# CHELTENHAM GIRLS HIGH SCHOOL
## Technology Faculty
### Project Scope and Sequence

**Academic Year:** Yr 7  
**Unit:** Clocks  
**Area of Study:** Information and Communication  
**Context Area:** Resistant Materials  
**Time Frame:** 13 weeks

<table>
<thead>
<tr>
<th>Week</th>
<th>Design Process Phase</th>
<th>Student Tasks / Activities</th>
<th>Completed</th>
</tr>
</thead>
</table>
| Week 1 | Identification of Need               | • Project title page  
Design Brief                                      |           |
Introduction to Workshop Safety                     | • Class discussion about the Need and Brief  
• Analysis of Design Brief  
• Definitions of key words / terms  
• CAF mind map  
• Safety in the Workshop video |           |
| Week 2 | Research                             | • Collage of inspiration designs  
Introduction to the Scroll Saw – safety aspects & practical skill development |           |
|       |                                       | • Product Analysis – Why we do it!  
• PMI analysis of 3 existing clock designs  
• Scroll Saw license |           |
| Week 3 | Research                             | • Commence Material Research (plywood and timber)  
Design Skills – Sketching techniques |           |
|       |                                       | • Commence Tools used in the construction of the clock  
• Graphics for D&T DVD  
• Intro to freehand sketching skills using fineliner  
• Design annotation  
• Scroll Saw license (cont) |           |
| Week 4 | Design Development - Initial Ideas   | • Complete 3 initial ideas (concept designs) including all relevant annotation.  
• Quality rendering of each initial idea  
• Complete detailed PMI analysis for each initial idea. |           |
| Week 5 | Design Development - Initial Ideas   | • Complete 3 initial ideas  
Developed Ideas                                      |           |
|       |                                       | • Begin Final Idea – should show clear refinement of initial ideas and approximate dimensions / annotations  
• List and justify design changes / modifications |           |
| Week 6 | Developed Ideas                      | • Completion of Final Idea  
Final Design                                       |           |
|       |                                       | • Chosen Design – document reasons for design selection with respect to aesthetics, materials choice, target market and manufacturing.  
• Teacher approval of chosen design  
• Begin full size (1:1) design of selected design. Design must communicate all relevant detail including colour and construction details.  
• Commence assignment Innovations in Communication Devices |           |
| Week 7 | Final Design                         | • Completion of Final Idea  
Realisation                                        |           |
|       |                                       | • Template making  
• Marking out of Final Design onto Plywood  
• Demo of quality Procedure documentation  
• Students document realisation procedures |           |
| Week 8 | Realisation                          | • Marking out of Final Design onto Plywood (cont)  
• Students begin cutting out of designs using Scroll saws  
• Disc Sander Safety Demo – completion of Onguard Safety Test for Disc Sander  
• Students document realisation procedures |           |
| Week 9 | Realisation                          | • Cutting out of designs using Scroll Saws (cont)  
• Sanding using Disc Sander / hand sanding          |           |
| Week 10  | Realisation                     | • Drill Press Demo – completion of Onguard Safety test for Drill Press  
|         |                                | • Students document realisation procedures  
| Week 11 | Realisation                     | • Finishing / Painting demo  
|         |                                | • Students apply chosen finishes to their clocks  
|         |                                | • Students document realisation procedures  
| Week 12 | Realisation                     | • Students apply chosen finishes to their clocks (cont)  
|         |                                | • Demo of clock mechanism assembly  
|         |                                | • Students assemble clock mechanisms  
|         |                                | • Students document realisation procedures  
| Week 13 | Evaluation                      | • Students apply chosen finishes to their clocks (cont)  
|         |                                | • Students assemble clock mechanisms (cont)  
|         |                                | • Clock realisation completed  
|         |                                | • Students document realisation procedures  
|         |                                | • Evaluation of design with respect to the design brief.  
|         |                                | • Evaluation of functional / aesthetic aspects of their product.  
|         |                                | • Design folio completed and submitted for final marking |