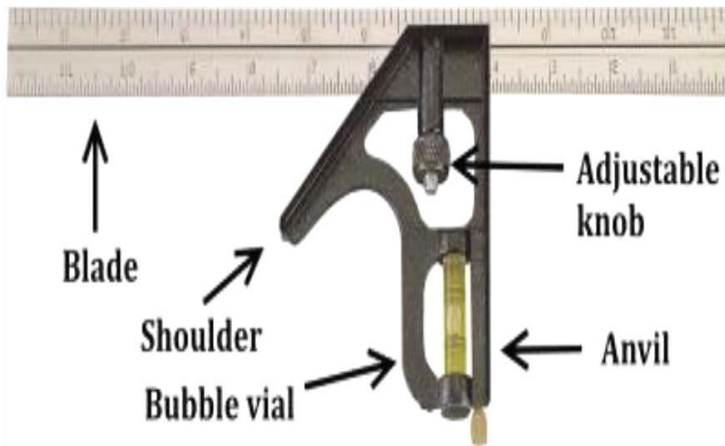


**SANGAM SKM COLLEGE - NADI**  
**LESSON NOTES – WEEK 1**  
**YEAR 10**  
**BASIC TECHNOLOGY**

<b>Strand</b>	TD10.4: HAND TOOLS AND MATERILAS
<b>Sub-Strand</b>	AT11.4.1: HAND TOOLS AND APPLINCES
<b>Learning Outcome</b>	Identify and familiarize with basic and common hand tools.

### **1. Combination Square**

- Measuring and marking tools.
- For levelling, as a try square, to determine the squareness of a piece of joint.
- It can also be used as a saw guide.

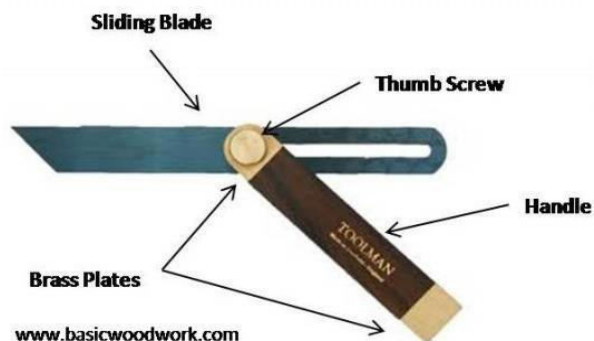


Exercise 1: Sketch a diagram of a combination square and write down its uses.

Reference site: <https://www.youtube.com/watch?v=a7ALNH1NF8w>

### **2. Sliding Bevel**

- Can be set to different angles to aid marking out.
- The stock is made from rosewood which is a high quality material.
- The blade is made from hardened and tempered steel.
- It is used to mark lines at any angle on a work piece.

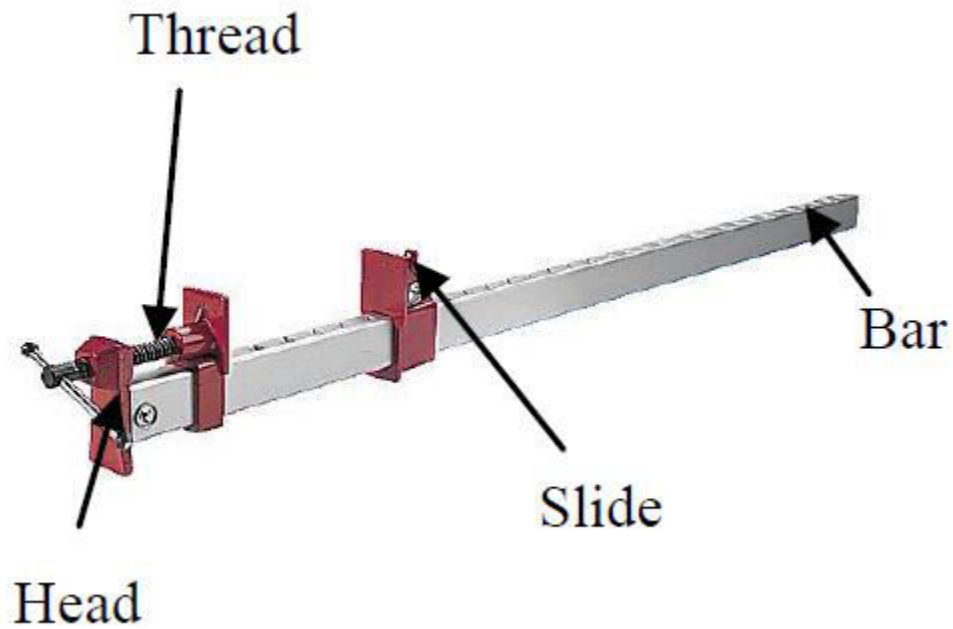


Exercise 2: Sketch a diagram of a sliding bevel and illustrate how to use this tool.

Reference site: <https://www.youtube.com/watch?v=a7ALNH1NF8w>

## 2. Sash Cramps

- Used to clamp work together when it is glued
- They vary in size and are normally used in pairs
- When in use, the sash clamp is placed below the work to be glued / assembled.



Exercise 1: Sketch a diagram of a sash clamp and write down how it is used.

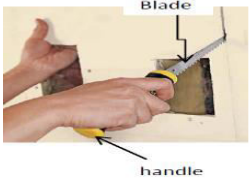
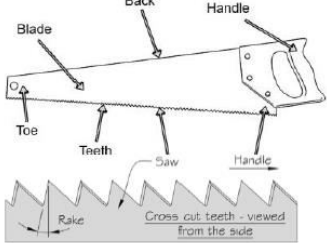
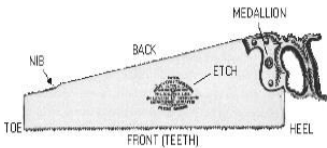

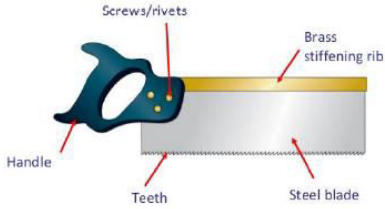
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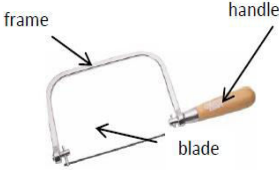
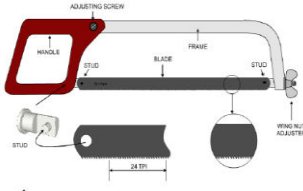
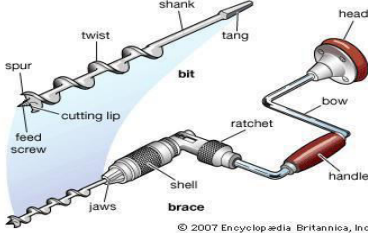
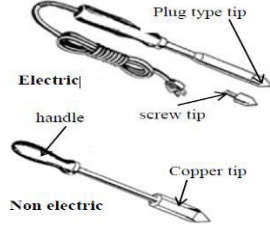
*Note: if you cannot print and paste the notes you can write in your note book. Answer all exercises in your note book.*

**SANGAM SKM COLLEGE - NADI**  
**LESSON NOTES – WEEK 2 - 3**  
**YEAR 10**  
**BASIC TECHNOLOGY**


<b>Strand</b>	TD10.4: HAND TOOLS AND MATERILAS
<b>Sub-Strand</b>	AT11.4.1: HAND TOOLS AND APPLINCES
<b>Learning Outcome</b>	Identify the parts of common hand tools and state their uses.

4. **Hand Saws**-are hand-held tools, manually-driven, that are designed to cut through softer material mainly wood.

i. Keyhole Saw	<ul style="list-style-type: none"> <li>Used for circle and curve cutting in wood</li> <li>Has very thin, pointed blades for cutting small, tight radius curves and holes</li> </ul>	
ii. Cross Cut Saw	<ul style="list-style-type: none"> <li>Used for woodcutting across the wood grain</li> <li>Usually 24 inches to 26 inches long with 8 to 11 TPI(teeth per inches)</li> <li>Doesn't cut as aggressively as rip saw but leaves a much smoother edge.</li> </ul>	
iii. Panel Saw	<ul style="list-style-type: none"> <li>Used for woodcutting across the wood grain</li> <li>Usually shorter than regular cross cut saws for easy portability</li> </ul>	
iv. Rip cut Saw	<ul style="list-style-type: none"> <li>Used for woodcutting with the wood grain</li> <li>Usually 24 to 26 inches long with 4 to 7 teeth per inch (TPI)</li> <li>Cut very aggressively and leave slightly rough edges.</li> </ul>	
v. Back Saw	<ul style="list-style-type: none"> <li>Used for fine woodcutting, moulding and trim.</li> <li>Has a rigid piece along the back to prevent the saw from kinking during use.</li> </ul>	

vi. Coping Saw	<ul style="list-style-type: none"> <li>used for fine woodcutting, coping moulding joints</li> <li>Has deep steel tension frames and very thin blades to make intricate cuts at extreme angles</li> </ul>	
vii. Hack Saw	<ul style="list-style-type: none"> <li>Used for metal cutting</li> <li>Has very fine teeth and thin blades, held under tension in a steel frame</li> </ul>	
viii. Ratchet Brace and bits	<ul style="list-style-type: none"> <li>Hand-operated tool for boring holes in wood</li> <li>This tool is mainly functional for turning bits and drills of all type being adjustable for operational in limited condition</li> </ul>	
ix. Soldering Iron	<ul style="list-style-type: none"> <li>Used in soldering</li> <li>Supplies heat to melt solder so that it can flow into the joint between two work pieces.</li> </ul>	

Exercise: Given the name of the hand tools draw and label the all the parts

<p><b>1. Cross Cut Saw</b></p> 	<p><b>2. Back Saw</b></p> 	<p><b>3. Hacksaw</b></p> 
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