

1:12 SCALE BACKYARD GARDEN TOOL SHED

Workshop Practice Project • Tool Calibration & Joinery Manual • 6" × 8" Structure

CUT FROM A SINGLE 2' × 4' SHEET OF 1/4" PLYWOOD • INCLUDES 32" × 24" CALIBRATION SCRAP

PRACTICE SPECIFICATIONS	SCALE & GEOMETRY	STOCK TAKE-OFF	TRAINING VALUE
• Type: Garden Tool / Potting Shed • Width: 8.00" (8 inches) • Depth: 6.00" (6 inches) • Eave Height: 6.50" (6-1/2 inches) • Peak Height: 9.50" (9-1/2 inches) • Pitch: 45.0° (12/12 standard pitch)	• Scale: 1:12 (1" = 1'0" Real Life) • Real-Life Size: 8'0" W × 6'0" D × 9'6" H • Doorway: 2-1/2" W × 5-1/2" H • Window: 2" × 2" Potting Window • Bench: 7-3/4" × 2" Sliding Shelf • Overhangs: 1/2" Rafter Eaves	• Sheet Size: ONE (1) 2' × 4' (24" × 48") • Thickness: 1/4" (0.250") Plywood • Shed Area: 16" × 24" (Takes 1/3 of sheet) • Test Scrap: 32" × 24" (2/3 of sheet!) • Joinery: 1/8" Dados & 1/4" Rabbits • Assembly: PVA Wood Glue & Clamps	• Zero Risk: Low-stakes throwaway build • Calibration: Dial in 1/8" blade height • Dado Fit: Practice two-pass 1/4" channels • Rabbeting: Master sacrificial sub-fences • Companion Model: Sits on lawn plinth! • Readiness: 100% prepared for dollhouse

1. Executive Dimensions & 2' × 4' Sheet Stock Breakdown

This project is mathematically scaled to represent an authentic 8 ft × 6 ft backyard tool shed at 1:12 scale. All shed components are nested into a **16" × 24" section** of your 2' × 4' sheet, leaving the remaining **32" × 24" section** as an enormous calibration board for risk-free test cuts.

Feature	Decimal	Ruler Fraction	1:12 Real Scale	Engineering & Shop Purpose
Overall Shed Width	8.000"	8"	8 ft 0 in	Front Wall S3 and Floor Deck S1
Overall Shed Depth	6.000"	6"	6 ft 0 in	Gable Walls S2-A & S2-B depth
Wall Eave Height	6.500"	6-1/2"	6 ft 6 in	Baseline to eave line on all 4 walls
Gable Peak Rise	3.000"	3"	3 ft 0 in	Rise above 6-1/2" eave line to ridge
Total Ridge Height	9.500"	9-1/2"	9 ft 6 in	Baseline to apex (6.50" eave + 3.00" rise)
Roof Pitch Angle	45.000°	45°	12 / 12 Pitch	arctan(3.00" rise / 3.00" run) = 45.0°
Rafter Slope Run	4.243"	4-1/4"	4 ft 3 in	True slope length across rafters
Roof Slope Panels (2)	9.00" × 4.75"	9" × 4-3/4"	9 ft × 4 ft 9 in	Includes 1/2" eave and side overhangs
Shed Door Opening	2.50" × 5.50"	2-1/2" × 5-1/2"	2 ft 6 in × 5 ft 6 in	Flush with floor; left side of front wall
Shed Window Opening	2.00" × 2.00"	2" × 2"	2 ft 0 in × 2 ft 0 in	Centered on right half of front wall
Potting Bench / Shelf	7.75" × 2.00"	7-3/4" × 2"	7 ft 9 in × 2 ft 0 in	Slides into 1/8" wall dados at Y = 2-1/2"
Dado & Groove Depth	0.125"	1/8"	1.5 in	Leaves 1/8" core in 1/4" plywood
Corner Rabbet Width	0.250"	1/4"	3.0 in	Conceals raw front plywood edges

2' × 4' Plywood Sheet Cut Allocation:

Sheet Section	Dimensions	Components Included	Workshop Purpose
Section A (Shed Parts)	16" × 24" (16.00" × 24.00")	S1 (Floor Deck), S2-A & S2-B (Gables), S3 (Front), S4 (Shelf), S5-A & S5-B (Roof)	Contains 100% of all finished shed components.
Section B (Test Scrap)	32" × 24" (32.00" × 24.00")	Large untouched test-cut reservoir	Used for the 4 pre-flight calibration drills below.

2. The 4 Pre-Flight Machine Calibration Drills

The Golden Rule of Miniature Joinery: NEVER cut your project panels until your scrap test joints slide together smoothly and stand square on their own! Cut a 6" × 12" board from Section B and perform these 4 calibration drills:

Drill # & Name	Tooling Setup	Execution Procedure	Pass/Fail Acceptance Criteria
Drill 1: Dial in 1/8" (0.125") Blade Depth	Table Saw or Router Table. 1/8" brass setup gauge or steel ruler.	1. Unplug tool. Set blade/bit height to 1/8" above table surface. 2. Lock arbor/collet. Run 4" test cut across scrap board.	PASS: Leaves exactly 1/8" core plywood thickness below groove. FAIL: If >1/8", weakens panel; if <1/8", panel bottoms out.
Drill 2: Two-Pass 1/4" (0.250") Dado Width	Table saw with standard 1/8" blade (or 1/4" spiral router bit).	1. Pass 1: Cut test groove at Fence = F. 2. Pass 2: Nudge fence over by ~1/8" (blade kerf). 3. Test-fit offcut of actual 1/4" plywood into groove.	PASS (Thumb Pressure Rule): Panel slides in smoothly with light thumb pressure and stands upright on its own at 90° without wobbling or falling!
Drill 3: 1/4" W × 1/8" D Edge Rabbet	Auxiliary 3/4" sacrificial wooden fence clamped to rip fence.	1. Set blade height to 1/8". 2. Slide fence over until blade teeth bury slightly into wood, leaving exactly 1/4" exposed. 3. Feed scrap with push block.	PASS: Yields crisp, flat 1/4" W × 1/8" D shoulder in a single pass. Conceals raw front plywood edges completely!
Drill 4: Window / Door Plunge Cuts	Cordless drill with 3/8" brad point bit + scroll saw / jigsaw.	1. Mark opening with sharp 0.5mm pencil. 2. Drill pilot holes inside two diagonal waste corners. 3. Cut 1/16" inside line; file flat to pencil line.	PASS: Clean, square 90° inside corners with zero tearout on face veneer.

3. Workshop Blueprint: 1:12 Scale Backyard Garden Tool Shed (6" x 8")

Full architectural cut sheet and machining details for Parts S1 through S5, including calibration drills.

PRACTICE PROJECT

1:12 Scale Garden Tool Shed (6" × 8") — Test Cut & Joinery Practice Blueprint

Practice 1/8" Dados, 1/4" Edge Rabbits, 45° Gables & Jigsaw Openings on 2' × 4' Plywood (Zero-Risk Training)

PART S1: SHED FLOOR DECK (8" × 6") **PART S2: GABLE SIDE WALL (6" × 9-1/2")** **PART S3: FRONT WALL & CUTOUTS (8" × 6-1/2")**

S1: Floor Deck Details

- Overall Dimensions: 8.00" (8") Width × 6.00" (6") Height
- Center Line: X = 4"
- End Features: 1/4" End Rabbit

S2: Gable Side Wall Details

- Overall Dimensions: 6.00" Width × 9.50" (9-1/2") Height
- Gable Peak: 45° Pitch
- Shelf Dado: Y = 2-1/2"
- Vertical Joint: Vertical 1/4" Rabbit

S3: Front Wall & Cutouts Details

- Overall Dimensions: 8.00" Width × 6-1/2" Height
- Door Opening: 2-1/2" × 5-1/2"
- Window Opening: 2" × 2"
- Note: Practice Plunge & Scroll Saw Cuts

TOOL CALIBRATION DRILLS (WORKBENCH SCRAP)

DRILL 1: DIAL IN 1/8" (0.125") BLADE DEPTH

- Raise saw blade / router bit to approximately 1/8".
- Cut a 4" test groove across scrap.
- Check with depth gauge or ruler: must be dead-on 1/8"!
- Rule: Leaves exactly 1/8" of core plywood remaining.

DRILL 2: TWO-PASS 1/4" (0.250") DADO WIDTH

- Make Pass 1 at Fence = F.
- Nudge fence by blade kerf (Pass 2).
- Test-fit offcut of actual 1/4" plywood:
- > It must slide with light thumb pressure and stand upright on its own without wobbling or binding!

DRILL 3: 1/4" EDGE RABBET WITH SACRIFICIAL FENCE

- Clamp scrap board to table saw rip fence.
- Bury 1/8" blade 1/8" deep into wood, leaving 1/4" exposed.
- Run edge against fence using push block in single pass.
- Yields perfect 1/4" W × 1/8" D corner shoulder!

DRILL 4: WINDOW/DOOR PLUNGE & CLEAN CORNERS

- Drill 3/8" pilot holes inside waste corners.
- Cut with jigsaw / scroll saw 1/16" inside line.
- File/sand clean to pencil line for razor-sharp 90° corners.

PRACTICE SHED SHOP INSTRUCTIONS (CUT FROM A SINGLE 2' × 4' PLYWOOD SHEET):

- Stock Take-Off:** All shed parts take only 16" × 24" of your 2' × 4' panel. You have a massive 32" × 24" area left for zero-risk test cuts!
- Master Test Rule:** NEVER cut main house pieces until your scrap test joints slide together smoothly and stand square on their own!

4. Itemized Component Cut List & 6-Phase Construction Order

Complete component schedule and step-by-step assembly sequence for the garden tool shed. All parts cut from Section A (16" × 24") of your 2' × 4' panel.

Part ID	Part Name	Qty	Ruler Dimensions	Decimal	Machining Operations & Practice Notes
S1	Floor Deck	1	8" Wide × 6" Deep	8.00" × 6.00"	Route 1/4" W × 1/8" D end rabbets on left/right ends; test dado at center (X=4")
S2-A	Left Gable Wall	1	6" Wide × 9-1/2" Height	6.00" × 9.50"	6-1/2" eave + 3" peak (45° pitch); 1/4" front corner rabbet; bottom deck dado (Y=0); shelf dado (Y=2-1/2")
S2-B	Right Gable Wall	1	6" Wide × 9-1/2" Height	6.00" × 9.50"	Mirror of S2-A; shelf dado at Y = 2-1/2"
S3	Front Wall	1	8" Wide × 6-1/2" Height	8.00" × 6.50"	Pierced cutouts for Shed Door (2-1/2" W × 5-1/2" H) and Window (2" × 2")
S4	Potting Bench / Shelf	1	7-3/4" Wide × 2" Deep	7.75" × 2.00"	Interior workbench; slides into 1/8" dados on gable walls at Y = 2-1/2"
S5-A	Front Roof Slope	1	9" Wide × 4-3/4" Slope	9.00" × 4.75"	45° slope; provides 1/2" overhang all around
S5-B	Rear Roof Slope	1	9" Wide × 4-3/4" Slope	9.00" × 4.75"	Matching slope (solid roof or open back for interior access)

Master 6-Phase Build Flow:

Phase	Title	Step-by-Step Workshop Assembly Instructions
Phase 1	Blanks Breakdown	Cut 7 rectangular blanks on table saw. Mark 3" peak on gables S2-A/S2-B (eave at Y=6.5", peak at Y=9.5"); cut 45° angles cleanly.
Phase 2	Bench Dados & Rabbets	Cut 1/4" W × 1/8" D vertical corner rabbets on front edges of S2-A/B. Cut bottom deck dados (Y=0) and potting bench dados (Y=2-1/2"). Cut end rabbets on Floor Deck S1.
Phase 3	Door & Window Piercing	On Front Wall S3, mark 2-1/2" × 5-1/2" door and 2" × 2" window. Drill pilot holes, cut out with scroll saw / jigsaw, and sand edges square.
Phase 4	Carcass Assembly	Dry-fit S1, S2-A, S2-B, and S3. Apply PVA wood glue into bottom dados and front corner rabbets. Clamp square (diagonal = 10.00").
Phase 5	Potting Bench Slide-In	Apply glue into side shelf dados at Y = 2-1/2". Slide potting bench S4 in from open rear. It locks the two walls together with immense strength!
Phase 6	Roof Installation	Glue Roof Slopes S5-A and S5-B across gables with 1/2" overhangs. Optional: Frame door with rustic wood battens and miniature latch.