



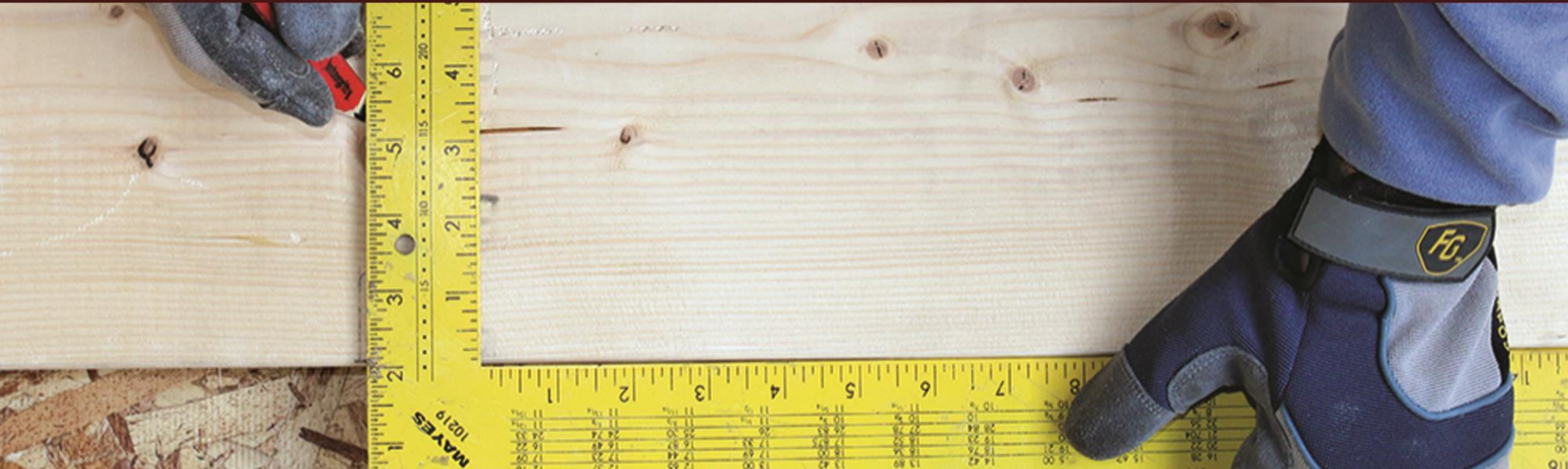
**Core**



# Module 00103

## Introduction to Hand Tools

## Core 00103 Introduction to Hand Tools



### 3.0.0 Other Common Hand Tools

# Objective

**Successful completion of this module prepares you to do the following:**

Identify and describe other hand tools common to shops and job sites.

- a. Differentiate between various handsaws and their designated applications.
- b. Identify common clamp designs.
- c. Explain how different files and utility knives are used with various materials.
- d. Describe shovels and picks and the tasks for which each one is best suited.

# Performance Task

**Under supervision, you should be able to do the following:**

1. Inspect and demonstrate the safe and proper use of the following hand tools:
  - Handsaws
  - Clamps
  - Files
  - Utility knives
  - Shovels

# Trade Terms

*Miter joints:* Joints made by fastening parts together with the ends cut at a similar angle, usually 90 degrees.

*Kerf:* A cut taken by a saw blade, with a width equal to that of the blade teeth.

*Emery cloth:* A material made with a thin cloth backing, coated with an abrasive that is tightly bonded to the backing; typically sold in sheets or narrow rolls.

*Tang:* Tapered, pointed end of a file designed for insertion into a file handle.

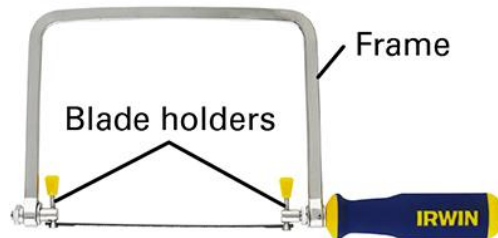
## 3.1.0 – Saws



(A) Backsaw



(B) Keyhole Saw



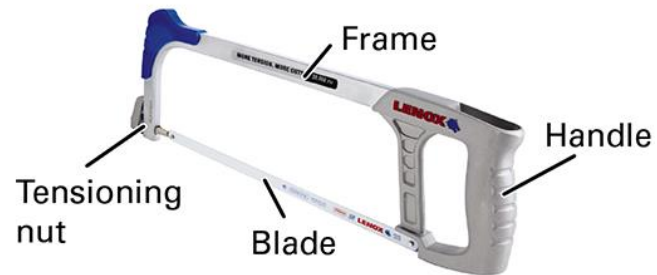
(C) Coping Saw



(D) Drywall Saw



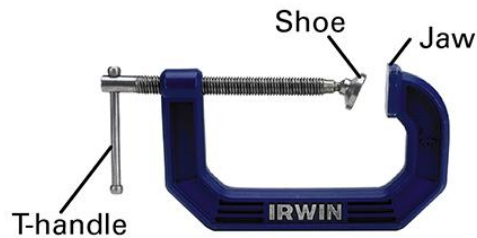
(E) Handsaw



(F) Hacksaw



## 3.2.0 – Clamps



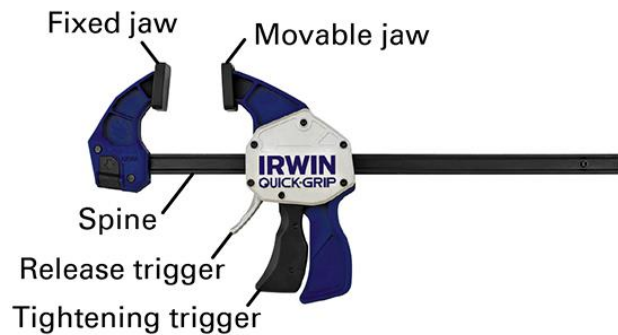
(A) C-Clamp



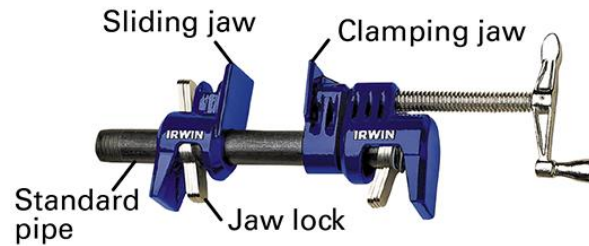
(B) Locking C-Clamp Pliers



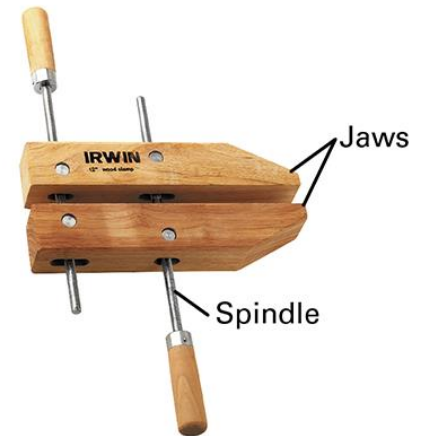
(C) Spring Clamp



(D) Bar Clamp



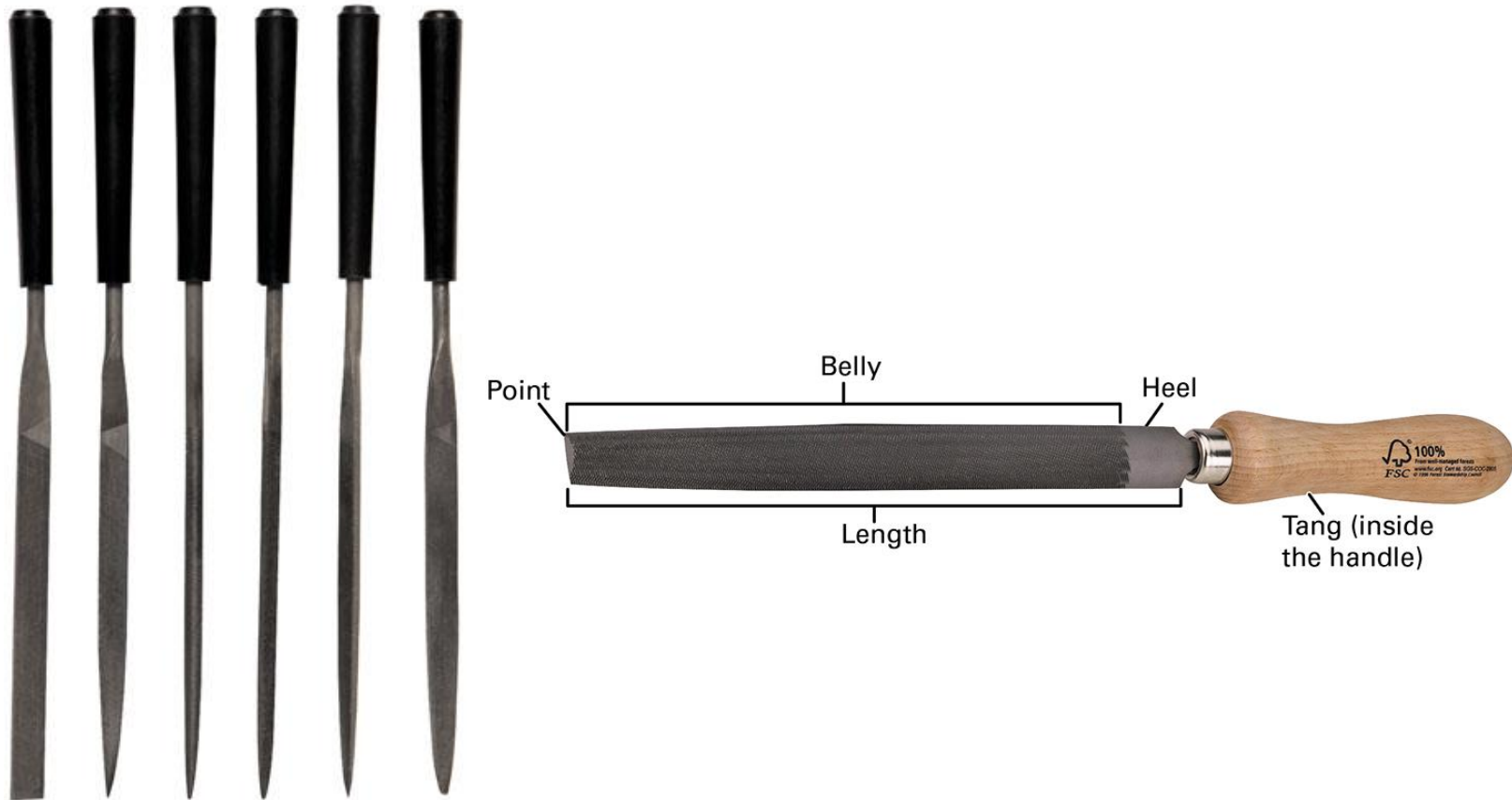
(E) Pipe Clamp



(F) Hand-Screw Clamp

### 3.3.1 – Files and Rasps (1 of 5)

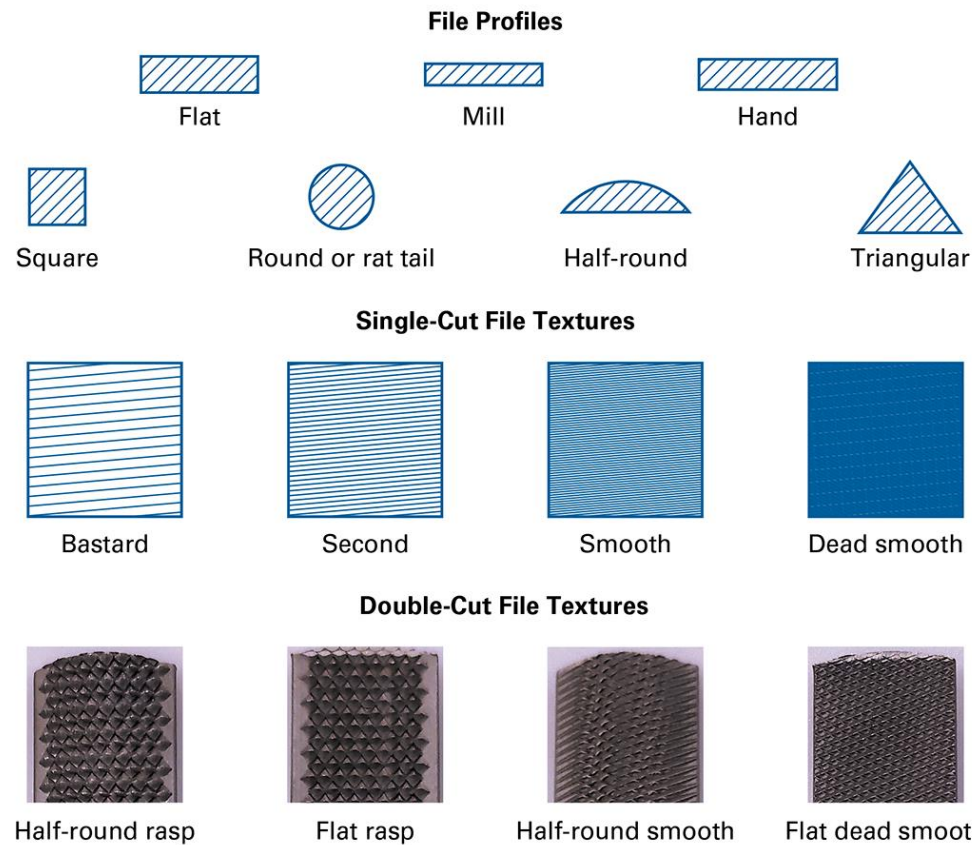
Files and rasps are used to cut, smooth, or shape metal and wood.





## 3.3.1 – Files and Rasps (2 of 5)

### File profiles and textures



### 3.3.1 – Files and Rasps (3 of 5)

Rasp-cut files work very poorly on metal and should be used on wood only. Rasps may also be made from a softer metal that is not hard enough for effective metal cutting.

### 3.3.1 – Files and Rasps (4 of 5)

Type	Description	Uses
Rasp-cut file	The teeth are individually cut; they are not connected to each other.	Leaves a very rough surface. Can be used on soft metal, but is primarily used on wood.
Single-cut file	Has a single set of straight-edged teeth running across the file at an angle.	Used to sharpen edges, such as rotary mower blades.

### 3.3.1 – Files and Rasps (5 of 5)

Type	Description	Uses
Double-cut file	Two sets of teeth crisscross each other. Types are bastard (roughest cut), second cut, and smooth.	Used for fast cutting and material removal.

### 3.3.2 – Utility Knives

Utility knives have a high rate of injury and can inflict significant damage on the body in an instant. Use them with great care. Self-retracting models may be required on the job site.



**(A) Self-Retracting Knife**



**(B) Folding Utility Knife**



**(C) Carpet Knife**

### 3.4.0 – Shovels and Picks (1 of 2)

Round shovels are best for digging fresh earth. Square shovels can hold a lot of material, but they do not dig well. They are best used for loose material collection, such as sand or gravel.



(A) Round

(B) Square



### 3.4.0 – Shovels and Picks (2 of 2)

A pick is a good choice to break up rocky soil, while the mattock is better for clearing tree roots.

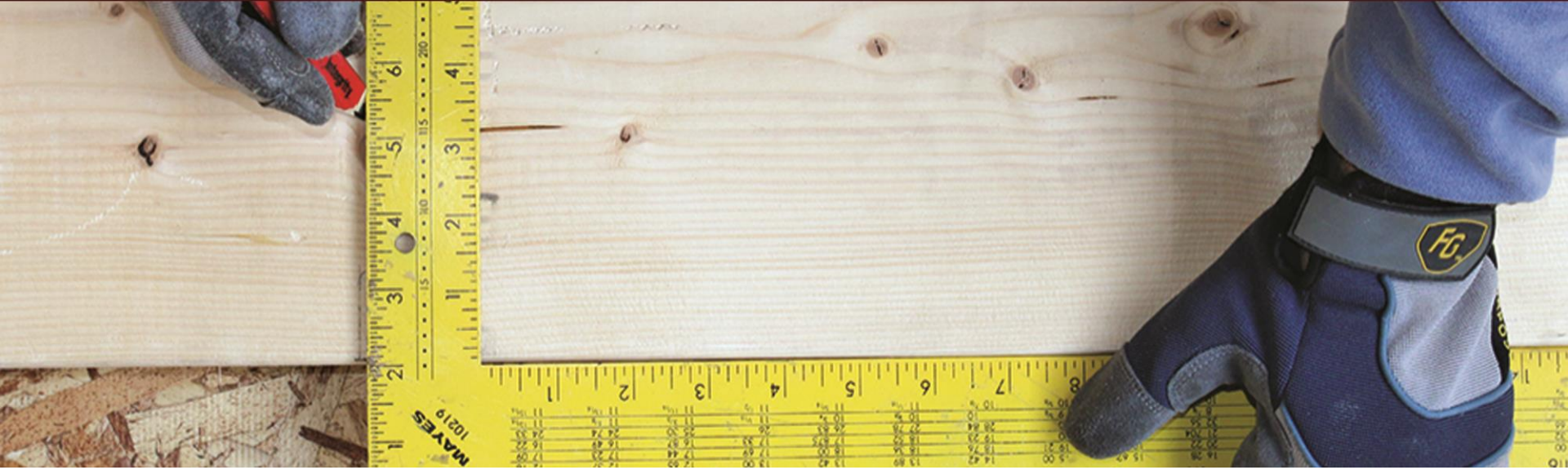


**(A) Pick**



**(B) Mattock**

## Core 00103 Introduction to Hand Tools



**Next...**

## **Module Review and Exam**

Review the complete module to prepare for the Module Exam. In addition, complete the Module Review.