



CURRICULUM OVERVIEW FOR DT - RESISTANT MATERIALS

**YEAR
7**

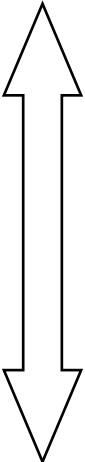
What is 'Resistant Materials'?
Health and safety
Designing and creativity

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

Half Term 2

Half Term 3

**YEAR
9**

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

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

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

Half Term 1

Half Term 2

Half Term 3

Half Term 4

Half Term 5

Half Term 6

**YEAR
10**

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

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

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

Investigating smart materials.
Complex prototyping to a design brief.

Utilising the work of other companies and designers.

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

**YEAR
11**

NEA
Research
Iterative designing

NEA
Prototype building
Testing in use
Developing ideas

NEA
Final product build
Testing with user
Evaluation

Revision

Revision

END OF EXAMINATION PERIOD