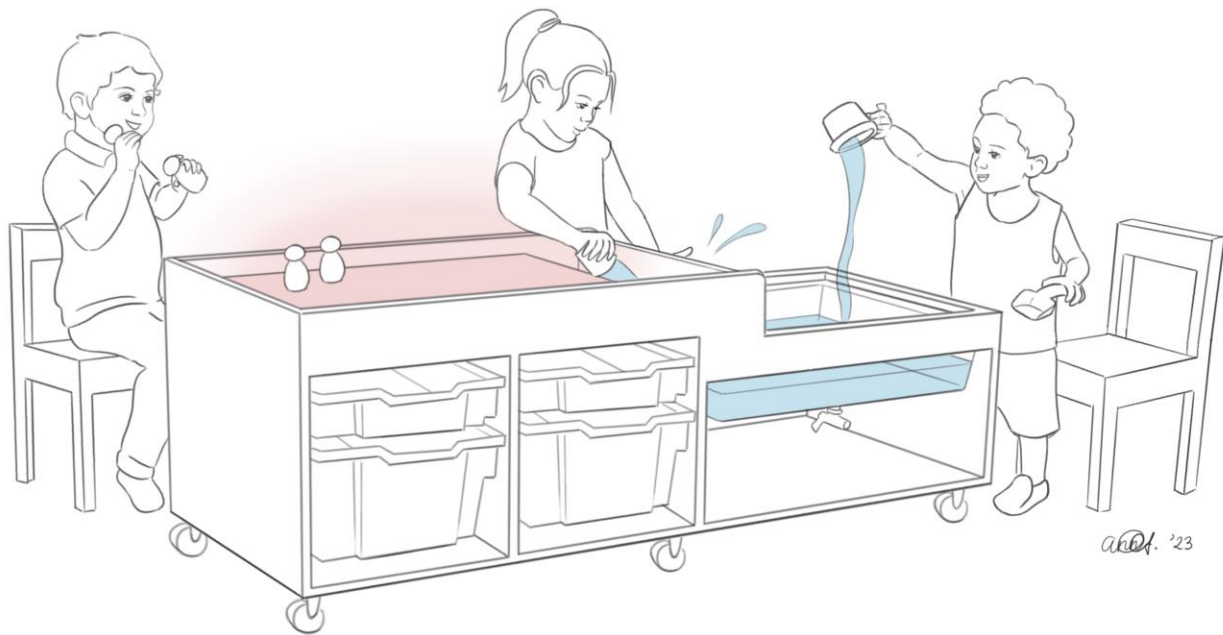


# Developing a Product for Multisensory Play at Childcare Centres

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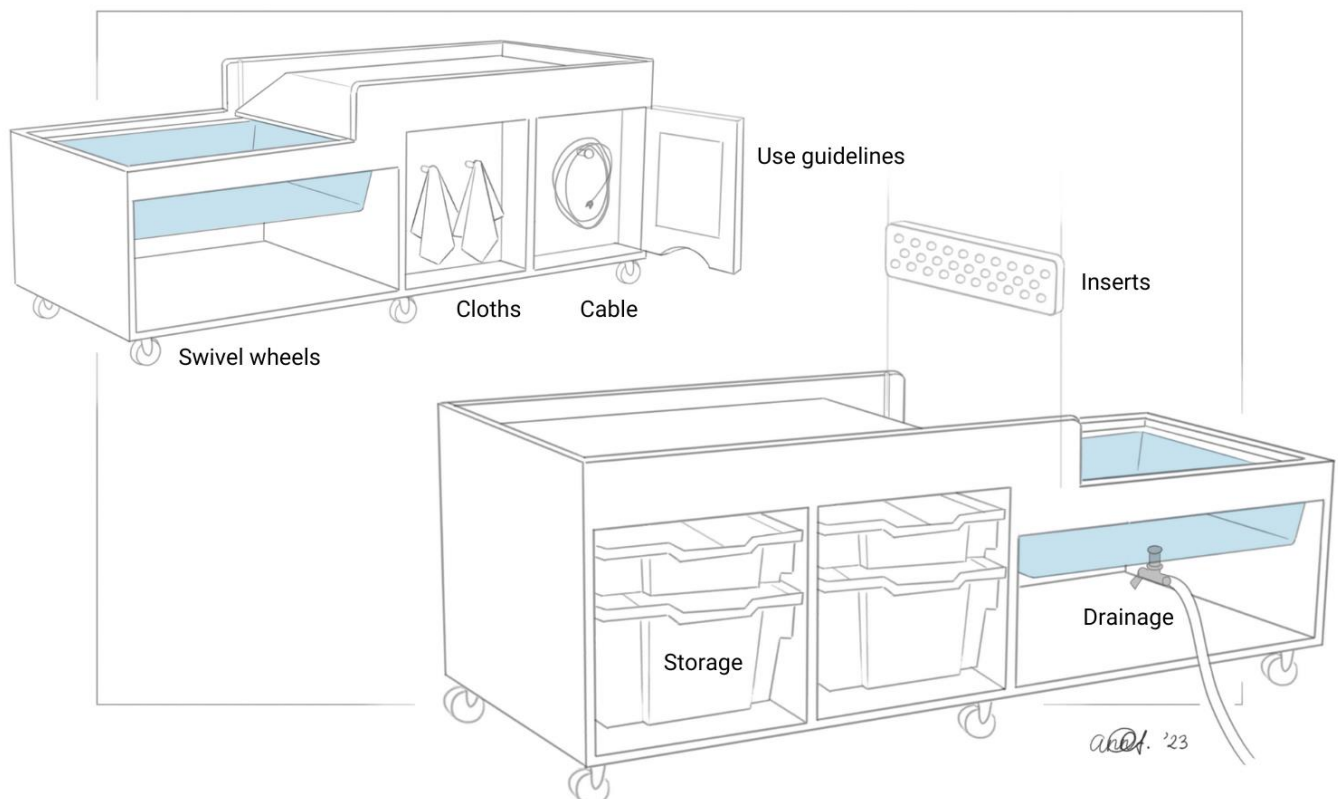


This bachelor thesis provides research and a new product design for the company De Beleving, Interieur en Meer, located in Amersfoort. The company creates customised interior designs and furniture, mostly for schools and childcare centres but not exclusively. For this thesis, a sand, water and light table has been developed for children at childcare centres. The company addressed their interest in integrating light and water play in future products as this is not part of its assortment yet. The light and water play, as well as loose parts play, are linked to another objective: stimulating children in using and training their sensorimotor skills.

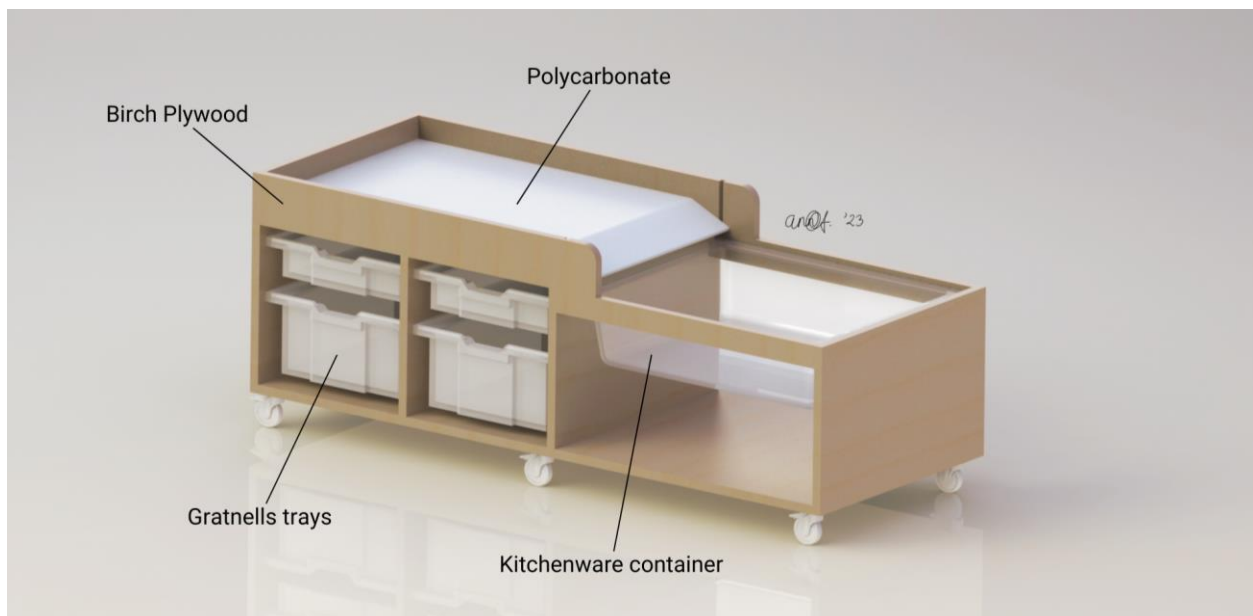
The research question reads: How can sand, water and light play as well as loose parts be meaningfully integrated into a product to stimulate engagement and the use of sensorimotor skills of children at a day or after school care, suited to the company's objectives?

To answer this question, a literature review and market analysis were executed. The target audience, 2 to 8-year-olds, is learning about symbols and volumes, and is still rather egocentric in viewing the world (Piaget, 1929). During these ages, children transition from solitary play, through parallel play to social play. Their sensorimotor skills are developing and toys, loose parts in particular, may aid this development (Sutton, 2011). Moreover, they may stimulate exploration and creativity in children. Interviews with caretakers and children indicated that children enjoy lighting up features and using their hands to feel different kinds of textures and move materials around. Furthermore, the caretakers suggested a need for a stable product design that would not move around while children were playing and leaning on the product.

Thus, the design of the table focuses on the movement of materials by having a slope and vertical sieves for materials to fall through. With a transparent water container, children can see how materials fall and move in the water. The table has translucent storage trays, so children can easily see and take toys out of them. Removable items, like the water container, trays and wheels, add to the sustainability and durability of the table, as these can be replaced or repaired. The image below shows the final design.



Based on the insights and requirements formed during the company analysis, literature review, and market analysis, the final product design meets the majority of the project's requirements and will likely stimulate children's engagement and the use of sensorimotor skills. In addition, the product is customised to the target group's height and preferences as discussed in the interviews. Furthermore, the plywood and polycarbonate sheet need to be waterproofed and safe to work with while the electricity is on, which is the main cause for the commercial price to surpass the desired amount. The material choice of the product is displayed in the image below.



All in all, the product may invite children to play, explore and develop themselves, while complying with the company's objectives (safety, durability, sustainability) and style. The multisensory table may be suitable for childcare centres that are willing to invest in a durable and sustainable product because the product's price is on the higher end of the market. Since the company creates customised products, they could offer a similar but half-sized product for smaller childcare centres that do not have a large space or budget. In that case, the storage may be one tray wide instead of two and a water container of half the size can be used. For the future market implementation of the product, it is recommended to develop a prototype to scale first and have it tested out by children and their caretakers. That way, user evaluations can be collected and possibly used for a redesign.

## References

Piaget J. The child's conception of the world. New York: Harcourt Brace Jovanovich; 1929.

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