



Subject	Year	Specialism
Design and Technology	Year 10	Product Design

Project

Design Skills

Content (Intent)

Prior Learning: KS3 Product Design – Trick Deck, Zip Tag, Block Bot, Pinball, Chocolate and Café project all establish design skills which are built upon in this project.

The Design Skills project has been designed to improve and develop students drawing, prototyping and use of CAD to present their design work. Students often struggle to draw in 3D so a good chunk of project time is given over to isometric drawing and presentation techniques on paper. Once design ideas are generated the students move onto CAD design and prototyping. To ensure engagement with the project a design brief is given (STEM toy design, trainer design, design movement inspired speaker). Group work is encouraged and a competitive element used to further engage the students. The final outcome is a presentation board/PPT that is shown to the final client.

Future Learning – GCSE NEA project (50% of GCSE grade)

How will knowledge and skills be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
<ul style="list-style-type: none"> Isometric drawing – through use of IsoSketch tool, classroom tutorials and YouTube videos Use of line weights, marker pens, rendering techniques and annotation – teacher demonstrations SpaceClaim used to teach CAD skills – teacher demonstrations and video tutorials Prototyping techniques – card modelling, Styrofoam, laser cutting and 3D printing 	<p>Assessment A final project presentation is the main focus for assessment in this project. This may be in the form of a PPT or a presentation board containing sketches, CAD work and a final prototype for the client to view.</p> <p>Main areas of assessment: Contribution to final presentation board – effort and grade. Feedback throughout project to support progress.</p>

How can parents help at home?

Parents and carers can ask to view their child's work and offer feedback on their design ideas. Students will need client feedback throughout the project so it is great to get parents involved. Parents/Carers can also ensure that their child has drawing equipment such as coloured pencils to enhance their design pages.

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Reading	Vocabulary	Careers Links
<p>https://www.youtube.com/watch?v=8nb0g2vEnK0</p> <p>https://www.youtube.com/watch?v=UHMIE RW2pS4</p> <p>https://www.youtube.com/watch?v= uzSM AI5AuE</p> <p>https://www.youtube.com/watch?v=j7YPA HnvrEQ</p>	<p>Isometric Oblique IsoSketch Orthographic Line weight Rendering Hot wire sculptor</p>	<p>Product Design Graphic Design Architecture Interior Design Design Engineering Art and Design careers</p>