



# Year 8



## Designer Lantern

### The BIG Picture

**Learning Objective:** Work with a wide range of processes and materials SO THAT you further develop your design, making and evaluating skills while building your technical knowledge.

- Build your technical knowledge and practical skills using specialist workshop and industrial equipment.
- Further develop your drawing skills so that you can communicate design idea in 2D & 3D.
- Further develop your CAD skills to design in 2D & 3D
- Develop your materials knowledge
- An introduction to 3D CAD, electronics and the work of designers.

**Assessment:** During this project, you will be formally assessed on the four main stands of the national curriculum (designing, making, evaluating & technical knowledge). The assessments will be a mixture of skills based and knowledge-based tasks. You will reflect on your assessments by identifying your successes and the elements you could improve.



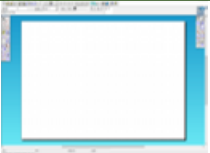
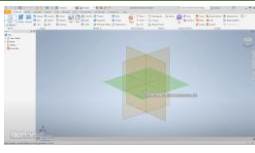












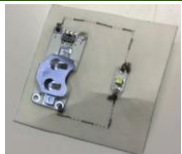










Problem Solved!



Designer Lantern

# Key Terminology

| Design Technology Skills   |   | Project Skills   |  |
|--|---|--|--|
| <ul style="list-style-type: none"> <li>● Resilience</li> <li>● Perseverance</li> <li>● Independence</li> <li>● Teamwork</li> <li>● Health &amp; Safety</li> <li>● Quality Control</li> <li>● Problem solving</li> <li>● Iteration</li> <li>● Design Movements</li> </ul> | <ul style="list-style-type: none"> <li>● Research</li> <li>● Designing</li> <li>● Modelling</li> <li>● Assembling</li> <li>● Making</li> <li>● Manufacturing</li> <li>● Critique</li> <li>● Analysis</li> <li>● Evaluating</li> </ul> | <ul style="list-style-type: none"> <li>● Measuring</li> <li>● Marking out</li> <li>● Cutting</li> <li>● Half lap joint</li> <li>● Mitre joint</li> <li>● Dowell joint</li> <li>● Drilling</li> <li>● Shaping</li> <li>● Isometric drawing</li> <li>● Iterative design</li> </ul> | <ul style="list-style-type: none"> <li>● CAD / CAM</li> <li>● Threading</li> <li>● Machine Sewing</li> <li>● Heat Transfer</li> <li>● Sublimation Printing</li> <li>● Pattern Cutting</li> <li>● Zig-zag stitch</li> <li>● Hems</li> <li>● Electronics</li> <li>● Sewable circuit</li> </ul> |

| Equipment & Materials   |   |   |   |   |
|---|---|---|---|---|
|  |  |  |  |  |
| 2D design<br>(2D CAD software)  | Inventor<br>(3D CAD software)   | Heat Press  | Band Facer  | Pillar Drill  |
|  |  |  |   |  |
| Glass Paper   | Steel Rule  | Try Square  | Bench Hook  | Tenon Saw   |
|   |  |  |  |  |
| Mitre Saw   | LED<br>(Light Emitting Diode)   | Battery Cell Holder   | Conductive Thread   | Circuit   |
|  |  |  |   |  |
| Sewing Machine  | Bobbin  | Fabric Shears   | Needle  | Thread  |
|   |  |  |   |  |
| Vilene<br>(Bonded Fibres)   | Pine<br>(Softwood)  | Dowel<br>(Pine - Softwood)  | Teak<br>(Hardwood)  | MDF - Medium<br>Density Fibreboard<br>(Manufactured board)                            |