



Blowing Bigger Bubbles to Get Kids Moving

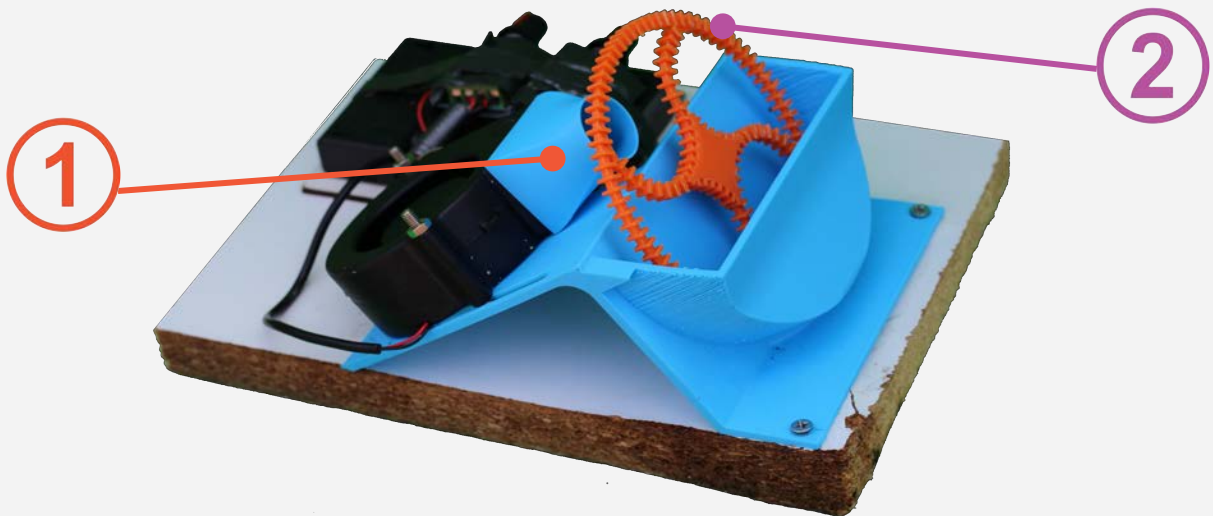
Katie Henshaw, Matthew Mesman, Julie Yu
Industry Partners: Brendan McMorro, Jack Miller
Advisor: Tarek Zohdi

Kids spend **7.5** hours a day on screens.

This unprecedented amount of screentime is linked to increased obesity, decreased academic performance and decreased mental health outcomes.



Let's design and optimize a toy to blow huge bubbles, encouraging active play.



1. Fan + Nozzle



We utilized fluid dynamic principles to select a centrifugal fan for efficiency. We then calculated efficient wind tunnel curve for the jet nozzle. Making the jet shoot bubbles at a Matlab optimized angle.

2. Wand



We rapid prototyped various shapes and styles to optimize bubble size. Our iterations resulted in a yin yang shape that is designed around the expected air jet size leaving the nozzle.