

Sandbach School Design and Technology Curriculum: DEPTH OVERVIEW

Introduce:

Curriculum Enrichment
AQA Design and Technology

Year 9 Design and Technology Curriculum Sequence

Intent: Pupils develop creativity, imagination and practical skills and embed skills learnt in Year 7 and 8. Through developing practical experiences in Specialist Rooms, pupils draw on and develop a range of different disciplines including Mathematics, Science, Engineering and CAD. The subject embeds literacy skills through analysis and evaluation techniques.

R1

DEPTH CURRICULUM

CHOICES

HT1

Materials and Working Properties
Presentation Box

HT2

Materials and Working Properties
Presentation Box

HT3

Materials and Working Properties
Presentation Box

HT4

Materials and Working Properties
Presentation Box

HT 5 & 6

Materials and Working Properties - Pinewood
Derby / Casting / Exam Technique / Review

Why These modules?

Introduction to practical work. Mini-project that includes the Design Process, planning, intuitive design, design fixation and basic practical skill.
Pupils required to problem solve and plan their own projects

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Building on basic presentation skills
Upskilling pupils in terms of presenting ideas
Developing Creativity Skills

Developing Practical Skills, planning and developing models
Marking and Measuring out Materials and Creativity

National Curriculum Links

Pupils will:

Design - identify and solve their own design problems and understand how to reformulate problems given to them
Design - develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools
Make - select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture
- select from and use a wider, more complex range of materials, taking into account their properties
Evaluate - test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups

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Specification Links

3.2 – Specialist Technical Principles
3.2.5 – Using and Working with Materials
3.3 – Designing and Making Principles
3.3.4 – Design Strategies
3.3.5 – Communication of Design Strategies
3.3.6 – Prototype Development
3.3.7 – Selection of Materials
3.3.8 – Tolerances
3.3.9 – Material Management
3.3.10 – Specialist Tools and Equipment
3.3.11 – Specialist Techniques and Processes

Teaching These Topics Here Supports:

NEA Development in Yr 10/11
Subject Knowledge and embedding understanding from Years 7 and 8
Science, Maths, English

Y9 Depth Curriculum: Yr 9 students develop a detailed knowledge and understanding about the characteristics , working properties and processes linked to key materials i.e. *HT1 woods and metals and casting , HT2 Technical drawing skills, and HT5/6 Product prototyping, testing and sustainability (This builds on related topics & knowledge introduced in the Yr 7 and Yr 8 schemes).*

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Teaching These Topics Here Supports:

Prior learning of skills learnt in Transition Phase
Subject Knowledge and understanding of sketching techniques
Exam Knowledge required for GCSE

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