

PRODUCT DESIGN

Description of learning	<p>Key Stage 3</p> <p><u>Year 7</u> Explore wood groups and their properties Examine which woods are most suitable for specific jobs Manufacturing a packaged jigsaw</p> <p><u>Year 8</u> Explore metal groups and their properties Examine scales of production and how they effect how you manufacture products. Manufacturing and packaging a magnet</p> <p><u>Year 9</u> Explore plastic groups and their properties Examining ergonomics to design a piece of acrylic body adornment</p> <p>Key Stage 4</p> <p><u>GCSE</u> AQA (http://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-product-design-4555)</p> <p><u>Year 10</u></p> <p>Autumn term Explore 3D sketching Design and make a room fragrance Explore blister packaging</p> <p>Spring term Explore and market a product – chocolate bar Re-design and manufacture a chocolate bar and its packaging</p> <p>Summer term Re-design a mobile phone Explore materials and manufacturing techniques</p> <p><u>Year 11</u></p> <p>Autumn term Controlled Assessment (40hrs)</p> <p>Spring term Examination practice and preparation Completing a preparation sheet for task element of the examination</p>
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Resistant Materials

This subject area is about using different types of materials to create an end product.

The Resistant Materials department has developed an ethos of using the latest technology to actively engage and support pupils in their learning, including CAD /CAM. Technology is the use of problem solving and manufacturing techniques, these lie at the core of everything that we do in school. The Department sets and expects high standards of work, and delivers a range of courses that suit the needs of the individual pupils.

Key Stage 3

Throughout Key stage 3 pupils will study three different material areas

- year 7 – Wood , boxed wooden jigsaw
- year 8 – Metal , scales of production , magnet
- year 9 – Plastic, body adornment

Following the new national curriculum students are taught techniques for exploring and developing ideas including— 3D mock ups, Computer Aided Design and Manufacture, 3D sketches, annotating designs, analysing data and research.

Key Stage 4

Key Stage 4 is the two year period during which students work on courses leading to national qualifications. In Design and Technology, pupils will study AQA: Product Design. This is very similar to RM, but creates a complete packaged product that works and also allows pupils to access A 'level Product Design if they wish to continue at KS5.

These are taken as full GCSE courses.

Each course will involve the students in producing an individual design and make project. They will also be taught related parts of the programmes of study. They are required to research their own design task, generate and develop a range of relevant ideas, and manufacture a solution which best satisfies the requirements they have identified.

Evaluation of their ideas and research; materials, components; production techniques and their own performance are important and integral parts of each project

During Year 10 pupils follow a range of mini projects. Each topic allows students to explore Different Key Skills and gain or reinforce any prior learning.

Year 10

Autumn term

Explore 3d sketching

Design and make a room fragrance

Explore blister packaging

Spring term

Explore and market a product – chocolate bar

Redesign and manufacture a chocolate bar and its packaging

Summer term

Redesign a mobile phone

Explore materials and manufacturing techniques

Year 11

Autumn term

Controlled Assessment 40hrs

Spring term

Exam practice and preparation

Completing a prep sheet for the task