



GLYPH: PLASTIC WASTE 3D-PRINTING AS A WAY TO REDESIGN URBAN SPACE

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Rotterdam-based design studio The New Raw has collaborated with local school children to design GLYPH, a vibrant new collection of sustainable play-furniture for Eleusis 2023 European Capital of Culture.

As part of the ongoing research initiative Print Your City, which explores the concept of applying robotic 3D-printing to plastic waste as a way to redesign and locally build urban space, the project is the result of an eight-week laboratory hosted in the Greek city, involving more than 700 children aged 5-14 from the region and welcoming over 1,000 visitors in total, with a focus on the key principles of the circular economy.





Following an educational tour using a pragmatic approach and exploring ways to recycle discarded plastic, local children were heavily involved in the design process and were invited to create drawings, which were later scanned, digitally processed and engraved onto the city's new urban furniture. The name of the collection, which comes from the Greek word γλυφή (carving), refers to ornamental engravings of messages or symbols on ancient temples.

In this way, The New Raw explores co-creation by employing digital craftsmanship: school children become authors of their own cities by donating their waste material and contributing their creative

input in the form of drawings.



By the end of the laboratory, 240 kg of plastic had been recycled and transformed into a collection of eight self-standing swinging benches that can function independently or in a playscape when composed in groups. The iconic shape of the bent blocks pays tribute – with a twist – to the archetypal shapes of building blocks found in the ancient ruins of the city and allows the benches to swing. Conceived as an easy-to-apply system of play furniture to activate empty lots in the industrial city of Eleusis or in other environments lacking public space, the monolithic elements are light and

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portable and can be arranged in multiple ways to build a colorful and unexpected open-air playground:

"Designed to inspire spontaneous behavior, GLYPH encourages playfulness and increases the bonds between users of all age groups through involvement, inclusion and interaction," explain the designers Panos Sakkas and Foteini Setaki.



Each geometrical piece is unique thanks to the engraved children's drawings and is produced in three different dimensions and colors: wheat yellow, mint green, and water blue.

The furniture was made primarily from rPP and rPE plastics commonly used in bottle caps. Collected

specifically for this purpose, the plastic waste was sorted, washed and shredded before being melted and extruded with colored pigments to create the swinging benches. Printing time for each piece ranged from five to seven hours. The collection currently serves as the lounge area of the organization and as a teaser for Eleusis 2023 European Capital of Culture. During the initiative, the pieces will be installed in various locations, and after 2024 they will be donated to the different schools that participated in the laboratory.

