

Subject: D&T

Year Group: Year 10

Students in Year 10 are working on a mini design and make task to develop seating for outdoor socialising. They will follow the design process researching the need, developing a range of solutions, drawing them using CAD and modelling solutions.

If students are unable to complete practical tasks, it would be beneficial for them to invest time developing their CAD skills. See links for download instructions for 2D Design and Fusion 360

2D Design student version can be downloaded free from here for Windows use.

https://eggbuckland.sharepoint.com/:u:/g/Technology/EfqYOIKo9a5Ar_PdpLhGSMoBQJNZAQGP3et-tpBmMFxgRA?e=ddm2F5

Having downloaded it, please use these instructions to install the licence file. <https://eggbuckland.sharepoint.com/:w:/g/Technology/EaWHw-rU2MZCoRi3NKWMx8sBiLroJC8KqQ8bg7XYQd6eww?e=rGalur>

This should give access to all functionality apart from printing. Work can be saved and printed in College or recorded via a screen shot and printed from Word or similar.

Fusion 360

https://eggbuckland.sharepoint.com/:b:/g/Technology/EVvJgmi_stdIhcAF6PenPtsBZLgxJZRst13MlaLr7Ulumw?e=TMVqMI

Week Beginning	Subject Topic	Key Learning points/big questions	Independent/Home learning	Linked Assessment	Key Vocab	Resources
Week 1	Task analysis Researching existing products	Understanding the design process – need to solution What is iterative design? Using a problem outline and design brief to direct a project	Photograph and analyse an existing outside seat using the ACCESSFM criteria	LSTs Completion of individual pages Assessment at completion of the project	Task analysis Primary / secondary research Product analysis Aesthetics Cost Customer	Files https://eggbuckland.sharepoint.com/:f:/g/Technology/Er9VhA898dJPjASrG

	Product analysis	How can I use a Task Analysis to help consider a need? Using the inspiration of others to help by researching existing products. In depth product analysis through ACCESS FM. How will analysing a product help me design successful solutions?			Environment Safety Size Function Materials Target market Ergonomics Iterative design	gePEeoBW7Z5_x5giFgTG-Ay01ldA?e=mBEAov Mind Map Designer (focuslearning.co.uk)
Week 2	Specification	What does it mean to specify something? How can I create a specification?	Find an example of a product bought online. Could be anything from a phone to a bike light. Get a picture of the item Find the product specification. Annotate and explain what the product specification tells you about the product before you buy it.		Specification Specify As above	Focus on Flatpack - Focus eLearning by Focus Educational Software Ltd.
Week 3	Design ideas	3D sketching Representing solutions on paper How can I get better at sketching when I can't draw? Use of colour to enhance presentation	Practice sketching an electronic item at home in isometric		Solution Sketch Isometric drawing (projection)	2D Drawing App (focuslearning.co.uk)
Week 4	Development of solution(s)	Developing a proposal through sketching and CAD Annotating with construction and manufacturing notes	Many products are purchased in parts to be assembled at home. This might be to create less cost between manufacturer and consumer due to more economical transportation, enable easier transportation between shop and home, fit through doorways etc. Identify a "self assembly" product at home. Analyse how it is assembled.		Development Detail design Fusion CAD	

			Sketch the and comment on the assembly fittings.			
Week 5	Modelling	Producing a scale model using card and modelling materials	Explain the advantages of modelling solutions to: The designer The manufacturer The consumer		Modelling Cutting mat Craft knife Scalpel Glue gun Prototype	
Week 6	Evaluation against spec Improvements, modifications and redesign	How can I use my specification to evaluate my work effectively? What could I do to improve the quality of my work if I were to make it again?	Identify a process you have carried out where you have changed what you do or the way you work because of evaluation of the process / task or self-evaluation		Evaluate Consumer Modify	

In the event of a full or partial closure of the year group, it will not be possible to teach all aspects of this course. Flexibility will need to be exercised by teachers and some lessons will be moved around.