



Forms: Sustainable Toys For Kids

*Aleksandra Borowska
Ravensbourne*

Plastic plays a major role in our society however it rapidly kills our planet. As humans we've adopted a linear approach. We take, we make, we use and dispose. In 2016 the UK produced 27 467 million tonnes of household waste. Almost 4 % of that was toys often non recyclable. Despite of the great idea of recycling not every plastic ends up in the recycling process. It's also worth mentioning that recycling uses lots of energy and cost efficient processes. One of the solutions is to rethink and redesign the process. Cradle to cradle design can help our planet. Biodegradable products made of waste can not only reduce negative ecological footprint but extend our lifespan. In the long term, we would be able to live in harmony with nature again.¹

My design targets the consumer market of toys and games, more precisely sandpit toys. According to Mintel's report Toys & Games, in the UK population will increase from 65.91 million to 67.51 million in 2022.

Along with the growth in population demand for toys for young children increases. For that reason, I chose material to be sourced from the side product of the wood industry market. My product aims to reach modern families, parents and their children. Despite many efforts of toy manufacturers to reduce toxic materials, phasing out the plastic is slow and still not a mainstream trend. To illustrate the problem, we can look at the Lego Company. "We want to improve our waste management, and we aim for zero waste in our production." They aim to change plastic for more sustainable material by 2030, however it will happen in 12 years until that time they will still use plastic.

In response to the issue of growing waste my design follows the principles of the circular economy for no waste in toys. The sandpit set incorporates a classic beach design of shovel, rakes, bucket and 2 sand moulds with unusual and refreshing bio materials. I have chosen to use eco resin and sawdust as main components of my product. Sawdust ideally would be obtained from the wooded factories or furniture manufactures to use as much of side product and cast with eco resin.

¹ according to www.gov.uk





Another reason for use of such material is its biodegradable properties. Often those sandpit toys are thrown away or lost on the beach leaving a waste, that is not an issue if biodegradability is possible. The material of my design will disintegrate overtime if left in the soil and in that case won't produce non recyclable waste. Toys have been also designed to respond to children's development needs. The range of prototypes were tested on a group of kids, age 2-6. Testing process helped me to find the right ergonomic and attractive shapes for the age group.

