design on a two dimensional format to use as a 'blue-print' for the actual making.

On questioning pupils, I found that they thought that experimenting with the fruit constructions was the most important stage, and not the actual making of the vessel itself. They also agreed that it was of vital importance that a process took place, and that the process was of equal importance as the product in order for a successful design solution.

I regard this as a promising result in terms of realising the importance of design process in the resolution of a design problem and indeed in the resolution of any type of problem. For a first year group, the advantage of realising the importance of design process itself will be of a huge benefit to their own personal development, and as a contributing effect to how they perceive their environment.

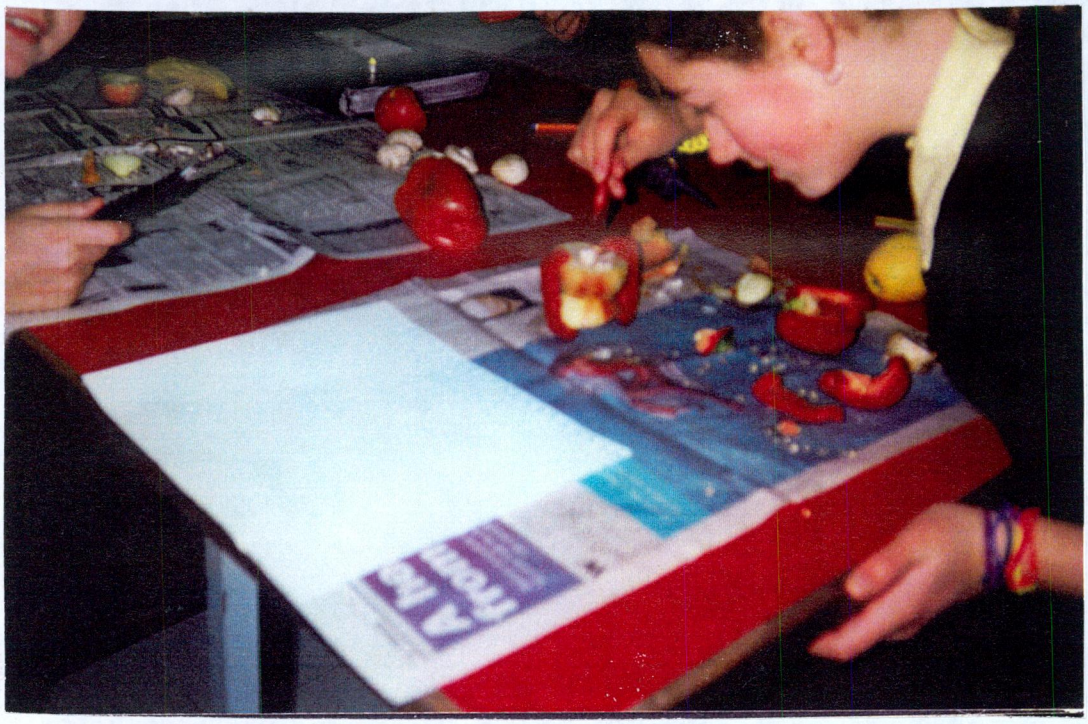
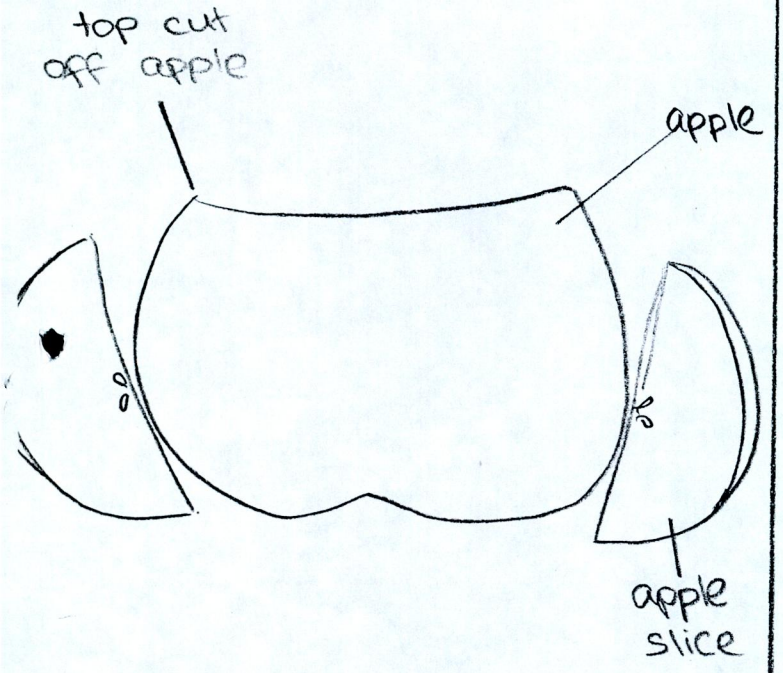
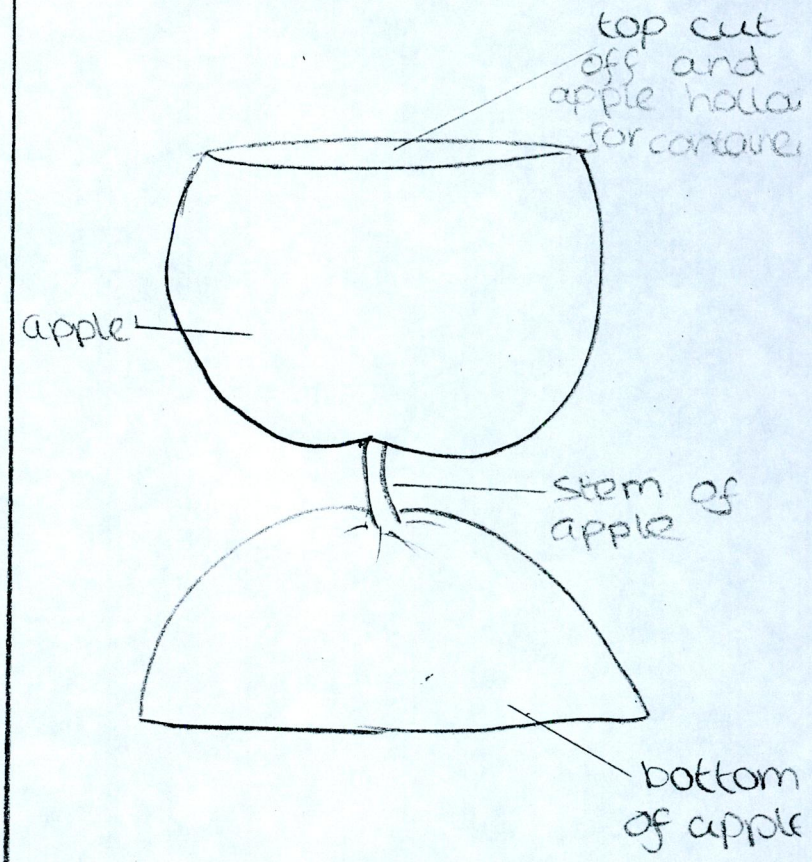
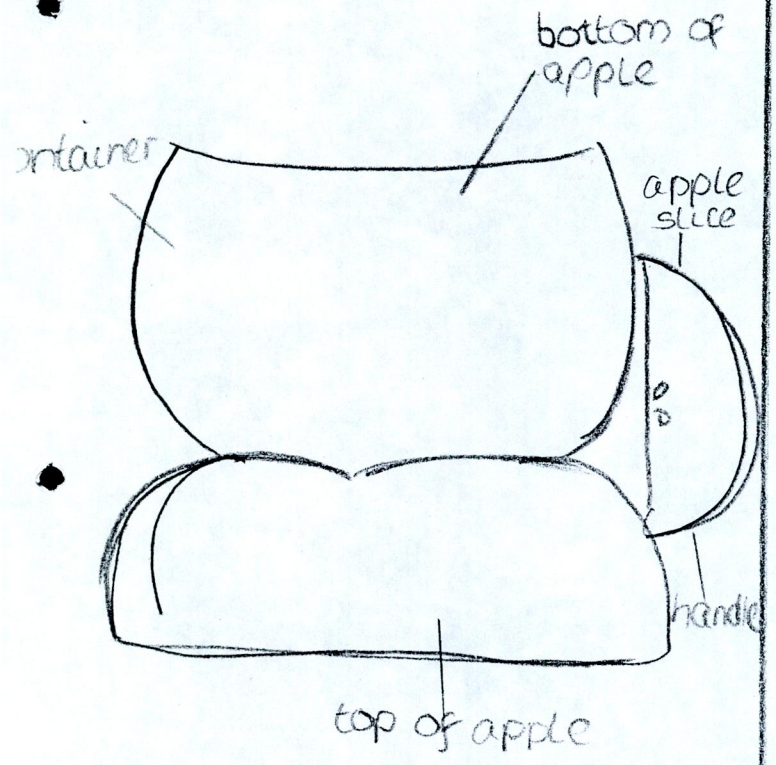


Diagram 1


top cut off apple
apple
apple slice


top cut off and
apple
stem of apple
bottom of apple


bottom of apple
apple slice
top of apple

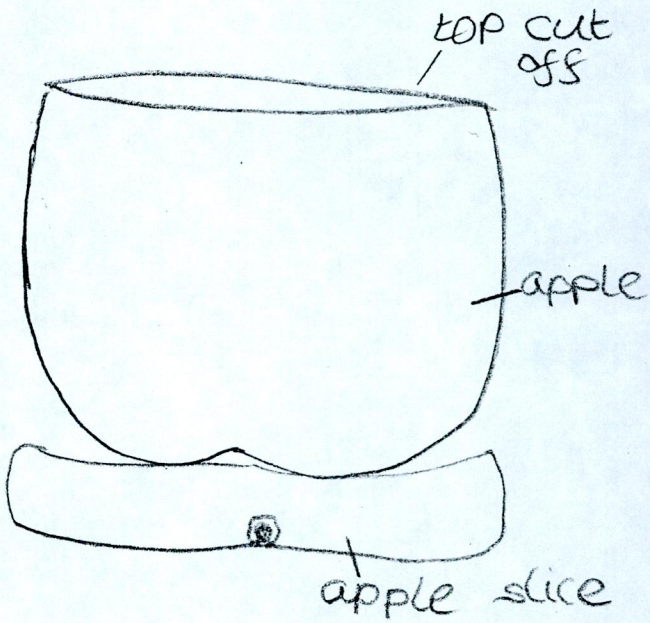
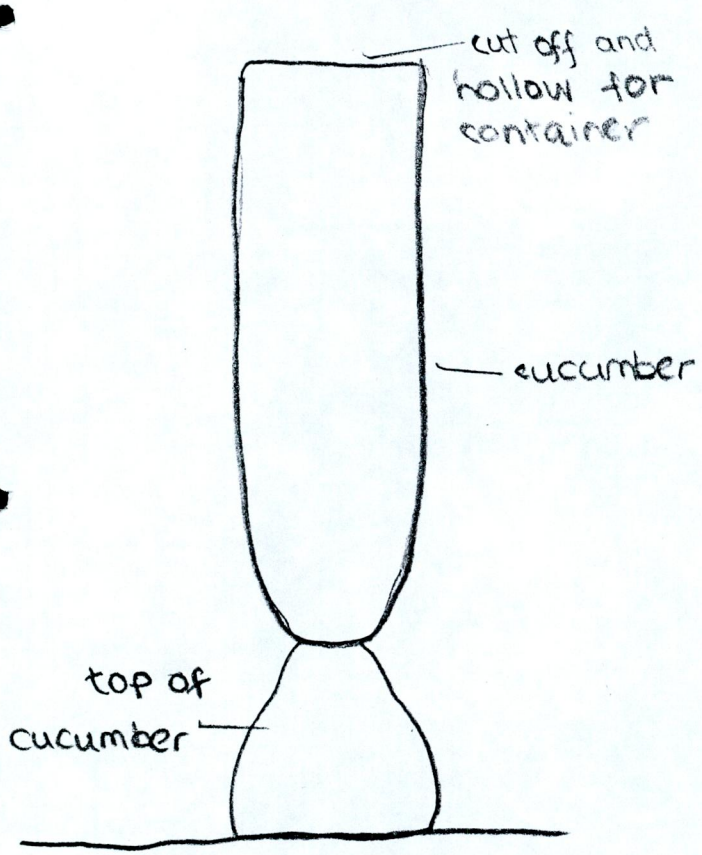
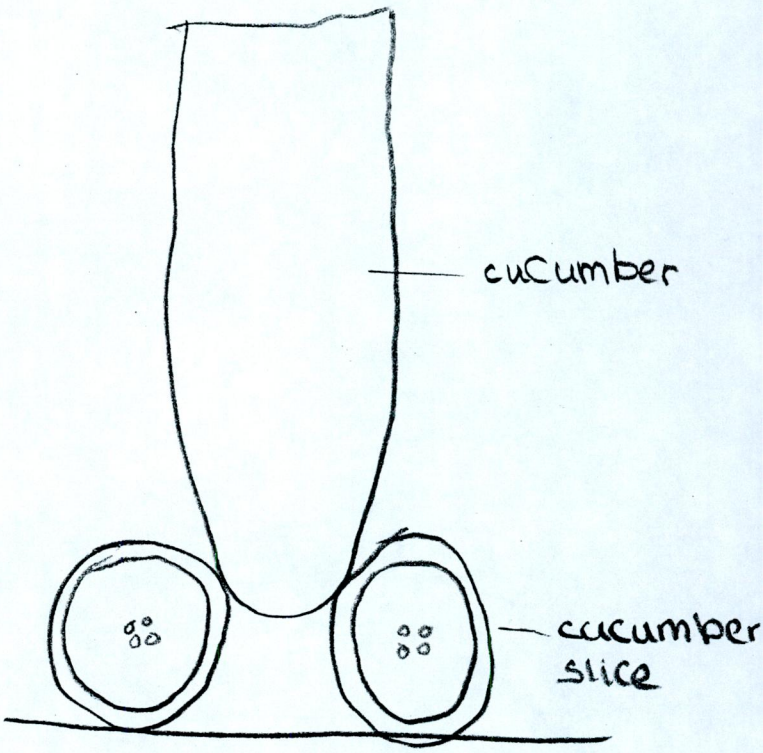
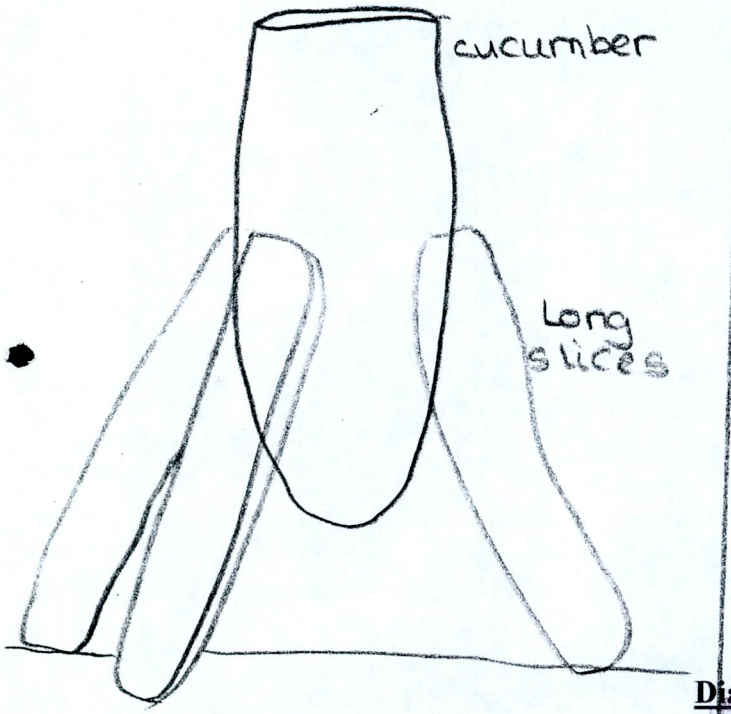

top cut off
apple
apple slice

Diagram 2


cut off and hollow for container
cucumber
top of cucumber


cucumber
cucumber slice


cucumber
Long slices

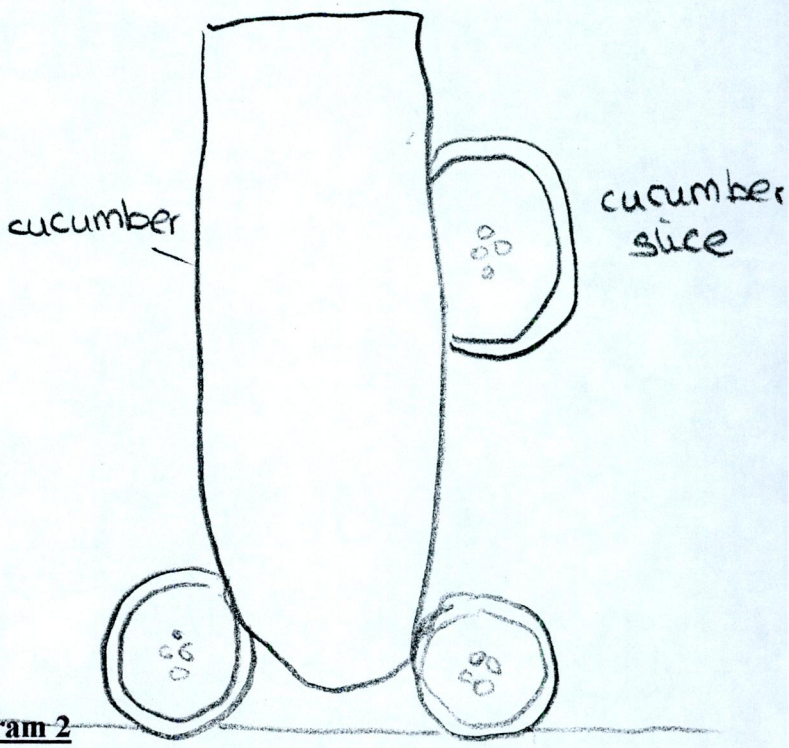

cucumber
cucumber slice

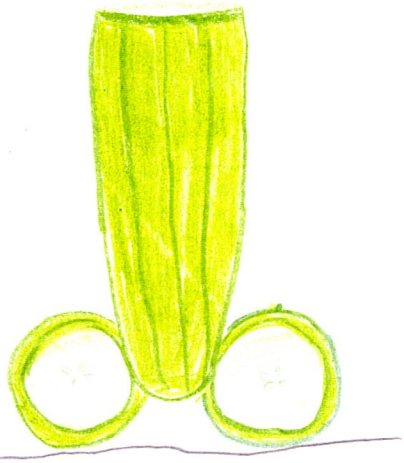
Diagram 2

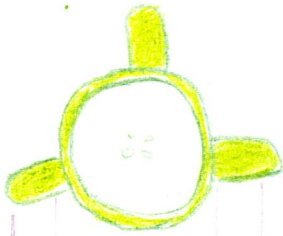
VESSEL DESIGN - PRESENTATION DRG

DESIGNER :

CLASS :

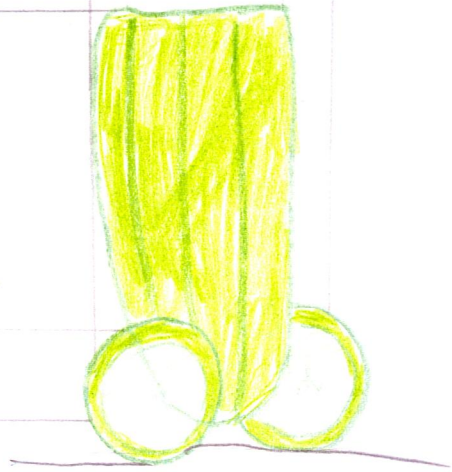
4. FULL VIEW





3. BIRDSEYE VIEW

1. FRONT VIEW

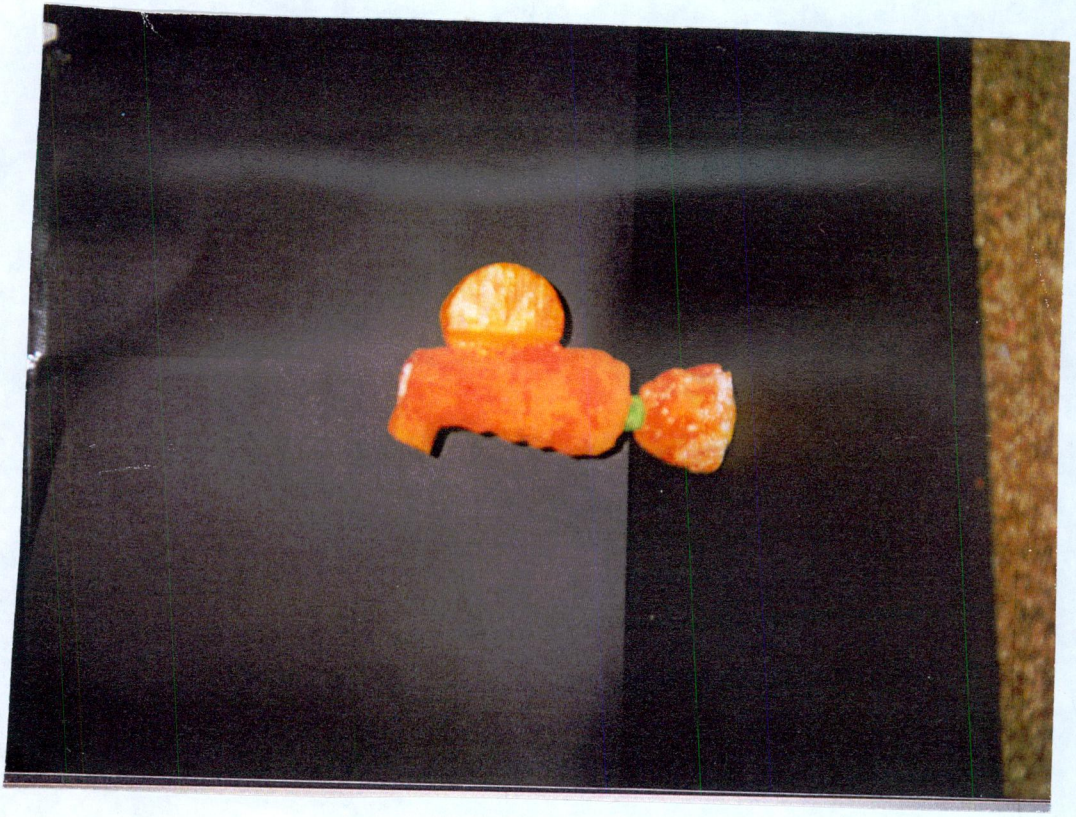


2. SIDE VIEW

Diagram 3

Diagram 5

Diagram 6



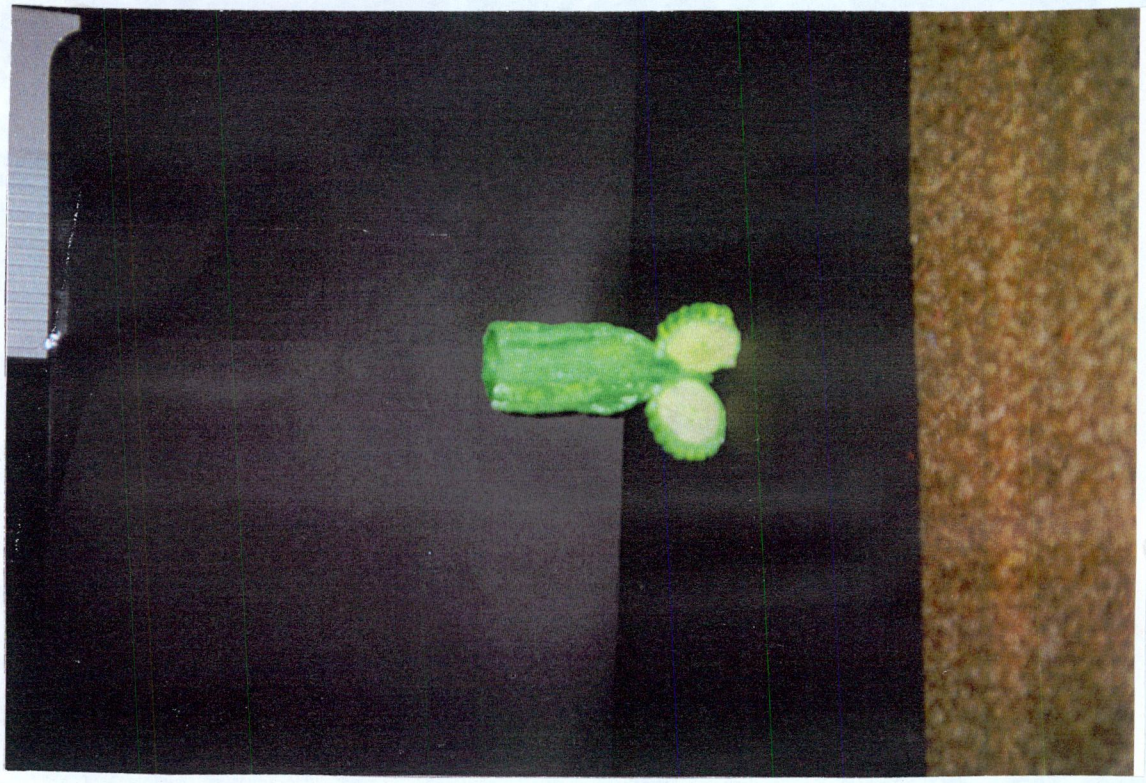
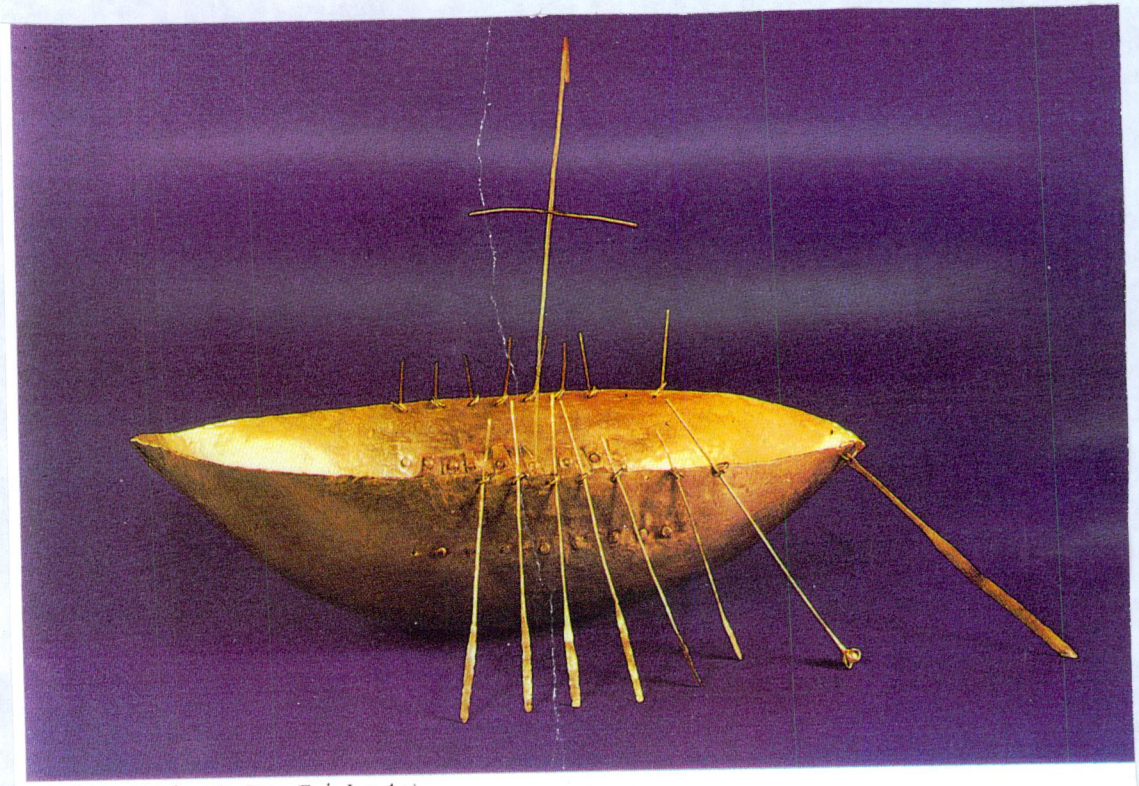
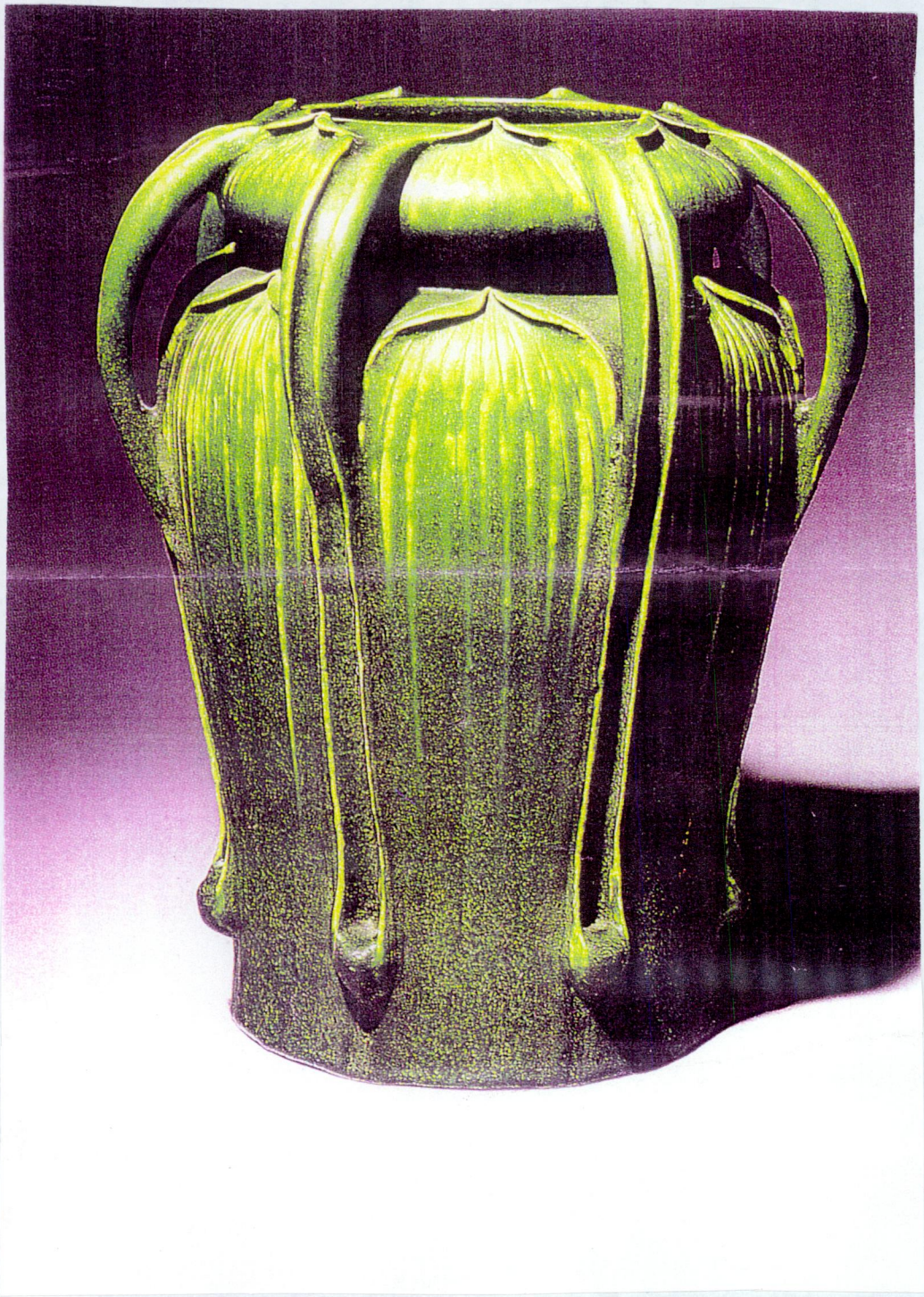


Diagram 8



Gold Boat, Broighter, Co. Derry (Early Iron Age).

Support Studies



Support Studies

Second Year Scheme

The 'aim' of this scheme of work was …

"To develop an understanding of visual communication through the process of designing and making a poster based on the theme of 'My world'."

It is important to note that this scheme of work is part of the Junior Certificate exam, more specifically two-dimensional studies.

The classes combined (third and second) are a weak group in general, with only a small amount of pupils showing a potential strong ability. Therefore, in drawing up this scheme, I decided to have the context very structured and put particular emphasis on 'support studies' to compliment the actual design process. In choosing a theme at the start of the year, both the Art teacher and I decided on a theme that would be broad and offered a wide range of possibilities and sources, for starting points. The theme chosen was 'My world'. The end product for this scheme is a poster design based on an aspect of 'My world' and the scheme was in several stages.

Stage 1

The first stage of the scheme involved looking and learning about the history of lettering, looking specifically at its function and discussing how, why and whom it was used by. This stage traced the development of lettering from ancient cave inscriptions right up to how lettering is used in modern society. As part of pupils' research, pupils had to find different types of lettering and mount these examples in their support study notebook as part of their investigation.

During the first part of the scheme, pupils experimented with their own styles of lettering and discussed it in terms of visual communication, by looking at letter shapes and letter legibility. The pupils then had to research a variety of typefaces for their homework and put their findings into their support study notebook. (See Diagram 1b)

Stage 2

The next stage involved pupils looking and finding out about the 'alphabet' and tracing its ancestry. During this stage, pupils used a simple grid as a guide for rendering simple 'block' lettering. This practical application was intended to be a base for the later 'making' stage of the design process.

Pupils worked well during this stage and produced a variety of work which showed a clear indication of their technical ability. From this stage I decided to use block capital lettering for their final poster design so that the pupils would benefit from using practical guidelines and parameters to work with and within.

Stage 3

In order of appearance, the next stage was to look at letter spacing and word spacing. At this stage pupils were introduced to the importance of letter spacing for effective visual communication. During this class pupils used the grid format that they used in the previous stage for the rendering of their lettering, they also learned to transfer lettering using tracing paper. This lesson was also aimed at giving the pupils a base for the constructional aspect of the poster design. Pupils found this stage time consuming and difficult at first, but during the stage they agreed that it was an effective solution to letter transferring and to keeping the letter shapes constant. (See Diagram 2b)

Stage 4

The next step was to determine what aspect of 'My world' the pupils were to choose. This was done by exploring a variety of possibilities that pupils could explore by means of a 'brainstorming' exercise. Pupils used a spider diagram and class discussion to decide and choose a subject that appealed both to their own personal interests and to the theme 'My world'.

This brainstorming exercise proved to be quite fruitful, and pupils had explored their theme sufficiently and then through discussion had chosen the area which suited their criteria, i.e. the area had to reflect

an aspect of the theme which appealed to their own personal interests. Pupils were encouraged to explore as many different possibilities as possible before settling on a specific area.

Once their specific area was chosen, the next step was to investigate and record as much information concerning the area as possible by recording the information visually in their support studies notebook. This information was obtained from both primary sources, such as could be found in the environment, or from secondary sources such as photographs and magazines etc. The pupils, for homework, researched and drew out images related to and specific to their chosen subject.

Stage 5

The next stage was concerned with familiarising pupils with both 'Balance' and 'Composition'. As part of their support study, pupils looked at and discussed balance and composition in poster design. Pupils discovered the importance of a balanced composition within the structure of posters in terms of legibility and visual communication. (See Diagram 3b).

Pupils set about choosing an image from their research which would best reflect their chosen subject. They then investigated 'composition' through the process of using a viewfinder to choose a variety of views of the image in a poster format. Once a variety of compositions had been selected, pupils recorded them via thumbnail sketches. Pupils then investigated balance by using rectangles to represent where the lettering would be put. (See diagram 4b). Pupils then chose the composition that they thought had the most effective balanced composition.

Stage 6

The next stage was to choose the poster's colour composition. For visual effect, I restricted pupils' use of colour to three. These colours could be either harmonious or contrasting. As part of pupils' support studies, they learned about artists' use of colour in both painting and poster design. (See Diagram 5b).

Pupils set about choosing an appropriate colour composition via thumbnail sketches. This proved to be quite an interesting stage, with pupils producing well composed colour compositions which showed that they had an understanding of 'Harmonious' and 'Contrasting' use of colour. (See Diagram 6b). The thumbnail sketches were applied into the support study notebooks to show the 'process' that took place in identifying the most effective balanced composition and the most effective colour composition. At the end of this stage, each pupil had to present the 'client' (teacher) with an A4 coloured rendering of the complete coloured poster composition (including image and lettering). These proposed solution designs were assessed through a class evaluation where pupils were encouraged to use 'Constructive criticism' as a means to improving the poster design.

Stage 7

The final stage involved the making of the poster. The posters were made from coloured card which were cut out into specific shapes and then applied onto a base card. The base card was the background colour and each of the shapes was attached to this sheet. Pupils used their 'mock-up' proposed solutions as a guide to constructing the poster. Lettering was applied in a similar fashion, with pupils using the grid and tracing paper method that they had learned previously in the scheme, to transfer their lettering to the poster.

Pupils did not have any problems with the cut out shapes in the final poster construction, but they did have some difficulty with cutting out the letters or rather the letter shapes. But eventually almost every pupil produced 'acceptable' letter shapes. (See Diagram 7b). When the poster composition was completed and constructed, all of them were displayed and evaluated in terms of how they visually communicated. The main points that were evaluated was …

(i) Effective visual communication.

(ii) Balance and Composition.

(iii) Effective use of colour.

Outcome/Findings

As previously stated, this group was a weak streamed group, but I feel that the scheme was structured to suit their individual abilities. Some pupils produced very effective poster designs, while other pupils produced satisfactory results. In general I feel that pupils did not fully appreciate the importance of the design process 'during' the scheme. Most pupils expressed unrest and impatience when they were selecting different compositions. The first year group expressed this same impatience, but realised its importance near the end of the scheme. I feel that this class felt the same, but were reluctant to admit the importance of the 'process'. A lot expressed that they could have produced the same poster design without going through the process.

I am not particularly worried about this attitude, because the pupils themselves will see the relevance of process in their next scheme. They have already been introduced to design process so hopefully this knowledge will surface in their work in the area of Art, Craft and design and in other more personal areas, where it can help to improve their lives.

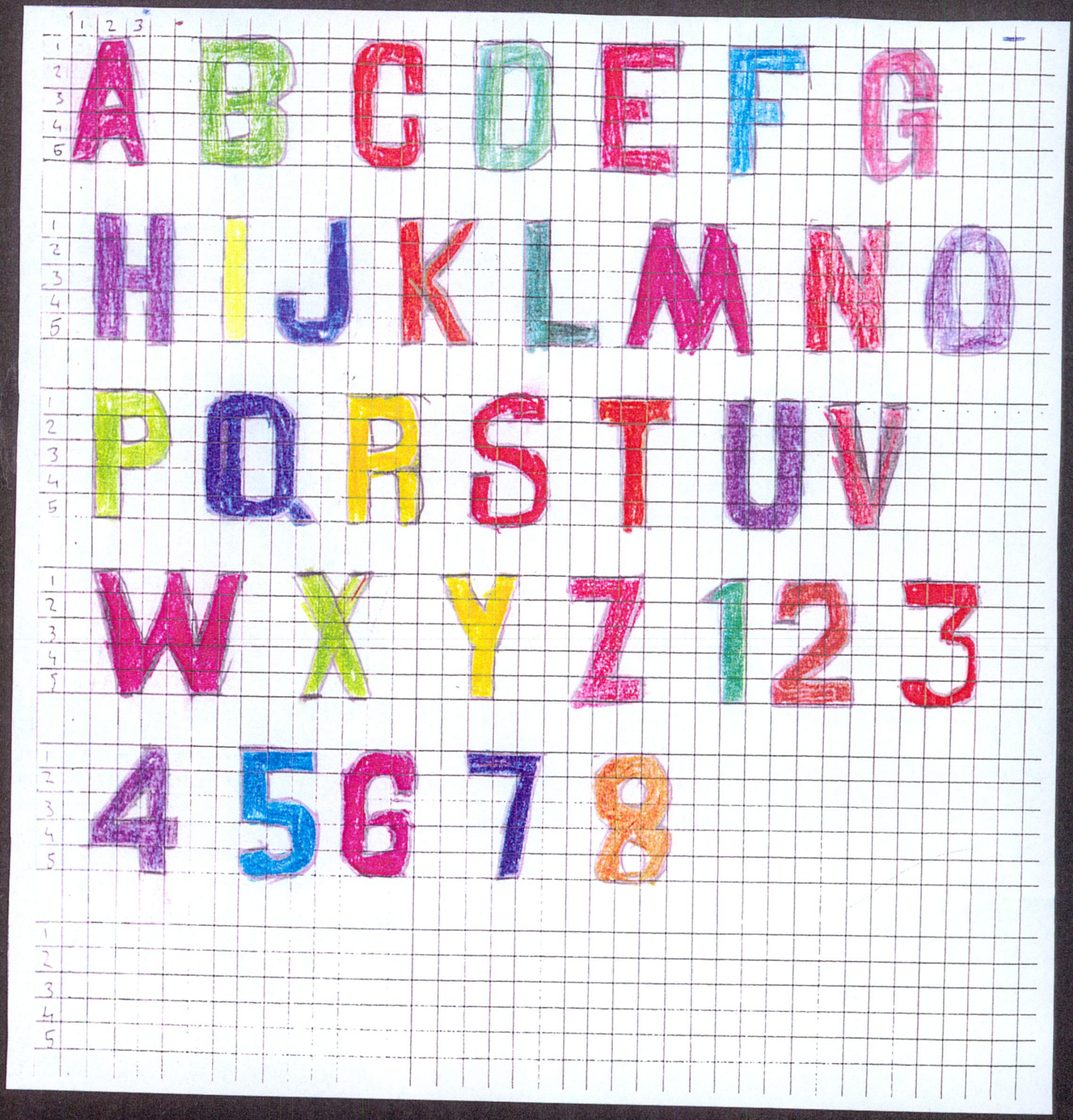

A B C D E F G
H I J K L M N O
P Q R S T U V
W X Y Z 1 2 3
4 5 6 7 8

Diagram 2b

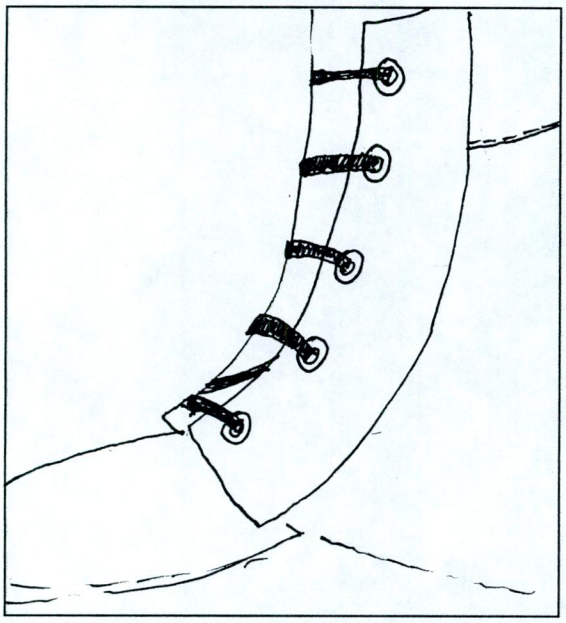
Junior Certificate

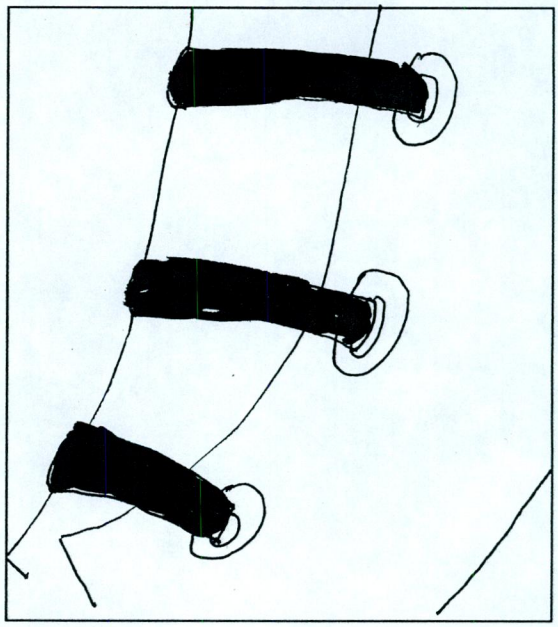
Poster Design

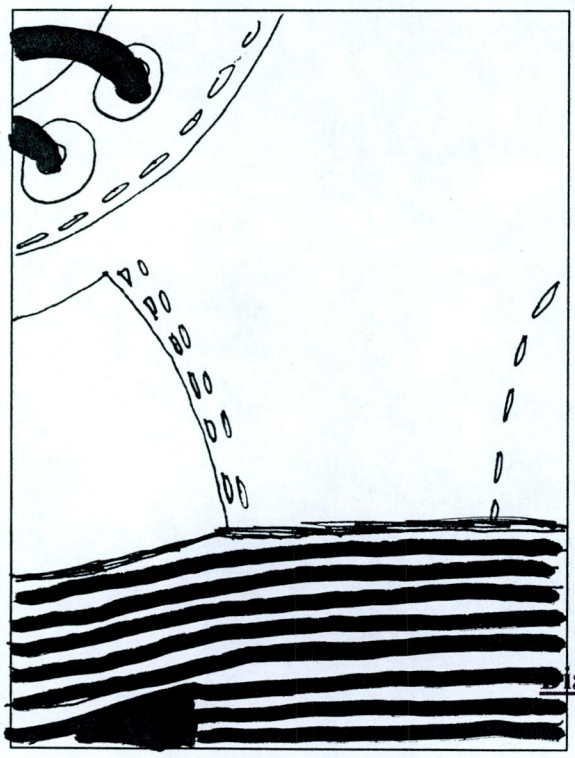
Theme - **My World**

Sub-Theme -..MY SHOES..... *Designer* - ..MR DWER.....

Thumbnail Sketches







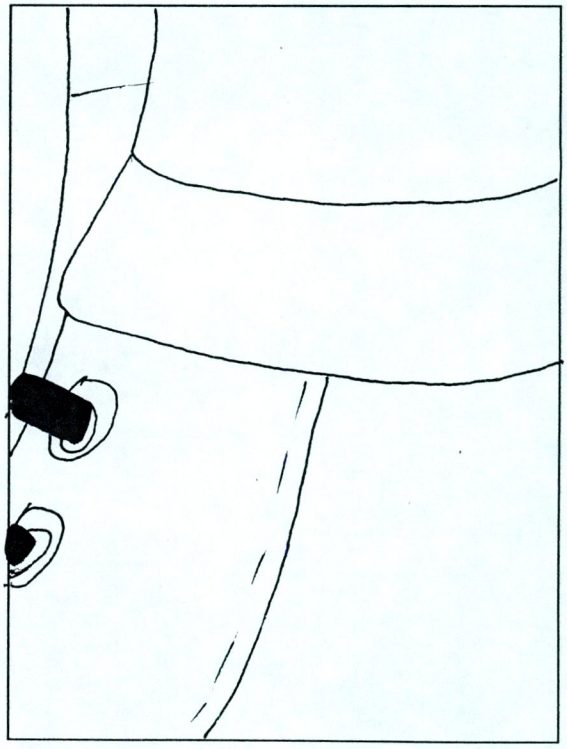


Diagram 3b

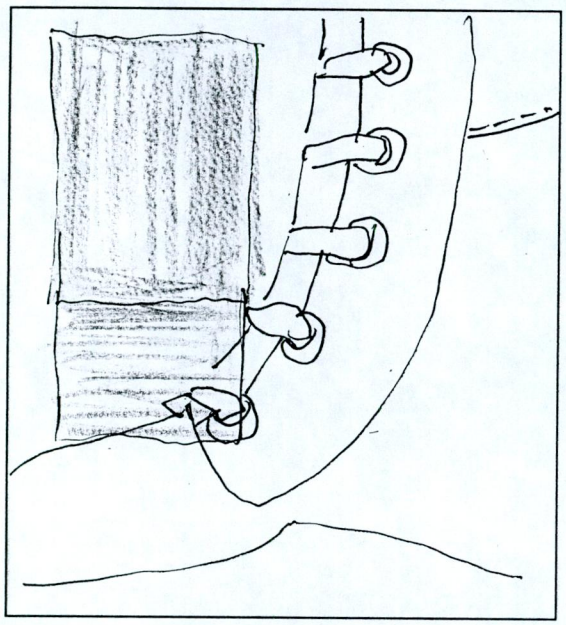
Junior Certificate

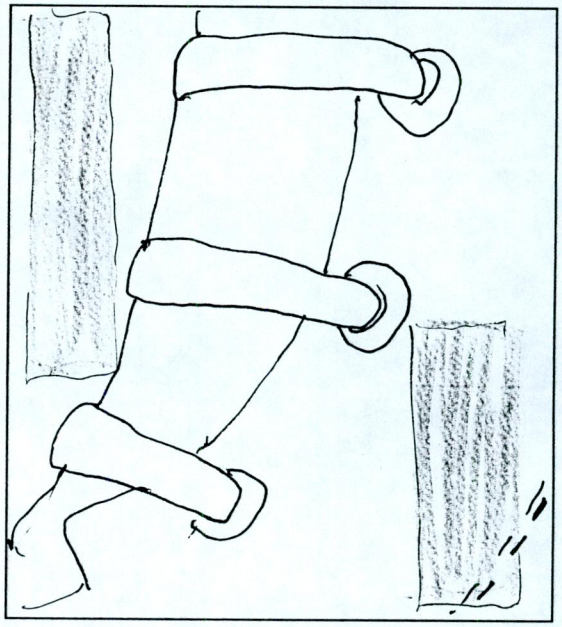
Poster Design

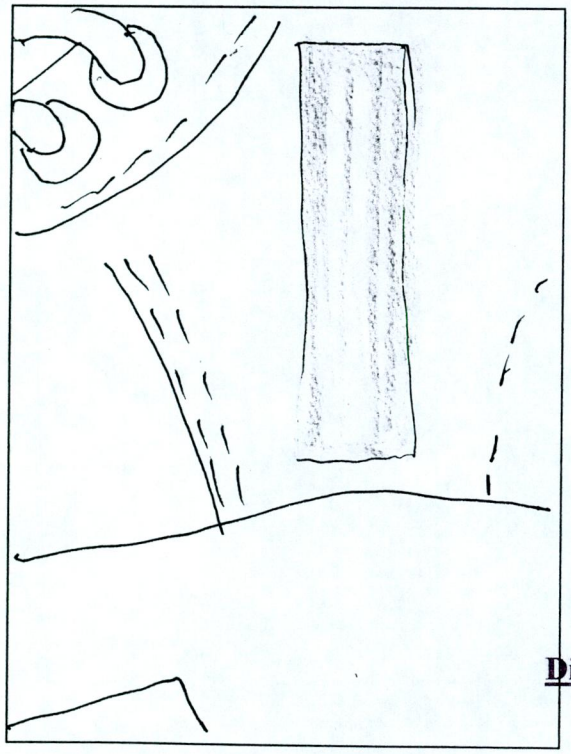
Theme **- My World**

Sub-Theme **-** MY SUCES **** ***Designer*** **-** MR DIVER

Thumbnail Sketches







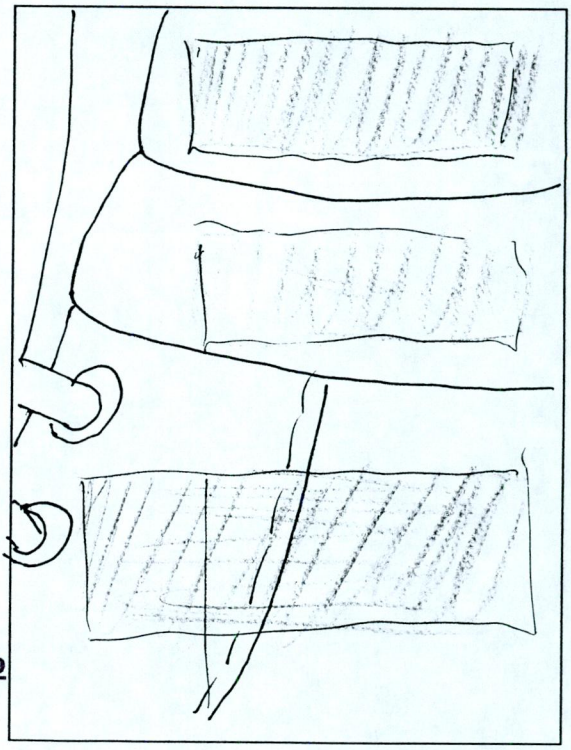


Diagram 4b

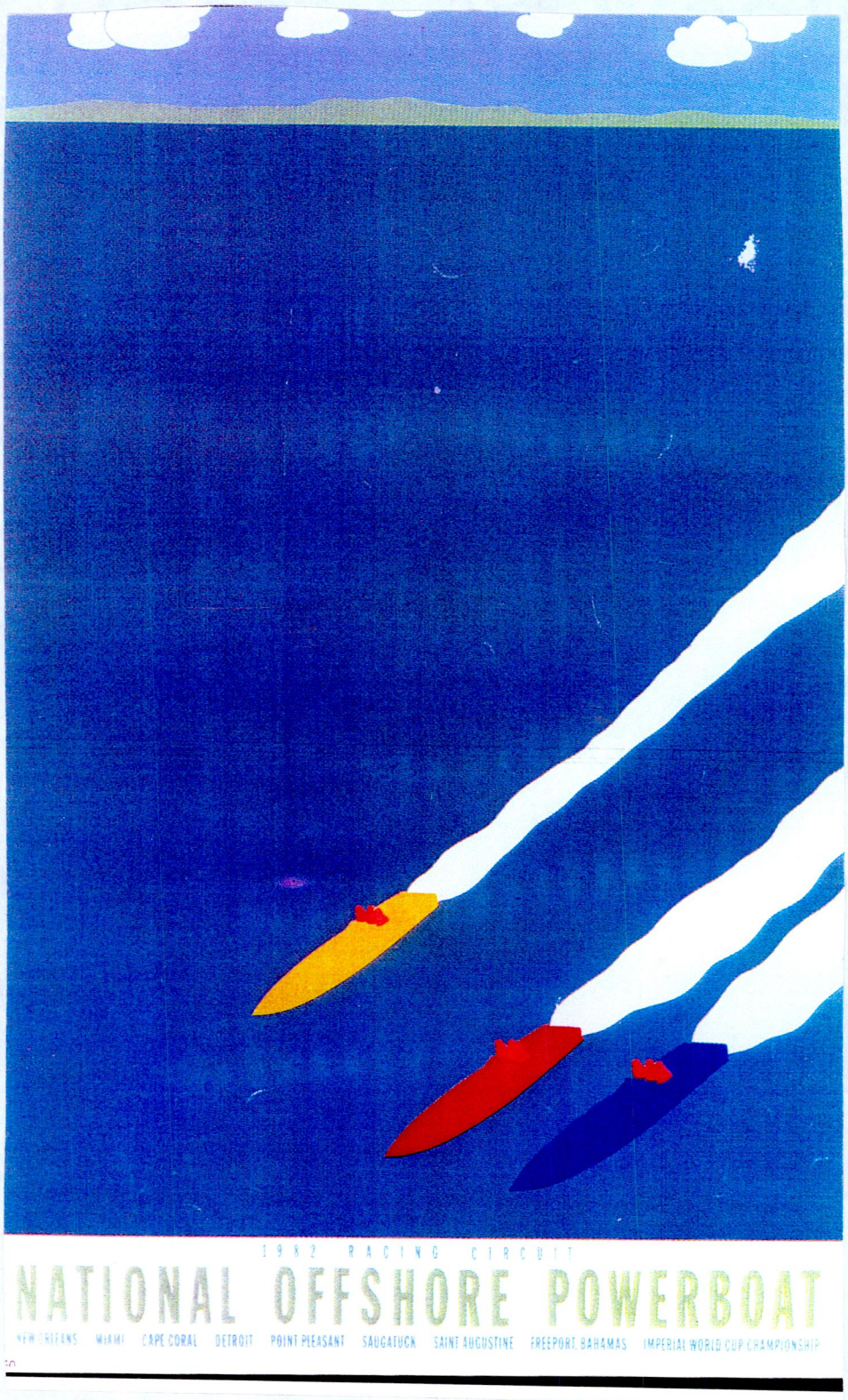

1982 RACING CIRCUIT
NATIONAL OFFSHORE POWERBOAT
NEW ORLEANS MIAMI CAPE CORAL DETROIT POINT PLEASANT SAUGATUCK SAINT AUGUSTINE FREEPORT BAHAMAS IMPERIAL WORLD CUP CHAMPIONSHIP

Diagram 5b

Junior Certificate

Poster Design

• Thumbnail Sketches

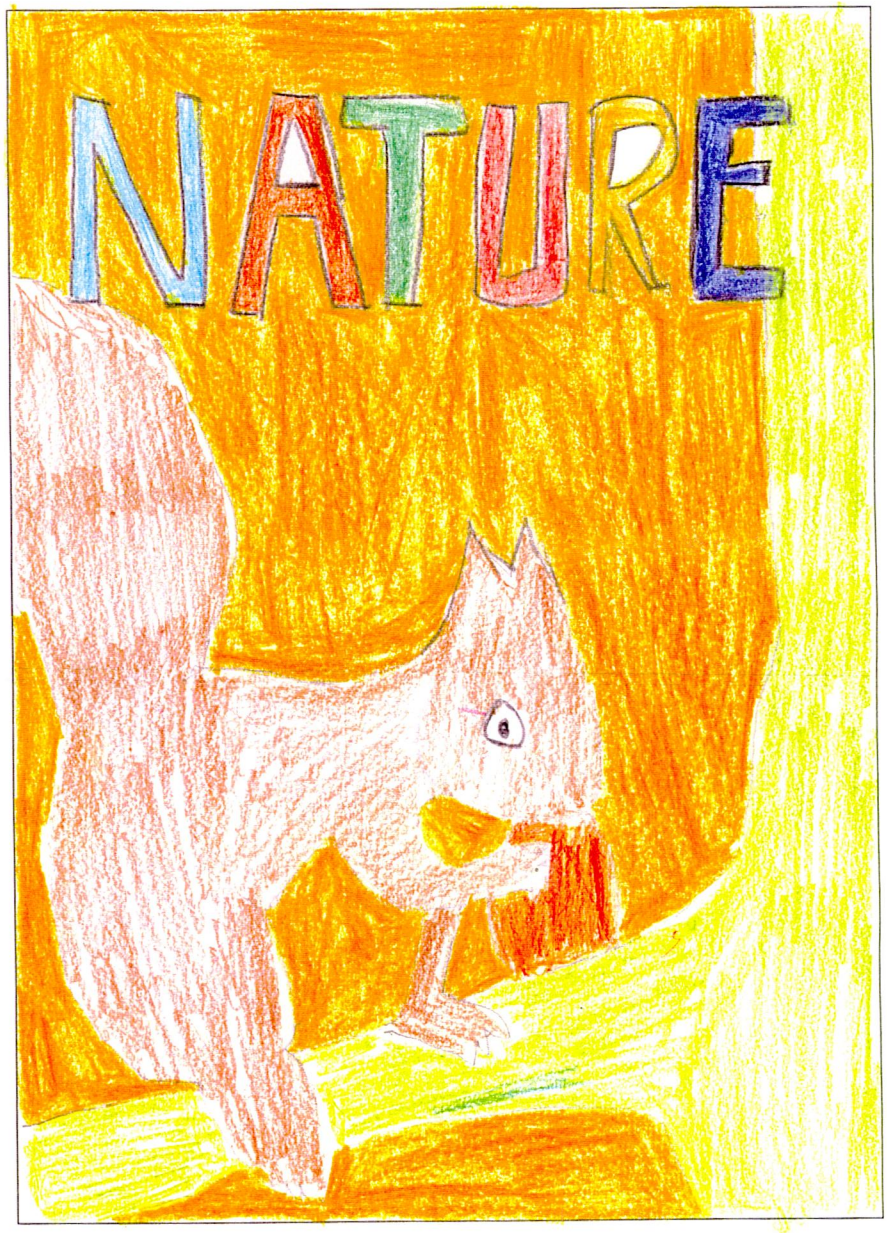
Diagram 6b

Diagram 7b

Junior Certificate

Poster Design

• Thumbnail Sketches



Poster design solution

Actual Posters

Study drawing for poster design

Conclusion

In looking for a definition for a design and design process, I have discovered "design" cannot be defined without reference to a process. Therefore to design anything that is to exist in an environment a process must take place.

During this process a lot of considerations must be made in regards to research, analysis and resolution, in order for the design solution to fit into it's intended environment as comfortably as possible.

Considerations such as Aesthetic, Function and Scale etcetera, must be reviewed within the given environmental context, where the design solution will exist. If this process is implemented correctly, then the resulting design solution will offer the most plausible answer to the design problem at hand. If the design solution is arrived at, without proper implementation of the design process, then the solution may not offer the most effective answer that it has the potential to; therefore the environment where the design solution is intended to exist could possibly suffer as a result to an unsatisfactory solution to the design problem.

The environment where we exist, be it natural or manmade always causes concern to us as human beings. We always seem to strive for a "perfect" world, where we can exist in harmony with each other and with our environment. We would all like the best of everything and would all like everything to work properly to its fullest potential which in turn would make our lives easier and more comfortable to live. This is where the designer is important. Everything around us has been designed. The problem is

that some designs have not been as resolved as they have the potential to be. Design education proposes a solution to these inadequacies through the process of educating human beings in the ways of design.

It has been proposed earlier that design is inherent to all human beings, it is plain to see that this is true but I believe that this inherent design ability must be nurtured and given direction. Design education must be promoted at a young age to provide a solid base to build upon a more competent appreciation for design in later stages.

Primary school education proposes two stages of design education. The first stage seems to promote enquiry, experimentation, exploration and identification of both materials and the environment. Pupils are should be directed toward an ever increasing arsenal of design, appreciation and resolution skills. In theory this would indeed provide a satisfactory introduction to evolving design skills, but the question remains; are these guidelines implemented in the primary curriculum. In a recent survey I researched this question and found.....

(I) On average 7 out of 10 primary school teachers were not aware that design was not addressed at primary school level.

(II) 6 out 10 primary school teachers believe that design education takes place at third level, in specific courses. 3 out of 10 believe that design education is specific to practical subjects at second level and 1 out of 10

believed that design education was addressed at primary level in terms of embroidery and textile work as part of extra curricular activity.

(III) Almost all agree that design is important to the environment and to our lifestyle. (See table 3)

From this questionnaire it is apparent that not much knowledge exists of design education at primary level and it does not seem to be properly promoted at this level therefore it can be proposed that on entering second level education, the only design education that the pupils will have received is that which they have attained from life experience rather than that which is taught to them through formal education.

Another questionnaire was distributed among a selection of secondary school teachers, this questionnaire was also concerned with design education.

(1) 8 out of 10 teachers believe that design education was essential to the education of pupils, 2 out of 10 teachers believe that design education was desirable but not essential.

(II) Almost all teachers in this survey acknowledged the importance of familiarity and exploration of materials as a look to acquiring good design skills.

(III) 8 out of 10 teachers believed that the environment would greatly benefit from design articulate people in today's society, 2 out of 10 believed that they would not make much of a difference.

(IV) All of the teachers involved believe that a design solution could not happen unless a process occurred.

(V) Almost all of the teachers believe that formal design education did not occur until second level. Half of these teachers believed that design education should be properly addressed at second level and the other half believed it should be left until third level.

From these findings, it is clear that design education is acknowledged at second level, and that teachers have identified that the process is important to an effective design solution. It has , however, come to my attention that a majority of teachers believe that design education should be dealt with at third level, in courses specifically related to the area of design. It is probably true that design can be more fully explored at third level, but not everybody goes to third level. Therefore to give everybody a fair chance design education must be implemented at an early age at a basic level, this can then be built upon so that when entering second level, all pupils will have an understanding of design. This knowledge can be added to and thus built upon during the Junior Certificate course, and by the time pupils reach the senior cycle they should have developed a competent awareness of design and design process.

In conclusion, I feel that it is true to say that design and design process is of vital importance from an educational point of view. The new Junior Certificate emphasises the importance of design process, especially in the area of Art, Craft, and Design. The

emphasis on this process is; I believe, of vital importance to the pupils development and also to the development of mankind. Our future depends on both ourselves and our children. If our children are properly educated and learn to appreciate the importance and relevance of design, and the effect that design can have on both our lives and our environment, then we will continue to evolve and perhaps someday, if all goes well we will achieve that perfect life which seems to elude us, The Junior Certificate course is a step in the right direction to achieving this goal.

(Table 3)

DESIGN EDUCATION

PRIMARY SCHOOL

This questionnaire is aimed at researching the importance of "Design Education" at primary school level. Please fill in the answers in relation to your own teaching experience, or tick appropriate boxes.

1. How important do you think "Design Education" is at primary school level ?

   (A) Essential _

   (B) Fairly important _

   (C) Not important _

   (D) Did not realise it was taught at primary level _

2. Where Should "Design Education" be taught ?

   (A) Primary level _

   (B) Secondary level _

   (C) Third level _

3. Which subject areas would you consider "Design Education" to be important: if any ?

_____

_____

_____

4. Describe what you would personally consider as "Good or bad" Design.

Design Education

Second level Education

This questionnaire is aimed at researching the importance of "Design Education" in third level schooling. Please answer in relation to your own teaching experience. Tick box for most appropriate answer.

1. How Important do you think "Design Education" is at secondary level schooling ?

   (A) Essential _

   (B) Desirable _

   (C) Not important _

2. Do you believe a process must take place before a design solution is reached (YES / NO)

3. Do you believe the environment would benefit from design articulate people ? (YES / NO)

4. At what level do you believe "Design Education" should occur ?

   (A) Primary level _

   (B) Secondary level _

   (C) Third level _

5. Describe some attributes that you would consider important for an effective design education

_____

_____

_____

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SELECTED BIBLIOGRAPHY

1. Aylward, Bernard. Design Education in Schools, London: Tiling, 1973.
2. Archer, L Bruce. An Overview of the Structure of Design Process , Cambridge: Met press, 1988
3. Barnes, Ken. Art and Design Topic Work - (8 - 13), London : Butler and Tanner, 1989
4. Crooks, Tony. The Changing Curriculum - Perspectives on the Junior Certificate , Dublin: 1994
5. Eisner, Elliot. Educating Artistic Vision , London : Thames and Hudson. 1973
6. Eggleston, John. The best of Craft Design and Technology , Cambridge : Met Press, 1988
7. Green, Peter. Design Education - Problem solving and visual experience , London : Anchor Press , 1974.
8. Klien, Bernard. Design Matters, Design *Matters* , London : Secker and Warburg, 1979
9. Langdon, Richard. Design Policy , London : The Design Council, 1989.
10. Mc Carthy, Iseult. Design Education For Schools Symposium, Dublin : National College Of Art and Design, 1995.
11. Theil, Philip. Visual Awareness and Design. London : University of Washington Press, 1983
12. Thistlewood, David. Issues in Design Education , London : Longman and Newman, 1990.
13. Wooff, Terence. Developments in art teaching , London : Open Books, 1976.