**SUBJECT**: BASIC TECHNOLOGY

**CLASS**: JSS1

**TOPIC**: MARKING OUT TOOLS, MEASURING TOOLS, AND GAUGE

**Marking Out Tools**

These are hand tools used for marking out the required shape of a particular metal from the sheet metal before cutting in the metal workshop. Examples are:

(i) Surface plate

This is used for checking the alignment and flatness of the object.

(ii) Surface table

This is used for marking out large objects, for checking accuracy, height alignment and parallelism.



(iii) Scriber

This is used for marking out straight lines on metals in conjunction with other marking out tools.

(iv) Centre punch

This is used to locate the centre of a hole to be drilled.



(v) Dot punch

This is smaller in shape and is used to mark or dot on scribed lines.

(vi) Trammel

This is used for marking out large diameters, where compass cannot serve.

(vii) Marking gauge

This is re-adjustable. It is used for marking specific lines along and across the grains of the wood.

(viii) Odd-leg caliper (Jenny’s Caliper)

This is used for marking out lines parallel to an edge. It is also used for finding the centre of a round bar.

(ix) Mortise gauge

This is used for marking out two parallel lines at a time.

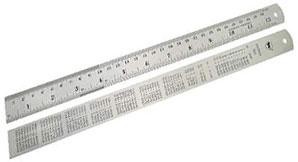


Measuring Tools and Gauge

These are tools used as testing and setting out tools. They are:

(i) Steel rule

It is made from carbon steel, used for measuring lengths.



(ii) Folding rule

Used to measure length.



(iii) Micrometer screw gauge

Used for measuring small thickness (diameter) to a high degree of accuracy.



(iv) Inside caliper

Used for measuring the internal diameter of an object.



(v) Outside caliper

Used for measuring the external diameter of an object.



(vi) Vernier caliper

For measuring both internal and external dimension of an object.



(vii) Centre square

For checking angles of 450 and 900.



ASSIGNMENT

1. State the use of the following tools: (i) Inside caliper (ii) Outside caliper (iii) Vernier caliper (iv) Odd- leg caliper