Tools, Materials, and Fasteners Lesson

**Tools:**
- Craft cutters, with ruler and cutting mat
- Corrugated plastic cutter
- Utility Snips
- Powered cardboard cutter
- Scroll Saw
- Bandsaw
- Drill Press with Drill press vise
- Hand Drill and vise
- PVC Cutter

**Materials:**
- 1 Acrylic Backplate
- 2 plywood sidewalls
- 1 wood stick 3/4” x 3/4” x about 8”
- 1 piece of corrugated plastic (Coroplast), about 6” x 12”
- 1 piece of 1/2” PVC pipe, 12” long
- 1/2” PVC fittings, angles and elbows
- Machine Screws, #6 x 1 -1/2”
- Hex Nuts, #6
- Flat washers, #6
- Self-tapping Screws, #6 x 3/4”
Tasks:

Coroplast- drawing provided
• Mark Edges and holes
• Cut and score
• Drill holes (3/16" and 1/4")
• Fold along score lines
• Check with drawing

Wood Sticks- Drawing provided
• Mark length and holes
• Drill holes
• Saw wood to length
• Check with drawing

Assemble wood sticks to acrylic back plate and wood side plates
• Refer to model
• Use machine screws with washers and hex nuts in larger holes
• Use Self-tapping screws and washers in smaller holes

Assemble Coroplast to Acrylic/Wood Structure
• Fasten with zip-ties

PVC Pipe and Fittings
• Cut pipe and add fittings to make a handle
• Drill holes to match acrylic backplate
• Fasten with machine screws, washers, nuts