

## **Y10 Cambridge Award Engineering Design**

|                                                   | Autumn 1                                                                                                  | Autumn 2                                                                                                                   | Spring 1                                                                                                                                            | Spring 2                                                                                                                                                                      | Summer 1                                                                                                                                    | Summer 2                                                                                                                                                                                                   |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   | R106: LO1                                                                                                 | R106: LO2                                                                                                                  | R107:                                                                                                                                               | R107: LO2                                                                                                                                                                     | R108:                                                                                                                                       | LO3:                                                                                                                                                                                                       |
| Topics                                            | Learn commercial production methods, quality and legislation and their impact on products and components. | Be able to research existing products (x6 bike lights)  R106: LO3 Be able to analyse existing products through disassembly | Developing and presenting engineering designs  • LO1: Generate design proposals using a range of techniques. 2D, Isometric and orthographic drawing | Develop designs using engineering drawing techniques and annotation  R107: LO3  Use Computer Aided Design software and techniques to produce and communicate design proposals | 3D Design Realisation  LO1: Know how to plan the making of a prototype  LO2: Understand safe working practices used when making a prototype | Produce a prototype of a bottle opener to set dimensions and tolerances  LO4: Evaluate the success of the manufacture of the bottle opener against set criteria including dimensions and quality of finish |
|                                                   | End of Unit<br>Assessment                                                                                 | Test papers                                                                                                                | Project assessed out<br>of 20 marks, focus on<br>practical skills only                                                                              | Project assessed out<br>of 20 marks, focus on<br>practical skills only                                                                                                        | Test papers                                                                                                                                 | Project assessed<br>out of 20 marks,<br>focus on practical<br>skills only                                                                                                                                  |
| Arts Mark                                         |                                                                                                           |                                                                                                                            |                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                             |                                                                                                                                                                                                            |
| Building on prior learning                        |                                                                                                           |                                                                                                                            |                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                             |                                                                                                                                                                                                            |
| Enrichment within the Curriculum                  |                                                                                                           |                                                                                                                            |                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                             |                                                                                                                                                                                                            |
| Extracurricular opportunities                     |                                                                                                           |                                                                                                                            |                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                             |                                                                                                                                                                                                            |
| Positive impacting on personal development (SMSC) |                                                                                                           |                                                                                                                            |                                                                                                                                                     |                                                                                                                                                                               |                                                                                                                                             |                                                                                                                                                                                                            |



## **Curriculum Overview**

| Preparing for the next stage of education |                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------|
| Ways to support your child's learning     | Praise for effort rather than being 'clever' shows them that by working |
|                                           | hard they can always improve                                            |
| Visits and trips                          |                                                                         |
| Websites / books /papers / magazines      |                                                                         |
| TV/Films                                  |                                                                         |
| Blogs/ podcasts                           |                                                                         |