



TEXTURED MAT

PROJECT TADPOLE

Problem Statement

Teachers at the **Little School in Durham** currently create their own **textured panels** for **infants**, which is **time-consuming and lacks standardization**. A more efficient and durable solution is needed to provide consistent **sensory engagement** and support early childhood learning.

Project Task

Design a durable, lightweight sensory board with safe, varied textures for infants and young children. The board should be affordable, portable, and easy to reproduce while maintaining its shape over time.



FINAL PROTOTYPE

OUR PROCESS

The team brainstormed various components of the solution to create Prototype #1, focusing on safety, sanitation, the different textures, and the structure of the mat itself.

The team used client feedback to make a new iteration of the mat, which became the final prototype.



PROTOTYPE #1

Low-fidelity prototype using cardboard, buttons, and mesh.

RESULTS

The team created an animal-themed textured mat with mix-and-match tactile tiles. The 3D-printed tiles attach to the base mat through velcro. It can be easily sanitized through the use of bleach spray, ensuring infant safety.

NEXT STEPS

With the prototype complete, the focus now is on improving adhesion by finding a stronger glue enhancer to ensure materials stay securely attached. The team is also moving on to refine the fabrics used through hemming and more precise cutting. Once an effective solution is identified and fidelity is improved, the design will be re-tested for durability and usability before delivery of product to The Little School.

