



LEAF

Living Wall

About Us

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We are **LEAF1**: an award-winning, national finalist F1 in Schools team from Simon Langton Grammar School for Boys. Having been in the competition for several years, we have a comprehensive and in-depth knowledge of the competition and an unrivalled enthusiasm for it. For the last five years, we have assiduously strived to grow and evolve as a team to arrive at where we are today.

F1 in Schools is the largest STEM project in the world, hosted globally in 40 countries, with over 20,000,000 students competing worldwide. Upon winning the regional championship, teams will then compete in the national finals against other teams from their country; following this, the team that wins the national finals will then represent its country at the international finals of the competition.

Like many other teams, we rely heavily on contributions from companies to help us flourish in the competition and ultimately win. We use the money in several ways, with a large amount of the sponsorship being recycled back into advertising our sponsors in creative and unique ways. The rest is used in funding the resources and materials used in car development and helping us progress through the competition as a team in general. We greatly appreciate all sponsorship and support that is given to our team, no matter how large or small.

Benefits for Sponsors and the School

Benefits

With the new addition of the living wall to the school grounds, we also plan to incorporate the making of each plant unit into the KS3 design curriculum. Becoming involved in the making of each box will teach younger students the different fixtures and fittings involved with wood units, valuable lessons about manufacturing methods, such as 3D printing, as well as get them to understand industry-equivalent orthographic drawings and assemble products from these drawings. They will also learn about building to tolerances in product assembly, and the different finishes and coats need to protect wood from different weather conditions. The upkeep of the wall will be added to the Year 7 forest school curriculum, meaning they acquire new knowledge on plant upkeep, and the challenges of having a vertical garden.

Beside the wall, there will be a sponsors plaque, showing off brand logos and names in exchange for your support for the project, and the school can offer publicity on its website, as well as through any news articles written on the living wall. Also, any investors in the project will have a post dedicated to them on both the LEAF1 and Langton Design Instagram accounts, which can help promote your brand to a worldwide STEM community.

Benefits for the Team

Benefits

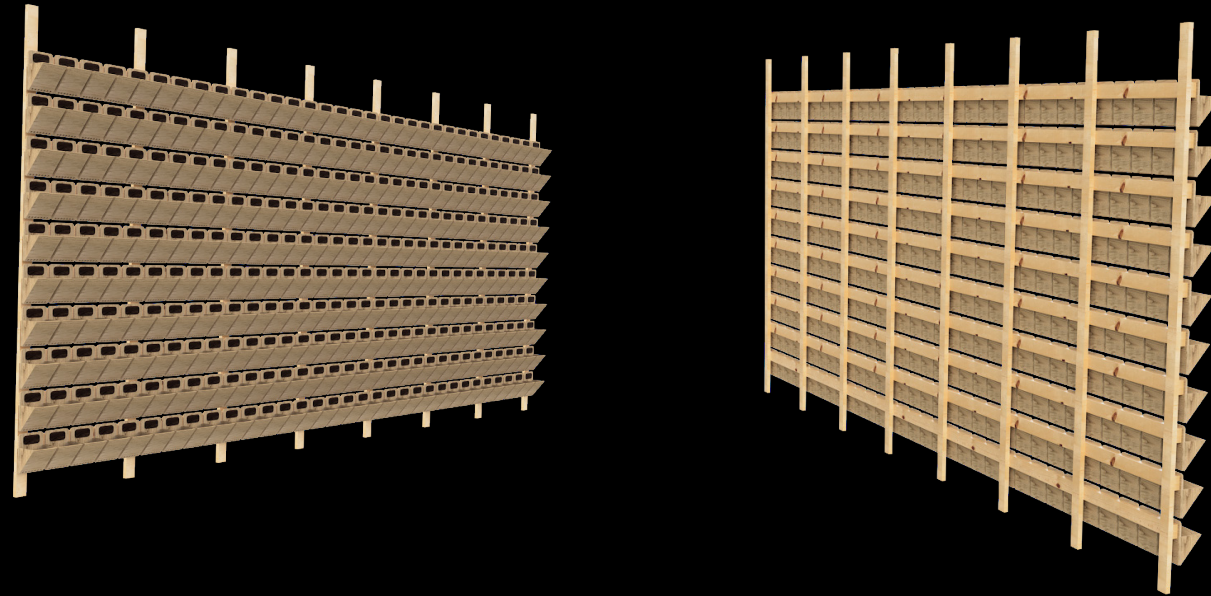
On the day of the actual competition, by having multiple sponsors that have helped fund the creation of our living wall, we will score extra points for outreach and sustainability. This will make us more likely to go through to the further stages of the competition- the national finals and the world finals.

When made, we will be the first team in the world to create a living wall, helping us stand out against other teams at the competition. However, its not all about the points. Through the living wall, we can offset all emissions from our project allowing us to become carbon neutral and possibly even carbon negative. As a team, we have pledged ourselves to sustainability to concur with our personal beliefs and team ethos, making being carbon neutral paramount to us.

Not only will a living wall assist us on our journey through the competition, but it will also assist future teams that can take advantage of the unique and sustainable advantages that it brings. This means that this investment will continue to boost our school's future teams in the competition for the foreseeable future, solidifying our school's place as being innovators in the F1 in Schools competition.

Orthographic and CAD Models

CAD



Figures 1&2 - Approximation of what the living wall will look like once assembled on frame - back and front of design



Figure 3 - Individual unit of the living wall - each student will make one over the course of their project

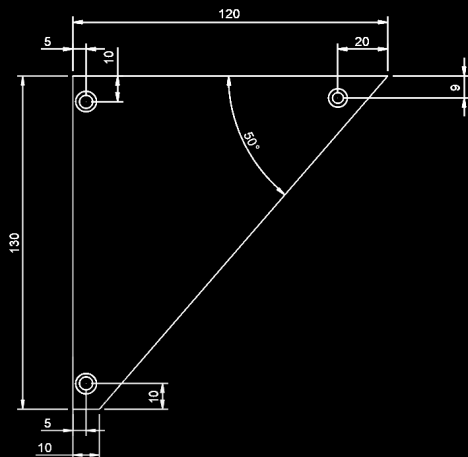


Figure 5 - Orthographic of the side of the individual unit showing its dimensions



Figure 6 - Example of the equipment used by students to assemble the individual units



Figure 4 - Exploded view of the unit, showing how it will be assembled and attached to the frame

Road Map for the Project

Roadmap

Stage 1 - CAD & Early Development:

- Consult the professional gardening company - Bourne to Garden
- Building Company performs surveys on suitable areas around the school
- Produce Orthographic drawings of each box unit
- Produce Assembly Instructions for the students to use.

Stage 3 - Lessons for students:

- Interpretation of orthographic drawings
- Building to tolerances
- Use of jigs, fittings and fixtures for wood products
- 2D Design/AutoCAD for student nameplates

Workshop skill development

Stage 5 - Project in the long-term:

- LEAF, Ecoclub and Forest School can all be incorporated into the upkeep of the wall
- Panels can easily be removed, disassembled and replaced - MDF material can be recycled or reused
- The living wall can be expanded, or more can be built at new locations

Stage 2 - Preparations:

- Purchase the necessary materials needed - soil, MDF, glue for coats, etc.
- Build the frame to hang on the wall
- Manufacture the jigs needed

Stage 4 - Assembly:

- Finished units should be produced by the students
- Filled with soil and seeds and are ready to put onto the wall
- Finally, arranged on wall

Contact Details

If you are interested in supporting the living wall or would like to get in contact with us about sponsorship for the team, you can reach us at:

outreach@leaf1.org.uk - Team outreach email

19agrumett@thelangton.org.uk - Atticus Grumett, LEAF1 Team Leader

18cnetherton@thelangton.org.uk - Cole Netherton, LEAF1 Sponsorship Manager

18zsmith@thelangton.org.uk - Zac Smith, LEAF1 Design Engineer/Living Wall Designer

Or, check out our socials:

[@leaf1_slbs](#) - LEAF1 Instagram

[@langtondesign](#) - Design Department Instagram

And our websites:

leaf1.org.uk

thelangton.org.uk