***Instructions for Assembly: STEM of Kicking Module***

**Materials**

(see the materials list for brands and vendors)

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| **Each kicking kit requires:**   * 2 jumbo craft sticks * 3 #10-32 x 1” machine screws * 6 #10 nuts * 3 different-sized rubber bands | A close-up of a green stick  Description automatically generated |

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| **Shared Resources include:**   * Heavy Duty 3-hole punch * Transparent tape | A stapler and a tape dispenser  Description automatically generated |

**Step 1: Punch holes in both ends of both jumbo craft sticks.**

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| For best results, punch one end of one jumbo stick at a time. | A close-up of a hole puncher  Description automatically generated |
| If your sticks splinter during punching, tape the ends before you attempt to punch the hole. | A red tape on a black surface  Description automatically generated |
| If the jumbo stick splintered when you punched the whole, leave the tape on for the rest of the steps.  If the jumbo stick has not splintered, you can remove the tape. | A red plastic tag with hole in it  Description automatically generated |
| At the **completion** of Step 1, you should have two jumbo sticks, each with a hole in both ends. | A wooden sticks on a blue surface  Description automatically generated |

**Step 2: Connect the jumbo sticks with machine screws and nuts.**

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| Form the “knee” by connecting the two jumbo sticks with a machine screw and two nuts.  Leave some space between the two nuts to fit the rubber band.  Do not tighten the first nut so tight that the “knee” does not swing. | **A screw and nut on a wooden piece  Description automatically generated** | |
| Add a machine screw and two bolts to the other ends of the leg.  Leave some space between the two nuts to fit the rubber band.  Make sure both screws are “pointing” in the same direction. | **A nut and bolt on a wooden stick  Description automatically generated** | **A bolt and nut on a wooden stick  Description automatically generated** |
| At the completion of this step, you should have two connected jumbo sticks and are now ready to add the rubber band. | **A wooden object with a screw on it  Description automatically generated with medium confidence** | |

**Step 3: Connect the rubber band to simulate the muscles.**

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| Connect the rubber band to the ends of the jumbo stick, making sure the rubber band is between the two nuts. You can tighten the second nut down to secure the rubber bands.  Loop **both** sides of the rubber band over the **same** side of the knee screw.  Do not tighten the knee’s second nut. The rubber band must be able to stretch. |  |

**Done!**

You now have a working leg, capable of kicking.

Simply bend your leg, then release to “kick”.

Change the rubber band to see how that stiffer rubber bands change the kicking power.