



Talking to Teenagers: 'Shaping Space' in the Irish School System

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Director

The Beginning

If we want a public that understands and appreciates architecture we must start with the children

- 1994 RIAI work on a school pack begins
- Obstacles :
 - Costs
 - Rigid National Curriculum

Research Phase

Studied Government education policy documents

Spoke to:

- Department of Education
- National Council for Curriculum and Assessment
- Teachers Subject Associations
- Individual Teachers

Objective

To understand !

Irish Education Structure

- Kindergarten / Crêche (under 4)
- Primary School (5 – 11)
- Secondary
 - Junior Cycle (12 – 15)
 - Transition Year (15 – 16)
 - Senior Cycle (16 – 18)

National Curriculum

- Primary School: 11 subject areas
- Junior Cycle: 30 subject areas (15 subjects usual)
- Senior Cycle: 30 subject areas (8 – 10 subjects usual)
- Junior and Senior Cycle end with **National Examinations**

Change in Early 1990s

- Agreement on the need to encourage:
 - critical thinking
 - expressive and creative abilities
 - awareness of national and European heritage and identity
- Benefits of cross-curricular activities and interdisciplinary projects
- Environment as a "...an integrating curricular principle and a pedagogically effective teaching method."

Transition Year

- Breathing space between Junior and Senior Cycles
- Fifteen/sixteen year olds
- No fixed curriculum
- Challenge for schools
- Opportunity for Architecture

Schools

- Teachers and pupils under pressure
 - Rising expectations
 - Limited resources
 - Pressures of change
-
- Involvement of people working in secondary school education critical

Partners

- Development of Teaching Materials:
Blackrock Education Centre
One of 25 teachers resource centres
- Funding:
Roadstone Ltd.
Manufacturer of building materials

Objectives for Pack

- Must fit educational framework
- Must help school fulfil its task
- Must help teacher do existing job
 - Must not mean extra responsibility
 - Must help solve teacher's problems
- If not, it will never be used

Result

Shaping Space:

*Architecture in the
Transition Year*

1997



Shaping Space

- Written and illustrated by a team of architects and teachers
- Almost 300 pages of lesson plans, worksheets, projects and homework assignments

Structure

Three modules:

- “My Home”
- “Neighbourhood, Village, Town City”
- “Buildings through History”

Topics

Plan, section and elevation Shelter
Use Space Light Colour
Scale Facades Materials
Structure Building types Evolution
of design ideas Vernacular and formal
architecture Building regulations
Site design Settlements Urban
design Streets, squares and public
spaces Axis and vista Urban and
rural landscape Communities and
change Planning laws and procedures .
. . . . Conservation and innovation

Lesson Plans

MY HOME



Lesson 1: What is a house?

This lesson examines why we need houses and focuses on the facilities and features considered important in a well-designed house.

Support material: Worksheet A1, Information Sheet 1 "Scrapbook Instructions".



Spotlight

Shelters and their uses



Key Concepts

Protection. Shelter. Facilities for rearing families and storing food.

Brainstorming

Any or all of the following topics may be explored with the students, who should rely on their own vocabulary and experience (where they live, observation, books, knowledge of the natural world, travel). A student/group who finds any point of particular interest may be encouraged to probe further.

• What is a house?

"House" is a word which means different things to different people in different parts of the world. Ask students to think of as many different house types as they can. List them on the board under headings such as the following. Students may suggest others.

Ireland — List/discuss houses and house types (including flats and apartments) in urban, suburban and rural settings.

Europe and the EU — Name the countries in Europe/the EU. Describe the types of houses which might be common in each but which are different from Ireland.

World-wide — Think of native populations, different cultures, rich and poor.

Natural world — Birds, insects, mammals, reptiles, amphibians — whether native, European or world-wide. Discuss why and how each creature uses/needs its "house". Elicit as many different words as possible for these "homes".

• Why do we have houses?

List as many reasons as possible for living in a house. Why do we need protection and shelter? From what are we being protected and sheltered? What facilities are needed in a house? These include places in which people can relax, eat, work, sleep, store food and belongings, be with their family and friends.

• What characteristics are important in any house?

Discuss space, warmth, light, good construction, privacy, security etc. List them on the board as the discussion develops.

Shaping Space



MY HOME



Activity — Design a shelter for a family.



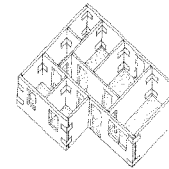
Key Concepts

Space. Natural light.

Working in pairs, the students design and construct a shelter for a family group of 4-6 people. They should consider: the spaces and facilities needed for the family; the positions of and reasons for windows and doors; the introduction/use of natural light. This is simply an exercise in determining internal space. There is no need to get too elaborate — positioning radiators, fireplaces etc. — unless the students negotiate a reason for doing so.

Materials: card, blade, scissors, glue, masking tape, Pitt Stick, pencil, ruler

Advance preparation: Cut plenty of card, using sheets of thin card or mounting board. Cardboard boxes which have been taken apart may also be used.



Teacher demonstration: Use a large piece of card to represent the floor. With a pencil and ruler, mark in the exterior walls and subdivide the space to represent the rooms. Mark the positions of doors and windows. Using additional pieces of card for the walls, mark door and window positions to correspond with the floor plan. Outline doors and windows. Cut them out, then assemble the walls on the base. Fix them provisionally with masking tape until satisfied that everything fits together.

The students now work in pairs to discuss and implement the design brief.

Review of work

Students look at their classmates' efforts and consider the effectiveness of each shelter. Remind them of Key Concepts — space and natural light.

- Which shelter best accommodates the needs of the family, making good use of space? How does it do this?
- Which shelter makes the best use of natural light? How does it achieve this?

Homework


1. Distribute copies of Worksheet A1 and discuss its requirements.
2. To complement the work they are doing, ask students to start collecting material for a Scrapbook. Distribute and discuss Information Sheet 1 "Scrapbook Instructions".
3. Students also start their own Vocabulary Files which should be updated with each lesson.



Shaping Space


Work Sheets

NEIGHBOURHOOD, VILLAGE, TOWN, CITY



Worksheet B3

Do this with Lesson 3.
Put all completed work in your folder.



Geographical profile
The climate of this island is temperate maritime, similar to Ireland's. A mountain range runs north/south down the centre of the island. There is scree on steeper slopes, with lush open plains west of the mountains. To the east, the land is interrupted by hills and valleys. Mountain streams feed into a lake and rivers, creating a few marshy areas. The northern part of the island is densely forested. There is a rugged eastern coastline. In the south, the climate is milder, with sandy beaches and coves. Forest in the south is less dense. The wildlife is similar to that found in Ireland.

Brainstorming
What factors should your group consider in deciding on the best place for your settlement? List them. The Key Concepts will give you some ideas.


Key Concepts
Shelter from the elements. Source of fresh drinking water. Sources of food and fuel. Sources of materials. Access routes to other parts of the island. Protection from predators. Suitable ground conditions.

Group decisions

1. Name the island you have discovered.
.....
.....
2. Study the map. Discuss the geographical profile and Key Concepts. Decide on a site for your settlement. Place an X on the site. List your reasons for choosing this site.
.....
.....

Shaping Space 50

NEIGHBOURHOOD, VILLAGE, TOWN, CITY



Worksheet B4: The Origins of Maynooth

Do this with Lesson 3.
Put all completed work in your folder.

Physical Geography
Examine Map 1 (Maynooth and its surroundings, 1860) and the OS Map (Discovery Series No. 50). Look for the range of natural and human influences which contributed to the choice of Maynooth as a settlement site and to its later development.

1. Identify the range of natural geographical features on the maps. List these features.
.....
.....
.....
2. How would these features have influenced settlement in this area?
.....
.....
.....
3. List the reasons why this location was considered a suitable site for settlement.
.....
.....
.....
4. Monasteries were usually built close to rivers in areas with good land. Does this apply to the monasteries in the Maynooth area? Explain your answer.
.....
.....
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Shaping Space 50

Information Sheets

INFORMATION SHEETS

INFORMATION SHEET 5: Irish Houses



Semi-detached



Detached country house



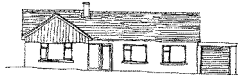
Semi-detached



3 storey over basement



Cottage



Bungalow

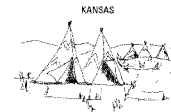


Flats with deck access

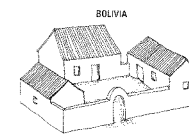
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Shaping Space

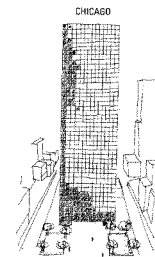
INFORMATION SHEETS



TEEPEE (wood and buffalo hide)



MARACA HOUSE (mud and tile)



SKYSCRAPER (steel and glass)



LOG CABIN (wood)



TERRACE HOUSE (brick, plaster and tile)



STILT HOUSE (wood and thatch)



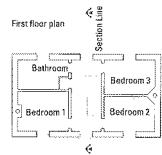
PUEBLO (mud)

Shaping Space

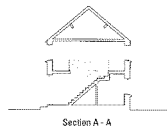
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Surveying, drawing, model-making.

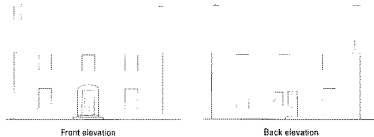
DRAWING GUIDELINES



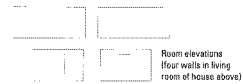
A plan drawing shows what you would see if you sliced through the building horizontally, lifted off the top part and looked down. The "cut" is usually made just above the level of the window sills. A separate plan is usually made for each storey of the building. Any solid part of the building which is cut through can be coloured in with shading or hatching. This is shown on the walls in the drawing.



A section drawing shows what you would see if you made a vertical cut through the building, took one half away, and looked into the other half. You can make as many section drawings as you need to explain the building, but one or two should be enough for most ordinary houses. To show where you have made your cuts, draw "section lines" on your plans with arrows on the ends to show which way the section is looking. Any solid parts which are cut (such as walls, floors or roofs) can be shaded or hatched.



An elevation shows what you would see if you looked straight at the building from the outside. A detached house needs 4 elevations. A semi-detached house has 3 elevations. A terraced house has 2 elevations.



Most elevations show the outside of buildings, but you can draw elevations of the walls

MODEL-MAKING GUIDELINES

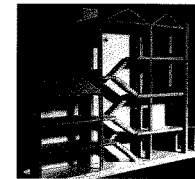
Kingspan Shelterwall	30 mm sheets 450 x 1200 mm	£3.00
"	50 mm sheets 450 x 1200 mm	£4.50
Kingspan Shelterfloor	30 mm sheets 2400 x 1200 mm	£19.25
"	50 mm sheets 2400 x 1200 mm	£27.90

Cork

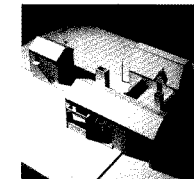
Cork flooring tiles are available in packs from DIY stores. They are easy to cut with a fine blade and have a "natural" feel. They are good for modelling landscapes and can be built up in layers to model hilly sites.

Cardboard

Cardboard is an excellent model-making material.



Georgian house modelled in kappaboard and mounting board



Small house made with mounting board

Mounting Board: Plain white board is the best because the cut edges will not be very obvious at corners and openings. It can be built up in layers to show architectural features. It can be drawn on to show details or coloured with pencil, paint or pastels to show the colour of finishes. If it is scored on one side, it can be bent to represent a curve, though it will curve in one direction only. (If you want to make slim columns you can roll white paper into a "cigarette" shape.)

Mounting board is available from stationers and artists' or hobby supply shops. Depending on thickness, the price ranges from £1.25-£2.00 for an A1 sheet (840 x 595 mm). Pulpboard is cheaper, at about 35p for a sheet which is somewhat smaller than A1.

Kappaboard: (two sheets of thin card with a layer of foam between them) is useful for making large-scale models of buildings on which you want to show the interior walls and rooms. It comes in two sheet sizes (see below) and two thicknesses, 3 mm and 5 mm. It looks good, is easy to cut with a blade and is thick enough to represent the thickness of a wall at scales from 1:100 to 1:50. It is available from some artists' and drawing

Activities

Field trips . . . building surveys . . . design
exercises . . . art or craft work . . .
photography . . . film . . . poetry . . .
music . . . essays . . . furniture . . .
landscapes . . . prototypes . . .
scientific, social or economic reports . .
. public presentations . . . debates

Adaptable

- To suit the needs of individual schools and students
- One module or a full year
- Academic and practical
- Teachers of history, geography, art or construction studies, mathematics or music, science, languages and literature, home economics, social, environmental, business, computer or media studies

Objective

Designed so that a teacher who knows nothing about architecture at the outset can take on a *Shaping Space* module with confidence

Government Support

- Department of Education's Transition Year Support Team advice
- 'Training the Trainers' Programme
- *Shaping Space* workshops for teachers in all twelve Transition Year Regions.

Now

Elements of *Shaping Space* used in:

- Primary schools
- Junior Cycle
- Transition Year
- Leaving Certificate Applied
- Primary Teacher Training Colleges

Government Policy

Action on Architecture 2002 – 2005

- Included support for ***Shaping Space***
- Policy implementation delays

- New Government Policy 2008 – 2014
- In preparation
- Proposed to include support for ***Shaping Space*** again

www.riai.ie/education



The screenshot shows a web browser window displaying the RIAI website. The browser's address bar shows the URL www.riai.ie/education. The website's header features the RIAI logo on the left and the text 'ARCHITECTURE & YOUNG PEOPLE' and 'Built Environment Education' on the right. Below the header is a navigation menu with links for 'careers', 'shaping space', 'guidelines', 'safety', 'useful links', and 'contact us'. The main content area is titled 'Architecture & Young People' and contains several paragraphs of text. A logo for 'BUILT ENVIRONMENT EDUCATION' featuring a stylized bee is positioned on the right side of the page. The footer of the website includes a navigation bar with links for 'home', 'careers', 'shaping space', 'guidelines', 'safety', 'useful links', and 'contact us'.

RIAI ARCHITECTURE & YOUNG PEOPLE
Built Environment Education

[careers](#) | [shaping space](#) | [guidelines](#) | [safety](#) | [useful links](#) | [contact us](#)

Architecture & Young People

The quality and sustainability of our built environment in the future will be determined by the children and young people of today.

They will be the clients, consumers and decision-makers of tomorrow. And their ability to make sound, informed decisions will depend on the education they receive.

The RIAI's Architecture & Young People Website aims to provide access to materials, resources and programmes which can help primary and secondary school teachers and their students to understand architectural design and the process by which the environment is shaped. It can also be used by Architects interested in working with teachers in the context of 'Architect in Residence' programmes.

The RIAI intends to maintain the Architecture & Young People Website as an evolving resource and is interested in hearing about activities and initiatives from anywhere in Ireland or elsewhere. 'Contact' hyperlink needed here.

The www.riai.ie/education website is part of the International Union of Architects Built Environment Education (UIA/BEE) Network. The UIA Built Environment Education (UIA/BEE) Network is an electronic portal designed to encourage the exchange of information and experience on teaching children about architecture.



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Shaping Space

RIAI

ARCHITECTURE & YOUNG PEOPLE

Shaping Space: Contents



[careers](#)

[shaping space](#)

[guidelines](#)

[safety](#)

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Shaping Space: Contents

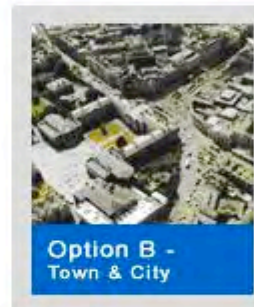


Shaping Space

Introduction



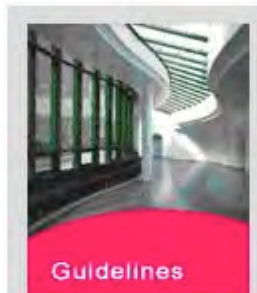
Option A -
My Home



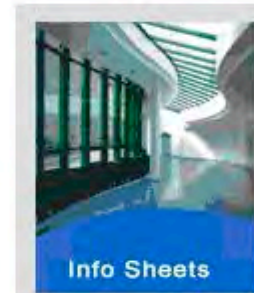
Option B -
Town & City



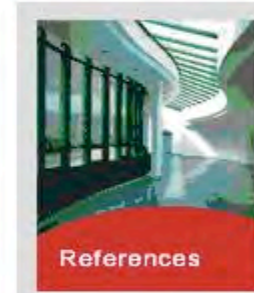
Option C -
Historic Buildings



Guidelines



Info Sheets



References

UIA BEE Network


- The International Union of Architects (UIA) Architecture & Children Work Programme
- Step 1: Guidelines on architecture in schools programmes, curriculum and teacher training
- Published Berlin 2002
- Objective: to help architects and teachers to collaborate on teaching young people about architecture

UIA Architecture & Children Website


- Step 2: Architecture & Children website
- Electronic portal for the international exchange of information and experience on teaching children about architecture
- Pilot launched in Istanbul, 6 July 2005
- Website hosted by RIAI

http://uiabee.riai.ie


ARCHITECTURE & CHILDREN
UIA Built Environment Education Network



Our Children will Build the Future
The UIA BEE Network aims to help Architects and Teachers everywhere show young people what makes good architecture... So that, as adult citizens, clients and designers, they will be inspired to take a role in making it happen!



Australia Bulgaria Egypt Finland France Germany Hungary Ireland Israel Italy
Japan Malta Mexico Mongolia Mexico Portugal Russia Trinidad & Tobago Turkey United Kingdom



Swedish

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ARCHITECTURE & CHILDREN
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UIA BEE Network Membership

The UIA's 'Architecture & Children' website is provided by the UIA Architecture & Children Work Programme. It operates as an electronic portal designed to encourage international exchange of information and experience on teaching children about architecture.

Any UIA Member Section that includes information about 'Architecture & Children' activities on their own website, and undertakes to observe the terms of the *UIA BEE Website Agreement*, can join the Network.

There is no charge to Member Sections for this link.

[>> contact](#)

The UIA BEE Guidelines

are designed to help architects all over the world to collaborate successfully with teachers, pupils and students.

They offer three valuable approaches to Built Environment Education:

'Architects in Schools Guidelines' - for organizing effective practical exercises for architects, pupils and teachers in schools.

'Curriculum Resources Guidelines' - for generating high quality architectural teaching materials;

'Teacher Training Guidelines' - on the training of teachers so that they can more easily engage in teaching pupils about architecture and the built environment.

[>> more information](#)

Child Safety

The UIA BEE Website Agreement, to which all UIA Member Sections linked to the Website agree, states that they will 'Adhere to the principles of the UN *Convention on the Rights of the Child*', in particular Articles 2.1, 17 and 29.'

Many countries also have laws, codes or guidelines for the protection of children from accidents, exploitation and other risks.

Architects, Teachers and Others organising Architecture & Children activities, or working with children in the context of Architecture & Children programmes, should take steps to ensure that all relevant national laws, codes and guidelines for the protection and safety of children are observed.

[>> more information](#)

[>>> BACK](#)

HOME - USEFUL INFORMATION - COPYRIGHT

What is it important for children to understand?

- That the quality of architecture affects the quality of people's lives
- That they have right to a decent built environment
- That as adult citizens they will have a role, with both rights and responsibilities, in seeing that they get it.

'Architecture is the will of an epoch translated into space'. Mies van der Rohe .

If *Shaping Space* helps to give young people:

- a stronger sense of what makes good architecture
- how they themselves can influence the quality of the built environment . . .

it will have succeeded in its aims

THANK YOU!