

# Archery system

## Summary

Members of a sports club for disabled young people wanted to try archery, but with limited upper body strength and coordination this seemed a distant dream.

Remap volunteer Derek Matthews took on the challenge and mounted archery bows on stands to enable seated players to take aim. Releasing the trigger is achieved by hitting a foot switch (don't worry, there are some clever safety features!)

Club members now enjoy their archery sessions as full participants, not onlookers.

## The challenge

Remap Cambridge was approached by a local sports club for children with disabilities who wanted to try archery. The club members are all wheelchair users, under the age of 18, with conditions that include cerebral palsy, epilepsy and muscular dystrophy. Most have very little upper body strength and some have little control of their limbs. None would be able to handle a bow and arrow without help from an able bodied adult and some specialised equipment. The members made clear from the outset that they did not wish to use a child's or training bow; they would only be satisfied if they could fire the real thing.

## The solution



Volunteers at Remap Cambridge under the leadership of Derek Mathews purchased a bow with a pull of 20lb and mounted this on a vertical support, the height of which can be varied.

The bow was also attached to the front of a horizontal beam which is free to move, allowing users to aim the arrow. The bow string is held by a release aid (available commercially and purchased by the club) which was mounted on the end of the beam.

This arrangement enables an able bodied helper to pull the bow string which is then secured. After aiming, the child can fire the arrow by striking a foot switch. An electrical system operates a solenoid to release the tensioned bow string and thus the arrow. This system is isolated for safety reasons and must be set live by the helper each time an arrow is loaded, to prevent an arrow being fired prematurely or inadvertently.

Wood was used predominantly in the construction, so that any modifications could be carried out easily, using wood screws and glue

## The benefits

When three units had been constructed, they were taken to the club where training and familiarisation was provided for both users and helpers. They were delighted with the equipment and have since enjoyed many hours of archery. Janie Godber, of the Upside

Down Club says: *“We have had several experiences with archery in the past which have been patronising for the members. With an able bodied adult holding the bow, drawing the string, aiming and releasing it, the youngsters have actually not achieved anything themselves. What Remap has developed will enable all of our members to take part as independently as possible, for which I am very grateful.*”