Design Teams from the 2017 - 2018 school year

Teams of interdisciplinary University of Washington students meet weekly throughout the year focusing on various design projects. Detailed below is a problem statement for all the teams, to learn more click on the corresponding team name to visit each teams page!

**Accessible Lunchbox**: Opening a lunchbox is a two-handed task; one hand is used to stabilize the box while the other is used to unlatch and take off the lid. This can be a challenging activity for individuals who have decreased hand function on one side.

![Accessible Lunchbox](image)

**Inexpensive Switch**: Every child deserves to play; it is a crucial part of their development. But most toys that can simply be purchased at a store are not accessible for everyone. For many children with mobility impairments, an adapted toy is the best way they can interact with a toy and gain valuable cognitive skills.

![Inexpensive Switch](image)

**Magic Arms**: Magic arms are orthotic exoskeletons that assist people with neuromuscular deficits through harnessing elastics bands to achieve near total anti-gravity influence on an upper-extremity. An update to an existing Magic Arms model is needed so to create a lighter and smaller version for pediatric use.

![Magic Arms](image)
**Toy Type Converter:** There are generally two types of toys: 1) timed toy and 2) bump and go toy. A converter is needed which makes it possible to control whether the toy acts as a timed toy or a bump and go toy so children are able to gain the developmental benefits of each type of toy.

**Xbox Adaptation:** Play is important for childhood development and users with varying dexterity/motor control need to be able to operate devices in their daily lives. Adapted game controllers are needed for rehabilitation therapy and this group worked with Seattle Children’s to ensure their design could be replicated.

**Inglemoor High School:** To spark interest in and ensure future progression of accessible design, a University of Washington Team collaborated with a course instructor at Inglemoor. They developed a 1-month curriculum relevant to GoBabyGo to teach high school students about ability-based design and accessibility.
**Continued Projects**

**Formable Hand:** Individuals with brain injuries often have limited movement on one side of their body. Performing daily activities with one hand can be challenging and hinder one's independence.

**Restroom Adaptation:** Individuals with dwarfism (little people) have difficulty using public restrooms because they are not adapted to their short stature. Accessible public restrooms currently are designed with taller toilet seats to assist wheelchair users however this excludes our users.

**Wireless Switch:** Adapted toys with wired connections can limit interaction and pose safety concerns. An attachment that makes a given switch wireless is needed to ensure the switch never gets pulled away from the user or tangled when the toy moves. Since playtime is an important aspect in a child’s development, we want to empower children with our solution to this challenge.