

# TET APPLICATION;

## Collaboration with School / Organisation / Sustainable Category

**Project purpose and background- Provide a clear statement of the problem you were trying to solve or objective you were attempting to achieve. Include any details necessary to fully understand the issue. (500 Character Maximum) \***

The objective of the workshops was to introduce the work of sustainable architects Richard Rogers, Chris Wilkinson & Max Fordham and Passive House design principles. These architects and engineers had passed away just weeks before and during the course, and it seemed appropriate to shine light on their work at this time. Children had visited Max Fordham's Passive House home and been given a tour by Max and the architect Justin Bere prior to the pandemic.

**Programme delivery - Describe how your project was implemented, the activities involved, any schemes of work created and if/how they relate to the curriculum, any outputs created, partners and schools worked with. Tell us what makes the initiative new and pioneering and about the children/young people it engaged. Were there any difficulties encountered? If so, how were they handled? (2,000 Character Maximum) \***

The programme was delivered in person with Archimake tutors in 2 school venues and in 2 schools online delivered on zoom with a school teacher to facilitate the activity in the classroom. Children also visited Max Fordham's house and received an in person talk from Max Fordham and Passive House architect, Justin Bere to learn about Passive House design, clever use of internal heat gains and how to prevent heat loss in buildings to reduce energy use.

The work related to the school curriculum through developing the children's art and drawing skills and also their understanding of physics and sustainability.

The outputs were drawings showing passive house principles and internal heat gains in a building. The children then drew proposals for sustainable refugee housing. These designs resulted in successful group models.

The initiative is new and pioneering because children are rarely introduced to the building physics and understanding heat gains. By the end of the term children understood that it is possible to have a warm home without conventional heating.

The online workshops are innovative because removing the need for a specialist tutor to travel increases the opportunity to reach schools across the UK rather than being restricted to a London schools.

The online model is also pioneering as we could teach more than one class in a single workshop, this increases the affordability of the workshops for schools and can thereby increase uptake and reduce barriers.

The children were aged 6-12 years and the workshops were delivered to primary and secondary schools children. The children's work also formed part of a submission for the international Kew Gardens Tree House competition.

Children engaged effectively and were successful in achieving creative designs and models for both forms of in person and online workshop delivery. We found the rapport developed between tutor and group in the online workshops was excellent and equal to an in person workshop.

**Programme evaluation - Tell us what is the overall impact of your project, what are the tangible benefits to CYP such as skills impacts, how have they been measured, has it met its objectives, how many CYP has it engaged, has there been a learning legacy for yourself and/or the collaborative school. (4,000 Character Maximum) \***

The tangible impacts and benefits to CYP are that they have been introduced to some important lessons relating to energy and heat transfer. This fundamental understanding can be applied to many other areas of their learning and

gives them the potential to discover new solutions to problems relating to energy and sustainability as a result of understanding these basics.

The children who had the opportunity to visit the Passive House home and be shown the systems of reducing energy such as the thermal blinds for windows and the heat recovery ventilation unit which was cleverly and simply shown and explained by the architect Justin Bere has the opportunity to inspire children for a lifetime to approach problem solving in a sustainable way.

The program reached 120 children in total with a range of 30 minute workshops up to 1.5 hour workshops. The visit to Max Fordhams house was with 8 children for 4 hours. The total teaching time was 49 hours.

The overall impact has been impressive in that the school has requested to continue to run the program for consecutive terms and obtained external funding to do so. The group numbers in the class has also increased during consecutive terms. Children clearly love attending the workshop and engaging in the creative exercises. The model making workshop is the most enjoyable and we believe the children gain most from this as a result of the pre design development workshops we run leading up to the model making stage. The narrative of the curriculum ensures the children develop increasingly clear visual ideas about their designs and this clarity is expressed in the output and the descriptions of the work the children give at the end of each workshop.

Numerous children in the workshop have confirmed to the teacher that they want to become an architect when they grow up.

The learning legacy is that we intend to continue to work with our online delivery to increase the reach to schools across the UK. We have also been approached by others who are keen to run our workshops in Manchester and Barcelona and are developing ways in which we can do this so our understanding of what works can be shared with others to continue the growth of the successful STEM workshops we have designed.

The school has expressed a desire to continue the workshops and we are working with them to enable an increased attendance by inviting other schools to join their time slot, so the costs can be reduced overall for all schools attending this workshop model.

Our objectives were to successfully deliver our in person workshop without the need to travel to the school and this has been successfully met. The difficulty in travelling to a school for a 1 hour lesson increases when the tutor does not live in a similar location as the school. The need for Archimake tutors to travel can create a 2 hour journey for a 1 hour workshop in some cases, and therefore this model is highly attractive for efficiency of time and use of expertise.

Another objective was to teach more than one class in a single workshop, and this was also met through teaching 2 classes of year 6's in a single workshop with 1 Archimake tutor, and a different teacher in each class. The rapport with the groups was less personal, however there was more of a team-like spirit with the Archimake tutor being the coach. There was a healthy competition and interest to see outcomes from each class which were shown at the end.

Another objective which was successful was to deliver the Archimake workshop which is designed for a 1-1.5 hour teaching slot, in a 30 minute teaching slot. This was due to the school only having a 30 minute enrichment session available to teach their 30 pupils. We halved the drawing tasks and tailored the childrens activities, but managed to coach the children to have an architectural drawing and notes at the end of each workshop. As it was not possible to make a group model in 15 minutes the model making was spread across 2 30 minute workshop sessions.

**Name for Award:** Archimake – Architecture, Engineering & Urban Design Academy

In collaboration with;

Westminster Children's University / Queens Park School, Katherine Warrington School, Northbridge House Prep & Senior School

## Work Output & Evidence of Impact



**Format of study;** In person & Online Archimake led.  
**Group A & B;** London Primary schs - 1 hour class  
**Group C;** London Secondary Sch – 1.5 hour class  
**Group D;** Hertfordshire Secondary sch - 30 min class  
**Group E;** London community group – 1.5 hour class  
**Impact;** Total workshop hours; 49  
**No. of children taught:**  
**Total; 120 children**

Archimakers on visit to Max Fordhams Passive House home  
 Being given a tour and introduced to Passive House principles and design solutions by Max Fordham and architect Justin Bere.

**Work Samples:**

**Max Fordham Passive House sustainability principles**

1993 - 2022 *Max Fordham*

Max Fordham's career  
 Sustainable  
 Low energy  
 Good life as far as  
 Sustainable future

Future house  
 really nice  
 with better  
 heat pump  
 (are you water heated?)  
 better  
 100% - no carbon at all

Extensive  
 ecology/green  
 rainwater  
 John Bere  
 parking building

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) Aidan	Age 12	Date 03/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop? I like the fabric house and how they're sustainable and to have what the house can do.			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

MAX Fordham  
Sustainable

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) Benjamin / Sam	Age 12	Date 03/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop? I like the house and how they're sustainable.			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

• make eco friendly house  
 • Solar radiation process transfer

It was really hard to hear so please can you change that in the future. Thanks

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) Lucy	Age 11	Date 02/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop? I thought that it was a fun lesson and I enjoyed learning about eco friendly houses.			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) Lucy	Age 11	Date 02/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop? I thought that it was a fun lesson and I enjoyed learning about eco friendly houses.			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) Rose	Age 12	Date 02/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop?			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

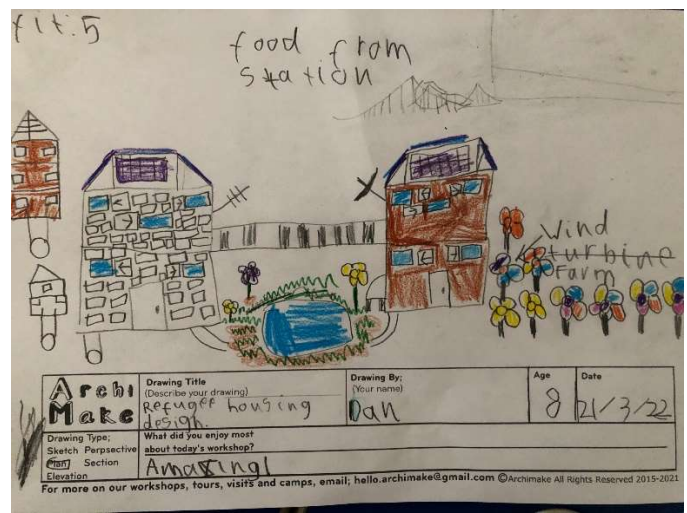
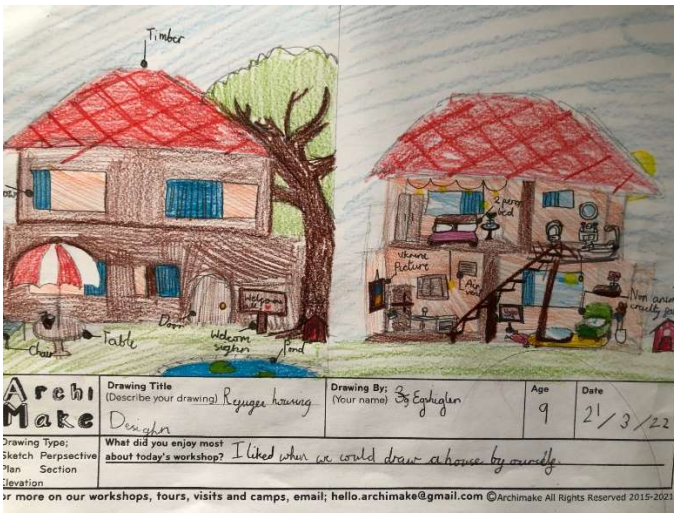
= Lighting  
= Heat

<b>Archi Make</b>	Drawing Title (Describe your drawing) What do you enjoy most about today's workshop?	Drawing By: (Your name) IVAN	Age 13	Date 02/03/2022
Drawing Type: Sketch Perspective Plan Section Elevation	What did you enjoy most about today's workshop?			

For more on our workshops, tours, visits and camps, email: hello.archimake@gmail.com ©Archimake All Rights Reserved 2015-2021

**Richard Rogers study;**





**Models of Sustainable Refugee House;**



**Archimaker feedback following above workshops;**

<p>"I liked seeing how buildings can store heat and light."          Tarun age 10</p>	<p>"I enjoyed how the buildings were eco-friendly."          Theo age 13</p>
<p>" Learning about the architect Max Fordham."          Henry Arnold age 11</p>	<p>"I enjoyed seeing the buildings Richard Rogers designed."          Isabel Kidal age 12</p>
<p>"I though it was a fun lesson and I enjoyed learning about eco friendly houses."          Lizzie Jacobs age 11</p>	<p>"I enjoyed seeing the futuristic houses and how they're sustainable."          Aidan age 12</p>

## **Teacher Testimonial following End of Term Presentations from teacher who facilitated above workshops at Primary School;**

“Thank you so much for inviting me to be a part of the Archimake celebration event last weekend it was a real pleasure to be part of the event and to see the amazing work that is being undertaken by the students have been working with you.

I was so very impressed by the amount of work put in by the facilitators and students, both in the delivery and organisation of the event and in the facilitation of the workshops leading up to the sharing and creation of the final portfolio and pieces of work.

I particularly look forward to seeing the V&A record of the doll’s house project as an extension of the larger scale design projects presented on the day which were without exception, outstanding.

I am currently working with authors and trainers to promote empathy as a part of my well-being work and I was particularly impressed by the challenge undertaken by some students to put themselves in the place of others and then design environments tailored directly to their needs.

I felt this complimented well the obvious themes addressed within the project of equality and diversity, which appeared regularly and ran through the research work undertaken by the students. It was impressive to see how this was delivered in parallel to the exploration and awareness of role models and what they symbolise to individuals and wider society.

Being in the privilege position of being able to watch the presentations, it was clear to see that the students had been guided through the design process and had all had opportunities to reflect and refine their ideas .This was illustrated clearly in their planning and recording elements of their portfolios, which were in my opinion extremely impressive and professional. I found that the results of the students’ through and in-depth research visually flowed throughout the presentations and clearly enabled the refinement and creation of thoughtful and detailed plans.

It was clear to see that the students were able to express themselves freely through the range of themes addressed and varied content in the portfolios and in the way in which the students were able to express and communicate their ideas on the day of presentation. Their delivery and performance suggested to me as a panellist that they had enjoyed a real sense of agency throughout the project.

I am really looking forward to our work together next year and hope that Archimake gets to deliver in as many of our partner schools as possible in the future; this project seems to me to be an amazing way to encourage the development of real-life skills and to encourage the fluent communication of ideas through architectural exploration through the creating of designs and the celebrating of creativity.”

Cllr Stella Wilson

Manager WCU

Westminster Children’s University, Queen Park School