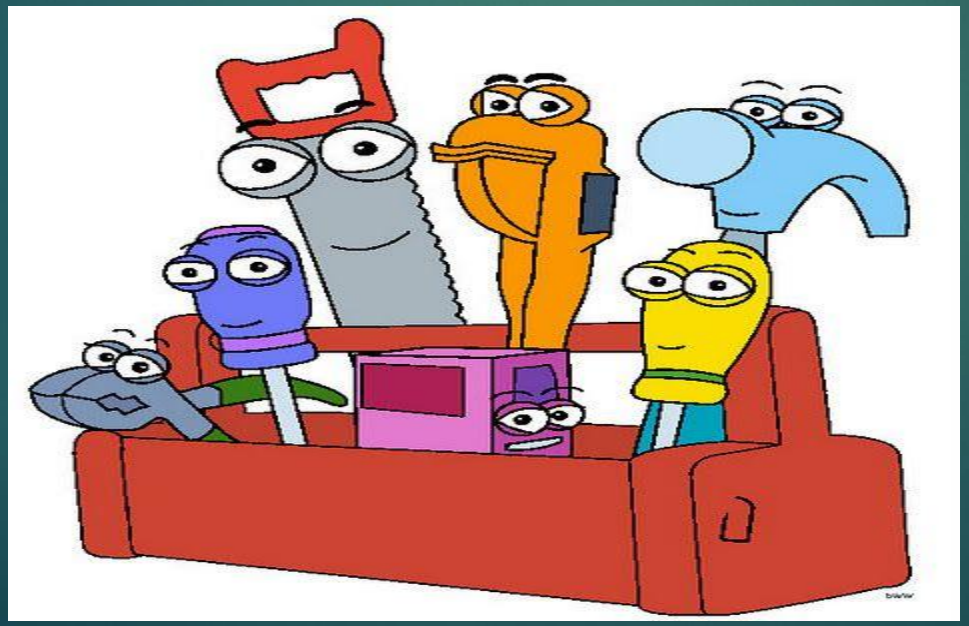
PROGRAMME: ICP
CENTRE: POINT FORTIN
COURSE: ELECTRICAL INSTALLATION LEVEL # 1
INSTRUCTOR: MASLYN VERNE MENDEZ



OBJECTIVES

At the end of this unit, the audience will be able to:

- State what is a hand tool.
- Identify the different types of hand tools.
- Describe the difference between hand and power tools.
- List the safety rules for using hand tools correctly.

HAND TOOL AND WELDING SAFETY VIDEO

https://www.youtube.com/watch?v=GbdeOIKS7jE

https://www.youtube.com/watch?v=7KJlfT5M6p8

WHAT IS A HAND TOOL

- A tool powered by human muscle rather than a motor or engine.

TYPES OF HAND TOOLS

- Categories of hand tools include wrenches, pliers, cutters, files, striking tools, struck or hammered tools, screwdrivers, vices, clamps, snips, saws, drills, and knives.
- Outdoor tools such as garden forks, pruning shears, and rakes are additional forms of hand tools. Portable power tools are not hand tools (Joseph A. McGeough, 2026).

HAND TOOL HAZARDS

- Along with common injuries such as cuts, lacerations, and bruises, the frequent and prolonged use of hand tools can cause soreness, aches, pains, and fatigue, which, when ignored, can lead to chronic musculoskeletal injuries (MSIs) of various kinds (Joseph A. McGeough, 2026).

DIFFERENCE BETWEEN Hand Tools AND Power Tools

Hand tools

Have no power source other than the physical force applied by the user. Hand tools include anything from axes to hammers, and screwdrivers to wrenches.

Power Tools

Require a non-human power source to function properly, e.g, external (electricity, compressed air, etc.) or Internal (battery pack, internal combustion engine, etc.).

Both kinds of tools require specific safety precautions or rules to be followed; yet some rules will apply to both.

Five basic rules apply to all tools used, either hand or power (Joseph A. McGeough, 2026).

5 BASIC RULES FOR HAND TOOLS

Keep all tools in good working order

Use the tool only for what it is designed to do

Examine the tool for damage before each use

Always follow the manufacturer's instructions when operating any tool

Always wear the appropriate PPE when operating any tool

GENERAL "Hand Tool" SAFETY RULES

Carry and store all sharp tools in a holster or sheath

Tag worn, damaged, or defective tools and do not use them

Do not perform "makeshift" repairs to tools or use tools that have makeshift repairs made to them

GENERAL Hand Tool RULES cont'd

Do not throw tools from one location to another or from one employee to another

When working on a ladder or scaffolding, be sure you and your tools are secure.

Do not carry tools in your hand while climbing, use a tool belt or host the tools by using a hand line.

The Greatest Hazards Of Hand Tools: Misuse/Improper Maintenance

Using a screwdriver as a chisel

Could cause the tip to break and fly, hitting either the operator or bystanders

A wooden handle on a tool, such as a hammer or an axe, is loose, splintered, or cracked

The tool head could fly off and strike the operator or bystanders

Hand Tool Misuse/Improper Maintenance cont'd

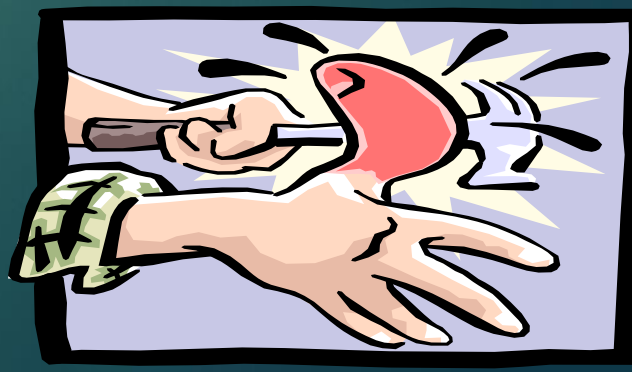
- Impact tools, e.g., chisels and wedges, are unsafe if their heads are "mushroomed."
- The heads might shatter on impact, sending sharp fragments flying
- Wrenches must not be used if the jaws are sprung, cracked, or twisted

The wrench could slip off

SAFETY RULES For SPECIFIC Hand Tools

HAMMERS

- Use a claw hammer for pulling nails
- Do not strike a hardened steel surface with a claw hammer
- Do not strike one hammer against another hammer
- Do not use a hammer as a wedge or pry-bar



SAFETY RULES For Hand Tools cont'd

CHISELS

- Use only sharp chisels
- Do not use chisels with a mushroom head
- Use only hammers that are designed for use with chisels

SAFETY RULES For Hand Tools cont'd

SAWS

- Do not carry the saw by the blade
- Do not use any saw that has a dull saw blade
- Keep control of the saw by releasing downward pressure at the end of each stroke

SAFETY RULES For Hand Tools cont'd

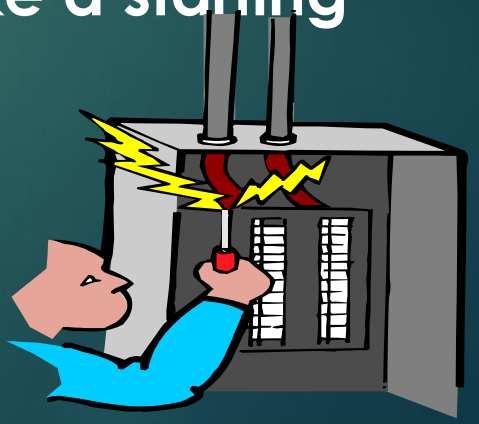
SCREWDRIVERS

- Always ensure the screwdriver fits the head of the screw
- Do not hold the work piece against your body while using the screwdriver
- Do not use a screwdriver as a punch, chisel, pry bar, or nail puller

SAFETY RULES For Hand Tools cont'd

SCREWDRIVERS CONTINUED

- Do not use a screwdriver to test the charge of a battery
- Use only screwdrivers that are approved to be used on or around electrical equipment , devices, or circuits
- Do not use a screwdriver to make a starting hole for screws



SAFETY RULES For Hand Tools cont'd

WRENCHS

- Do not use wrenches that are bent, cracked, or that have loose handles
- A hammer may be used for striking "face wrenches" ONLY
- If at all possible, use socket or box wrenches
- Do not use a cheater bar

REFERENCE

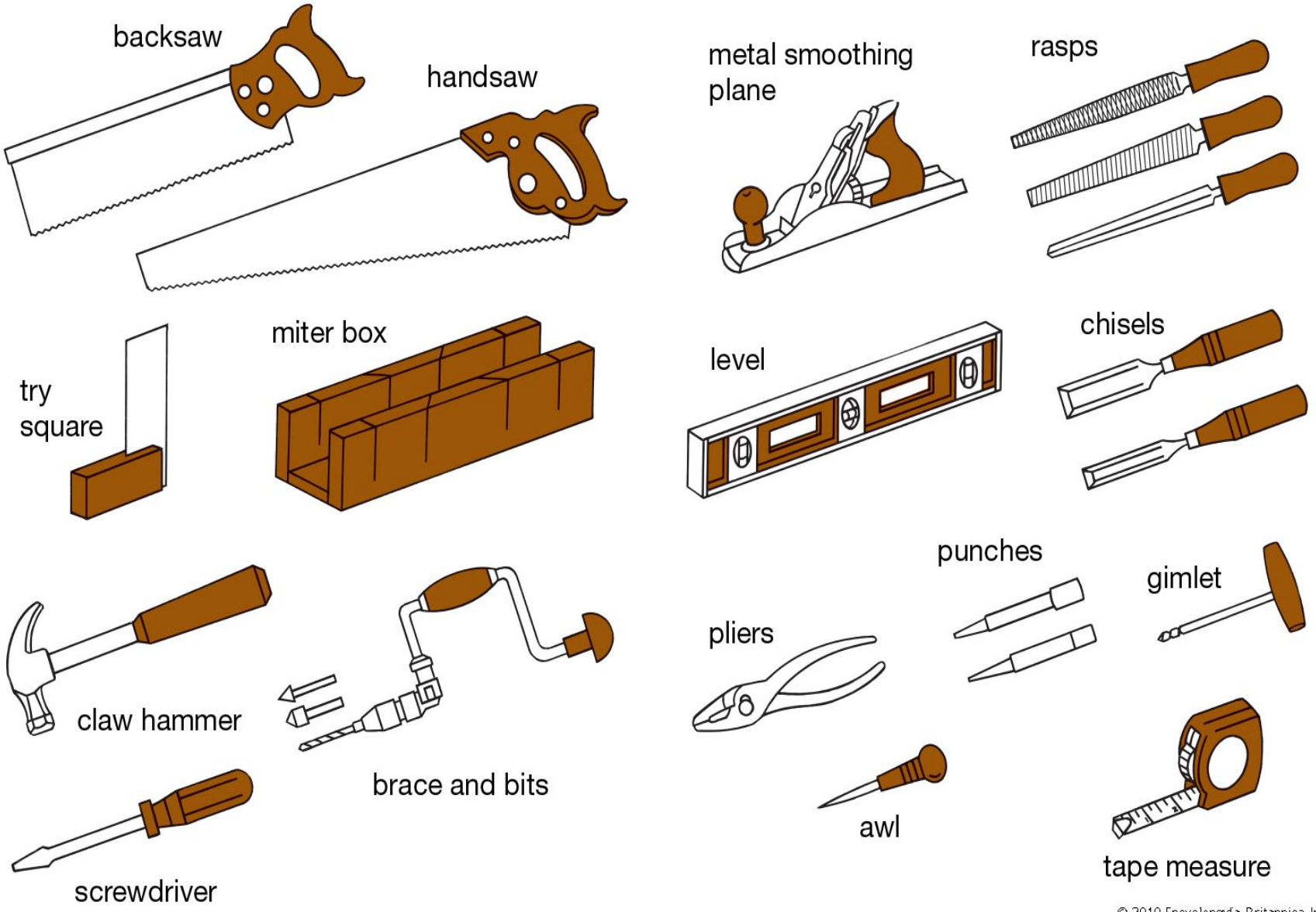
Joseph A. McGeough. (2026, January 27). *Hand tool | Types & facts | Britannica*. Encyclopedia Britannica. https://www.britannica.com/technology/hand-tool

Thank You

QUIZ

1. What is a hand tools.
2. List 2 safety measures when using hand tools.
3. List 3 hand tools hazards.
4. List 5 basic hand tools.
5. State what type of screw driver that can be used on electrical circuits.

Basic hand tools



(Joseph A. McGeough, 2026)