TVL – COMPUTER SYSTEMS SERVICING 11

Name: _____ Date: _____

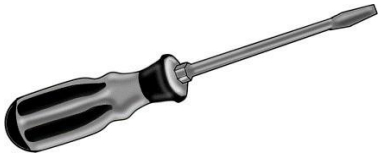
Grade: _____ Section: _____

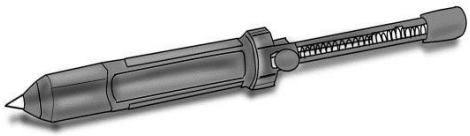
Quarter: 1 Week: 1 SSLM No. 1 ELC: Prepare Hand Tools

- **Objectives:**
  A. Identify different kind of hand tools.
  B. Check appropriate hand tools for proper operation and safety.
- **Topic:** Using Hand Tools

Let Us Discover

In engaging yourself in any activity on your computer you should know first the different kinds and appropriate tools in fixing or doing something on it. In computer application, the usage of proper hand tools and equipment is very essential. The following hand tools are usually being prepared and used especially in fixing or troubleshooting a computer equipment or devices.

1. **Flat Screw Driver**- a tool used to drive or fasten negative slotted screws. 	2. **Philip Screw Driver**- a tool used to drive or fasten positive slotted screws. 
3. **Side Cutter Pliers**- a tool used for cutting or trimming of connecting wires or terminal leads in the circuit board. 	4. **Long nose Pliers**- a tool used for holding, bending, and stretching the lead of electronic component or connecting wire. 

5. **Crimping Tool**- a tool made of metal with plastic-rubber handle, to press into small folds, to frill and to corrugate. 	6. **Tweezers** -a tool used to hold small sensitive part of a computer. 
7. **Wire Stripper**- a small hand-held device used to strip the electrical insulation from electric wires. 	8. **Flashlight**- a small electric light, a flash of electric light used to give light in dark conditions. 
9. **Magnifying glass**- a device made in glass with handle, to exaggerate or to increase the apparent size of an object. 	10. **Volt-Ohms-Millimeter (VOM)** -a measuring instrument used by technician for measuring: current, voltage, resistance. 
11. **LAN Tester** - a device used to test the network connection. 	12. **Anti-Static Wrist wrap**- a device used to eliminate electrostatic discharge in your work area. 
13. **Soldering Pencil**- a tool used to join two or more metal conductors with the support of soldering lead melted around it. 	14. **Desoldering Tool**- tool used to unsoldered unwanted parts or component in the circuit with the support of soldering pencil. 

Malfunctioning or Faulty Tools

Different Hand Tools has a variety of non-powered devices such as pliers, hammers, and screwdrivers. These tools may seem harmless, but using malfunctioning or faulty tools may cause injuries or accidents especially among beginners.

The two most common hazards associated with the use of Hand Tools are misuse and improper maintenance.

- **Misuse** occurs when a hand tool is used for something other than its intended purpose. (An example would be using screwdriver as a chisel. This may cause the tip to break and strike someone).
- **Improper maintenance** allows hand tools to deteriorate into an unsafe condition. (Example would include cracked wooden handles that allow the tool head to fly off or mushroomed heads that can shatter upon impact.
- Specially designed tools may be needed in hazardous environments. (Always use non-sparking tools in the presence of flammable vapors and dusts. Insulated tools with appropriate ratings must be used for electrical work).

The following are some of the best practices in using safe tools:

Pliers:

- Never use pliers as a hammer on the handle. Such abuse is likely to result in cracks or breaks.
- Cut hardened wire only with pliers designed for that purpose.
- Do not increase the handle length of pliers to gain more leverage. Use a larger pair of pliers or bolt cutters.
- Do not substitute pliers for a wrench when turning bolts and nuts. Pliers cannot grip these items properly and will slip.

Screwdrivers:

- Always use screwdriver tip that properly fits the slot of the screw.
- Keep away screwdrivers with broken or worn handles.
- Use magnetic or screw-holding screwdrivers to start fasteners in tight areas.
- Never use pliers on a screwdriver for extra leverage. Only use wrench or screwdrivers specifically designed to accept them.

Utility Knives/ Blades:

- Always use a sharp blade. Dull blades require more force and thus are more likely to slip. Replace the blade when it starts to “tear” instead of cut.
- Never leave a knife unattended with the blade exposed. Consider using a self-retracted knife with a spring-loaded black.
- Keep your free hand away from the line of the cut.
- Don’t bend or apply side loads to blades by using them to open cans or pay loose objects. Blades are brittle and can snap easily.