30 Make AT Projects
Invented by Therese Willkomm, Ph.D., ATP

Making AT for Eating and Drinking

1. Sushi susan
2. Water bottle challenge
3. Cup holder
4. Built up handle
5. Universal cuff
6. Sandwich holder

Making AT for Hearing and Communicating

1. Eye gaze board
2. Sound enhancer
3. Non-conductive mitt
4. Whisper phone
5. Stylus adapter
6. Holding carrying strap for iPad
7. Hands free eye gaze board
**30 Make AT Projects**

*Invented by Therese Willkomm, Ph.D., ATP*

### Making AT for Reading and Writing

1. Scan and read station
2. Page lifters
3. Writing aid/universal cuff
4. Pocket Eileen with doc holder
5. Stylus
6. Page stabilizer
7. Scissor platform
8. Adaptive writing aid
9. Slant board
10. Page holder

### Making AT for Low Vision

1. Vertical iPad holder for zooming in on board
2. Scan and read station
3. Slant board
4. QR code and dot maker
5. Pocket Eileen
6. Tactile overlay
7. Book holder
8. Page lifters
Materials
• 1 pair of regular scissors
• 1 strip of had plastic from folder
• Stickyback velcro

Directions
• Place a strip of loop (soft) sided Velcro along the handles of the scissors
• Place a strip of hook (rough) sided Velcro on each end of the folder strip
• Bend the plastic folder strip and attach to the Velcro to create easy open scissors

Uses
• For children who have difficulty separating out their fingers into holes or who have a weak hand grasp
Parts Required:

- 3d printed base
- 3d printed platter
- Clear Solo cup
- DC hobby motor
- Battery holder
- 3.5mm jack
- (2) batteries
- Objects to spin

Tools Required:

- Wire cutters
- Wire stripper
- Soldering iron
- Solder
- Super glue
- Drill bit (2mm)
Assembly Steps:

1. Cut one of the wires from your battery holder in half.

2. Strip back ~1½” from each end of the wires.

3. Bend the tabs on the motor up away from the motor body.
4. Solder one piece of the cut wire to each tab on the motor.

5. Solder the loose end of the cut wire and the long wire from the battery holder to each connector on the switch jack.
6. Place the soldered assembly into the 3d printed base
   a. There’s a knurled nut that holds the jack in place

7. Press the platter onto the shaft of the motor
   a. If the hole is too small, open it up with the drill bit
8. Load dice or other objects onto platter

9. Squeeze rim of cup to fit under locating lip on base

10. Test for proper function
Light Touch Switch

Materials
- 1 – 3D Printed Switch Base and 3D Printed Switch Cap 1 – 3.5 mm mono cable (e.g. https://www.digikey.ca/short/pf54w9, ~$4.50)
- 1 – 12 mm tactile switch (e.g. Omron B3F-5050, https://www.digikey.com/short/jvzq2d, ~$0.50)
- 1 – Hinge (18 mm section of ballpoint pen ink chamber OR 3 mm diameter x 18 mm length carbon rod OR 3 mm diameter x 18 mm spring pin )
- Glue gun
- Super Glue

- Remove the contacts on **ONE** side of the switch
- Solder the leads to the switch on remaining contacts. Test switch with toy
- Use a bit of super glue to secure the switch in place on the base

- Use hot glue to secure the cable.
- Insert the hinge into the switch.

Download file and instructions from [Makers Making Change](https://mkk.cc/1j).
PVC Holder with Screw Adaptation

Materials
- 3½ inch long, ½ inch in diameter PVC pipe
- 2½ inch long, ½ inch in diameter PVC pipe
- Two ½ inch elbows

Directions
- Cut the PVC pipe into the correct lengths and add the elbows.
- Once you fabricate the versatile adaptive tool holder, drill a hole about ¾ of an inch from the end where the tool will go.
- Twist the screw into the hole to secure smaller diameter instruments such as pastel crayons or even Q tips.

Uses
- Add large brushes into the PVC holder or large markers.
- If the tool is too small to fit into the PVC holder, add Rubbermaid shelf liner to build up the tool or wrap the tool in Wikki Stix to make the tool diameter larger.

Designed by Deborah Schwind & Judith Schoonover
Solderless Battery Interrupter

Materials

- Mono Male to Female Audio Extension Cable / MyCableMart (Part#FE-MONO-01-MF)
- 36-Gauge Copper Roll / Hobby Lobby
- Scotch Extreme Mounting Tape, 1 in. X 60 in. / Walmart

Strip the ends (remove the plastic covering) 1/8” on both the red and black wire

Remove the white paper backing from the piece of tape and lay one of the exposed wires in the center of the tape.

Cover it with a piece of cooper tooling foil.

Flip over and remove the red backing and repeat the same steps on the back side.

Trim the tape to the edges of the copper.

Make sure that there is no copper touching copper

This QR Code and the link will take you to a video that Therese Willkomm had created not only showing you how to make the Battery Interrupter, but also a business card switch. Therese has now come up with a variation using a pre-wired mono jack which is what we will be doing for this session.
Must Have Tools and Materials

The following tools and tools have been selected for creating solutions in minutes. Please use a QR code scanning app on your phone or tablet to scan the QR code. A webpage will open that connects you to where you can order these specific tools and materials.
Plastics

- Loc-Line
- Acrylic
- Sintra Board
- CPVC Winged elbow
- InstaMorph
- Corner guard
- CPVC pipe
- Black corner guard
- Corrugated plastic

Adhesives

- UGLu
- REMO 2
- Dual Lock
- Self adhering silicone tape
- Velcro Brand Industrial Hook and Loop
- Double-sided foam permanent tape
- Loc-lift Rug Gripper tape
Weighted Tools

Materials
- 3/8 inch hex nuts
- Electrical tape or colorful duct tape

Directions
- Wrap metal end of pencil with several layers of tape or WikiStix.
- Thread several hex nuts onto pencil.
- Wrap other end of pencil (directly below hex nuts) with tape.

Uses
- Grasping aid
- Weight on the tool can help stabilize uncontrolled movements due to ataxia
- The weight gives some more sensory feedback to the hand while writing

Design by Deborah Schwind & Judith Schoonover