ARCHIchild
architecture for children
‘Space and light and order. Those are the things that men need just as much as they need bread or a place to sleep.’

Le Corbusier
Foreword

During the 1990s I chaired the RIBA General Education Group. The purpose of this committee was to create a bridge between the architectural profession and schools, with the intention of raising awareness of architecture and the built environment among teachers and young people. As RIBA Vice-president for Education, I was able to consolidate some of the work of this group.

The RIBA has long-realised the benefits of schools using the built environment as a learning vehicle. It encourages curiosity and observation, and provides a rich seam to mine across many areas of the curriculum. Above all, it can inculcate a life-long love of well-designed places and spaces.

Studying the built environment can enrich and inform the lives of young people whatever they choose to do after leaving school. Some may go on to be architects, others may become clients and commission new buildings; all will become building users. Having a population at large that is interested in architecture, should in itself, encourage better architectural design.

Teachers may appreciate support when teaching aspects of the built environment. This is why ARCHIchild, is a welcome learning resource. I hope many schools will use it as a starting point for what should become an exciting and rewarding journey into the buildings, towns and cities around us.

Emeritus Professor George Henderson
Introduction

The ARCHIchild toolkit, designed by a team of architecture students from Norwich University of the Arts (NUA), has been developed through collaboration with the Norfolk Association of Architects (NAA) and funded by Royal Institute of British Architects (RIBA). Primarily a learning resource, it comprises a series of activities that can be delivered by teachers and educators. The toolkit will facilitate a project-based learning approach and address specific curriculum areas from a range of key stages. Some of the activities are designed in a flexible way and can be adjusted accordingly to the age group and learning outcomes. Through awareness and exploration of architecture, young people of all ages will be encouraged to understand the built environment in an integrated way and identify the advantages of good design.

One of the main aims of this document is to raise young people’s awareness of architecture and engagement with the built environment.

ARCHIchild, why?
• To enable children to know architecture: discovery, observation, listening, locating, naming
• To enable children to understand architecture: translating, discussing, demonstrating
• To enable children to experiment: using problem-solving methods, manipulating, designing, experimenting

ARCHIchild, for what?
• To be aware, to explore, to get inspiration and to learn from architecture
• To take part, to participate and to engage with architecture
How to use

ARCHIchild is composed of the following eight activities:

01 Battle of towers
02 City collage
03 Stained glass windows
04 Threshold labyrinth
05 Recycled city
06 Architectural elements
07 Tree houses
08 Making bridges

In this publication you will find a brief description of each activity with the learning outcomes and required materials and settings.

This information will give you a flavour of the activity and will help you to choose the most appropriate one for you. Each activity is designed for a wide age range. However, the learning outcomes and the contents can be adjusted to suit a specific subject and age-group.

Once you have chosen your activity, please visit our online resources library and download the full description of your selected activity.

The outcomes of these activities can also be shared in an exhibition within a broader community. We see the detailed activities as an ongoing tool that can be edited, appropriated and improved together with you.

If you have any questions or suggestions, please feel free to get in touch with us:

• For the full description of the activities, please visit: https://www.nua.ac.uk/study-at-nua/info-for-schools/
• If you have further questions, suggestions or feedback, please email: archichild@nua.ac.uk
• Please share your activities with us on Instagram using #ARCHIchild
activity 01

Battle of towers

Description
In this workshop, participants will be required to build the tallest and most stable tower in groups. Competing against other groups, the teams will have to design and create these stable towers using recycled materials, which they have collected from their homes. Students can take inspiration from the iconic skylines around the world and see how the structural framing of these buildings stand. By the end of the workshop, the team with the tallest building, which is able to stand without support, wins! Parallel to this, the participants can evaluate and vote for their designs according to the following fundamentals of architecture: structure (firmitas), aesthetics (venustas) and functionality (utilitas).

Key words
Towers, Problem Solving, Construction, Framing, Sustainability

Curriculum areas
Mathematics, Art and Design, Science, Design and Technology, Citizenship

Participants

Learning outcomes
• To build a tower which is stable, beautiful and functional
• To work effectively as a team

Required Materials
Recycled materials that students can find at home, masking tape, scissors, white tack

Facilities
Central tables without chairs

Duration
70-90 minutes
activity 02

City collage

Description
For this workshop, the participants have the opportunity to design their own houses using recycled boxes. At the end of the session the class is able to collectively place their houses on a map to create an urban space in which the students can decide where public facilities such as, schools, hospitals, shops, green spaces, laneways and streets will appear. This gives the opportunity for the participants to think about of town planning and consider how they will be able to create a cohesive and active community.

Key words
Spatial Awareness, Town Planning, Scale, Circulation

Curriculum areas
Geography, Art and Design, History, Citizenship, Design and Technology

Participants

Learning outcomes
• To have a basic understanding of town planning
• To reflect on their built environment and physical constraints
• To observe and interpret the inhabited space

Required Materials
Recycled boxes such as cereal boxes or anything similar, coloured paper, scissors, glue, masking tape, white tack

Facilities
Central tables with chairs

Duration
From 90 minutes to a week-long project

Observations
This can be delivered as a multidisciplinary activity where participants reflect and (re)design a specific area of their city and tackle different areas of study
**activity 03**

**Stained glass windows**

**Description**
In this workshop, pupils explore and interact with their environment by creating stained glass windows. Through the use of coloured tissue paper, each participant creates a collage on clear acetate to be hung on classroom windows. As light passes through and the collages act as a sun clock, the participants become aware of their environment. They are encouraged to consider the sensory response to the changing environment and to document the positions of the shadows in the classroom using tape or a camera. This workshop provides first-hand experience of the physical impact of the individual on space.

**Key words**
Sensory Integration, Spatial Awareness, Colour Theory, Material understanding

**Curriculum areas**
Art and Design, History

**Participants**

**Learning outcomes**
- Awareness of the evolution/condition of the built environment
- Recognise the sensory experience as the day progresses and the colour changes
- Analyse and document the changes experienced

**Required Materials**
Coloured tissue paper or coloured acetate, scissors, glue, acetate, tape, camera

**Facilities**
Table and chairs for the collage, a room with windows

**Duration**
Activity: 70-90 minutes
Observation and reflection: from a week to a year
**activity 04**

**Threshold labyrinth**

**Description**
In this workshop, each participant is given a cardboard box and has to consider the entry and exit of their body from the box. The participant experiences the following stages: design, construction and experience of their box. Through design they get to grips with the concept of perspective; as they construct they have to consider the scale of the body moving through the box. The group’s boxes are then put together to create a labyrinth that the pupils must navigate in and out of. This workshop encourages group work and critical thinking as the participants consider the human scale and develop spatial awareness.

**Key words**
Drawing Skills, Critical Thinking, Scale, Spatial Awareness, Motor Skills

**Curriculum areas**
Art and Design, Design and Technology, Mathematics, Physical Education

**Participants**

**Learning outcomes**
- Experience the following stages: design, construction, experience
- Critical thinking in the collaborative design of a labyrinth
- 3D modelling skills with consideration of scale
- Development of spatial awareness

**Required Materials**
Drawing material, paper and pencils, cardboard boxes, scissors, masking tape and glue

**Facilities**
Table and chairs for 3D modelling, clear floor area (gym) or open space for experiencing the labyrinth

**Duration**
One day workshop
activity 05

Recycled city

Description
Using a range of recycled objects, like bottles or boxes, participants will aim to build a collective city and explore it in terms of an architectural object. Through this activity, the participants will be able to recycle some objects and give them another utility. This will allow them to reflect on the amount of waste produced and the shape of objects from everyday life. In order to function properly, a city requires different levels of consideration, planning and infrastructures. By the end of the activity students will be able to define what makes a city and recognise what a city needs to function.

Key words
City, Cityscape, Infrastructure, Built Environment

Curriculum areas
Design and Technology, Geography, Art and Design, History

Participants

Learning outcomes
• Identify the needs of the city
• Understand the different needs and relationships between areas of the city
• Confidently answer the question ‘What makes a city?’

Required Materials
Recycled paper, bottles and boxes in varying sizes, white paint, cardboard, scissors, glue, scale people.

Facilities
Large space or surface to construct your cityscape

Duration
From 90 minutes to a week project

Observations
This can be delivered as a multidisciplinary activity
activity 06

Architectural elements

Description
In this workshop, the participants will become familiar with five elements of architecture (floor, walls, windows, doors and roof) and understand their relationship with the human body. Each participant will have the opportunity to build their own model, adjust the relationship between each element and play with different colours and materials. By the end of the activity, participants will be able to create a collective model, test the sunlight/shadows and produce pictures to represent their built environment.

Key words
Floor, Walls, Windows, Doors, Roof, Human body

Curriculum areas
Mathematics, Design and Technology, Geography, Art and Design

Participants

Learning outcomes
• Identify the 5+1 architectural elements
• Understand and visualise the relationship between the 5+1 architectural elements
• Characterise the main function of each element in relationship to the final design

Required Materials
Cardboard with different colours and textures, scissors, glue, drawing material, 1:100 human scale, white tack, camera

Facilities
Central tables with chairs

Duration
70-90 minutes
**activity 07**

**Tree houses**

**Description**
In this workshop, the participants get inspiration from huts and tree houses of different cultures. Each participant will have the opportunity to design and construct their own scale model of a tree house from natural materials. They will experiment with structural methods of building in a tree, and imagine what are the special characteristics of living in a tree, as well as what it would be like to live in one. In the workshop, participants are encouraged to consider the questions of sustainable architecture. This workshop utilises hands-on learning and 3D model-building methods.

**Key words**
Model, House, Sustainability, Environment

**Curriculum**
Science, Art & Design, Design & Technology, Geography

**Participants**

**Learning outcomes**
- Reflect on the minimal living requirements
- Understand and visualise the relationship between the tree structure and architectural elements

**Required Materials**
A tree branch to simulate a tree (essential), 40cms high, recycled cardboard (e.g. cereals boxes) to build the house, glue, foam base, scissors and drawing material to sketch ideas.
Optional: some natural/recycled elements to include in their houses (e.g. leaves, small branches, fabrics), balsa wood

**Facilities**
Central tables without chairs

**Duration**
70-90 minutes
Making bridges

Description
In this workshop, students will use whatever structural knowledge they have to make a bridge spanning the longest distance they can. To achieve this each student will have to consider several structural factors like load, stress and strain. To design their bridges the participants can investigate the materials, their properties and construction methods. During this workshop they will be able to develop an iterative process and test different designs and materials. By the end of the activity each participant should be able to answer why their design worked, or didn’t, in terms of its aesthetics, functions and structural qualities.

Key words
Structure, Load, Tension, Span, Stress, Strain

Curriculum areas
Physics, Design and Technology,
Maths, History

Participants

Learning outcomes
• Identify the components of a bridge
• Understand the relationship between span and structure needed to support it
• To understand why their design succeeded or why it failed

Required Material
Drawing material, wood, cardboard, different types of ropes and metal cables, glue, scalpel, cutting mat

Facilities
A desk and a chair per student

Duration
90 minutes
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