Preparing for A-Level Product Design at All Saints Catholic High School

There are number of things you can do:

- Develop as a Product Designer – through developing design skills – hand drawing and CAD / watching of relevant Product Design based programs / wider reading around the subject and visiting relevant websites etc. to develop your creative skills, technical knowledge and understanding.
- Preparing for the A Level Course - Starting to explore the technical knowledge and the skills which will be studied in the A Level course.

A great Product Designer develops the following traits –

- Good Observation Great designers are curious and first and foremost, they observe, take notice and make notes of things others overlook. A designer loves the moment when they find somebody implementing a DIY solution to compensate for poor design. Observation is the most primitive form of research. Research brings purpose to our actions. Designers observe.
- Great Listening Skills Good designers are able to listen to others wants and make sure that a product delivers what people truly want and are willing to spend their money on. Good designers listen.
- Ambition Whether it's poor design or a need for a new design, a designer must desire to improve what already exists or the evolution of design will cease. Good designers desire change. Designers are responsible for finding solutions. Great designers find solutions.
- Good Communication Without communication, solutions would remain in the mind of a designer and never have a chance to make a positive impact on the world. Designers communicate by sketching, making models, using computers, writing, speaking and any other tools necessary. Communication skills are vital and understated requirements for working with a team to bring a concept to life. Great designers are great communicators.
- Consideration Good designers have a consideration for the impact a design will make on others, the environment and economy. Green design is a term used when reducing environmental impact is a top priority for designers. Great designers understand this and have consideration for those who will be affected by a design.
- Unbound (by rules) Great designers are unbound by rules. Designers need to understand social norms, expectations and limitations of manufacturing, marketing and other aspects of design implementation. However, rather than being limited by beliefs and expectations, great designers are open to the less-than-obvious solutions to problems. Rather than forming a belief of what a solution can or can’t be, a great designer will often ask, "What if?" and "Why not?". Designers often see rules as guidelines. This freedom of thought is what many call creativity. Great designers are unbound by rules.

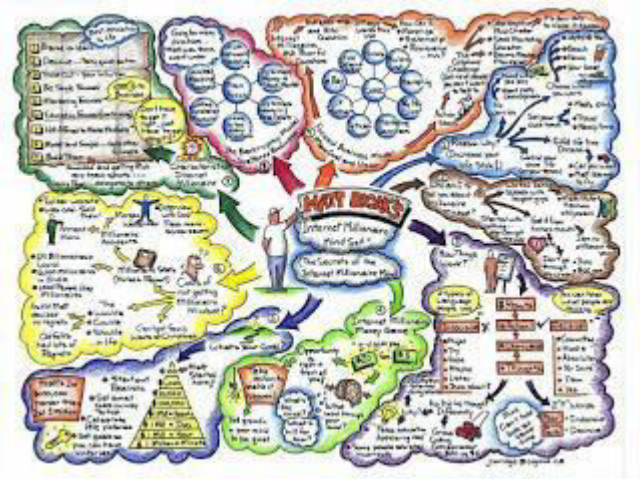
The tasks below will help build your knowledge and skills in Design and Technology and get you off to the best possible start this September. The tasks set for you will give you a taste of what is involved and get you thinking like a designer and to help you develop your skills, knowledge and understanding.

Complete the following tasks:

Materials: Understanding materials and their characteristics and working properties are crucial in design.

Task: Research the following materials and create a mind map based on your research and understanding of their characteristics and working properties:

- Woods
- Metals
- Polymers
- Textiles
- Composites
- Smart and modern materials
- Papers and card



Production processes

Task: Research the following manufacturing processes and create a presentation explaining the process. Include diagrams/sketches to aid your understanding.

- Injection Moulding
- Extrusion
- Laminating
- Milling
- Turning
- Casting

Design Theory

Task: Research a design movement and redesign an everyday object using the influence of the movement. Evidence the sketches in your sketchbook. Include a photograph of the product and then begin rapid sketching your initial ideas. Evaluate and analyse your ideas and develop them further. Annotate your development, explaining your design ideas. Draw a final design and explain how the design has been influenced.