



Foundations of Woods

Project Book 1-Chapter 3:
Carpentry Hand Tools

April 23, 2020



9-12 Foundations of Woods
Project Book 1-Chapter : [April 23, 2020]

Objective/Learning Target:

Students will learn about different carpentry hand tools and how to use them properly.

BASIC CARPENTRY HAND TOOLS

What You Now Know

- The importance of respecting a tool
- The importance of understanding how a tool is used

What You Will Know

- The role that hand tools play in carpentry
- How to identify common types of hand tools
- How to use common types of hand tools

INTRODUCTION TO HAND TOOLS

TYPES OF HAND TOOLS

- CUTTING TOOLS
- SHAPING TOOLS
- STRIKING TOOLS
- FASTENING TOOLS

DEVELOPING HAND-TOOL SKILLS

- PATIENCE, PRACTICE, AND DETERMINATION WILL ALLOW YOU TO ACQUIRE THE SKILLS YOU NEED TO USE TOOLS WITH THE EXPERTISE OF A PROFESSIONAL CARPENTER.
- HAND TOOLS REQUIRE SAFE AND PROPER HANDLING TO AVOID INJURY.

HAND SAW

- MOST COMMON TYPE IS THE CROSSCUT SAW
- TEETH ARE SHARP
- KEEP HANDS AND FINGERS AWAY FROM THE CUTTING PATH
- SECURE MATERIAL BEING CUT TO A BENCH OR PAIR OF SAW HORSES



UTILITY KNIFE

- METAL OR PLASTIC HANDLE WITH FIXED OR RETRACTABLE BLADE
- NEW BLADES ARE RAZOR SHARP
- CUT AWAY FROM YOURSELF
- KEEP BLADE COMPLETELY RETRACTED WHEN NOT IN USE
- STORE FIXED BLADE KNIVES PROPERLY

HAMMER AND CHISEL

- CHISELS ARE USED FOR CUTTING, TRIMMING, FITTING, AND SHAPING WOOD
- CONSISTS OF A HANDLE AND A BLADE, CALLED AN IRON
- BLADE IS A FLAT STEEL BAR WITH A 25° OR 30° BEVELED END
- MANY DIFFERENT TYPES
- SHARPENED END HELD AGAINST THE MATERIAL; OTHER END STRUCK WITH A HAMMER

HAMMER AND CHISEL CONTINUED

CHISEL SAFETY

- KEEP BOTH HANDS BEHIND THE CUTTING EDGE.
- KEEP THE CHISEL POINTED AWAY FROM THE BODY.
- SECURE THE WORK PIECE.
- USE ONE HAND TO HOLD AND GUIDE THE CHISEL.
- USE THE OTHER HAND TO STRIKE THE HANDLE WITH A HAMMER.
- ALWAYS HIT THE CHISEL SQUARELY ON THE END OF THE HANDLE.
- NEVER PLACE A CHISEL IN PANTS POCKETS.
- PROTECT THE CUTTING EDGE OF THE BLADE WHEN NOT IN USE.

CLAW HAMMER

- TWO PARTS: HANDLE AND METAL HEAD
- HANDLE MADE OF WOOD, PLASTIC, FIBERGLASS, OR STEEL
- HEAD MADE OF DROP-FORGED TEMPERED STEEL OR TITANIUM
- HEAD HAS THREE PARTS- FACE, CHEEKS, AND CLAWS
- AVAILABLE IN A WIDE VARIETY OF SIZES AND WEIGHTS



NAIL SET

- STRIKING TOOL WITH A ROUND, TAPERED METAL SHAFT
- USUALLY 3 1/2" LONG
- USED TO DRIVE THE NAIL HEAD BELOW THE FINISHED SURFACE OF THE MATERIAL
- CUPPED TIP SHOULD BE SLIGHTLY SMALLER THAN THE HEAD OF THE NAIL OR BRAD
- HOLD NAIL SET DIRECTLY IN LINE WITH THE NAIL OR BRAD
- STRIKE LIGHTLY WITH A HAMMER
- DEPTH OF THE SET SHOULD BE ROUGHLY EQUAL TO THE DIAMETER OF THE NAIL



CLAMPS

USED TO POSITION AND SECURE MATERIALS SO THEY CAN BE SAFELY CUT OR SHAPED

C-CLAMP

- SHAPED LIKE THE LETTER C
- THREADED METAL SHAFT WITH A SHOE

BAR CLAMP

- LONG METAL BAR WITH ADJUSTABLE PLATES OR JAWS
- TIGHTENED WITH SCREW SHAFT OR A POWERFUL SPRING

SANDPAPER AND SANDING BLOCKS

- NATURAL OR ARTIFICIAL ABRASIVES APPLIED TO A PAPER OR CLOTH BACKING
- ABRASIVES ARE GRANULES OF HARD MATERIAL GRADED ACCORDING TO SIZE
- THE LARGER THE GRANULES, THE COARSER THE PAPER
- NATURAL ABRASIVES: GARNET AND FLINT
- ARTIFICIAL ABRASIVES: ALUMINUM OXIDE AND SILICONE CARBIDE

