

Y10

**R038: TA1**

**Design Process**

- Linear / Iterative
- User Centred
- Inclusive
- Design Briefs
- Specifications
- Primary and Secondary Research
- ACCESS-FM
- Disassembly of a product
- Client and designer
- Modelling and materials

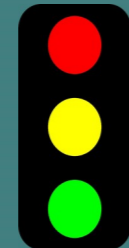
**R038 TA2: Design Requirements**

- Qualitative / Quantitative Data
- Design Specification
- Scales of Production



- Stock forms
- Manufacturing Methods
- Costs—labour and capital
- Market pull and Tech Push
- BSI Standards

**R038: Principles of Engineering**



- Standard conventions
- Standard conventions for dimensions
- Meaning of line types
- Abbreviations
- Representations of mechanical features

TA3:

I can know different types of drawing used in engineering.

These include:

- Freehand sketching
- Isometric drawing
- Oblique drawing
- Orthographic drawing
- Exploded views
- Assembly drawings
- Block diagrams
- Flowcharts
- Circuit diagrams

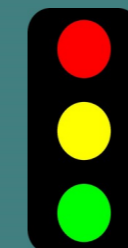
**R038 TA3: Communicating design outcomes**

- Copyright
- Law
- Lice Cycle Assessment
- Environmental Issues
- Sustainability Issues

TA3:

I can know:

- Types of drawing used in engineering
- Working drawings
- Using CAD drawing software



**R038**

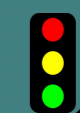
**Mock Exam**

Y11

**TA4: Evaluating design ideas**

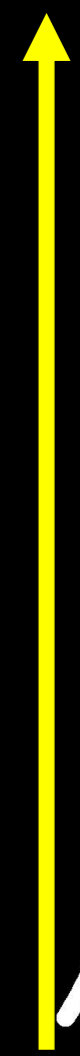
I can know the following areas:

- Production of models
- Qualitative comparison with the design brief and specification
- Ranking matrices
- Quality function deployment (QFD)
- Virtual (3D CAD)
- Card modelling
- Block modelling
- Breadboarding circuits
- 3D printing
- Methods of measuring the dimensions and functionality of the product
- Quantitative comparison with the design brief and specification
- User testing
- Reasons for identifying potential modifications and improvements to the design



**R038**

**External Exam**



**Exam Prep**