Landau Learner Curriculum Overview

Subject: Design and Technology **Director of Learning: GM** **Year: 7**

Curriculum organisation			
Students are taught in mixed ability for the equivalent of four single lessons per fortnight. Over the year they have four rotations covering different aspects of Design and Technology.			
What topics will students be studying this year? Includes links to National Curriculum, Curriculum Intent and Prior Related Learning*			
Rotation 1 - CADCAM	**Rotation 2 - Graphics**	**Rotation 3 - Food**	**Rotation 4 – Electronic Products: Lamp**
Use of 2D Design software, What is CAD? What is CAM? How to draw accurately, Develop design and model making skills. Correct and safe use of the CNC laser cutter. Advantages and disadvantages of CADCAM. Problem solving. Evaluation of prototypes.	How to create Isometric Drawings How to create orthographic drawings How to create 1 point perspective and 2 point perspective How to apply Enhancement Techniques	**Theory sessions:** Through discussion and demonstrations, we cover: The Eat Well Guide, Importance of Fruit and Vegetables in our diet, seasonal food and impact of sugar. **Practical sessions:** We prepare: Fruit salad, Couscous, Ragu sauce, Little cup-cakes. Through these practical sessions, we Introduce students to the safe use of the Food Room and facilities, Safe knife skills, Food Safety, Basic food prep / cooking skills (boiling, simmering, sizzle test, hob and oven use.	To be able to mark out correctly and accurately To be familiar with and able to use hand tools safely and carefully To finish edges neatly and smoothly To be able to use the pillar drill and strip heater under supervision To solder a basic circuit effectively To evaluate effectively
*Links **Prior Learning:** Computing KS2 curriculum: undertake creative projects that involve selecting, using, and combining multiple applications **National Curriculum :** develop and communicate design ideas using computer-based tools **Curriculum Intent:** we encourage students to develop an iterative, hands on approach to problem solving.	*Links **Prior Learning:** builds on knowledge of geometry taught at ks2 **National Curriculum :** develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling **Curriculum Intent:** students will develop technical knowledge and vocabulary	*Links **Prior Learning: builds on KS2 knowledge to** understand and apply the principles of a healthy and varied diet **National Curriculum :** preparing ingredients; using utensils and electrical equipment; applying heat in different ways; **Curriculum Intent:** We aim for students to be aware of where new products come from and that good design is about making things better for people.	*Links **Prior Learning:** measuring skills taught at ks2, applying circuit knowledge from science sessions **National Curriculum :** understand how more advanced electrical and electronic systems can be powered and used in their products for example, circuits with light, design appealing products that meet the needs of various users, evaluate products against a specification. **Curriculum Intent:** students will be given exposure to a range of material areas, whilst developing safe working.

Equipment needed for sessions:	**What can you do to support your child?**
Ingredients lists will be provided in advance of practical food sessions Sketchbook (provided) Pencil, ruler, rubber, sharpener, Ball point pen	Encourage your child to be curious about how things work. Reinforce with your child that making mistakes is part of the design process. Encourage your child not to be afraid to voice their ideas of how particular problems could be solved. Encourage them to use their imagination and develop a creative mind.
How will learning be assessed and progress measured?	**Extension and enrichment activities:**
The four assessment objectives students are assessed on in all projects are: Researching and Designing, Development and Making, Evaluation and Testing, Technical Knowledge	