



CURRICULUM OVERVIEW FOR DT - RESISTANT MATERIALS

YEAR
7

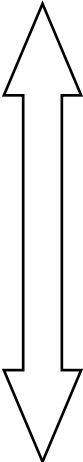
What is 'Resistant Materials'?
Health and safety
Designing and creativity

Key practical skills and machinery
Hand tools
3D Printer

YEAR
8

What is a mechanism?
Cams and followers
Implementing mechanisms in a product

Joining different materials
Developing ideas
Manufacture of own product



Courses Delivered
10 week Rotations

Half Term 1

YEAR
9

Iterative thinking
Prototyping
Computer aided design (CAD) software
Complex laser cutting

Half Term 2

The 6Rs
The environment
Carbon footprint
Second investigate, design and make task

Half Term 3

Computer aided manufacture (CAM) processes
Manufacturing in industry
3D printing
New technologies

Half Term 1

YEAR
10

Introduction project.
Design and make task working with polymers, electronics and manufactured boards.

Half Term 2

Key practical skills in working with different materials (metals, polymers and timbers).
Material properties.

Half Term 3

Energy generation & storage.
Social, moral and environmental issues faced when designing

Half Term 4

Investigating smart materials.
Complex prototyping to a design brief.

Half Term 5

Utilising the work of other companies and designers.

Half Term 6

Beginning of research for the **Non-Exam Assessment (NEA)**, worth 50% of overall GCSE grade.

NEA

YEAR
11

Research
Iterative designing

NEA

Prototype building
Testing in use
Developing ideas

NEA

Final product build
Testing with user
Evaluation

Revision

Revision

Revision

Revision

END OF EXAMINATION PERIOD

END OF EXAMINATION PERIOD