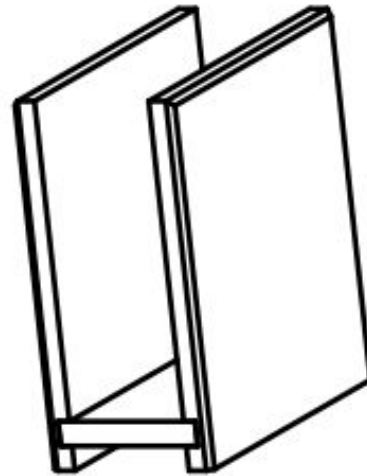
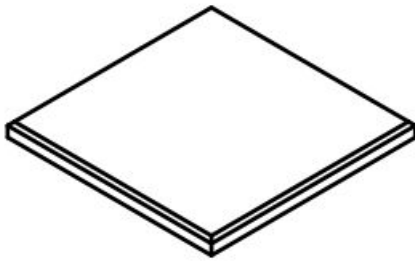




Spark Makerspace Woodshop Class: **Napkin Holder and Trivet**

Students will make a matching napkin holder and a trivet out of a single laminate board with contrasting colors. Students will learn how to setup and use the router table to cut dados and round over edges. Finishing techniques including applying shellac and mineral oil will also be demonstrated. Members will be certified on the chop saw and the router table as part of this class.



Materials Required: (per set)

- Contrasting hardwoods
- Wood Glue
- Shellac
- Mineral Oil
- Rubber Feet (x4)
- JB 5 min Clear Weld

Tools Used:

- Table Saw
- Clamps and Cauls
- Planer
- Chop Saw
- Router Table
- Sanders (fixed and portable)

Note on Heat Resistant Finishes for the Trivet

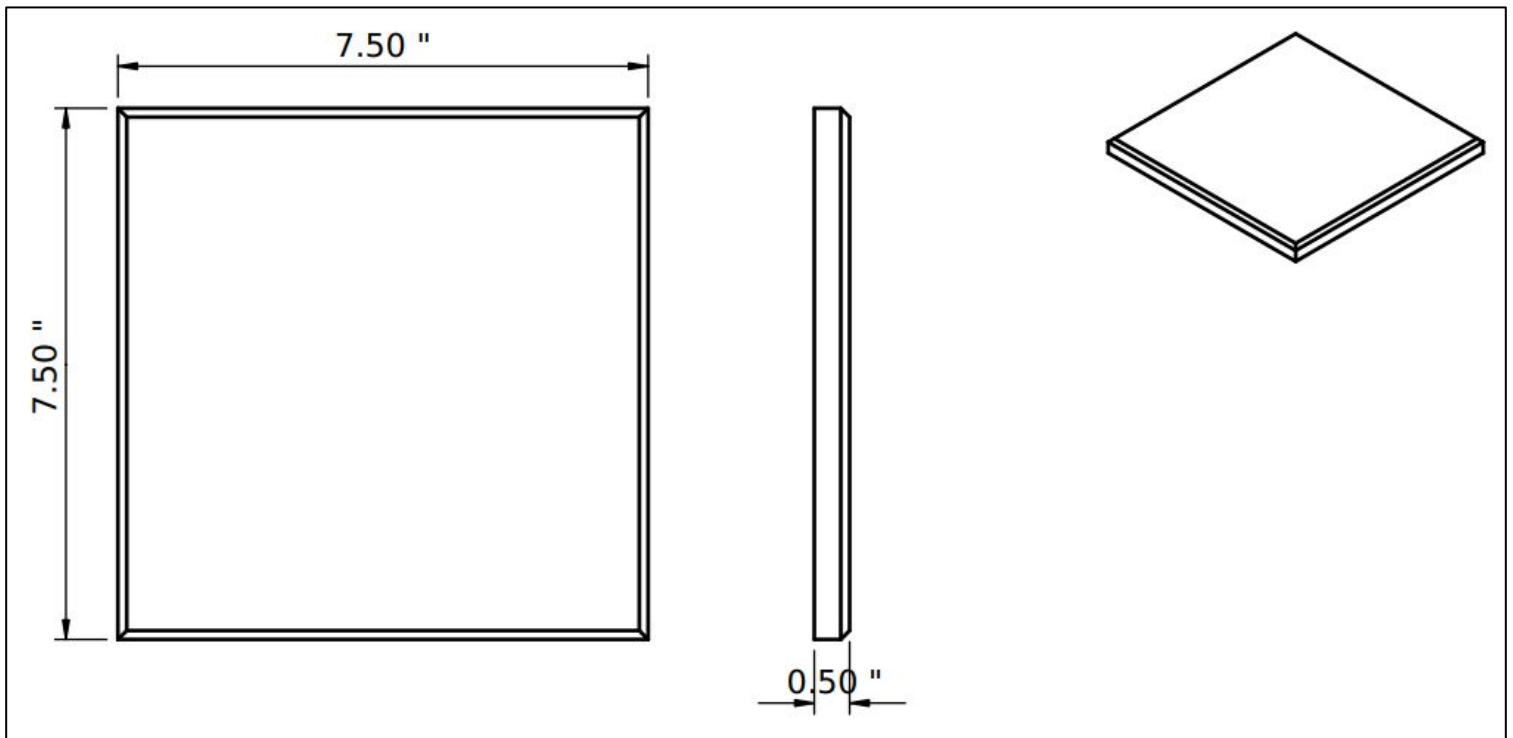
A trivet is a utensil that is placed between a hot dish and a table to protect the table from the heat. Trivets can be made out of any material that provides a good level of insulation and is not sensitive to large heat gradients. Because the trivet will be exposed to hot surfaces, many finishes such as shellac, lacquer, and polyurethane are not appropriate. In this class, we will be applying a mineral oil finish to the trivet. This finish will fill the pores in the wood and offer some protection. Setting a very hot pan or pot on the trivet may cause some charring, but it will still provide protection to the table.

Session 1: Manufacturing Laminate Board (Duration 2 hrs)

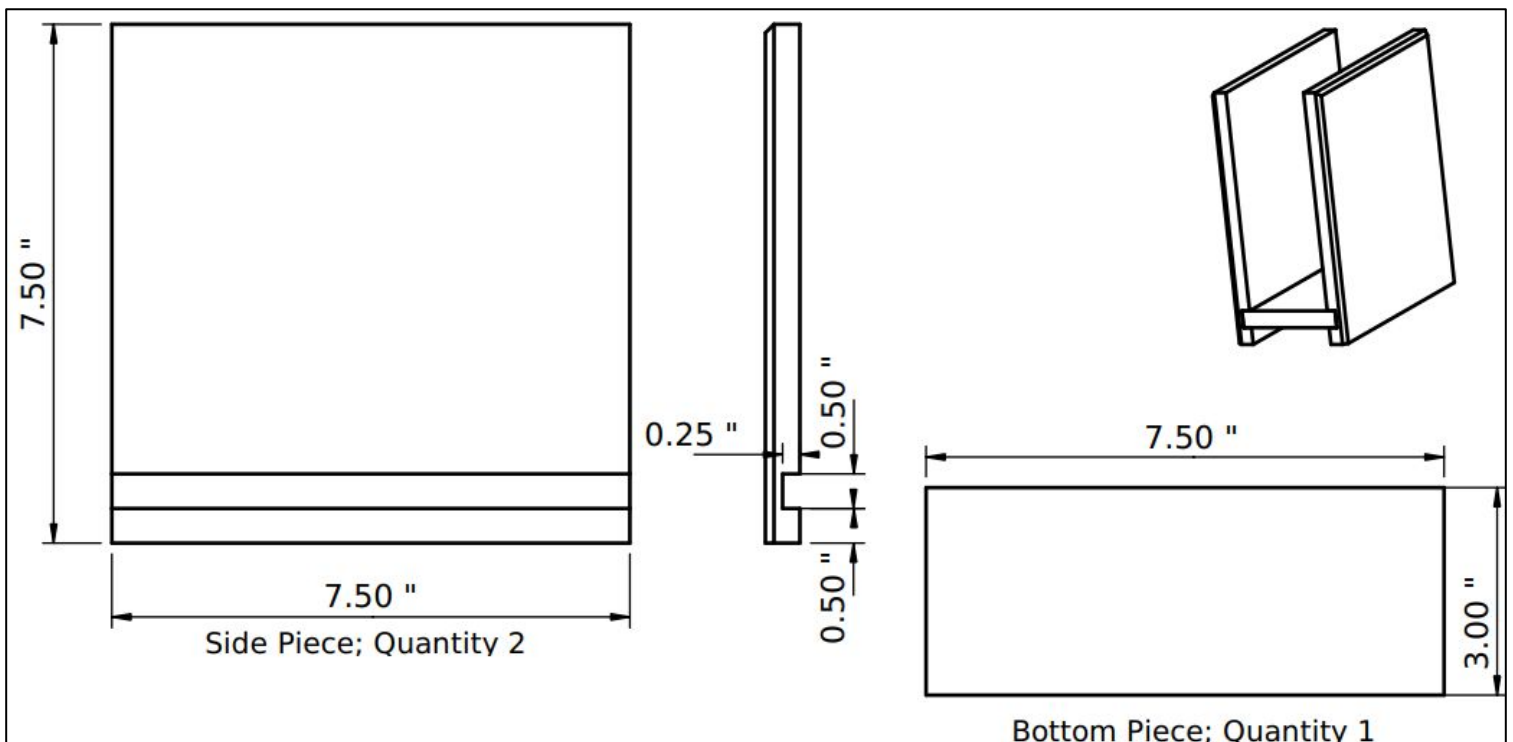
1. Start with a clear grained light colored hardwood (4/4 by 6 ½" x 30" nominal).
2. Select and locate accent strips.
 - a) Contrasting color hardwood (e.g. walnut or cherry) ½" to ¾" x 30" of 4/4.
 - b) Determine the location in the primary board to glue the accent strips.
 - c) Number of accent strips is determined by the student, but 1 or 2 strips is recommended.
3. Rip the primary board.
4. Dry fit the accent strips with the primary board.
5. Glue and clamp laminate board with cauls.

Session 2: Processing and Assembly (Duration 4 hrs)

1. Unclamp board and remove excess glue with a scraper
2. Thickness board to nominally a ½" in the planer.
 - a) Final passes should be light to prevent overshooting the desired thickness.
 - b) Alternate faces of the board that are processes though the planer with each successive pass.
3. Cross-cut board into sections with the following dimensions on the compound miter saw. (Assumed final width is 7.5"):
 - a) Three of 7.5" x 7.5"
 - b) One of 3" x 7.5"
4. With the router table, route ½" wide by ¼" deep through dato along one edge of two of the square pieces. The bottom of the groove should be ½" from the edge.
5. With the router table, round over the long edges and top of the napkin holder sides pieces as well as one face of the trivet.
6. Sand all edges and faces to 320 grit.
7. Use 5 minute epoxy (JB 5min Clear Weld) to assemble the napkin holder.
 - a) Wear gloves to mix and apply epoxy.
 - b) Dispense equal amounts of the two parts of the epoxy (resin and thickener) to a piece of cardboard.
 - c) Mix well with a tongue depressor for 30 seconds.
 - d) Apply epoxy to the dato and the long edge of the 3" x 7.5" board.
 - e) Use the provided spacer (2 ½" wide) to support the top of the napkin holder
 - f) Apply clamps and let epoxy cure.
8. Hand rub the mineral oil finish into the napkin holder.
9. After the epoxy has cured, apply shellac finish to the napkin holder.
 - a) Thin the shellac with 1 part denatured alcohol to 1 part shellac.
 - b) Apply finish with disposable brushes.



Trivet Design



Napkin Holder Design

Spark members with approved shop access may use the shop to create items, like those described in this tutorial, at any time. If you have any question on methods, materials, or tools, please contact the Spark Woodshop Leads at:
WOODSHOP@SPARKMAKERSPACE.ORG