

NEWS

BUILDING OUR FUTURE WITH STEAM'S ENGINEERING IN A BOX

24 JUL , 2019

STEAM's Engineering-in-a-Box programme inspiring Irish schoolchildren with the support of BAM and companies from across the Irish building & construction sector

Have you heard that the experts are saying Ireland will need 550,000 new housing unit completions by 2040? That's 25,000 per year. 500 a week. 70 every day including Sunday. Whichever way you put it, that's a lot of houses. And that doesn't include any offices, hospitals, factories, roads or shops.

Who is going to build all of this? According to consultants EY, the replacement demand for construction industry workers over this period rises from 9,000 next year to 19,000 p.a. by 2040. Yet the CAO reports less than 2,000 third-level entrants putting Architecture or Construction as their first choice for 2019. This relatively low figure can be partially explained by results of market research conducted by CIF, where 40% of young adult respondents said they wouldn't consider a career in construction because they "don't know enough about what it is like", despite advertising directly to transition year and leaving certificate students.

STEAM Education Ltd, based in Cork, has taken a clear conclusion to heart from multiple studies worldwide – that focusing on younger children (9 to 12 years old) encourages much greater uptake at career-choice stage. Their Engineering-in-a-Box (EIAB) programme is designed specifically for this cohort, engaging them with hands-on activities that demystify many elements of the discipline in fun, exciting ways. From constructing lollypop stick structures using triangulation to discovering load distribution

with paper towers to planning and design sweet factories these schoolkids are learning instinctively – through playful collaboration and problem solving.

Clever course design aside, what really makes this programme tick are the professional engineers who STEAM Education train to co-teach the lessons alongside the regular schoolteacher. This is where companies like BAM Ireland are discharging their Corporate Social Responsibilities, by committing both funding and manpower to support EIAB in primary schools across the country. This outreach is vital if those gargantuan numbers above are to be met, by increasing awareness and familiarity with the construction professions in those who have yet to narrow their career options or subject choices.

EIAB launched in 2016 and has now been delivered to over 4,000 pupils in more than 100 schools, supported by 30 companies. More than half of these companies are from the Construction Sector, who foresee the long-term benefits of the programme to their industry.

One of these is BAM Ireland, as STEAM's Linda Egan (Communications and Client Engagement, Engineering-in-a-Box) describes: "It's been great to act as the link between Industry and Education to help promote STEAM (STEM + Arts) with primary school children and help introduce them to the wonderful world of Engineering. BAM Ireland have been hugely supportive from the very beginning. BAM engineers across the country have worked in Abbeystrewery and Brooklodge in Co Cork, Kill in Co Kildare and Gardiner's Hill in the heart of Cork City. The kids love having real-life engineers working with them in the classroom. It brings engineering to life for them in a way that most will not have experienced before."

The best testimonials for EIAB come from the participants themselves. Colm Walsh (pictured above) is a Site Engineer with BAM Ireland: "I really enjoyed teaching STEAM's Engineering-in-a-Box to the 6th-class students of Scoil Chill Ruadháin, Brooklodge. The way in which the children used engineering principles that they had learned in the classes to solve the tasks that were set to them was brilliant. It was clear to see every day I set foot in the classroom, that the children couldn't wait to begin the next project. Their enthusiasm was inspiring, and I hope I get to continue delivering EIAB on behalf of BAM Ireland for years to come. I would recommend that all companies get involved in the programme as it is an enjoyable and rewarding experience."

Meanwhile, the school faculty get to expand their horizons into an area which they might never have considered bringing to the class themselves. Clare O'Connor, Vice-Principal at Brooklodge NS, has this to add: "Engineering-in-a-Box has added a new and exciting layer of education to our school. We would not have had this wonderful opportunity without the partnership with BAM and the amazing engineers they have sent to deliver the programme. We appreciate that they are very busy and are delighted they go to such lengths each year. The children absolutely adore the hands-on lessons, and I'm sure it has inspired many over the past few years. Teachers and children both look forward to the sessions, and all know that we at Scoil Chill Ruadháin are very lucky to have forged such a friendship with STEAM and BAM!"

EIAB's ultimate success will be measured in generational timescales. Like a multi-storey tower, the liftshafts and stairwells are in place, and the floors are slowly but surely sprouting across the lattices. We can see the outline and imagine the final shape. But to keep it growing upward takes vision, dedication and good old-fashioned hard work. With the ongoing support of BAM Ireland and other companies, as well as the commitment of the individual engineers and teachers, STEAM Education will keep on reaching skyward. And with all of us working together we can all help to build the engineers who will build our future.

For further information on STEAM Education and Engineering-in-a-Box check out:

<https://www.facebook.com/STEAMEDUCATIONLTD/>
www.steam-ed.ie

Twitter: @steamkids11

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Or contact

Linda Egan: Communications and Client Engagement for STEAM Education,
Engineering-in-a-Box

Linda.egan@steam-ed.ie, 021 4205437 or 0868566999