

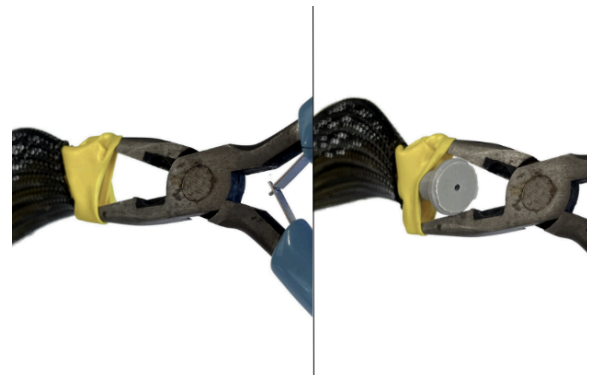
1) Insert a rubber balloon through the nylon braided sleeve using the end of a pencil



2) On the closed end of the balloon, cut a small hole with scissors. It should be just large enough to fit the shaft of the stopper



3) Using pliers to help you, insert the closed muscle connector into the hole you just made



4) Insert the muscle connector and pull the edges up so that the balloon edge touches the round base of the stopper.



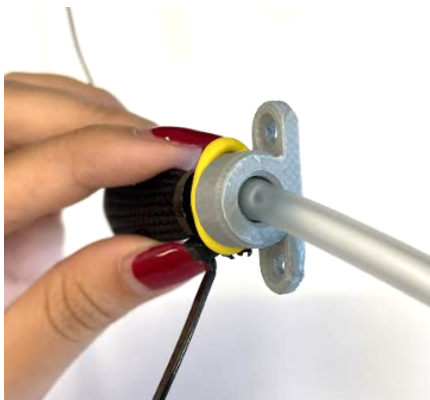
- 5) Pull the nylon sleeve around the balloon until it touches the round base. Hold the nylon mesh, balloon and end of the stopper between your fingers. Zip tie the nylon sleeve and balloon to the stopper to create an airtight seal. Use pliers to help tighten.



- 6) Insert the open muscle connector to the open side of the balloon. Then, repeat steps (1) & (2) with this end of the muscle. **Note: At this step, ASK a mentor to review your muscle and help tighten them for you**



- 7) Insert the silicone tubing to the open muscle connector and push the syringe. The muscle should contract in length and bulge in the middle.



(air leaks are our enemy!)*

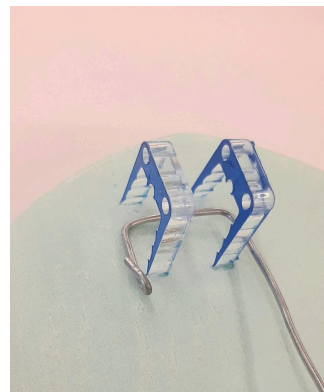
- 8) Screw in the eye into the closed muscle connector



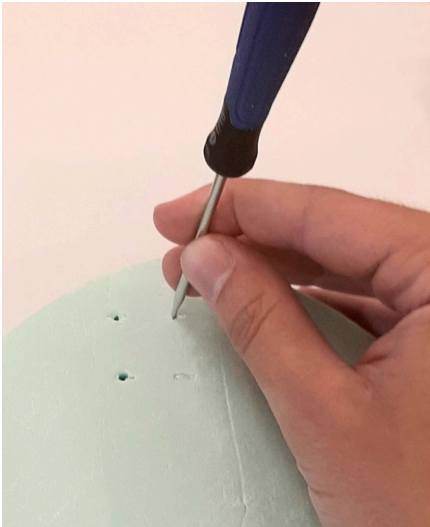
- 9) Set muscle aside. Place the 1st paddle near the front of the boat, with the hot glue side facing toward the front of the boat. Position the wire so that it is at the center line of the boat, with the axle facing to the side.



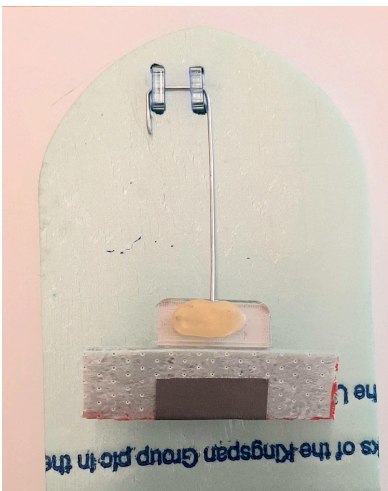
- 10) Place the two U-nails on top of the axle, but **do not** press them fully in to secure the paddle. Only indent the surface of the foam to create 4 marks where the U-nails will be inserted.



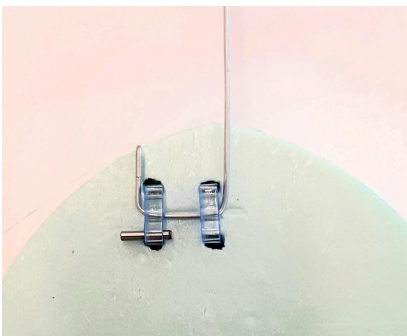
- 11) Using a small screwdriver, create holes straight down where the marks are.



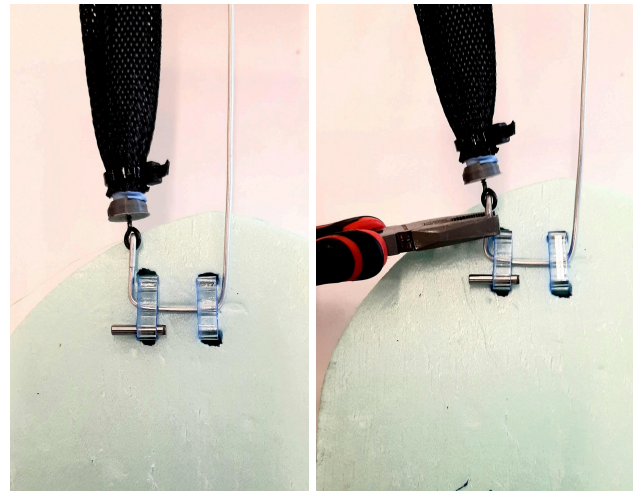
- 12) Press 2 U-nails into the holes to clamp the paddle to the bottom of the boat, with the axle in the slot in the middle of the U-nails.



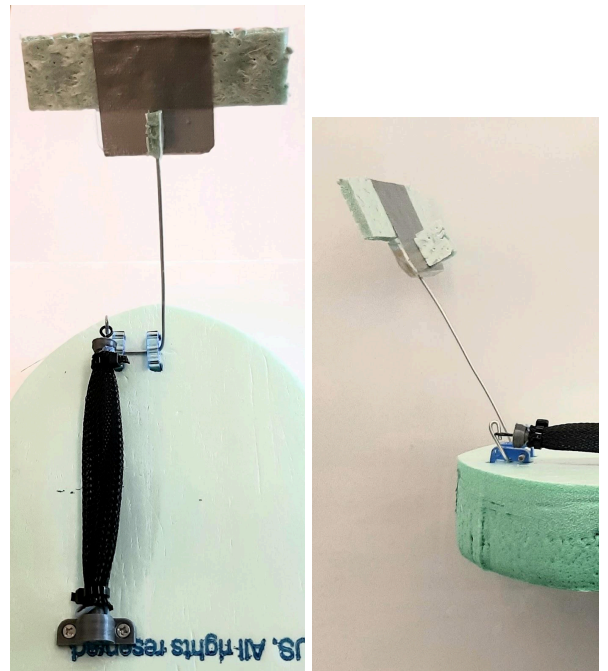
- 13) Place a dowel pin in the slot behind the axle. This prevents the paddle from rotating too far back.



- 14) Feed the eye hook on the muscle onto the hook of the foot. Use pliers to clamp the hook and secure the two together.

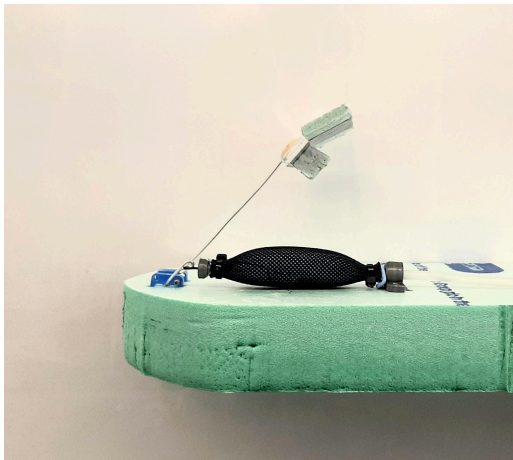
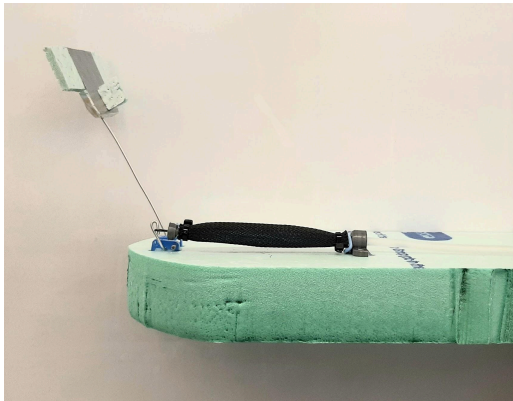


- 15) Put the paddle in the forward position (leaning towards the front of the boat). Keeping the paddle in that position, screw the muscle into place using the screws provided.



- 16) Pump the syringe. When the muscle contracts, the paddle should rock back.

Note: Pull the syringe back all the way after every push. This resets the air in the system.



- 17) Position the 2nd paddle as far back on the boat as possible but ensure there is still enough room for the McKibben muscle to fit on the boat. Your 2nd muscle should sit on the opposite hand side of your boat (if 1st muscle was on the right, 2nd should be on the left)



- 18) Once you find the right placement for all the components, repeat steps (6)-(11) to secure the 2nd paddle