

Core Content Overview:

Year 7 gives a broad based experience of four topics each lasting approximately 9 lessons (9 hours). The first project is Graphics, the second project is Structures, the third project is Electronics and the final project is Computer Aided Design (CAD) and Computer Aided Manufacture (CAM). This is new for September 2016 and will prepare pupils for the new GCSE's where a greater degree of creative thinking is required.

Key Skills:

Graphics. This involves both Consumer and Industrial Technology departments, designing and making a Ball-bearing game. This requires pupils to learn how to sketch, shade and render and also to measure accurately then to safely cut out a two-piece card box.

Structures involves learning about forces and how they occur. Pupils will work in teams to produce the tallest structure they can from limited resources and the main challenge involves building a structure to hold a 1kg mass over a 300mm hole.

Electronics requires pupils to learn about electronic components and build prototype electronic circuits using bread-boarding techniques.

Computer Aided Design and Manufacture (CAD/CAM) will see pupils learn to design using computers and then learn to use the laser cutters to cut out their designs.

GRADE	DESCRIPTOR
Yr 7 Grade 6	<ul style="list-style-type: none"> • I get ideas from my existing products research to help creativity. • My ideas show evidence of allowing for cultural differences where appropriate. • I have trialed other products and taken ideas from them. My design work directly connects to my specification. • I can design and develop ideas by using a variety of information sources. • I can make ideas/development clear using drawings, discussion and modelling showing understanding of costs and people tastes. • My annotation refers to the specification. • I apply my knowledge and understanding of materials throughout the making process. • I can see what's working well and what needs improving. I can overcome technical problems as they occur with minimum help. • My product will be well made and work as intended. • I can test my product in situation and document appropriate comments. • I can comment upon most of my specification points and say whether it was helpful. • I can suggest and record the main changes I would need to make in the future. • In the end of module exam a mark equal to, or in excess of 61% is attained.

GRADE	DESCRIPTOR
Yr 7 Grade 4	<ul style="list-style-type: none"> • I can come up with a number of ideas with basic reference to my research/specification. • I can use simple information found to add detail to my ideas. E.g. simple sizes, materials, how it works etc. • I can use simple modelling to show my ideas. • I can develop different ideas using some information and research that I have found. • My development work uses a mixture of sketches and labels to show information about materials, sizes, how it works and who it is for. • I can present my development work neatly using 2D/3D drawings. • I can select tools and equipment without help. • I will apply my knowledge and understanding by using tools and shaping materials correctly. • My product will be well made and function as intended. • I can identify what is working well and what could be improved. • I can think about (reflect) upon my specification and say where it is successful and not so successful. • I can say/document where my product does/doesn't fit my specification and why. • In the end of module exam a mark equal to, or in excess of 46% is attained.
Yr 7 Grade 2	<ul style="list-style-type: none"> • I can draw out 2/3 different ideas with basic labels which relate to the brief. • I can identify and write down good or bad points of a design. • I can talk about my ideas to the teacher. • I can develop some ideas using colour. • My development work uses a mixture of sketches and labels to tell the teacher about materials and sizes. • I can write down a good and bad points about my development. • I can select tools and equipment with help. • I can shape materials correctly. • My product fulfils most of the design task. • I can say if I was successful/unsuccessful. • I can identify a good or bad points about my work. • I can identify a way of making my work look and work better. • In the end of module exam a mark equal to, or in excess of 31% is attained.