



Preparation for Year 12



Product Design ▾

Congratulations on your GCSE successes and welcome to your post-16 studies at All Saints!

At this significant moment in your education, you have selected to study courses that reflect your own unique gifts, talents, interests and future goals.

So let's get started! These tasks are designed to introduce you to some concepts that you will be exploring over the year ahead as well as giving you the opportunity to demonstrate your commitment and sincere interest in this subject.

We look forward to seeing your preparation work and welcoming you to our department in September.

Aims	<i>The tasks below will introduce you to the core skills and knowledge needed to succeed in A-Level Design and Technology: Product Design. The tasks below will introduce you to different aspects of Product Design and help you gain prior knowledge as well as having the opportunity to explore different aspects of Design in preparation for what you will further develop during your A Level studies.</i>	
Deadline for submission	Monday 2nd September 2024	
Where to submit work	Internal students:	External students:
	Google Classroom ▾	asaid@allsaintsschool.co.uk

Choose **TWO** tasks to complete from the following list:

Week	Task / question	Links to help you	Notes
1	Visit the Design Museum (Free Entry - 224-238 Kensington High St, London W8 6AG)	https://designmuseum.org/	Choose 3 products from the Product wall and redesign it to make the product more suitable for modern life.



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2	Designer and company research	<p>https://www.aqa.org.uk/subjects/design-and-technology/gcse/design-and-technology-8552/subject-content/designing-and-making-principles/the-work-of-others</p> <p>https://filestore.aqa.org.uk/resources/design-and-technology/AQA-8552-RSG-NEW-DESIGNERS.PDF</p>	<p>Choose one Designer & one Company from this list and produce a page of research on their work, their inspiration and their design style. (Try to choose designers and companies you don't currently know much about)</p> <p>Designers: Ettore Sottsass, Philippe Starck, Charles Rennie Macintosh, Harry Beck, William Morris, Zaha Hadid</p> <p>Companies: Braun, Dyson, Apple, Alessi, Under Armour, Zara, Gap, Primark.</p>
3	Modelling Materials Research	<p>https://www.jamesdysonfoundation.co.uk/who-we-are/our-story.html</p> <p>https://www.bbc.co.uk/bitesize/guides/zbstng8/revision/1</p> <p>https://www.technologystudent.com/</p>	<p>(Paper, Cardboard, Styrofoam, Foam Board, Polymorph) Choose 2 of the materials above and research why they are good prototyping materials, what industries commonly use them and what their limitations are. Link research back to James Dyson and his Vacuum prototyping.</p>
4	New & Emerging Technologies investigation	<p>https://www.dezeen.com/</p> <p>https://www.designweek.co.uk/</p> <p>https://www.designnews.com/</p>	<p>Find a news article explaining a new material, process or product which you think is an exciting invention/development. Explain how you could use this within a product</p>



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Keywords and definitions:

You will need to be familiar with the following keywords in term 1.

Keyword	Definition	Use of keyword within context
Ergonomics	The study of people's efficiency in their working environment.	Ergonomics is used to design products that fit the user's needs, improving comfort and efficiency.
Sustainability	Meeting the needs of the present without compromising the ability of future generations to meet their own needs.	Students must consider sustainable materials and production methods to minimise environmental impact.
Aesthetics	The set of principles concerned with the nature and appreciation of beauty.	Aesthetics is important in product design to ensure that products are visually appealing to consumers.
Prototype	An early sample, model, or release of a product built to test a concept or process.	Prototyping is crucial in the design process to test and refine ideas before full-scale production.
CAD (Computer-Aided Design)	The use of computer software to create, modify, analyse, or optimise a design.	CAD is used by designers to create precise drawings and 3D models of products.



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Manufacturing Processes	Methods and techniques used to produce goods.	Knowledge of different manufacturing processes allows designers to choose the most efficient and cost-effective methods for production.
User-Centred Design	A design process that focuses on the needs, wants, and limitations of the end user of the product.	User-Centred design ensures that the final product is intuitive and easy to use.
Innovation	The process of translating an idea or invention into a good or service that creates value.	Innovation is crucial in product design to create new and improved products that meet changing consumer demands.
Functionality	The quality of being suited to serve a purpose well.	Ensuring functionality means that the product performs its intended purpose effectively and efficiently.
Anthropometrics	The study of the measurements and proportions of the human body.	Anthropometric data is used to ensure that products are designed to fit the intended users comfortably and safely.
Tolerance	The permissible limit of variation in a physical dimension or measurement.	Understanding and applying tolerances ensures that parts fit together properly and function as intended, accounting for small deviations in manufacturing.