A LEVEL DT – BRIDGING TASKS 2020 – CONTACT: MR PRIDHAM – D.PRIDHAM@RALPHALLENSCHOOL.COM

Drawing and communication skills Produce a sketchbook of drawings of a range of objects/products. Ensure you experiment with a range of media and techniques, including isometric 3d and different styles of rendering. There are loads of great sketching/drawing tutorials on Youtube e.g. https://www.youtube.com/watch?v=iVy0qGqmKFU	**Designer/design movement research** 1. Designers are often influenced by what has gone before. Research 3 design movements e.g. Art deco, Art nouveau, Memphis. Record the key features of each and collect images of products/fashion/architecture in each style. 2. Select a specific designer e.g. James Dyson or Philippe Starck. Produce a factsheet on your designer, including examples of their work and the impact they have had on design.	**Analysis/evaluation skills** 1. As you did at the start of your Yr11 NEA, analyse (mind map) a context to identify design opportunities. Analyse either 'lockdown' or 'smarter living'. 2. Using ACCESS FM, analyse a product within your home which you make regular use of e.g. your toothbrush or toaster.
Development of an existing product Identify a product you currently use. Sketch a range of possible developments that may be seen in this product in 10 years time. You may wish to think about how smart materials may be incorporated. Annotate your sketches to explain your thinking.	**2D CAD - Techsoft 2D Design V3** Download the demo version of 2D Design V3. https://www.techsoft.co.uk/Products/Software/TechSoft-Design-V3-Download Use the software to draw a net/surface development for a piece of packaging e.g. cereal box. Add branding and images to your design on appropriate panels.	**3D CAD - Autodesk Fusion 360** Download Autodesk Fusion 360. https://www.autodesk.co.uk/products/fusion-360/free-trial There are some similarities to 123D design which you will have used in Yr11. Have a play with the software – see of you can draw and extrude profiles. There are tutorials on Youtube e.g. https://www.youtube.com/watch?v=A5bc9c3S12g which are good if you work through them slowly.
Research product evolution (e.g. mobile phones) Identify a product where there has been clear development over time e.g. the mobile phone. Record the key milestones/developments on a timeline. Explain whether each is an 'incremental' or 'radical' development.	**Disassembly activity (reverse engineering)** Carefully disassemble a simple product of your choice. Photograph or sketch each component and explain what each does to ensure the product functions.	**Control – micro:bit** Visit the micro:bit website https://microbit.org/ There are is an introduction video which you should watch if you haven't used a micro:bit before. Go to home learning https://microbit.org/get-started/home-learning/ and have a go at some of the starter projects – open them in 'Maker Code' when it asks you. Experiment with improving programs in the ways it suggests. It will model what your program does. Email HEX codes to us if you want them tested for real.