

BOTS 2 Supply List

Electronics

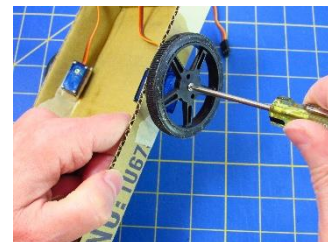
- one (1) [Adafruit Circuit Playground Express](https://www.adafruit.com/product/3448) microcontroller board with USB data cable and battery case
- three (3) alligator clip to male header jumper wires in different colors (such as <https://www.adafruit.com/product/3448>)
- one or two (1-2) 9g micro servo motors (such as <https://www.adafruit.com/product/169>)
- one or two (1-2) micro continuous rotation servo motors (such as <https://www.adafruit.com/product/2442>)
- Optional:
 - two (2) [plastic wheels to fit micro rotation servo](https://www.adafruit.com/product/1008) (or [servos with wheels](https://www.adafruit.com/product/1008))
 - 5mm LED diodes (tiny bulbs with two wires)
 - alligator clips test leads (such as <https://www.adafruit.com/product/1008>)
 - conductive tape, copper or nylon with conductive glue (such as <https://www.adafruit.com/product/3961>), or aluminum foil tape (found in heating supplies at the hardware store)



Crafts Supplies

Cardboard is our main building material because it is sturdy and easy to cut with scissors or make holes in with a sharp pencil during class. In general, you can use whatever you have on hand. Here are suggestions for what to look for – you do not need all of them! **Highlighted materials** are my top recommendations:

- **Sturdy cardboard** or similar material for building, such as:
 - small corrugated cardboard mailing boxes
 - heavy and lightweight scrap pieces (cereal boxes, old postcards, index cards)
 - cardboard tubes
 - cardboard coasters (for wheels)
 - plastic recyclables, such as:
 - food containers
 - corrugated signs
 - bottle caps (good for wheels!)
 - lightweight wood (best outside of class)



- Adhesives, such as:
 - **masking tape** or other kinds of household tape
 - **peel-and-stick Velcro dots** — for quickly switching out microcontroller boards
 - **peel-and-stick double-sided tape** a decent alternative to hot glue
 - electrical tape
 - adhesive dots -- good for googly eyes and other decorations
 - removable mounting squares or gum (used for hanging posters)
 - hot glue gun (to be used outside of class)
- Connectors, such as:
 - **paper clips**
 - metal brads
 - **string and/or heavy thread** (thread can fit through the holes on the servo arms)
 - mini zip ties
 - wire, twist ties, pipe cleaners
 - paper or plastic straws
 - bamboo skewers, cocktail picks, and/or toothpicks
 - craft sticks (with lots of tape or with hot glue)
 - large wooden or plastic beads (good as spacers)
 - Hardware:
 - nuts and bolts
 - screws
 - tools (wrenches, screwdrivers)
- Cutting tools, such as:
 - **sharp pencil** (for poking holes)
 - **scissors** (preferably small, sharp scissors like sewing or nail scissors)
 - kid-friendly [ceramic craft knives](#)
- Decorative materials, such as
 - colored markers
 - glitter glue
 - **googly eyes**
 - peel and stick craft foam

