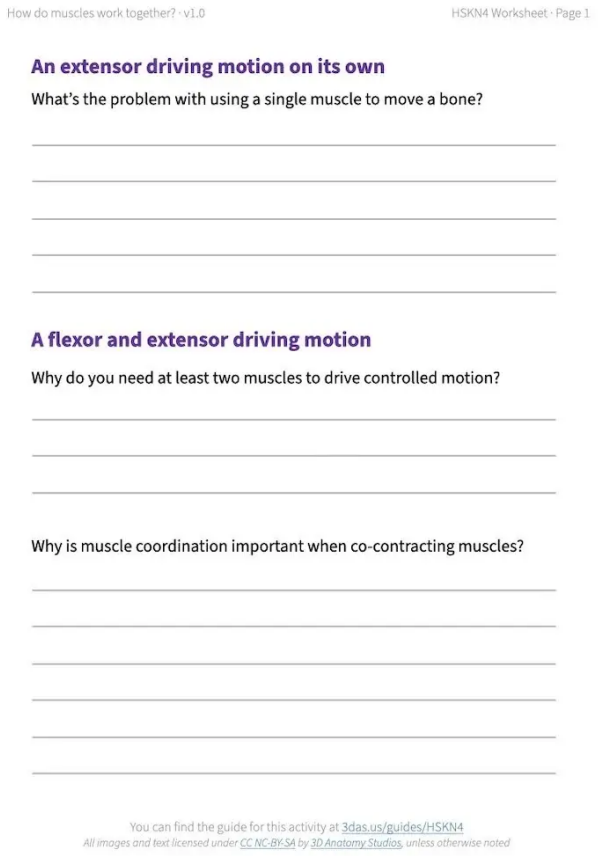
Materials needed

For this activity you'll need:

1. The worksheet for this activity (either opened in a PDF viewer on a desktop/tablet computer or printed out).



How do muscles work together? · v1.0 HSKN4 Worksheet · Page 1

An extensor driving motion on its own

What's the problem with using a single muscle to move a bone?

A flexor and extensor driving motion

Why do you need at least two muscles to drive controlled motion?

Why is muscle coordination important when co-contracting muscles?

You can find the guide for this activity at 3das.us/guides/HSKN4

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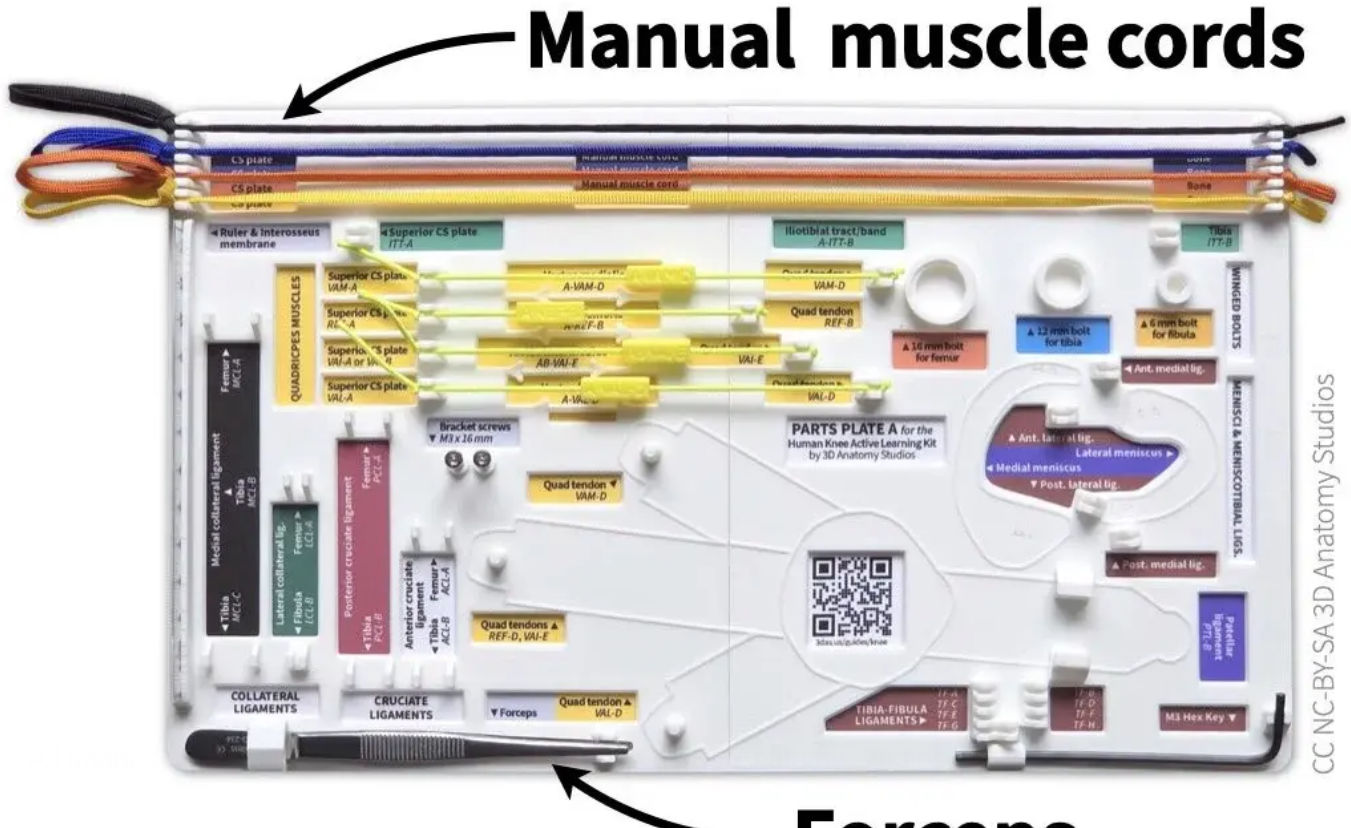
2. A Human Knee Active Learning Kit (Basic or Full model). You do not need any of the muscles for this activity or the patella. If your knee kit has muscles attached, detach all the muscles and attach them to their designated spot on the parts plate(s). You will need the patella, however. Once you've removed all the muscles, leave the patella hanging from the patellar ligament; you'll be attaching manual muscle cords to hold it in place. Once you've finished preparing your knee for this activity, it should look like the image below.

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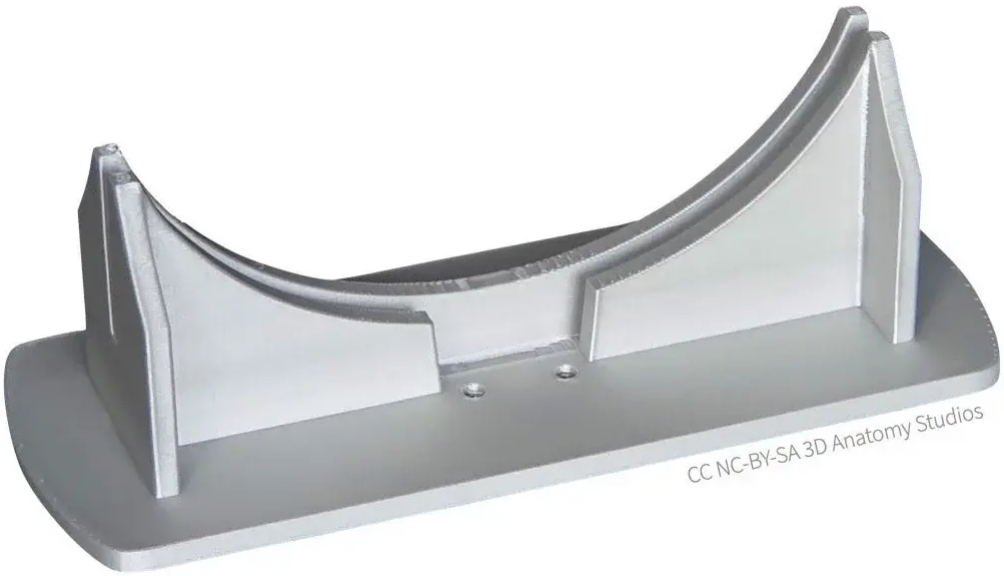
The knee kit shown from a lateral view with all of the muscles removed and the patella left hanging by the patellar ligament.

2. The following items from Parts Plate A in your knee kit:
   - All four Manual muscle cords
   - Forceps



The manual muscle cords and forceps should be attached to Parts Plate A in your kit. The manual muscle cords attach to hooks at the top of the plate and the forceps fit into a holder in the bottom left corner.

3. The cross-section plate bracket from your knee kit box.



The cross-section plate bracket

4. Clamps to att). It's helpful to hav o it from twisting.



Spring clamp



C-clamp

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To attach the cross-section plate bracket to the edge of your tabletop, you can use clamps such as spring clamps (left) or c-clamps (right). The maximum clamping widths for the clamps shown above are 2 inches (for the spring clamp) and 3 inches (for the c-clamp). The size clamp will depend on the thickness and design of your tabletop.

5. (Optional) Some material to place between the clamps and the tabletop to prevent damage from the clamps. A couple wooden shims stacked to make a thin rectangle are a cheap and effective solution (not included in your kit).



If you're using a c-clamp or some other clamp with metal contacts, you'll probably want to use some material between the clamp and the tabletop to not damage the surface. Wood shims work well for this.

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