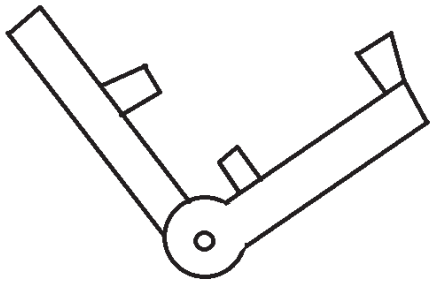
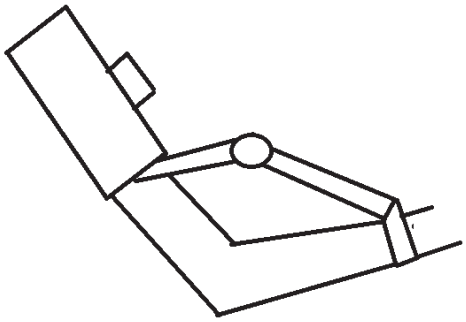
Rough Design Idea 1:



Rough Design Idea 2:



Ideas-sense	Pros	Cons
EMG	**-Natural. It should behave exactly how it should.** **-has proof of concept done before**	**-Can be very finicky. May result in spending more time getting emg to work than design** **- Will require both bicep and triceps for accurate readings of movement**
Pressure Plates	- Would allow greater degrees of freedom? - Easiest to program - Simplicity	- hard to incorporate all the uses of the bicep -doesn't work for everything e.g. holding heavy things
Bands measuring how much the muscle changes	-can bring more accuracy to the EMG if used in parallel -cleaner readings than the EMG	-may be hard to isolate different muscles - Will require both bicep and triceps for accurate readings of movement

Ideas-move	Pros	Cons
Motor controlled springs (Series Elastic Actuator)	**-Allows user more leeway and freedom. -is more supportive and less forcing**	**-harder to calibrate -more complicated -may be more expensive -involves a lot of research -slightly delayed**
Gears	-more directed/instant movement -faster implementation	-limited range of motion -can be restrictive

bigger=better	Chris	Ndungu	Mark	Kai	Total
Assistive technologies	1	2	2	4	9
Sensitivity	6	4	6	5	21
Ease of usability	7	7	5	7	26
comfort	4	5	4	6	19
Bio-controlled	5	3	7	1	16
Bio-inspired (having things behave like muscles)	3	6	1	2	12
Max degrees of Freedom	2	1	3	3	9
separation	**separation**	**separation**	**separation**	**separation**	**separation**
Time Limit	3	3	3	2	8
Budget	2	1	1	1	5
Complexity of mechanical/ program design	1	2	2	3	8