

Prototyping Notes for Chimera Mouse

Average human hand length: 6.8 inches - 7.6 inches

Average human hand width: 3.1 inches - 3.5 inches

<https://www.medicalnewstoday.com/articles/average-hand-size#adults>

(Remember a hand is curled over a mouse so these measurements are not quite accurate to the mouse)

Average mouse dimensions:

<https://www.wikihow.com/Measure-Hand-Size-for-a-Mouse>

Want: Comfortable hand grip + have also room for all of the buttons and be able to comfortable reach and use all of the buttons on the mouse.

Have excellent arm support as well, as this is a device controlled by one hand, therefore should work to make it very supportive wrist-wise as well.

Look at examples of: ergonomic mice for wrist injuries, thumb injuries

Look at: examples of ways to grip the mouse

Electronic parts measurements:

Arduino:

LENGTH	68.6 mm
WIDTH	53.4 mm
WEIGHT	25 g

USB Port: 1.3cm x 0.5cm

Arduino USB shield:

Dimensions: 20 x 53 x 53mm

Scroll wheel: ??

Joystick: ???

Buttons: Depends on the width of mouse

Needed:

- thumb resting position/area

- Have space beside the scroll wheel for resting fingers
- Comfortable grip and resting spots for other fingers?
- Mock up electronic stand in (measurements for electronic parts)

Materials:

- Cardboard
- Tape
- Cord for computer

Mouse Usage and injury resources:

[https://www.ccohs.ca/oshanswers/ergonomics/office/mouse/mouse_problems.html#:~:text=Pain%20\(ache%2C%20soreness\)%20along,stiffness%2C%20restricted%20range%20of%20motion](https://www.ccohs.ca/oshanswers/ergonomics/office/mouse/mouse_problems.html#:~:text=Pain%20(ache%2C%20soreness)%20along,stiffness%2C%20restricted%20range%20of%20motion)

<https://advancechiro.on.ca/common-computer-related-injuries/>

<https://www.zenbusiness.com/blog/computer-mouse-injuries/>