Jack-O-Lantern Boxes

PROJECT PLAN

Materials

Item	Qty
1" x 4' x 8' Board*	1
1" x 6" x 8' Board*	1
1" x 8" x 8' Board*	1
#6 x 1-1/4" Flat Head Phillips Wood Screws	
Sandpaper**: 150g, 220g & 320g	
Drill Bits: 3/8"	
Wood Glue	

* Board Dimensions are "nominal". Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

** Starting grit will depend on board surface condition, a rough surface will require starting with a coarse grit first.

Grit is measured in the coarseness of the particles on the sandpaper. The lower the grit number, the coarser the paper. Heavy sanding would require 60 to 80 grit, medium sanding would require 120 to 220 grit, and finish sanding would require 320 to 400 grit. Super fine sanding would be 600 grit and higher.

A select/premium board or plywood comes with a smoother surface finish. It is clear or has very few tight knots, and it will have straight and sharp edges. This grade of wood pairs well with other boards or panels better and requires less time to sand and finish.

Tools Used

Miter Saw	**or** Circular Saw	Drill/Driver	Jigsaw	Orbital Sander
20V 1.5Ah Battery	20V 4.0Ah Battery	Charger	Tape Measure	Rotary Tool
Countersink Bit	Safety Glasses	Phillips Dr. Bit	Drill Bits	Scissors

Also Needed: Clamps

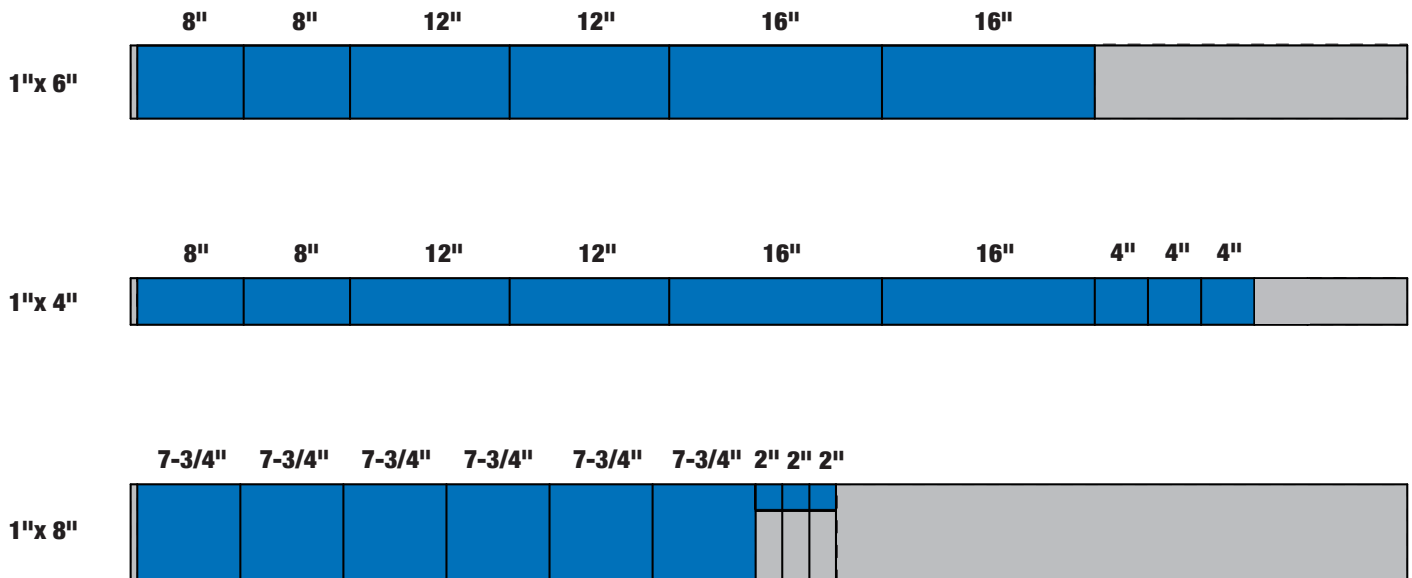**Battery Tip:** A 4.0 Ah battery is recommended to be paired with high amp draw tools for maximum efficiency.

Lumber Cut List

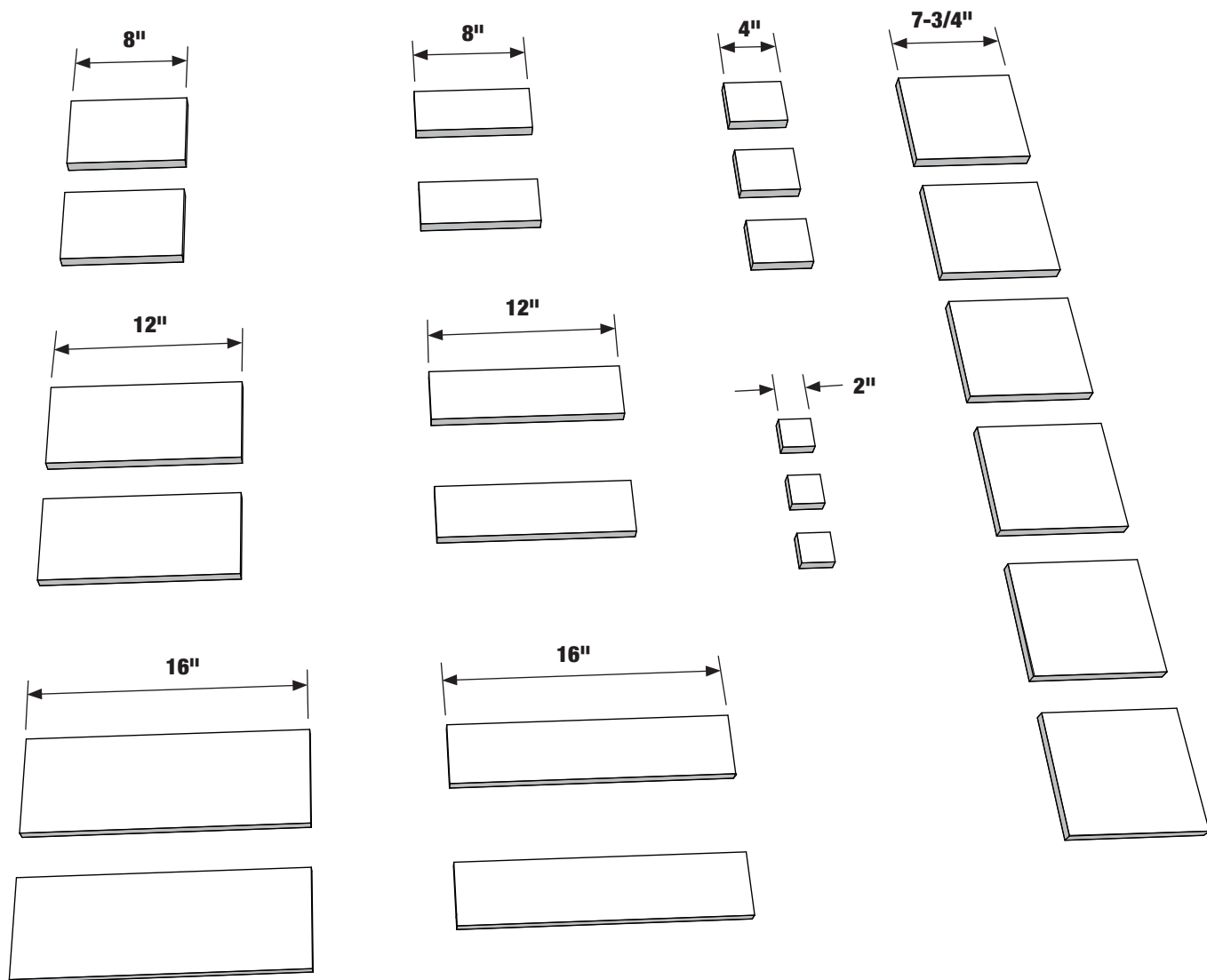| Board*	Description	Cut to	Qty
1" x 4"	Short, Side Panels	8"	2
1" x 4"	Medium, Side Panels	12"	2
1" x 4"	Tall, Side Panels	16"	2
1" x 4"	Inner Lid Piece	4"	3
1" x 6"	Short, Face & Back Panels	8"	2
1" x 6"	Medium, Face & Back Panels	12"	2
1" x 6"	Tall, Face & Back Panels	16"	2
1" x 8"	Base & Lid	7-3/4"	6
1" x 8"	Stem **	2"	3

* Board dimensions are "nominal." Actual dimensions are smaller due to lumber industry standards. Cuts are actual length.

** Stem will be cut to final length in Step 2.
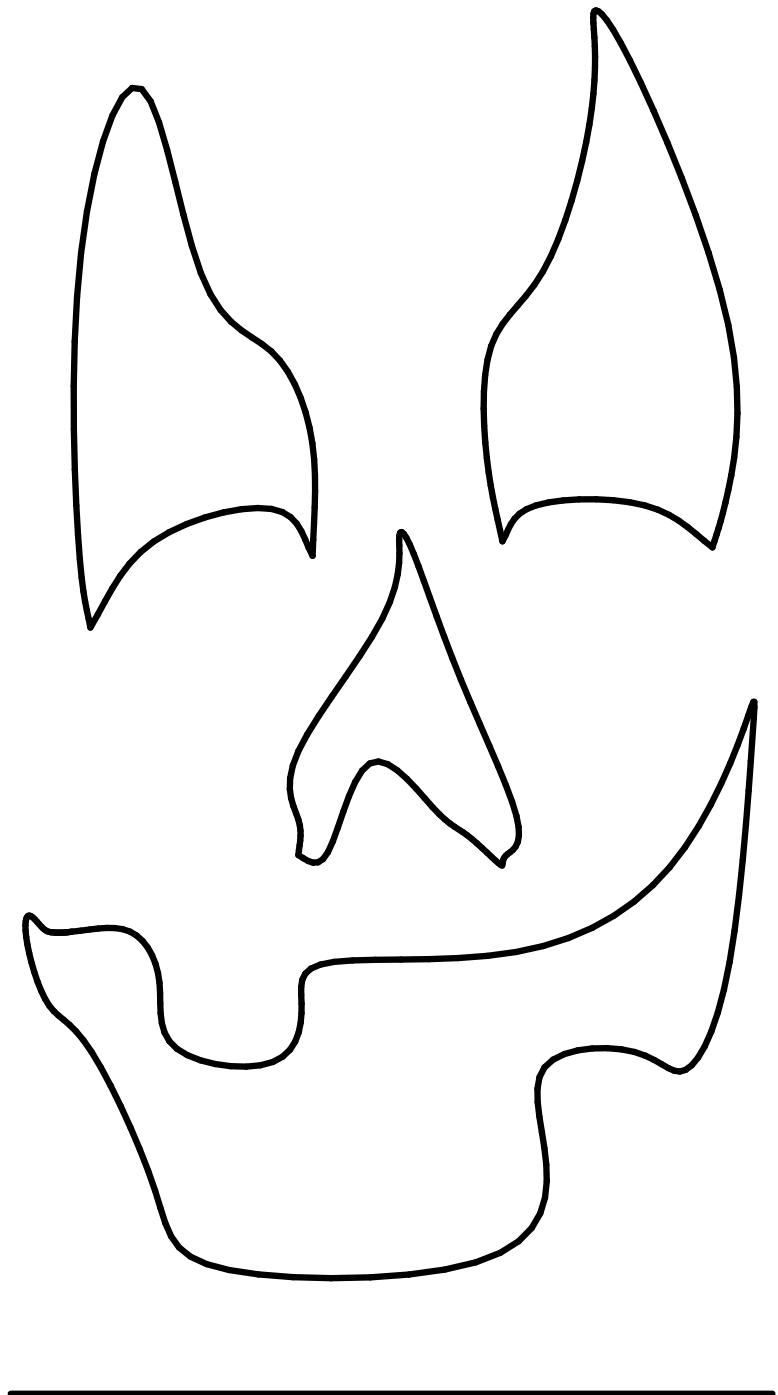
Lumber & Sheet Layout Guide

Lumber & Sheet Cut Layout Guide

8"

8"

4"

7-3/4"

12"

12"

2"

16"

16"

Patterns & Templates

Print

This face is to fit on the short jack-o'-lantern. The baseline should measure out to be 4" long and it will align with the bottom of the small face board. Print this sheet at a 100% scale. It will fit on an 8-1/2" x 11" sheet of paper.
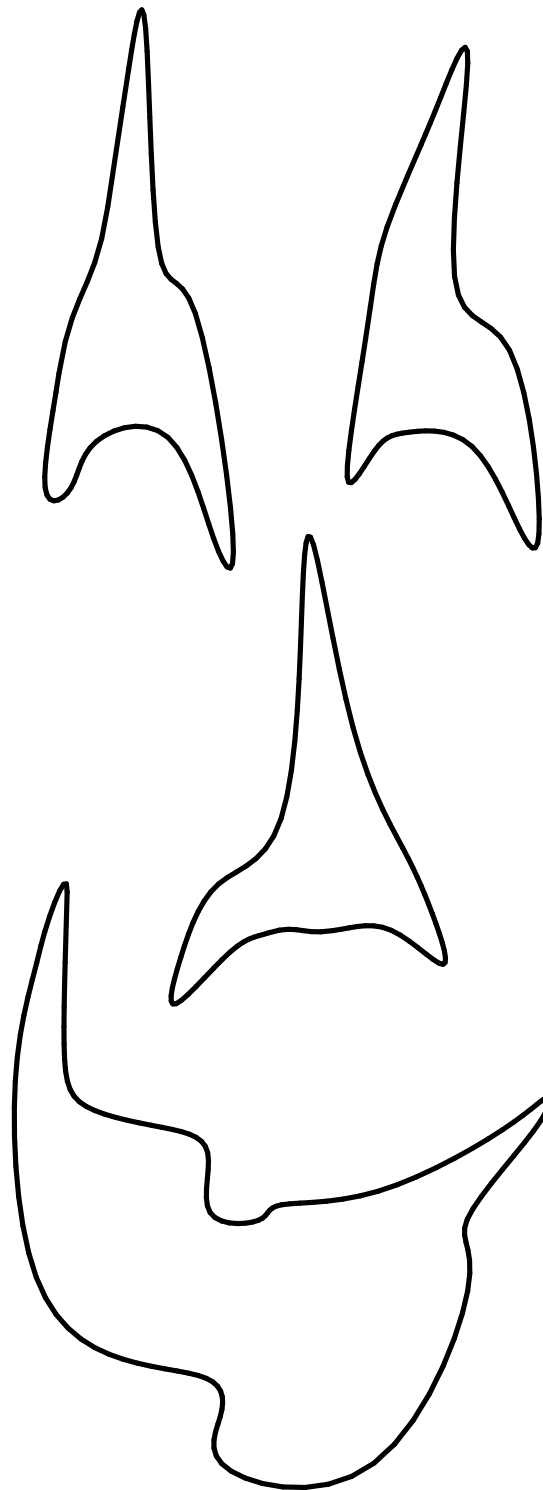
Patterns & Templates

Print

This face is to fit on the medium jack-o'-lantern. The baseline should measure out to be 4" long and it will align with the bottom of the medium face board. Printing this face to the correct size will require scaling the pattern up to 123%. The pattern can be enlarged by placing this page in a copier and scaling it to 123%, or you can print this document directly and adjust your printer settings. It will need to be printed on a larger, formatted sheet of paper such as an 11" x 17" tabloid/ledger.

Scale factor may vary on printers. Measure the baseline to make sure it is the proper size. Baseline should measure 4".
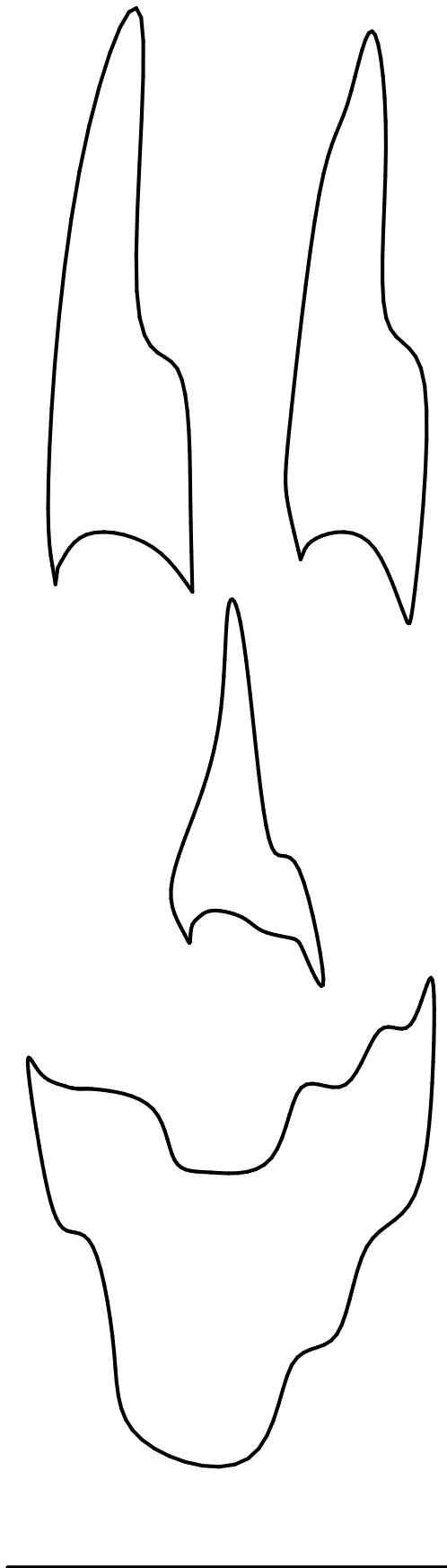
Patterns & Templates

Print

This face is to fit on the tall jack-o'-lantern. The baseline should measure out to be 4" long and it will align with the bottom of the tall face board. Printing this face to the correct size will require scaling the pattern up to 154%. The pattern can be enlarged by placing this page in a copier and scaling it to 154%, or you can print this document directly and adjust your printer settings. It will need to be printed on a larger, formatted sheet of paper such as an 11" x 17" tabloid/ledger.

Scale factor may vary on printers. Measure the baseline to make sure it is the proper size. Baseline should measure 4".
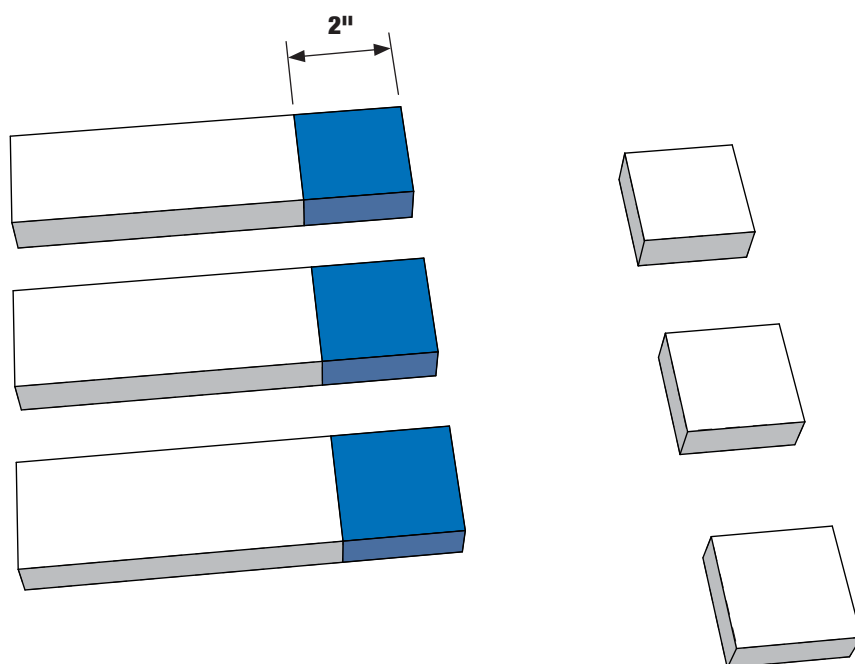
Assembly Instructions

Step 1

Cut out all material using the Lumber & Sheet Cut Layout Guide.
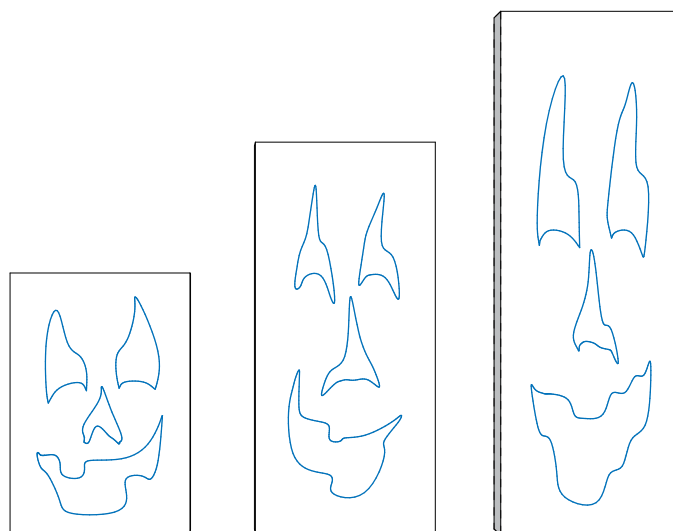

Step 2

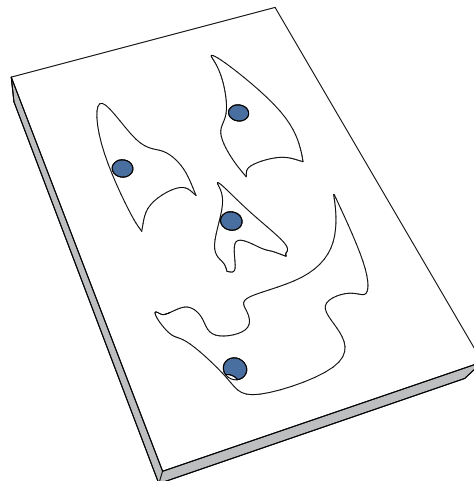Use the Miter Saw to cut the (3) stem pieces down to a 2" x 2" square.

Step 3

Using the scaled patterns as a template, either cut the face out with scissors and trace the pieces onto the face boards or use a sharp object to poke small holes through pattern then connect the dots.

Either way, align the templates to the bottom edge of the correct face boards and center them.

Step 4

Drill a 3/8" hole on the inside edge of the eyes, nose, and mouth of each face.
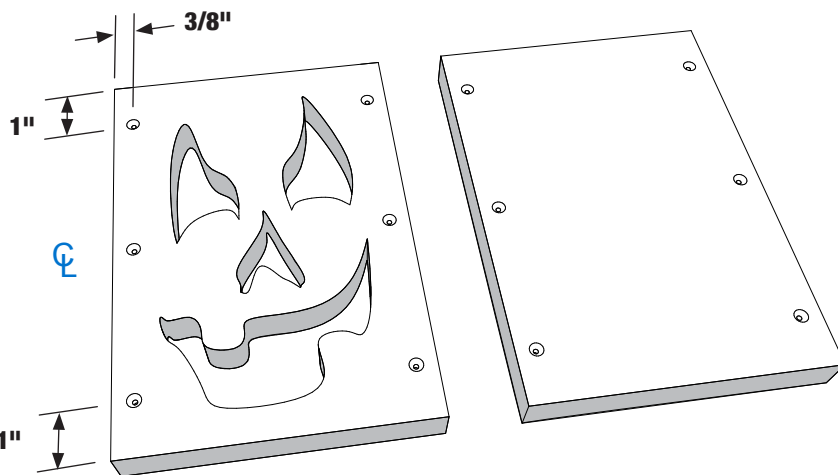

Step 5

Use the Jigsaw to cut out the faces on each board.

Use the Rotary Tool to add a more dramatic look to the features of the face. Be creative!

Step 6

Drill (6) countersink holes on each of the face and back boards. First, measure 1" from the top and bottom and at the midpoint of each board. Drill countersink holes 3/8" from each side.
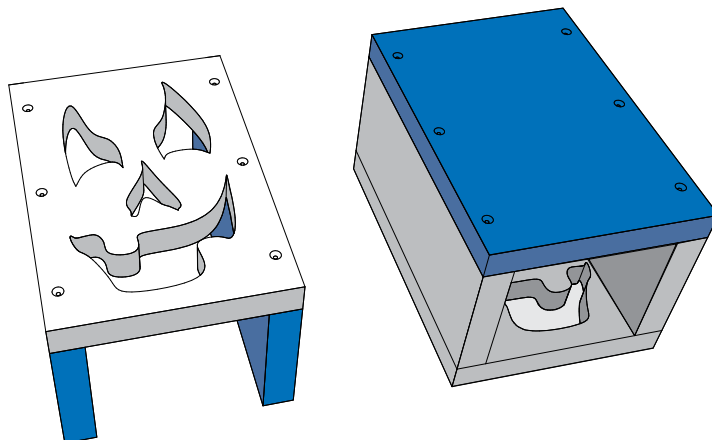

3/8"

1"

1"

Step 7

Attach each appropriate sideboard to each face and back boards. Apply a thin layer of glue to the edge of the side panel and align both parts. Then use #6 x 1-1/4" screws to fasten the pieces.
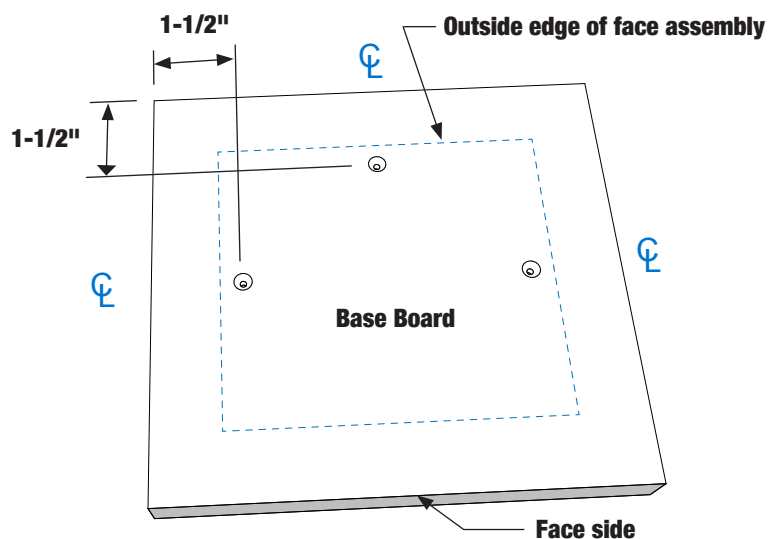
Do this for each jack-o'-lantern.

Make sure to clean up any excess glue before it dries.

Step 8

Take a base board and find the center line on (3) of the sides. Then measure 1-1/2" inward and make a mark.
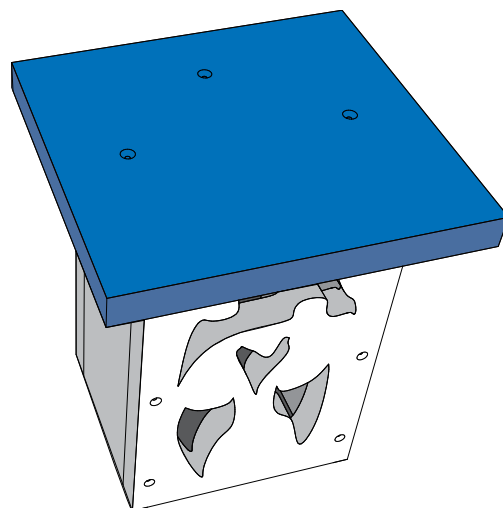
Drill countersink holes at those locations.

1-1/2"

1-1/2"

Outside edge of face assembly

$\mathcal{C}_L$

$\mathcal{C}_L$

$\mathcal{C}_L$

Base Board

Face side

Step 9

Add a thin layer of glue to the bottom edges of the face assembly. Align the base board to the assembly. There should be a 1-1/8" overlay on all (4) sides. Make sure the countersink holes are at the back and sides of the assembly.

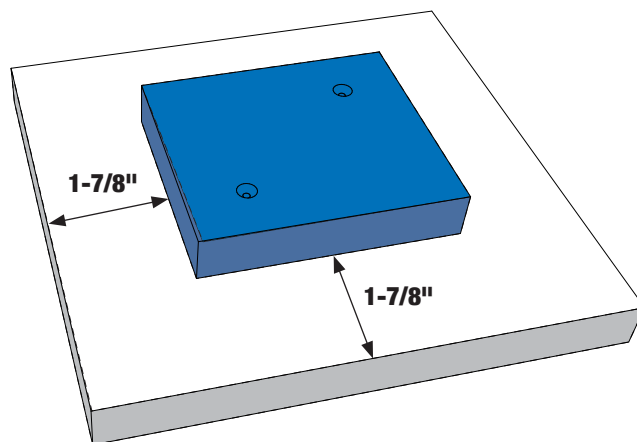Attach using #6 x 1-1/4" wood screws.

Step 10

Check to make sure the 4" x 4" inner lid pieces fit. They should be just loose enough to slide into the face assembly.

Add (2) countersink holes to the bottom (the placement is not critical, just keep them at least 1" from the sides).
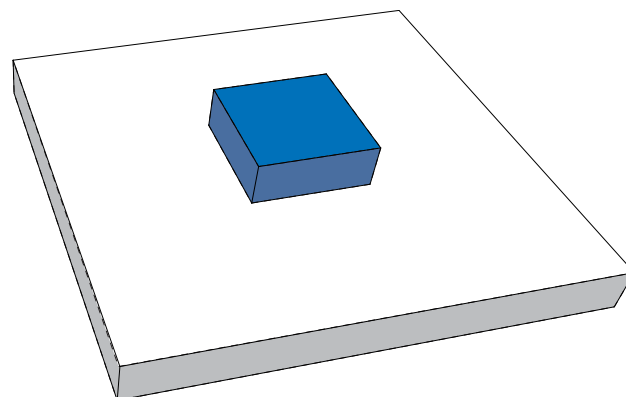
Center the lid on the lid board. Spacing should be 1-7/8" on all (4) sides.

Glue and attach with screws.

1-7/8"

1-7/8"

Step 11

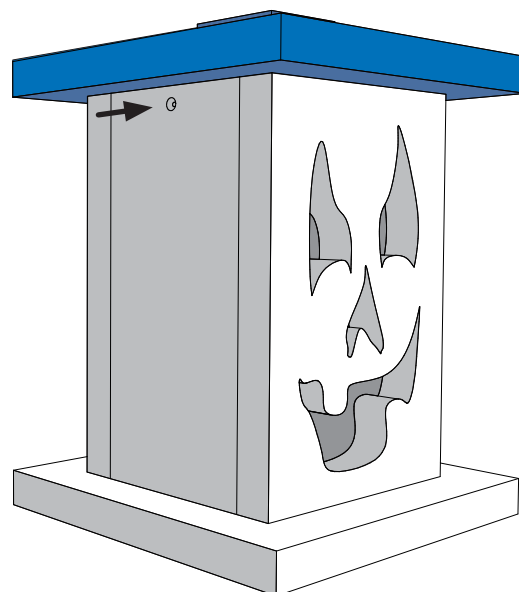Turn the lid over and find the center. Glue the stem to the top.

Step 12

Measure down 3/8" on each side panel and drill (1) countersink hole.

Place the lid on top. Align and set it into place.

Add wood screws to each side to secure the lid. Screws can be backed out to get inside.

Step 13

Sand and finish to your desire.

Tealight candles can be installed through the mouth or by opening the lid.

Project complete!

Rougher finis – Use 60-80 grit sandpaper to hand sand with the grain of the wood.

Smoother finis – Use 60-80 grit sandpaper to remove scratches & imperfections.
Followed by using 120-220 grit to smooth.

Finish Sanding – Use 320-400 grit sandpaper

Super fine sandin – Use 600+ grit sandpaper