PEELER

BRIONY HOWELLS

Rheumatoid Arthritis

Effects

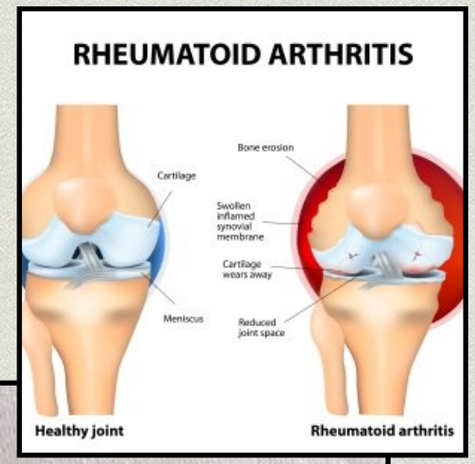
- *Pain,*
- *Swelling,*
- *Stiffness.*

Treatment

- *No cure,*
- *The process and be slowed down by medication,*
- *Surgery is possible to realign the bones.*

Common

- *Smokers,*
- *Females,*
- *Inherited.*





https://www.nhs.uk/conditions/rheumatoid-arthritis/causes/

Nerve Injury

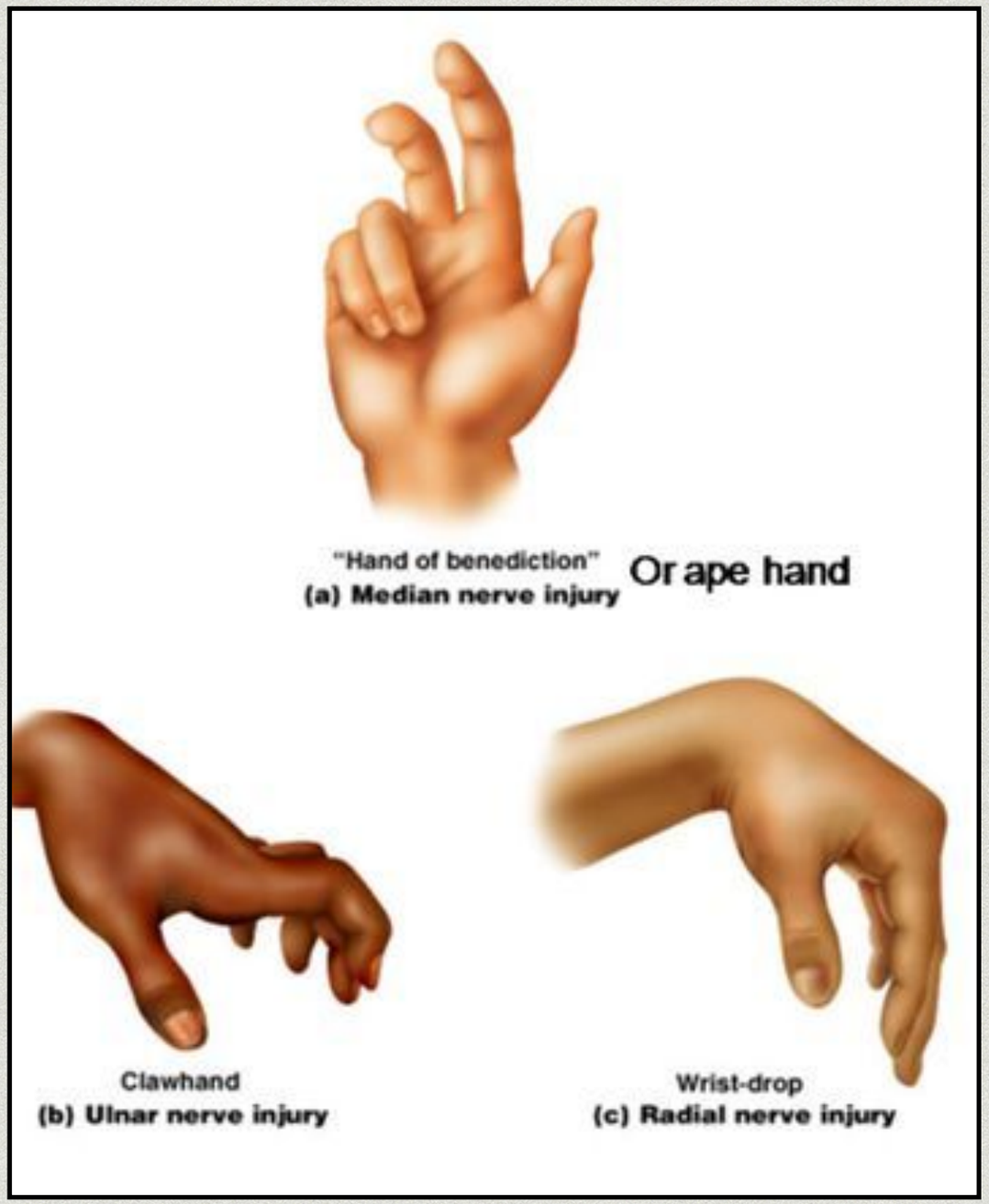
Effects

- *Loss of sensation,*
- *Loss of function,*
- *Numbness,*
- *Weakness,*
- *Pain.*

Treatment

- *Surgery in server conditions ,*
- *Healing time in mild cases.*
- *Broken nerves cannot repair itself.*

- **CARPAL TUNNEL SYNDROME**



http://www.assh.org/handcare/hand-arm-injuries/nerve

https://www.nhs.uk/conditions/mallet-finger/

Mallet Finger

Effects

- *Damaged/torn tendons.*
- *Deformity of the finger.*
- *Painful, swelling.*
- *Bone fragments chip off.*

Treatment

- *8 weeks of healing,*
- *Surgery in extreme cases,*
- *Treated by splint, can fail to heal.*



Other conditions

- parkinsons
- cerebral parsly

Existing Products







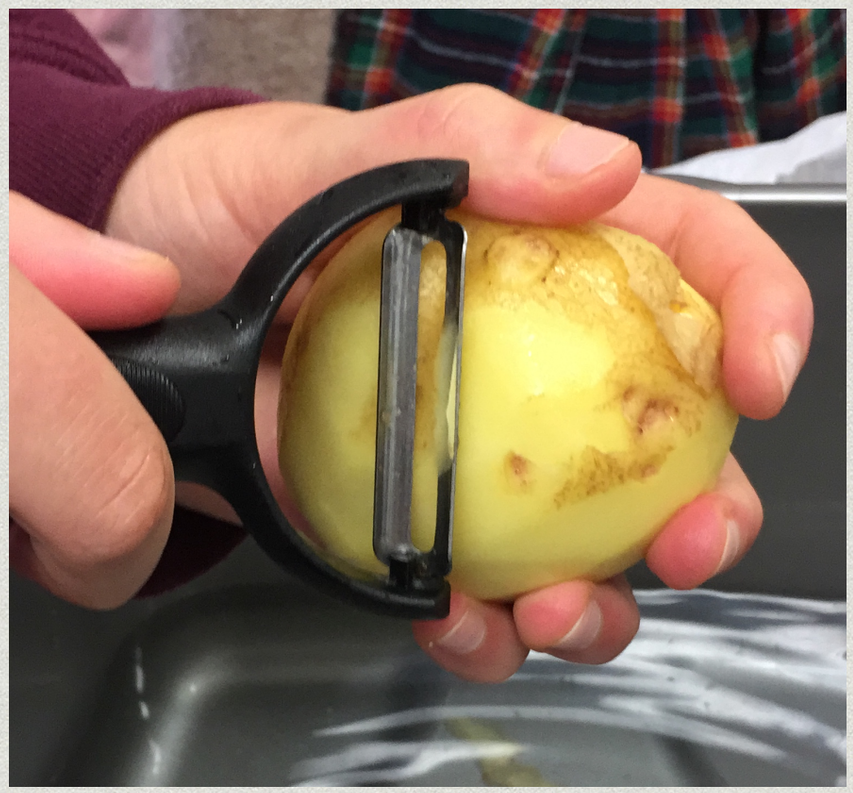


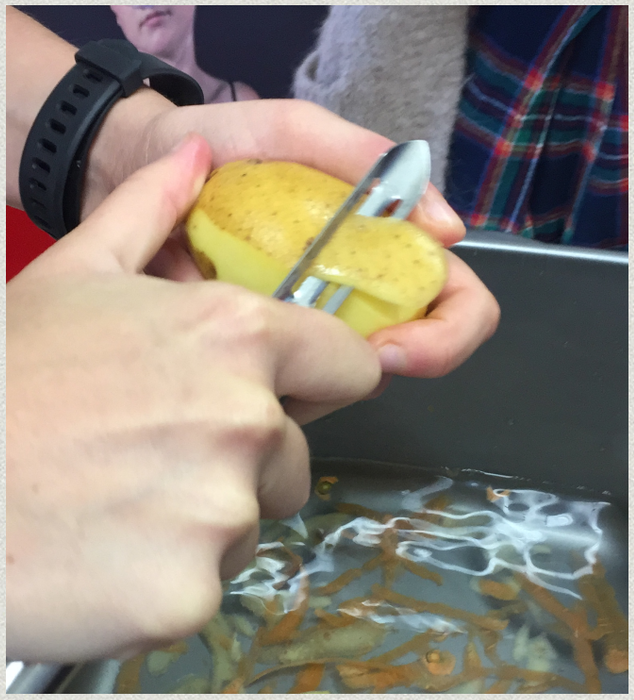




Primary Research









Empathy Research











Conclusion

Knife Peeler

- *Easier to grip,*
- *Can slip,*
- *Wasteful,*
- *Faster,*
- *Easier to use.*



‘Y’ Shaped Peeler

- *Skin gathers — makes it harder to use,*
- *Easier to peel pushing away from you,*
- *Catch your own hand,*
- *The blade moves too much.*



Handle Design Checklist Report.

Michael Patkin
Department of Surgery
The Royal Adelaide Hospital, South Australia

http://ergonomics.uq.edu.au/eaol/handle.pdf

Patkin, M. (2001). A checklist for handle design. *Ergonomics Australia On-Line*, *15* (supplement).
(http://ergonomics.uq.edu.au/eaol/handle.pdf)

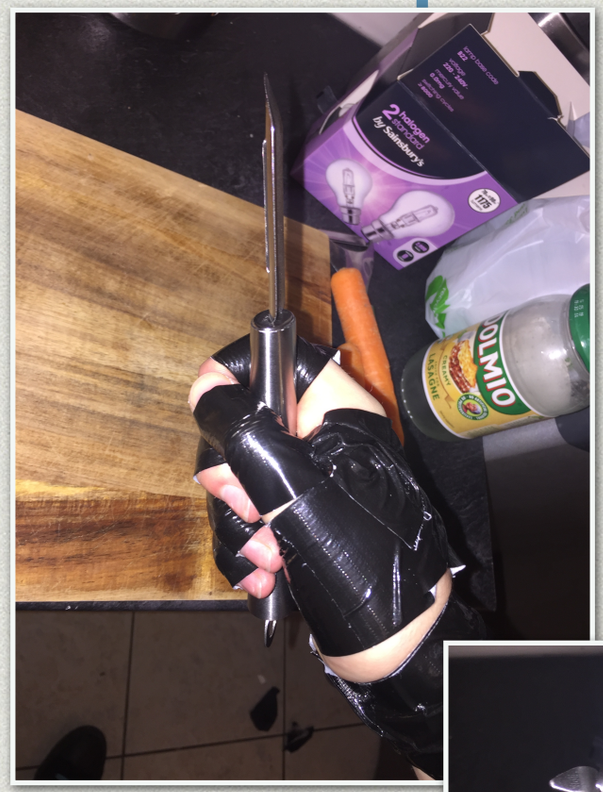
In-depth Empathy Research

- Before I continued with my research and design, I wanted to ensure I explored the more server cases of restricted hand movements.

- I decided to re-look at the empathy research by taping the hand with duck tape. Unlike my previous research I ensured to cover the wrist, knuckles, the thumb and fingers, I applied multiple layers and secured the tape tightly to the skin.



Empathy Research



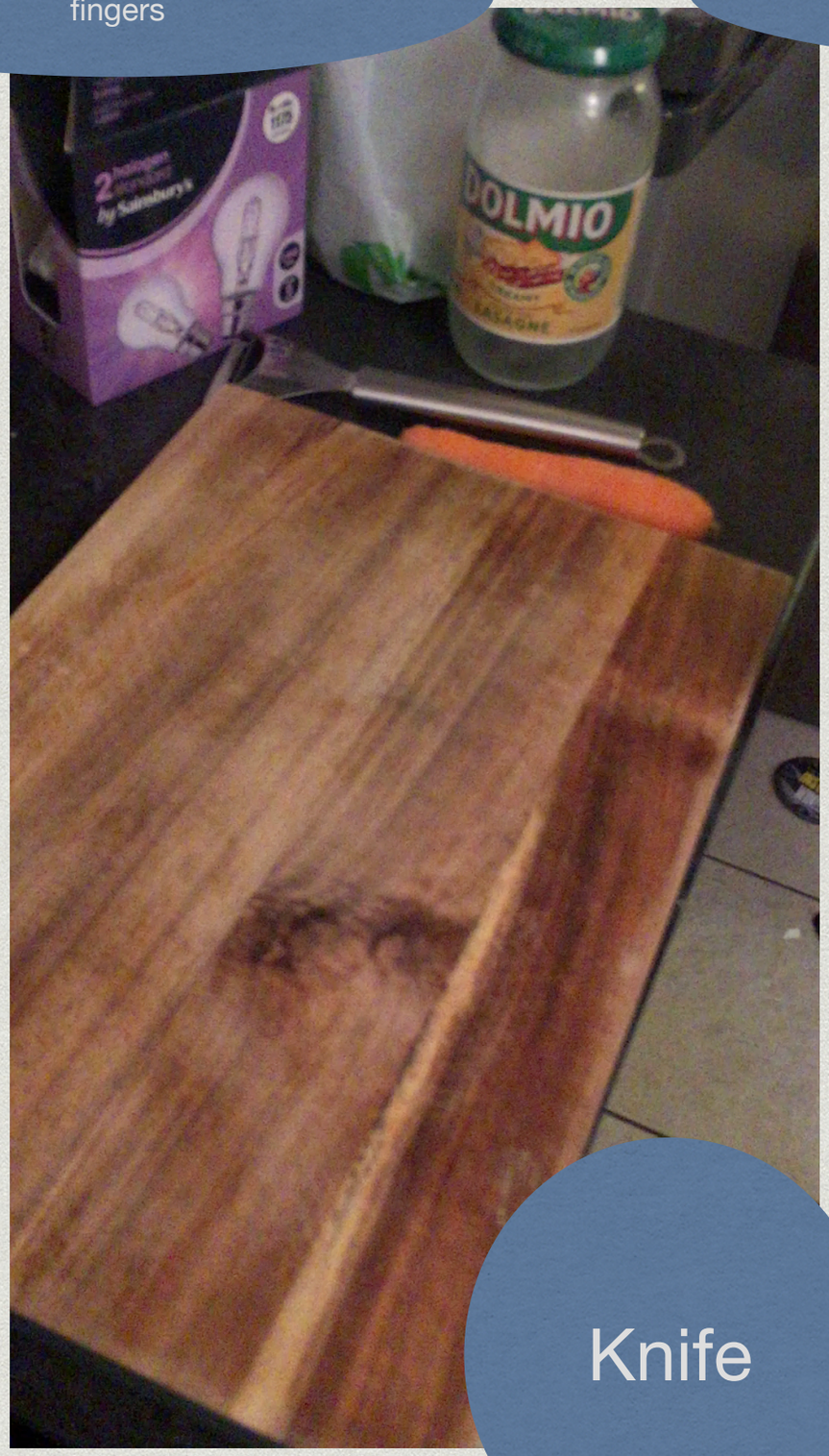






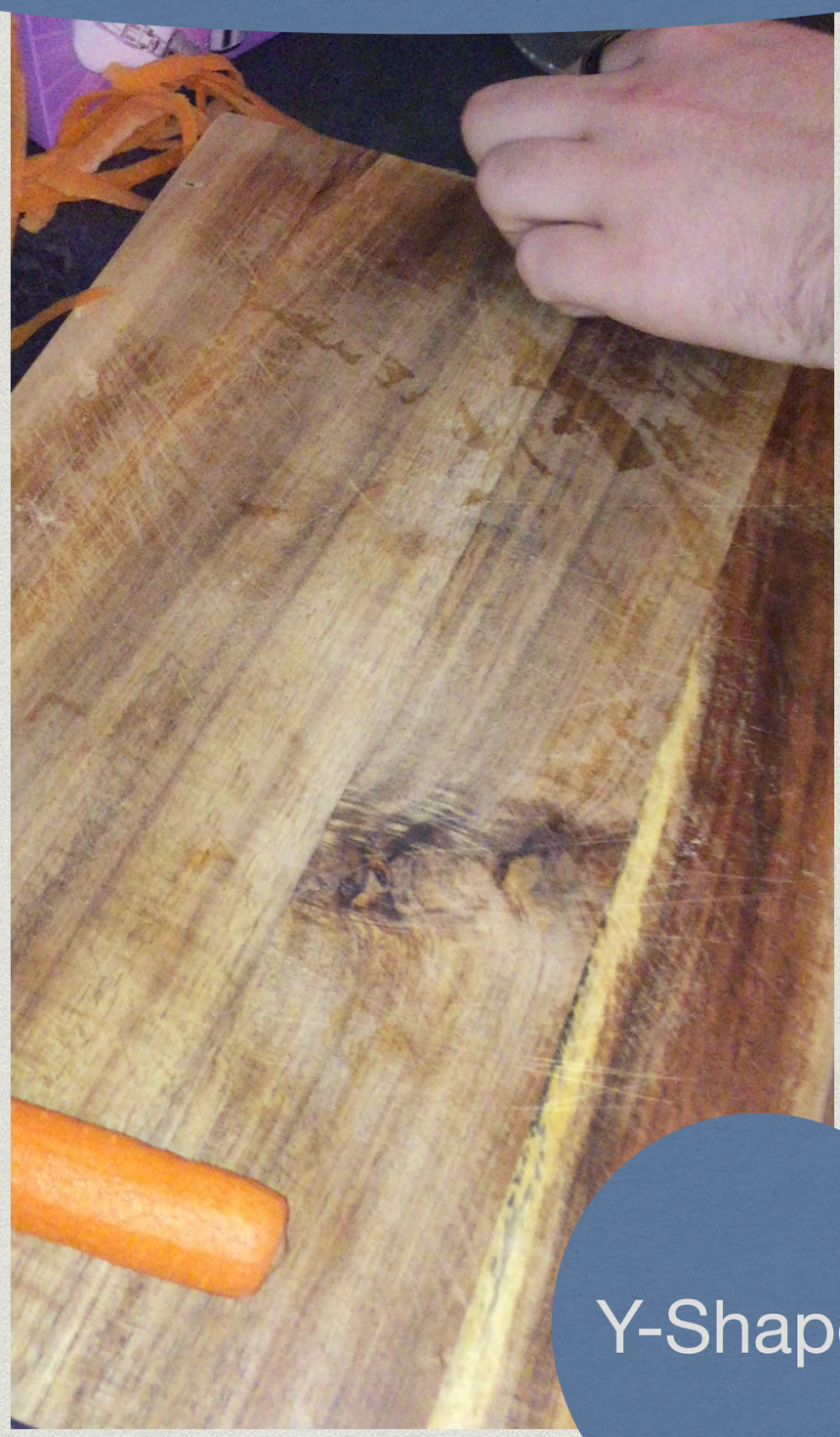


Uncomfortable in the hands and end of fingers



Knife

Easier to use, less wastage, straining on the wrist, fingertips, back of the hand.



Y-Shaped

DESIGN INSPIRATION

MOTION DRONE CONTROLLER








FCC ID:2ALUG-TB001
OPEN
Manufactured by
The source Wholesale RH4 1XA
71518 712287
SUPPLIER REF.LK-811



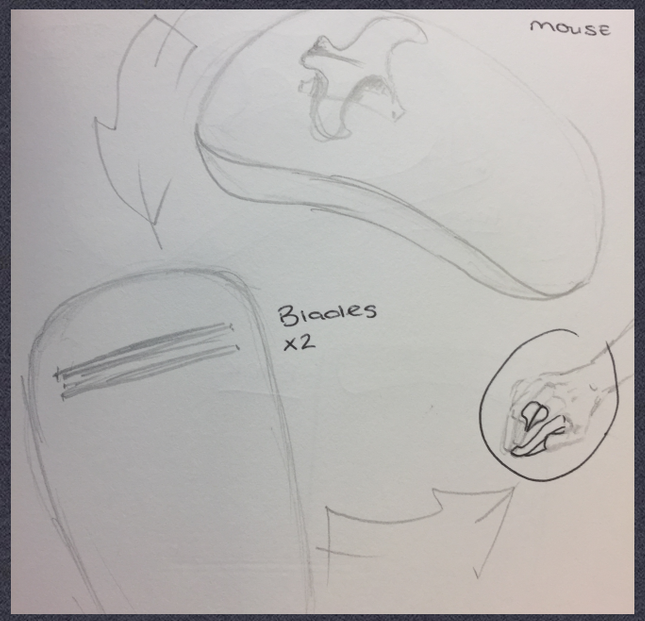


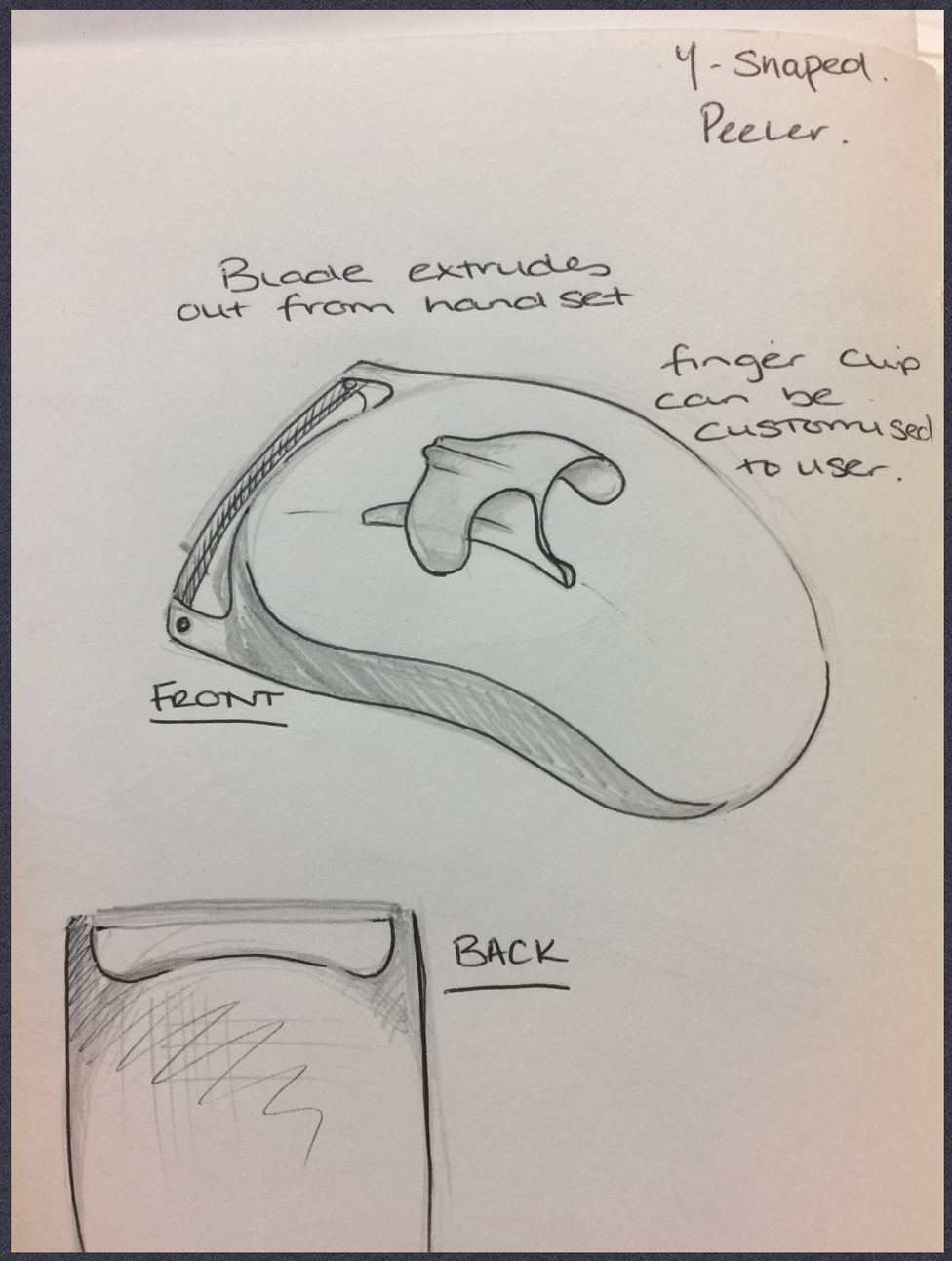


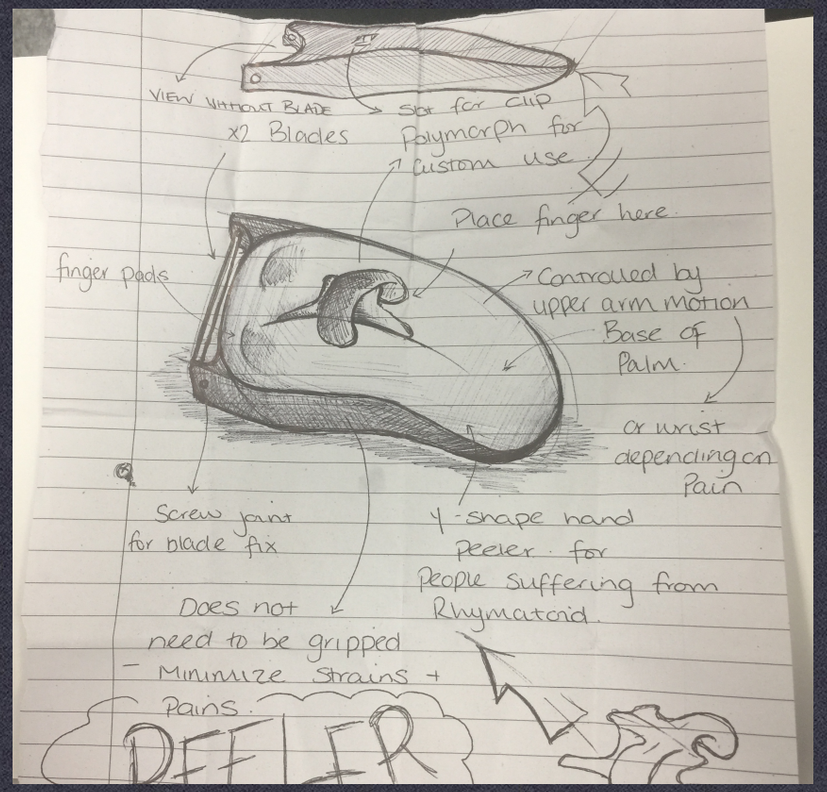














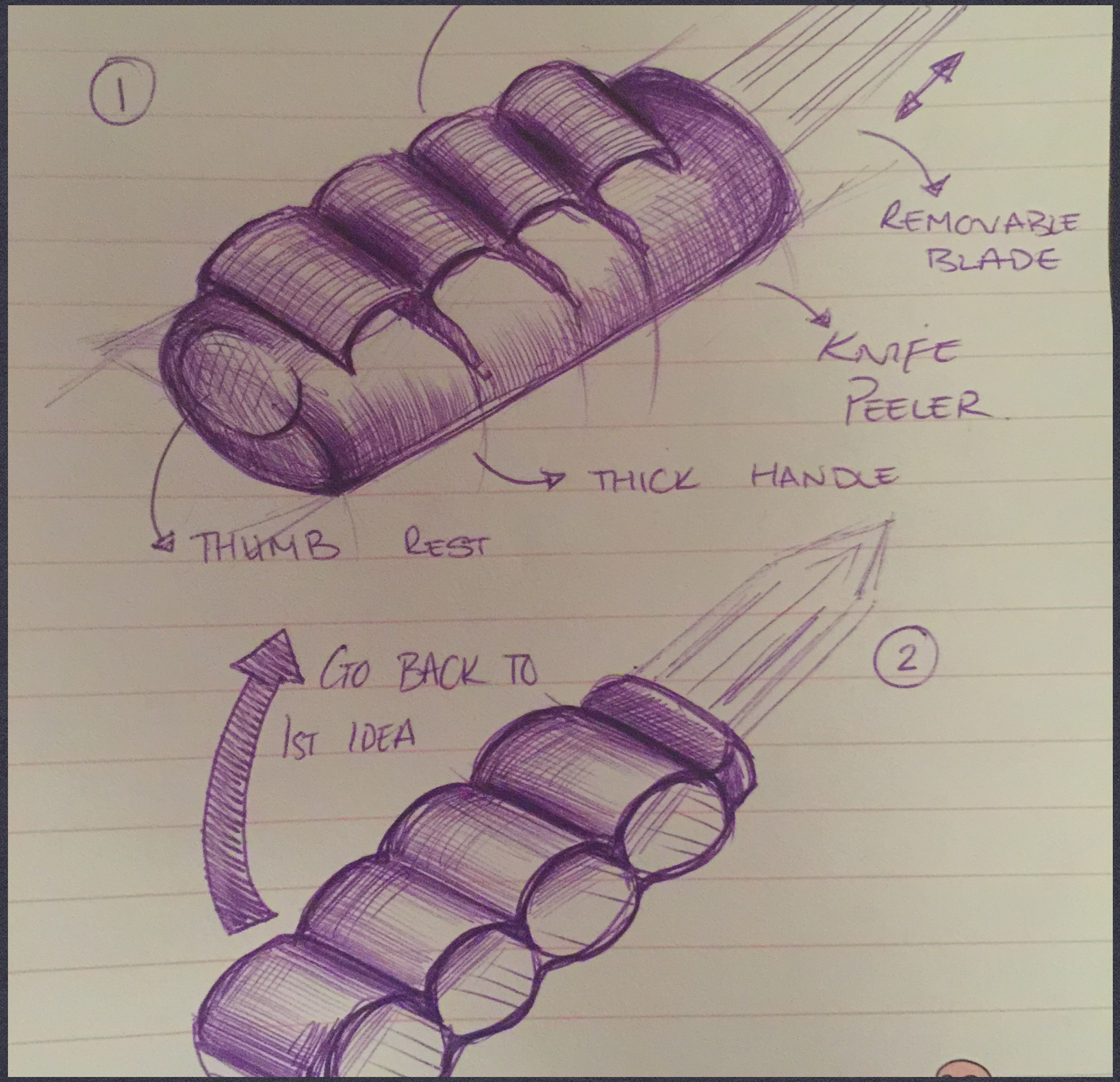
MOTION PEELER

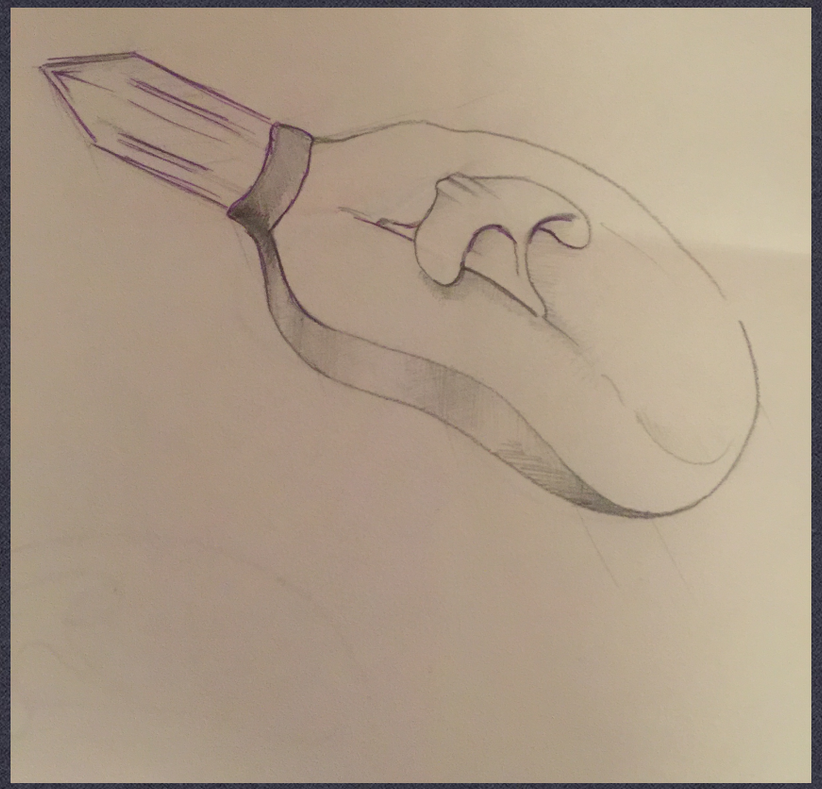
Y - SHAPE

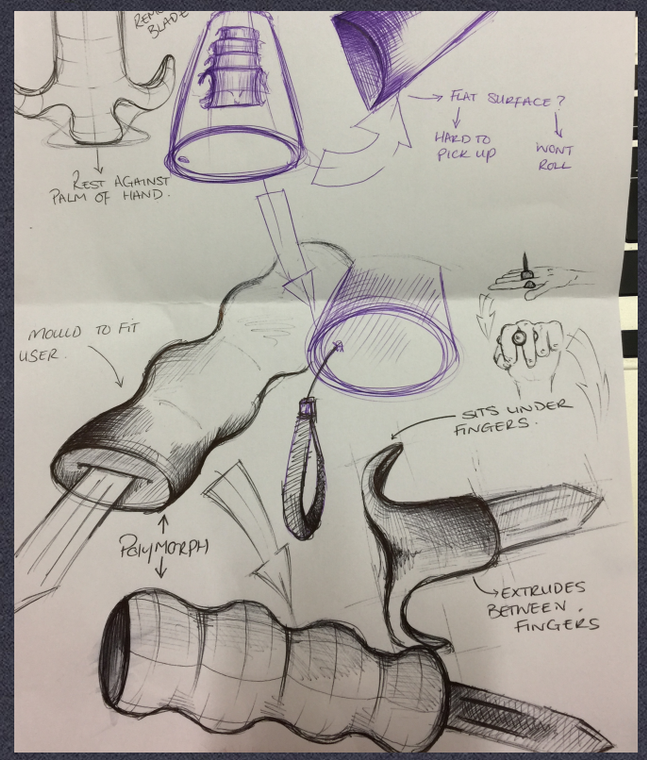

FINGER REST
FINGER CLIP
WRIST REST
Y - SHAPE.
SLOT FOR
FINGER
CLIP.



- I took inspiration from a hand controller.
- My initial idea was to have the blades under the handset.
- I considered that waste veg might catch by the blades and affect functionality.
- My solution was to have the blades extruding out from the handset.
- This makes it easy to clean and to remove the blades.
- This design, minimises hand movements - less pain or strain.
- Less grip needed.







MOTION PEELER

KNIFE

Preparing for Report - 2000 WORDS (40%)

- **The report should contain the following elements;**
- **Identification of the key design issues addressed in the design R&D stage,** - ABSTRACT.

- **Description of the new designs to be evaluated and key enhancement features,** - REVIEW, ANNOTATE, ILLUSTRATED.

- **Descriptions of your test methods and the UX/usability metrics used to measure product effectiveness, efficiency and user satisfaction,** - HOW TO TEST THE EFFECTIVENESS, MEASURING TIME? PEOPLES RESPONSES? (LIKERT SCALES 1-5/AGREE OR DISAGREE.)

- **Evidence of functional prototype testing** - PHOTO EVIDENCE.

- **A summary of results -** EXCEL (TABLE) 4 COLUMS OF VALUES TO EVALUATE. DO NOT PRODUCE POINTLESS GRAPHS THAT ARE NOT INFORMATIVE.

- **Evidence of statistical analysis** - WHATS THE AV? DOES THE SPEED DECREASE AS AGE INCREASES?

- **Evaluation and conclusions–which is the best design?** - 2 THINGS - EVALUATED PROCESS? TEST METHODOLOGY TO BE IMPROVED? CONDITIONS? OUTCOME> WHICH WAS THE BEST? IF THE ORIGINAL IS BETTER THAN YOURS - STATE SO, YOU WILL NOT GET MARKED DOWN ON THE FUNCTIONALITY - YOU ARE MARKED ON THE PROCESS.
- FILE > REDUCE FILE SIZE FOR TURN IT IN !!!

What to test for?

- Comfort - (Likert scale) respond to a statement.
- Comfortable to use> agree or disagree?
- Look at using a line as appose to circles and numbers during the likert scale. Use a 10 cm (100 ml) line to numerically calculate the percentages of user experience. Measure from anchor point to achieve a value to input into Excel.
- Look at user satisfaction as appose to comfort because more could come under that category > efficiency, effectiveness, usability.
- Use two words at the opposite end of the semantic differential scale - apposing opposites to describe feeling to collect subjective data.
- Peeler A, B,C, D - peel set number of potatoes, roughly same size to measure volume of peel and time. CONSISTENCY! Cutting carrots to set length with rough diameter the same.
- TEST TIME, WEIGHT OF PEELE, COMFORT, SATISFACTION, AESTHETICS.











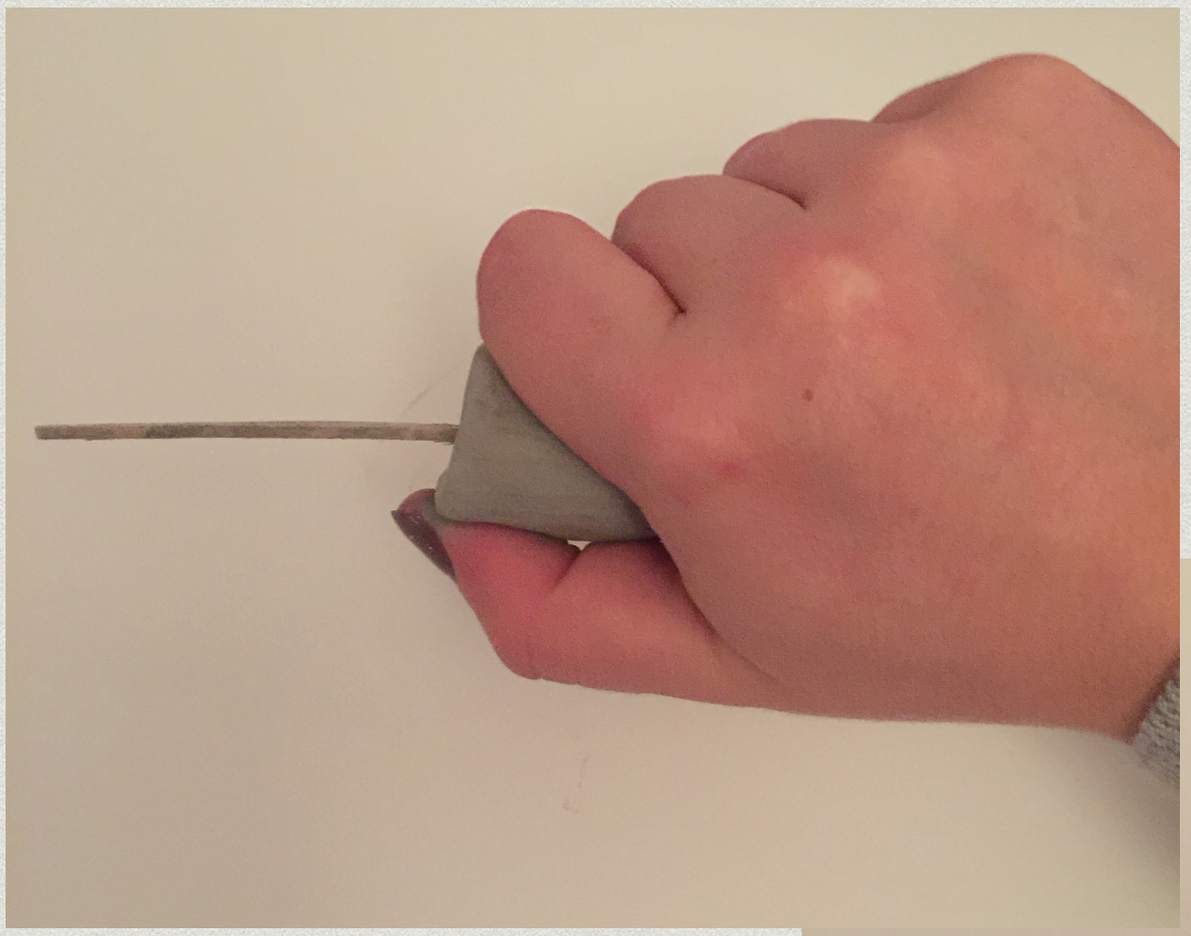






















UX Design **Hand Peeler** Questionnaire

In this questionnaire you will be asked a series of questions regarding the comfort, efficiency and function of a hand peeler design for users with significant destruction with hand movement and control. You will also be asked for personal information such as your age and gender, your personal details will remain anonymous.

How old are you?

……..

What is your gender?

Female Male Transgender Gender Neutral Prefer Not To Say

Do you have any conditions affecting the hand?

Yes No

If yes, what is the name of the condition?

……

On a scale of 1 to 4, how comfortable if the product to hold?

Very uncomfortable > **1** **2** **3** **4** < Very comfortable

On a scale from 1 to 4, how efficient to you find the product?

Efficient > **1** **2** **3** **4** < Not efficient

On a scale of 1 to 4, how would you rate the peelers usability?

Very usable > **1** **2** **3** **4** < Not very usable

Mark the line to indicate how much the aesthetics of a product mean to you?

Very important **Unimportant**

Mark the line to indicate any discomfort you might have felt while using the peeler.

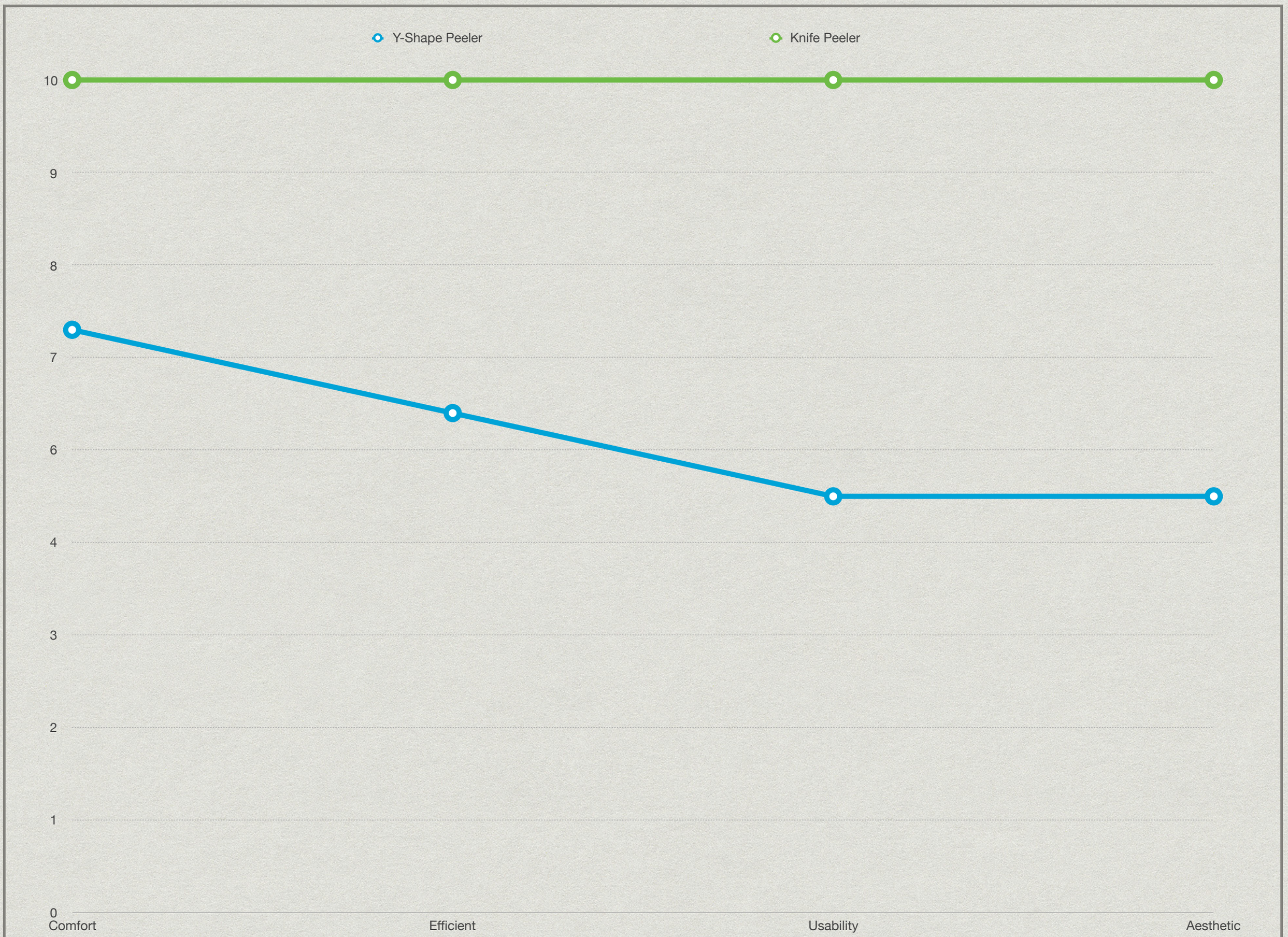
No discomfort **A lot of discomfort**

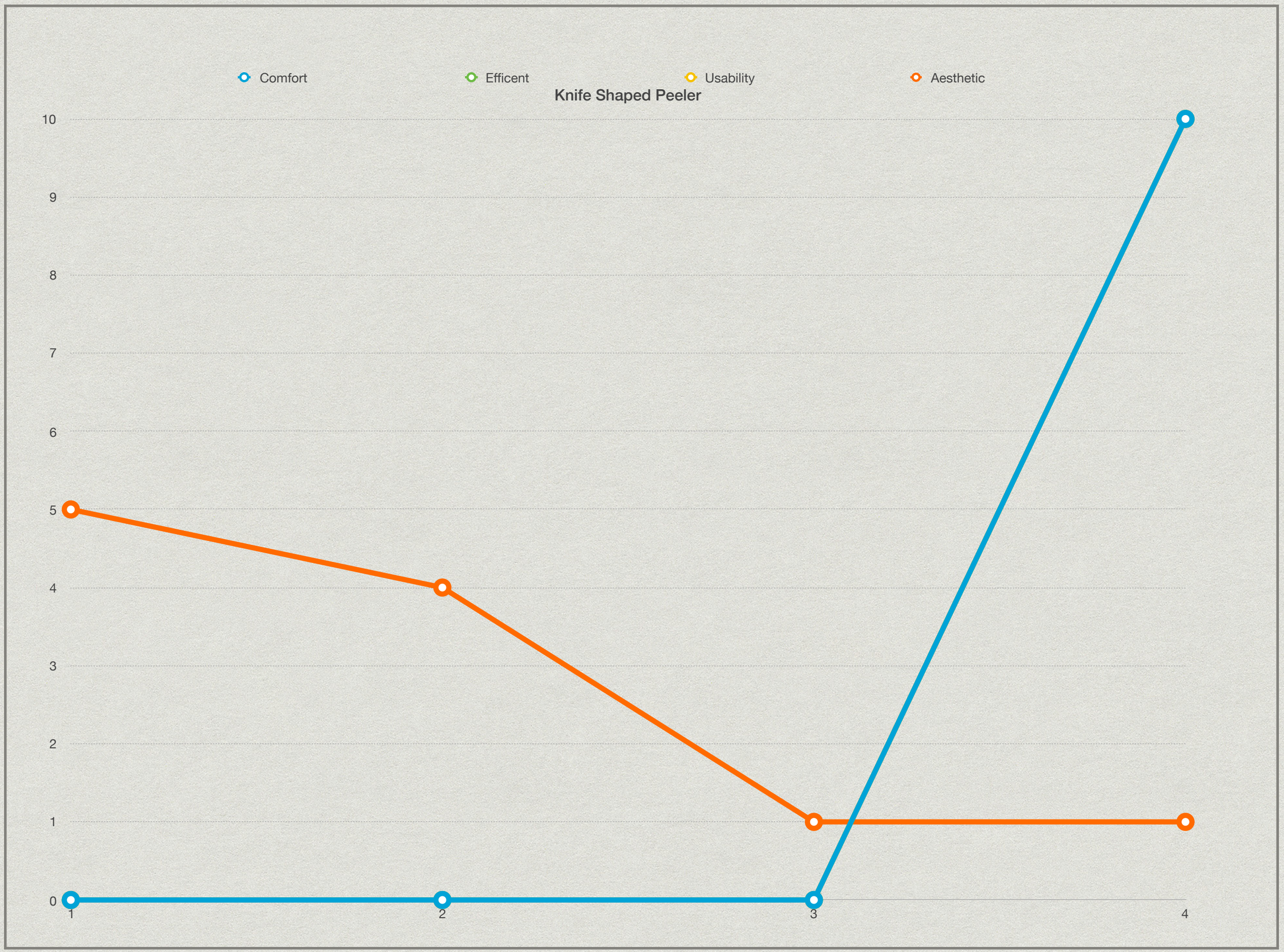
If you experienced any discomfort, please provide feedback. This will help develop the product for the future.

……
……
……

Thank you for taking the time too respond to this questionnaire.

Briony Howells 1701034


Y-Shape Peeler
Knife Peeler
10
9
8
7
6
4
3
2
1
0
Comfort
Efficient
Usability
Aesthetic


Comfort
Efficent
Usability
Aesthetic
Knife Shaped Peeler
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4


Comfort
Efficent
Usability
Aesthetic
Y - Shaped Hand Peeler
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4