

PRODUCT DESIGN

Curriculum Vision Statement

"It is okay if you feel like you don't know everything yet, because you most likely don't and never will know everything. Just keep going. You will always have something you've learned behind you and something you don't know in front of you. The important thing is to keep moving".

Mary McDonald



Vision

Design and Technology is an inspiring, rigorous and practical subject; that allows for the application of cross curricular skills such as Mathematics, Literacy and Science. At Northampton School for Girls (NSG) we develop and teach students to take risks with their learning; to think and intervene creatively, to solve problems both as individuals and as members of a team. We do this through a range of different opportunities: through advanced questioning techniques to really delve into our students' higher knowledge, encouraging debate on linking our impact as designers on the wider impact on the community; locally and globally. We use retrieval practise to help students make connections within their learning and get students to work outside their comfort zone using metacognition.

We build and develop these skills throughout their Key Stage 3 experience, which enables them to be confident independent learners ready to strengthen their skills further at Key Stage 4. Students are taught to use their creativity and imagination, to design and make products that solve real life and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

These are all valuable skills that can be taken forward to a multitude of directions should our students choose to do so. This subject is a gateway to a variety of career prospects such as; fashion and styling, product/graphic or interior design, engineering, construction and building, civil engineering, animator, photography, cabinet maker, set designer, signwriter.

Implementation

Below you will find a breakdown of the NSG Product Design curriculum for each year group and Design Technology specialisms.



Key Stage 3

YEAR 7	YEAR 8	YEAR 9
<p>Design - Present creative and realistic ideas that meet the needs and wants of a chosen user. Learn how to communicate ideas effectively through basic drawing skills and colour application.</p> <p>Making - An introduction to new machinery and equipment, in order to build confidence and accuracy when making products.</p>	<p>Design - Present creative and realistic ideas that meet a specification and also consider the user needs and wants. Expand on drawing skills to develop professional communication of design ideas.</p> <p>Making - Refining skills through the implementation of a wide range of materials, processes and techniques.</p>	<p>Design - Explore imaginative and detailed design ideas to solve problems within a given context. A sound understanding of materials, processes and techniques will be applied using prior knowledge to justify design choices.</p> <p>Making - Undertake problem solving activities in order to produce a fully functioning product, within a demanding design concept. Leading to a sound knowledge and understanding of skills and processes.</p>
<p>Topics Covered:</p> <p>Paper and Board - Pop-up Book - product analysis, design ideas, manufacture of pop-up mechanisms.</p> <p>Timber - Image board target market group, design Ideas, manufacture of flower holder.</p> <p>Textiles - Develop design idea for holding stationary equipment, based on a user, Health and safety, accuracy stitching on the sewing machine, manufacture of a pencil case.</p>	<p>Topics Covered:</p> <p>Paper and Board - Film poster - product analysis, specification, design ideas, typography, photoshop skills.</p> <p>Timber - Desk tidy - product analysis, specification, design ideas and manufacturing of timbers to make the end product.</p> <p>Textiles - Develop design ideas based on a user and chosen design theme, continue to work to health and safety needs, Accurate stitching when applying techniques such as applique and mola, manufacture of decorative cushion cover.</p>	<p>Topics Covered:</p> <p>Paper and Board - Chocolate box - design ideas, nets, isometric drawings, manufacture of chocolate box packaging, printing process. Pop-up card - design ideas, nets, manufacture of pop-up cards. Music player - product analysis, specification, design ideas, manufacture of prototype music player.</p> <p>Textiles - Developing colour application techniques through the designing and making of a drawstring bag. Working on a live charity project, producing a garment for a young child in need. Developing design strategies and construction skills.</p>

Key Stage 4/GCSE

<p>YEAR 10 & 11</p>	<p>Investigation - Research relevant information using both primary and secondary resources to investigate a chosen context. Including looking at the form and function of existing products to evaluate their effectiveness and link this to future design ideas.</p> <p>Design - Choose from a range of given contexts in order to problem solve and identify design possibilities. Learn how to communicate design ideas to a professional standard through the use of a wide range of drawing skills, annotations and working drawings.</p> <p>Making - Fully sound knowledge and understanding of materials, processes and techniques.</p> <p>Demonstrate the ability to solve problems and apply a range of complex skills competently, in order to create a high-quality product.</p>	<p>Topics Covered:</p> <p>Paper and Board - NEA context project - investigation, design, manufacture, testing and evaluation.</p> <p>Theory - CORE/ Paper and Board specialism.</p> <p>Timber - NEA context project - investigation, design, manufacture, testing and evaluation.</p> <p>Theory - CORE/ Timber specialism.</p> <p>Textiles - NEA context project - investigation, design, manufacture, testing and evaluation.</p> <p>Theory - CORE/ Textiles specialism.</p>
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Assessment

At KS 3 Students are assessed on Design Ideas, Manufacture of a product and test during each rotation.

At KS 4 students grades come from 50% Non-Examined Assessment (NEA), 50% Examination.

Independent Learning

Key Stage 3

YEAR 7	<p>Paper and Board - Initial Design Ideas for story board, write up story line, and design characters.</p> <p>Timber - Initial Design Ideas for flower holder, Improve design Ideas, and thermo and thermosetting plastics.</p> <p>Textiles - Design idea development, Health and safety awareness, revision for end of unit test through activities in booklet.</p>
YEAR 8	<p>Paper and Board - Initial Design Ideas for typography (film title), draw images for poster, and research photoshop tools and uses.</p> <p>Timber - Material properties research, joining techniques research and technical drawing with annotations.</p> <p>Textiles - Design idea development, considering stages of production, Revision for end of unit test through activities in booklet.</p>
YEAR 9	<p>Paper and Board - (On-going changes) Design Idea, Research printing techniques, research paper and board properties.</p> <p>Timber - (On-going changes) developing skill with timber such as candle holders, wooden games and storage units, learning how to use contexts and research to develop an outcome.</p> <p>Textiles - Developing design ideas, researching information linking to the design theme/ context, Researching properties of materials.</p>

Key Stage 4/GCSE

YEAR 10 & 11 Paper & board Textiles Timber	<p>NEA - Product Analysis, Design Brief and Specification, Initial Ideas, Development.</p> <p>Exam - Core theory knowledge of all material areas, Specialist theory knowledge, Exam style questions, drawing techniques, Revision techniques exam preparation.</p>
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