

Bringing Geometry to life with Holograms

Education Case Study



Cross-curriculum learning

With the FormBox, students were able to learn about a range of subjects within one workshop.

Significant time savings

Quick to set up and without the need to have a technician on hand, the Mayku Formbox means that students have more time to spend creating, freeing up the teacher for other tasks throughout the lesson.

Affordable and long lasting

At £499 (ex. VAT) the FormBox is an affordable addition to any classroom. With a two year warranty, you're covered should anything go wrong.



“The Mayku FormBox is a great tool to get students engaged in product design from a young age.”

Heather Seabourne, Sherfield School



Sherfield School used the Mayku FormBox to teach reception and junior students the fundamentals of vacuum forming by creating a hologram viewer

What is Sherfield School

Sherfield School is a leading Co-Educational school based in Hampshire which places innovation at the heart of student development. Using the Mayku FormBox, Sherfield School engaged children as young as 5 with an introduction to product design and engineering by allowing students to create hologram viewers under the supervision of teachers and assistants.

The Challenge

Sherfield School wanted to provide students aged 5 - 8 with a hands-on and engaging introduction to vacuum forming and design principles. Typically this part of the curriculum is reserved for students between the ages of 12 - 18 years old. The challenge was to show how the Mayku FormBox can be used successfully with younger learners by putting the power into the student's hands.



The Solution

Using vacuum forming as an activity, Sherfield used this workshop to teach reception and junior students about geometry and design by forming a hologram viewer taken from the FormBox's starter kit. These kits are included with every FormBox and are designed to get everyone making straight out of the box. Whilst the machine was heating up the teacher provided a basic introduction to vacuum forming. They also engaged students in aspects of geometry and science by explaining how holograms are made from the size and shape of the viewer.



The FormBox is suitable for independent use by children over the age of 8. However, with the help of an adult, the children involved in these workshops still gained a hands-on experience. They were shown how to place the material correctly in the trays, how to know when it was ready to form, as well as helping the teacher move the trays down onto the vacuum plate. Once all students had had their turn the teacher explained how to cut out their form from the sheet. She then showed them how to use the viewer with a smartphone, which was naturally a hit with the students. Both FormBoxes were running for 40 minutes at a time continuously across the two workshops without any issue or safety hazard for students and teachers.



Once every student had experienced the FormBox everyone was handed an activity booklet to be completed at home about what they had learnt throughout the workshop. This included a link to Mayku's own YouTube channel which hosts a number of fun and entertaining hologram films for students to use their viewers with. It also hosts informative videos of how vacuum forming is used for a range of other projects. Amongst these are tutorials for how to partner the FormBox with a 3D Printer to expand the range of things children can create.

The FormBox is designed for independent learning in the classroom. The simple user interface means students can use the FormBox independently. Affordable at just £499 (ex. VAT), the FormBox is powered by any vacuum cleaner which makes it portable and able to be used in a variety of learning environments. The size of the FormBox made it easy to transport between classrooms and for use by younger children to create a fun hologram viewer to take home at the end of the day.

Benefits of the Mayku FormBox

	Industrial Vacuum Former	Mayku FormBox
Machine cost	£1543+	£499
Sheet cost	£0.89	£0.42
Size	440 x 490 x 820mm +	315 x 466 x 274mm
Student contact time	Demo only	Unsupervised use



Introduction to Design and Manufacture with Design CIC Education

Education Case Study



Hands on

Learners are inspired to use the machine to produce their own products. Having multiple vacuum formers means each student can get hands on with their making and even try a few iterations.

Inspires creative thinking

The FormBox is suitable for independent use by children of 8 and above. Learners are inspired to experiment with product design and prototyping within a safe environment.

Affordable and long lasting

At £599 the FormBox is an affordable addition to any classroom. With a two year warranty, you're covered should anything go wrong.



“Our FormBox has proved to be a versatile, flexible and highly portable tool to teach about plastic polymers and the technology of vacuum forming.”

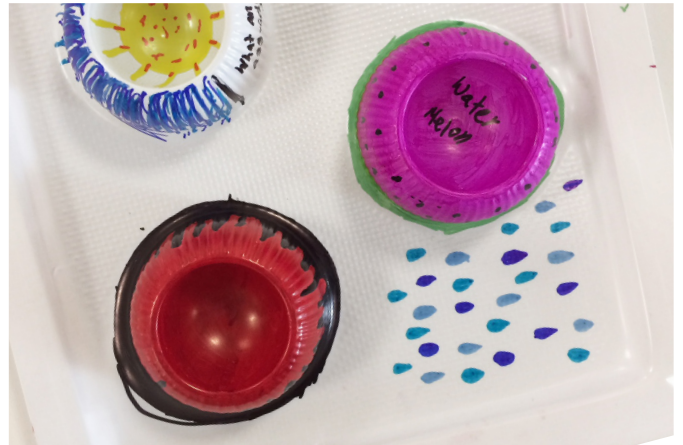
David Baker, Managing Director, Design Education CIC



London based charity, Design Education CIC, support the next generation of designers and makers. They used the Mayku FormBox during a series of hands-on workshops for primary school students.

The Challenge

Design CIC wanted to create a set of interactive workshops that teach students between the ages of 8-12 about innovation and product design through vacuum forming.



The Solution

Design CIC's mission is to inspire the makers of tomorrow. The FormBox is the first vacuum former designed for the classroom. The simple user interface means students can use the FormBox independently. Recognising this, Design CIC invested in several machines for their workshop. Their work engages students in independent learning and provides an inspirational, hands-on approach to product design. Encouraging discussions around the wider uses of plastics and how a more sustainable future could be developed.

Using a lesson plan from Mayku's curriculum, Design CICs workshop focused around students forming and customising an egg cup using a form taken from the FormBox's starter kit. These kits are included with every FormBox and are designed to get everyone making straight out of the box, whilst also teaching users how to design for the FormBox in the future.



Students worked in groups of three to form their egg cups. To give each student the best experience, everyone was given a few cast sheets to experiment with before finally forming. This gave each learner the chance to perfect forming through trial and error. The students loved being able to use the machine more than once to adapt their forming process before creating a final form. Once this task was completed the class discussed the materials, such as concrete or Jesmonite, that could be used with the molds to reproduce the egg cups en masse. After this the students were able to customise the molds they had made with colored pens and paint which they could then take home.



“Our FormBox has proved to be a versatile, flexible and highly portable tool to teach about both the thermoplastic performance of plastic polymers and the technology of vacuum forming. It has formed the centrepiece of our “Fantastic Plastic” days with both primary school pupils and disabled young adults”

David Baker, Managing Director, Design Education CIC

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