

The Art of Woodworking: Crafted with Geometry

Precision • Passion • Wood.

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AVD Woodworking!
16 April 2025



Woodworking

A skilled trade or hobby involving creating items from wood; encompasses various techniques and tools

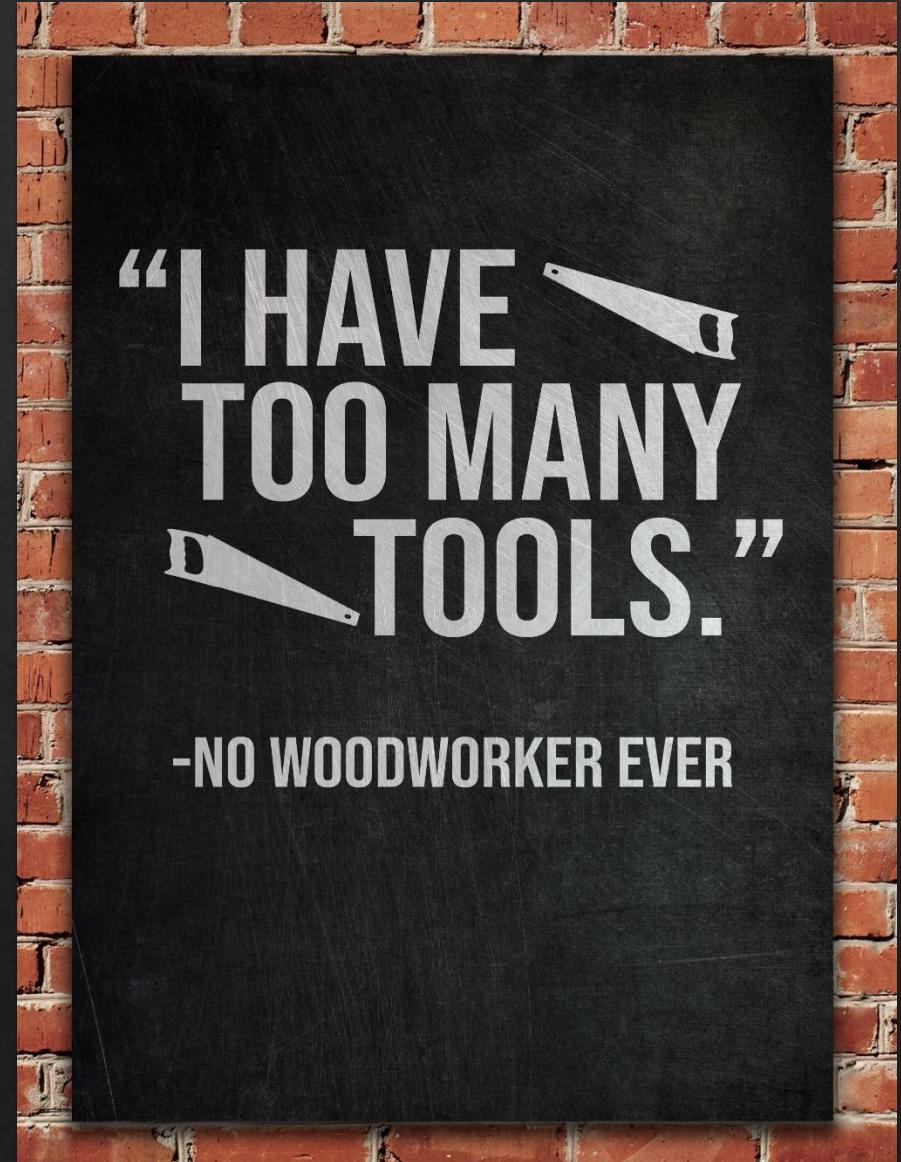
Just like most things in life, wood is a product of nature.



It's Woodworking Time



AVD Woodworking!



2025-04-18

The Alchemy of Woodworking

3. “Woodworking is a most satisfying pastime, so varied and multifaceted you will never complete the twin processes you have undertaken: acquiring tools and learning how to use them. You have begun a lifetime pursuit.”

- Michael Dunbar

2. “The best way to get started in woodworking is to buy good tools, and then never have to buy them again.”

- Red Green

1. “Being a creative person requires a lot of patience and perseverance.”

- Nick Offerman



My Woodworking Journey

I tried to replicate
a sofa-set at my
home in 2005.

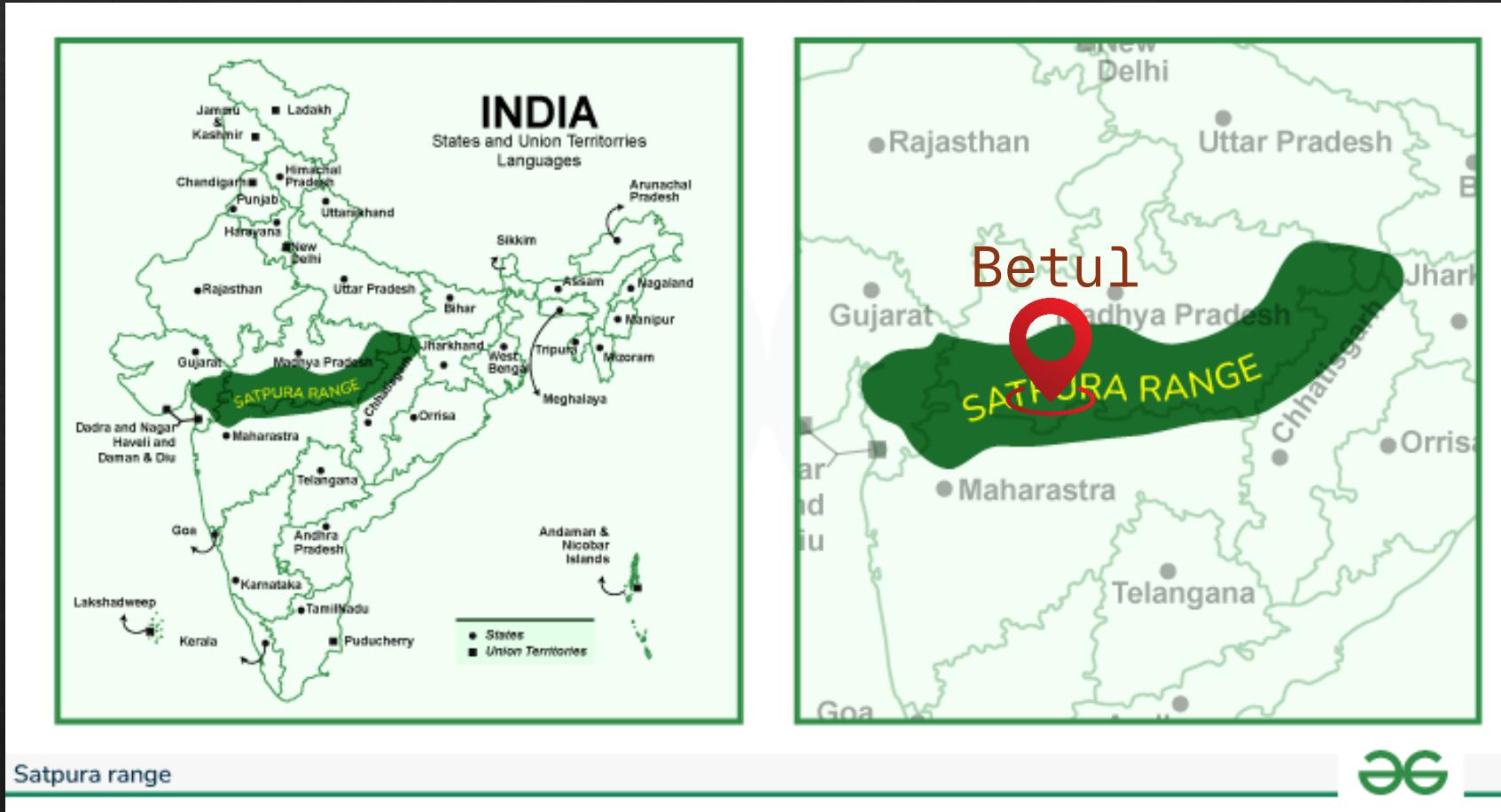
Material: Scrap wood
from a construction
site.

Tool: A **broken knife**
and hammer.



avd
WOOD
WORKING

My Woodworking Journey



सतपुड़ा के घने जंगल

■भवानीप्रसाद मिश्र

सतपुड़ा के घने जंगल।

नींद में डूबे हुए से
ऊँधते अनमने जंगल।

झाड़ ऊँचे और नीचे
चुप खड़े हैं आँख मींचे
घास चुप है कास चुप है
मूक शाल पलाश चुप है।

बन सके तो धँसो इनमें
धँस न पाती हवा जिनमें
सतपुड़ा के घने जंगल
ऊँधते अनमने जंगल।

...



Dominant Tree Species in Satpura Jungle

Teak (*Tectona grandis*): A predominant species, especially in the dry deciduous forests.

Sal (*Shorea robusta*): Found, particularly in the moist deciduous forests.

Mahua (*Madhuca indica*): Valuable for its flowers and fruits.

Bamboo (*Dendrocalamus strictus*): A common sight in many parts of the reserve.

Why Wood Speaks to Our Soul

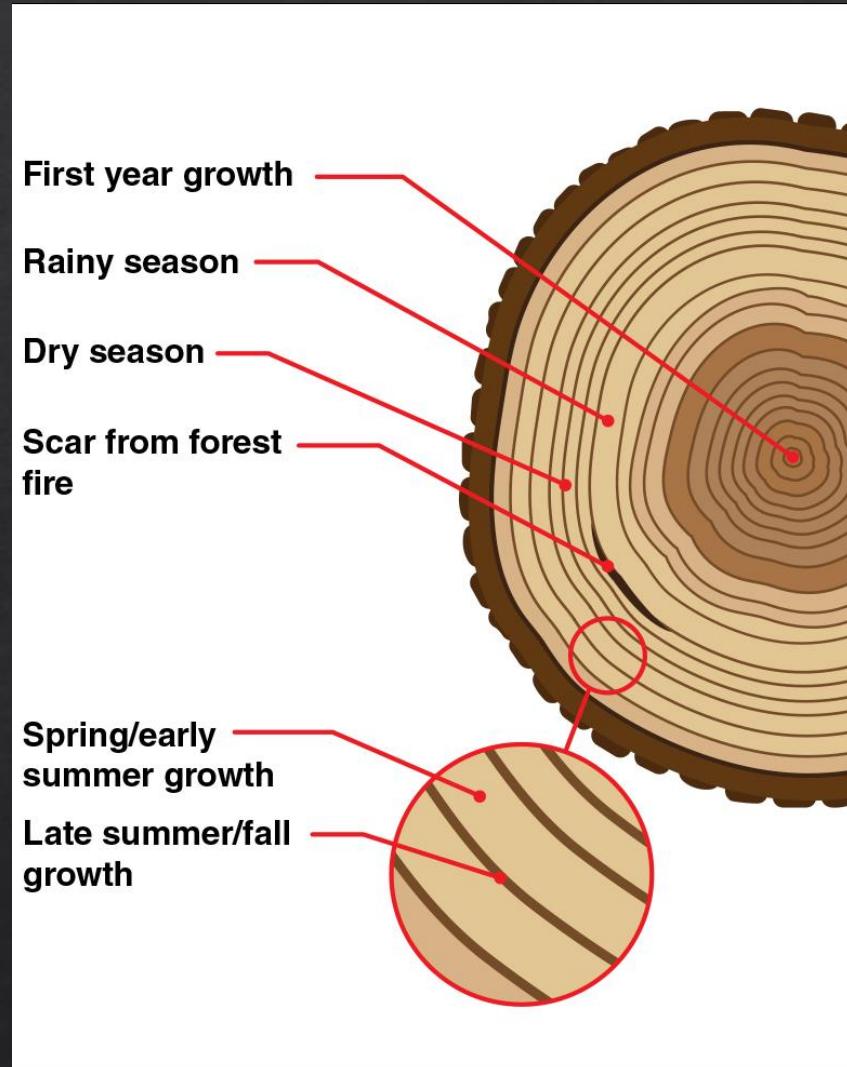
The Human-Wood Timeline:

- **Ancient Beginnings :** Woodworking in India dates back to the Indus Valley Civilization
- **Vedic Era Advancements :** During the Vedic period (1500-500 BCE), wooden chariots, weapons
- **Temple Architecture :** From the 3rd century BCE onward
- **Medieval Innovations :** Under various dynasties (Guptas, Cholas, Mughals), woodworking evolved with detailed craftsmanship.

Psychological Magic:

- Stress Reduction and Relaxation
- Creative flow boosts dopamine production
- Enhanced Self-Esteem and Accomplishment
- Mindfulness and Cognitive Engagement





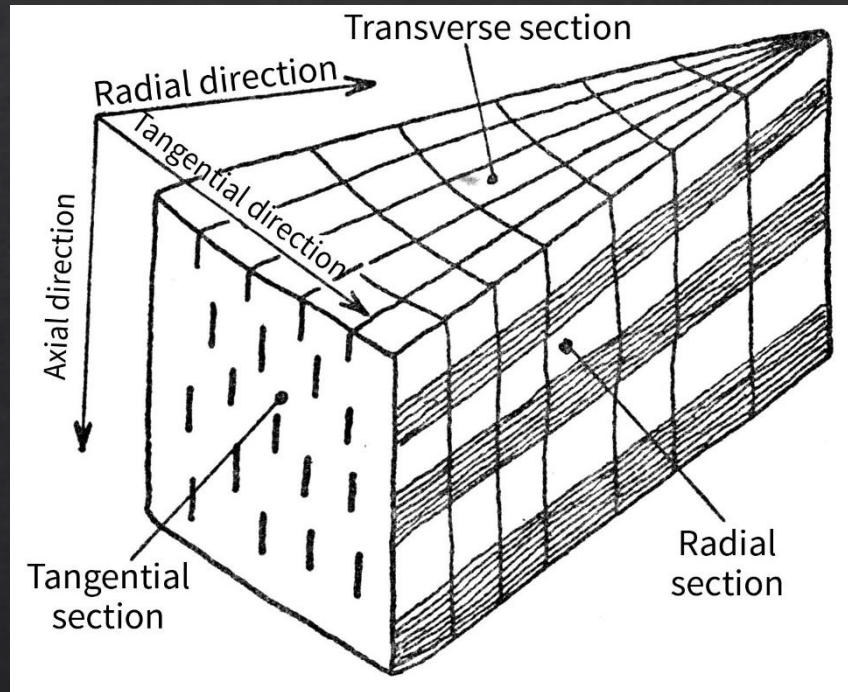
Understanding Wood Grain: The Basics

Wood grain refers to the orientation, alignment, and texture of cellulose fibers within wood. It is visible as patterns or lines on the surface, resulting from the tree's growth and structure.

Growth Rings: Formed annually, each ring has two parts:

- Earlywood (Springwood): Lighter, softer, rapid spring growth.
- Latewood (Summerwood): Darker, denser, slower summer growth.
- Alternating rings create the characteristic grain patterns.

Three Planes of Wood



Transverse: Cross-sectional view (visible growth rings).

Radial: Cut along the radius (straight lines from center to bark).

Tangential: Tangent to growth rings (cathedral patterns).

Hardwood vs. Softwood

Hardwood

- Dense and durable.
- Used for furniture, flooring, and musical instruments.

Examples:

- Teak: Strong and moisture-resistant.
- Sal: Light-colored, ideal for cutting boards.
- Babul: Rich reddish-brown, darkens with age, very dense.

Softwood

- Lighter and less dense.
- Used for framing, paneling, and outdoor projects.

Examples:

- Pine: Affordable and versatile.
- Cedar: Naturally aromatic and decay-resistant.
- Redwood: Resists insects and rot.



Introduction to Woodworking

Why Woodworking?

- A timeless craft that connects us with nature.
- Combines creativity, skill, and patience.
- Functional and beautiful results.

Tools to remove/cut
Hand saw
Chisels

Tools to add/join
Glue
Nails

Materials:
• Wood (various types)
• Glue
• Nails
• Finishes (oil, varnish)

- Mass Production: Steam-powered machinery revolutionized woodworking.
- Handcrafted Revival: Resurgence of interest in handcrafted artistry.



Woodworking Basics

Essential Techniques

Measuring and Marking: Precision is key.

Cutting: Use saws carefully for clean cuts.

Joinery: Techniques like dovetail and mortise-and-tenon.

Sanding: Smooth surfaces for a professional finish.

Finishing: Apply oils or varnishes to protect and enhance.

Safety Tips

- Keep tools sharp and well-maintained.
- Work in a well-ventilated area.
- Focus on one task at a time.
- Pay attention to the edge of your tool



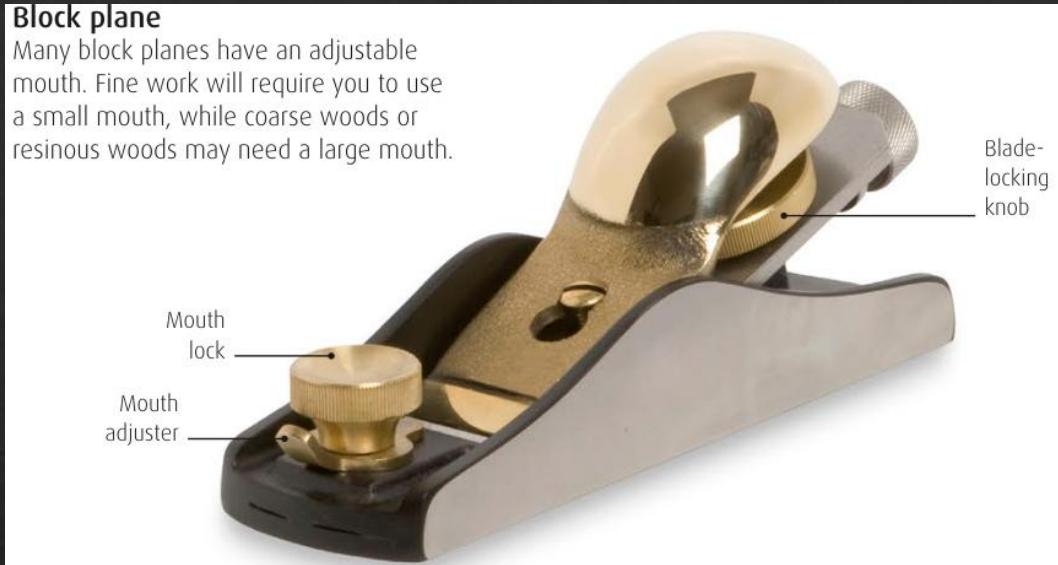
Essential Tools for woodworking: Saws

Saw blades have serrated edges called “teeth,” which are bent at an angle and set to alternate sides.



Block plane

Many block planes have an adjustable mouth. Fine work will require you to use a small mouth, while coarse woods or resinous woods may need a large mouth.



Essential Tools for woodworking: Planes



Planes are used to smooth, flatten, shape, or reduce the thickness of wood.

The thickness of the shaving can be controlled by adjusting the position of the blade within the body.

Essential Tools for woodworking: **Chisels**

Chisels are probably the most important cutting tools used by woodworkers.

Comprised of a steel blade with one end sharpened and the other mounted in a handle, they can cut with, across, or along the grain, removing large amounts of wood or the thinnest of shavings.



BEVEL-EDGED CHISELS

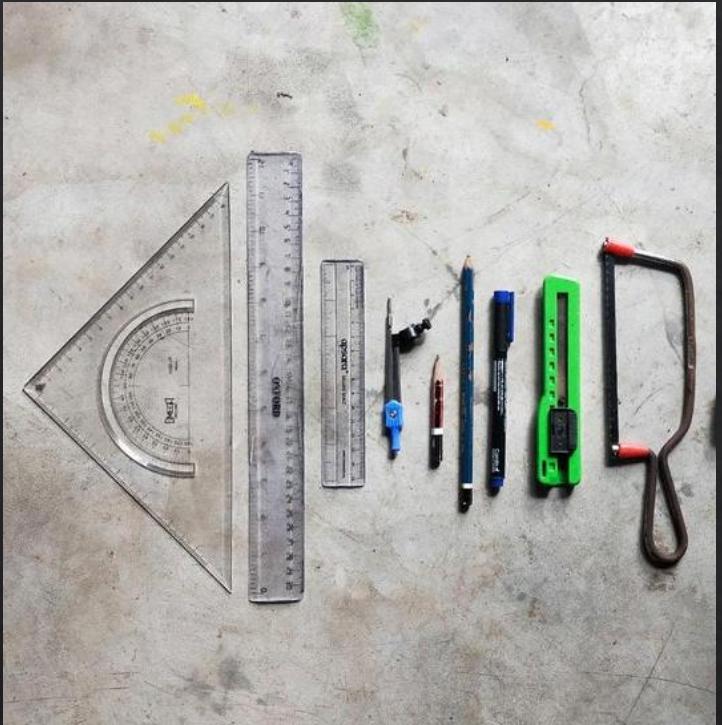
The most common of all chisels, bevel-edged chisels get their name from the bevels running down on both sides of the blade. The blades of these chisels taper toward the cutting edge, and the sides have a small surface area. This allows them to reach easily into corners and joints, unlike chisels with rectangular blades. For cutting, bevel-edged chisels can be pushed by hand or used with a mallet (p.35). Some are even strong enough to be struck with a hammer. The handles vary between manufacturers, giving you plenty of choices.

13 Types of Wood Joinery

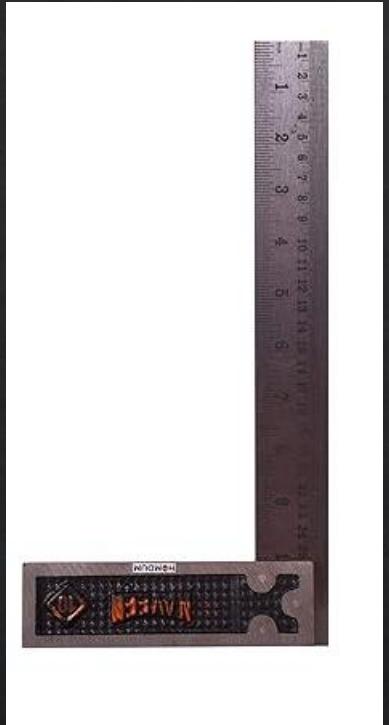


Marking Tools for Woodworking

Tools and Materials



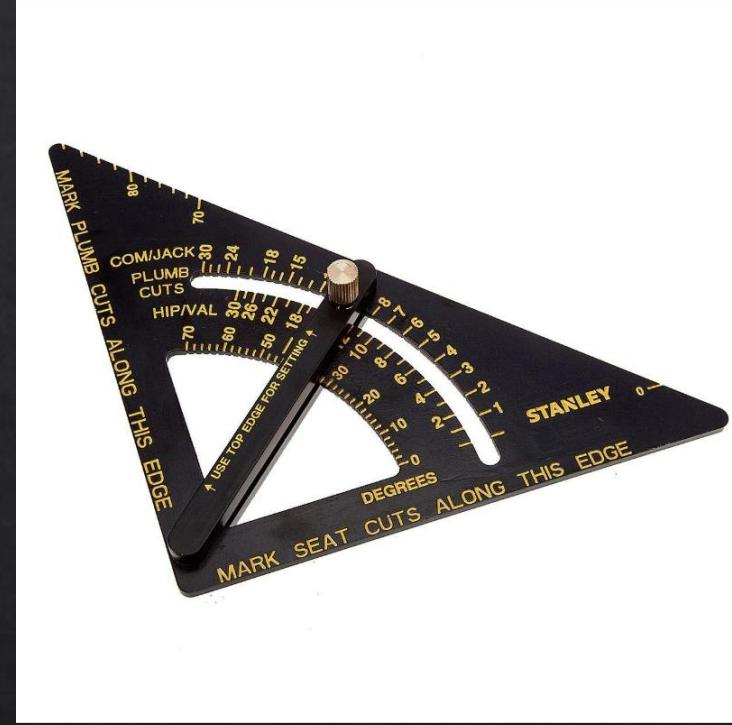
Try Square



Miter Square



Quick Square



Marking Tools for Woodworking

Double-check	Double-check measurements with the same tool to avoid errors from inconsistent devices.
Ensure	Ensure tools are square/aligned before cutting to guarantee precision in angles and lengths.
Mark	Mark clearly with a sharp pencil or knife line to guide accurate cuts.
Pause	Pause to confirm cuts match plans—rushing risks costly mistakes.



Sanding and Finishing



Sanding: Smooth rough surfaces using progressively finer grits (e.g., 80, 120, 220).

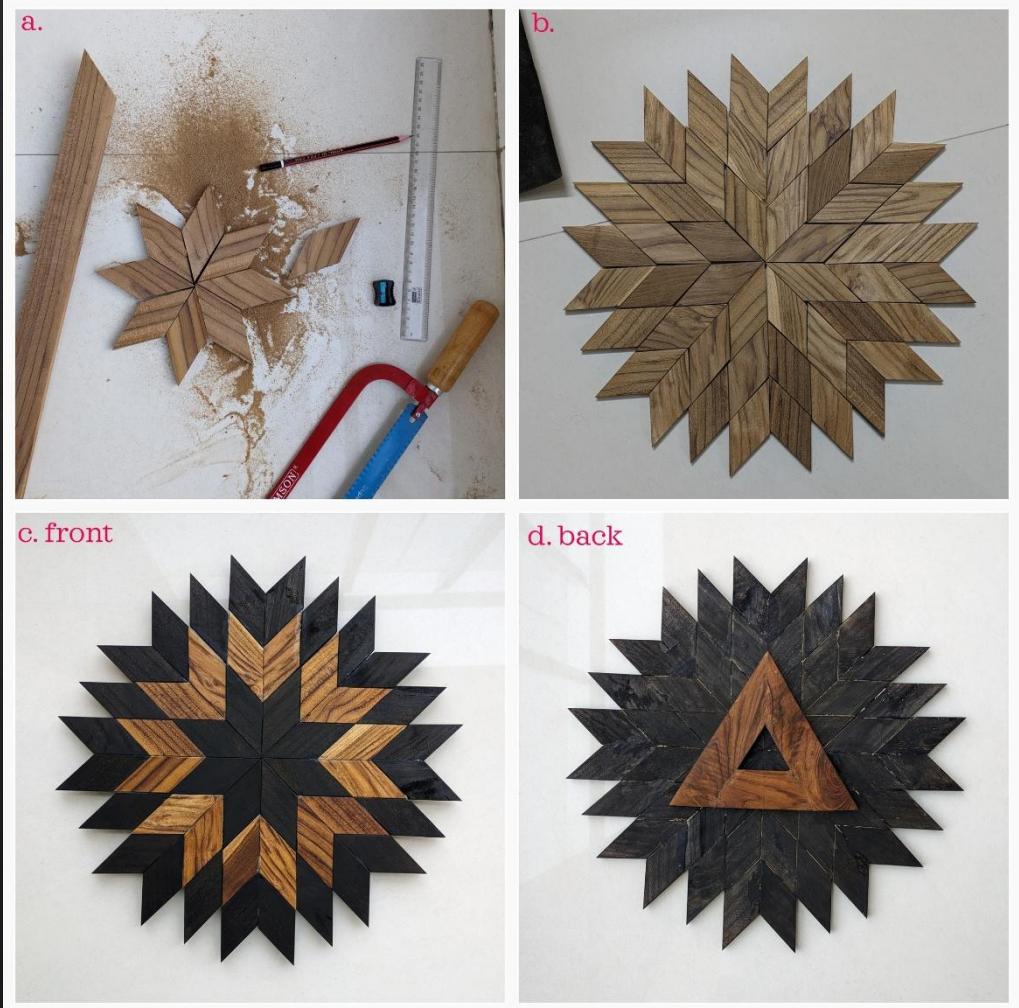
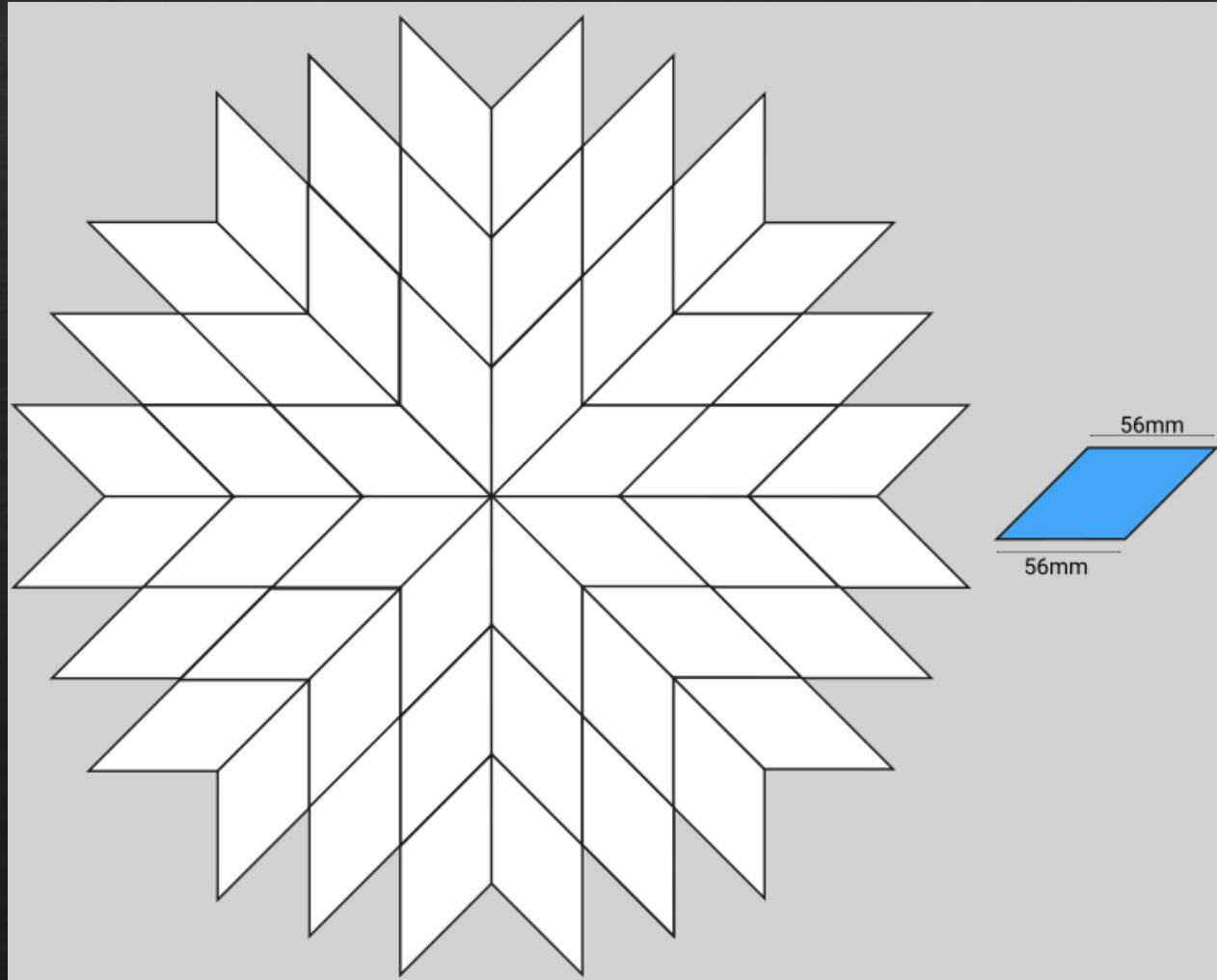


Finishing: Apply oils, varnishes, or stains to protect and enhance the wood's appearance.

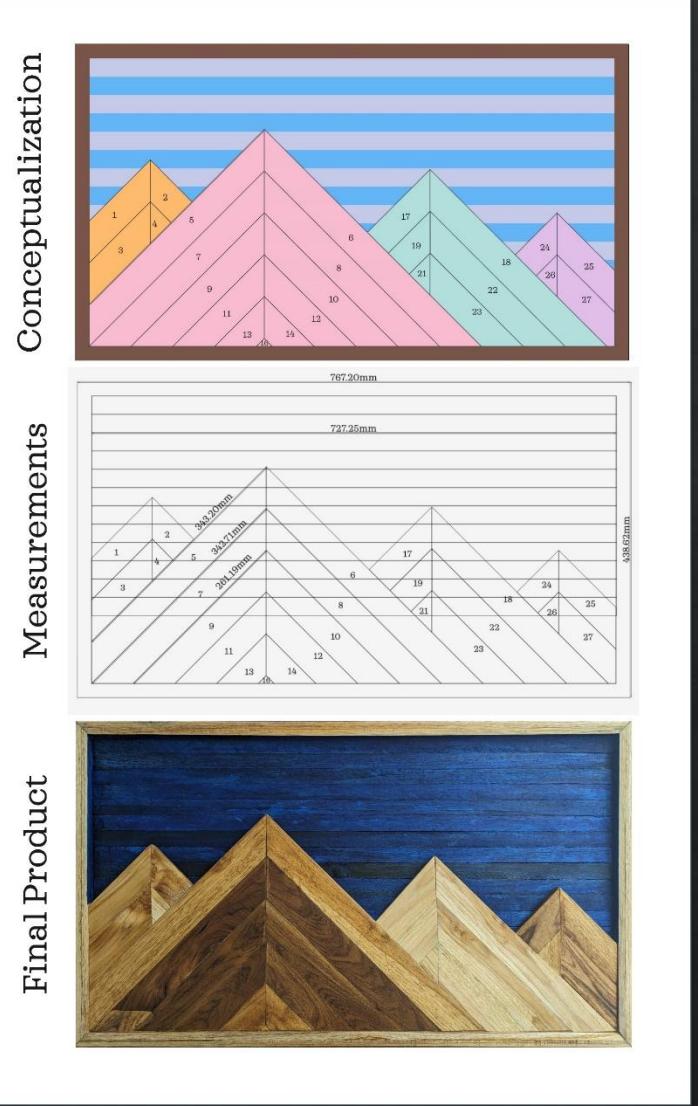


Tip: Always sand with the grain to avoid scratches.

Working with a Simple Design



Landscape artwork





Let's build something on the workshop



Let's build something on the workshop



Closing Remarks!

Thank you for joining today's workshop! I hope you enjoyed learning about woodworking and creating your own craft.

Share your creations online and tag me:

-  [YouTube](#)
-  [Instagram](#)

Remember: Woodworking is a journey. Keep practicing, and you'll create amazing things!

