West Park School

Design and Technology

Mock Examination 2025

In readiness for your mock examination in Design and Technology you must **LEARN** and **REVISE** the following content and skills:

Use your Booklets - Core Booklet and your Specialist Knowledge booklet as well as the revision cards you have made. You can also use the revision guide to help you prepare for this examination.

Advice:

- Use the number of marks linked to each question to guide not only how long you spend on a question but also the number of points you need to include in your answer.
- There will be some questions that include a product or a process example from all of the specialism areas. For these questions, you need to identify the product or process that allows you to answer the question to the best of your ability from your knowledge and revision.
- You must bring the following equipment to your Design and Technology examination: normal writing and drawing instruments; a calculator; a protractor.

Sustainability –
- Renewable energy sources – advantages and disadvantages
- Planned obsolescence
- Fairtrade
- Ecological and social issues when designing, manufacturing and using products

Material areas –
- Properties of materials
- Composite materials – examples of
- Electronic systems – inputs, outputs and sensors
- Smart materials – properties and applications
- Plastics – thermoforming and thermosetting + examples of each
- Primary sources, stock form, material suitability and commercial manufacturing methods, including scales of production.
    - o Plastic
    - o Cardboard
    - o Stainless Steel
    - o Plywood
    - o Fabric

Designers –
- Designers → how they have influenced their area of design – reference examples of their work, style + philosophy. Create at least 2 case studies on two different designers
- Examples of and how their work can influence the design of products

Maths skills –

How to calculate:

- Area
- Percentages
- Scale ratios
- Trigonometry – application of
- Gear rotation
- Costing
- Tessellation
- Graphs – bar charts and labelling axis
- Tolerances
    - How to calculate
    - How they are used in product manufacture

Modelling –

- How do you prototype?
- Understand the following examples:
    - Card
    - Styrofoam
    - CAD
    - Toile
    - Breadboard

Specification and Analysis

Understand specification points and justification of them [why?]

- Materials
- Cost
- Function
- Aesthetics
- Reliability
- Target Audience
- Ergonomics
- Safety

Data –

Types of data used when investigating and researching products + examples:

- Primary
- Secondary

Drawing Techniques –

1-point perspective
2-point perspective
Isometric