














## 1. Tools & equipment

1	<b>Coping Saw</b> 	Hand held tool used to cut intricate shapes in woodworking
2	<b>Bandfacer</b> 	A vertical bandfacer used for sanding, finishing & finishing tasks. (making surfaces flat).
3	<b>Hegner Saw</b> 	A piece of machinery used to cut intricate curves and joints
4	<b>Soldering Iron</b> 	An electrical tool which applies heat, melting solder allowing you to join metals together.
5	<b>Glass Paper</b> 	Sheets of <b>paper</b> with abrasive material glued to one face to enable finishing of specific materials.
6	<b>Wire Cutters</b> 	Hand held tool used to cut through wires or cables
7	<b>Wire Strippers</b> 	A hand-held tool designed to remove insulation from electrical wires.
8	<b>File</b> 	Hardened steel in the form of a bar or rod with many small cutting edges raised on its surfaces; used for smoothing or shaping objects.

## 2. Electronic Components

1	<b>Battery Snap</b> 	Snap onto the leads on the terminal end of a standard 9V battery.
2	<b>Switch</b> 	A component that can disconnect or connect the path in an <b>electrical</b> circuit.
3	<b>Light Emitting Diode (LED)</b> 	A light source that emits light when current flows through it in the correct direction.
4	<b>Wire</b> 	Made from copper, allowing electricity to flow between components.
5	<b>Battery</b> 	A combination of electrochemical cells with external connections for powering electrical devices.

## 5. Process; Soldering

Step 1	Heat the connection with the tip of the soldering iron for a few seconds, then apply the solder.
Step 2	Keep the soldering tip on the connection as the solder is applied.
Step 3	Remove the tip from the connection as soon as the solder has flowed.
Step 4	Don't move the connection while the solder is cooling.
Step 5	Don't overheat the connection, as this might damage the electrical component you are soldering

## 4. Materials; Manufactured Boards

1	<b>Medium Density Fibreboard (MDF)</b>	Made by breaking down any woods into wood particles, combining it with urea- formaldehyde(UF) resin, and forming it into panels by applying high temperature and pressure.
2	<b>Plywood</b>	Strong thin wooden board consisting of two or more layers glued and pressed together with the direction of the grain alternating.
3	<b>Chipboard</b>	Made from compressed wood chips and phenol formaldehyde glues, often coated or veneered to give desired appearance
4	<b>Hardboard</b>	A cheaper option than plywood where strength is not required. Made from wood fibre & resin.
5	<b>Oriented Strand Board</b>	OSB is Formed out of compressed layers of wood strands with adhesives.

## Key Vocabulary

1	<b>Template</b>	A shaped piece of rigid material used as a pattern for repeated processes such as cutting out or shaping
2	<b>Model</b>	A particular design or version of a product
3	<b>Prototype</b>	A first version of a device from which other forms are developed.

☐ Sand down any finished plywood shapes (P80,P120,P240,P320,P400)

☐ Know about Series Circuits & Parallel Electrical Circuits

☐ Know the black wire goes to the short leg on the LED. (Red – positive, Black – Negative)

## Across

3. Hardened steel in the form of a bar or rod with many small cutting edges raised on its surfaces; used for smoothing or shaping objects.
4. The colour of the negative wire in an electrical circuit.
6. Made from compressed wood chips and phenol formaldehyde.
8. Wood particles combined with urea- formaldehyde.
9. Strong thin wooden board consisting of two or more layers glued and pressed together.
12. A shaped piece of rigid material used as a pattern for repeated processes.
13. The colour of the positive wire in the circuit.
15. An electrical tool which applies heat, melting solder allowing you to join metals together.
17. A piece of machinery used to cut intricate curves and joints.

## Down

1. A component that can disconnect or connect the path in an electrical circuit.
2. A combination of electrochemical cells with external connections for powering electrical devices.
4. A machine used for sanding, finishing & linishing tasks.
5. Hand held saw used to cut intricate shapes in woodworking
7. A first version of a device from which other forms are developed.
10. A particular design or version of a product.
11. A light source that emits light when current flows through it in the correct direction.
14. Made from copper, allowing electricity to flow between components.
16. Formed out of compressed layers of wood strands with adhesives.

