YEAR 9 DESIGN AND TECHNOLOGY

KING JAMES'S SCHOOL

KNARESBOROUGH

Name:

Teacher: Class:

During year 9 you will study 4 different units giving you a foundation of skills required to undertake the Design and Technology GCSE:

Drawing/Visual Communication	**Practical Skills**	**CAD/CAM**	**Mini NEA** (Wooden Mirror)

During this unit you will have an introduction to the 3D CAD software SolidWorks. This industry standard software is used by engineering firms across the globe to help them design and visualise products. You will learn the fundamental methods of accurately creating virtual 3D models and this will result in you designing your own 3D product which will be output to the 3D printers.

CONTENT

You will have experience of working within the SolidWorks design environment.

You will be able to describe the Pro's and Con's of using 3D CAD systems when designing products.

You will be able to transfer the 2D CAD skills you learnt in years 7&8 into this more complex 3D CAD environment.

You will have experience of outputting from SolidWorks to a rapid prototyping machine such as our 3D printers.

SKILLS

In SolidWorks you will learn to use the following tools:

- View, Zoom and Pan around,
- Sketch Entities,
- Smart Dimension Tool,
- Extruded Boss/Base,
- Extruded Cut,
- Fillet,
- Revolve,
- Revolved Cut,

You will learn to:

- Edit / Change Sketch,
- Edit / Change Features,
- Apply material textures to a model,
- Assemble parts together using Mates,

Key Vocab:

CAD	Extrude	Assembly
Virtual Model	Dimension	Sketch Entities
Work Plane	Fillet	Mates