		KS4 Overview								
		Autumn Term		Spring Term		Summer Term				
		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
		Topic: basic metal cutting, shaping and joining	Topic: Use of engineering workshop machine tools - G Cramp	Topic: Use of engineering workshop machine tools - G Cramp	Topic: Introduction to Engineering drawing by hand	Topic: Computer Aided Design and Manufacture	Topic: PPE Synoptic Project Learning Aims: Unit 2 - Skills and			
	Practical Activity	Learning Aims: Learning outcome 1:5 Students learn to mark, cut, shape and join a pair of pliers from mild steel Outcomes: Pliers and engineering drawing. Assessment: Pliers log book, drawing , planning practical.	Learning Aims:Learning outcome 1:5. Students use hand tools and machine tools manufacture a G Cramp. Health and safety, risk assessments etc. Outcomes: G cramp and associated drawings Assessment: Log books, End of Term Test	Learning Aims: Learning outcome 1:5. Students use hand tools and machine tools manufacture a G Cramp. Health and safety, risk assessments etc. Outcomes: G cramp and associated drawings Assessment: Log books, End of Project Review Test	Learning Aims: Learning outcome 1.3 - Engineering drawing by hand, using instruments. ~Drawing conventions, BS8888, dimensioning, views etc. Rendering and shading 3D drawings • Two-dimensional projection first angle projection and symbol third angle projection and symbol Three-dimensional projection axonometric, isometric two-point perspective. Outcomes: A variety of 2D drawings drawn to BS8888 and 3D drawings with realistic rendering where appropriate. Assessment: Timed drawing activities with exam style questions	Learning Aims: Learning outcome 1:3/1. 5 Creating A3 isometric and orthographic drawings using 2D Design. Using the correct conventions to communicate engineering drawings and design ideas. Understanding the variety of CNC machines used widely in engineering and using some of them to manufacture components to a given specification. Manufacture of various components using CNC router & laser cutter. Production planning, tools and equipment, Health and Safety, Flow maps. Outcomes: A variety of 2D and 3D engineering drawings. Assessment: Timed drawing activities	tecniques in Engineering. Mock Synoptic projects - students respond to given brief to select materials and manufacturing processes, plan production and manufacture a given product. Outcomes: Manufactured component, Portfolio of evidence meeting condensed criteria for synoptic project. Assessment: Portfolio and practical assessed against Unit 02 criteria			
/r 1(		Topic: Engineering Tools and	Topic: Engineering Disciplines	Topic: Properties of materials	Topic: Engineering Drawing.	with exam style questions Topic: The application of science and	Topic: Revision and Exam Preparation			
~	Theory Content	equipment. Learning Aims: Learning Outcome 1.5 Knowledge and understanding of engineering tools and equipment and their correct applications, including hazards and risks. Outcomes: manufacture of a multi-tool, completing log book and tasks relating to the various manufacturing processes used. Assessment: exam style questions and short tests	Learning Aims: Learning Disciplines Learning Aims: Learning outcome 1: 1. In this learning outcome, the learner will know and understand how different engineering disciplines are applied to projects and products. The learner will know and understand the health and safety legislation that influences engineering. Outcomes: Case study report and exam responses through the study of different engineering disciplines with references to the development of products and projects which have affected the way in which we interact with the modern world. Assessment: Written report / Case study plus exam style questions and short tests	Learning Aims: Learning outcome 1: 3. Identification of a range of engineering materials, their properties and applications Outcomes 1: Investigation into materials, production of materials database, disassembly of engineered product & poster. Outcomes 2: manufacture of a multi-tool, completing log book and tasks relating to the various manufacturing processes used. Assessment: exam style questions and short tests	Learning Aims: Scale, ratio,• Systems of measurem imperial and metric, conversion. British Standards • British Standard BS 8888 purpose of the standard how it fits with the ISO standards how the standard is applied to engin	maths Learning Aims: Learning Outcome 1.2 Understanding of SI units of measurement in applied products and projects. The use of equations and formulae to solve engineering problems Outcomes: Working through real world examples and hands on tasks to calculate the properties of energy, forces and motion, electrical and geometry in the development of products and projects. Assessment: exam style questions and short tests	for Nov examination. Learning Aims: Learning Outcomes 1.1, 1.3, 1.4, 1.5 Disciplines, Materials, Drawing, Tools and equipment, Outcomes: Revision in preparation for year 10 exam, review of performance and initial preparation for Yr 11 exam. Assessment: Year 10 end of year exam			
		Autumn Term		Spring Term		Summer Term				

			Spring i	Spring 2	Summer 1	Summer 2
Yr 11	Topic: 1. Exam Preparation For Nov exam 2. Initial preparation for Synoptic Assessment Task Learning Aims:Learning Outcomes 1.1 - 1.5 Outcomes: Structured Revision through exam style questions linked to practical and theory based tasks. Detailed Materials investigation (properties of materials and materials testing) in preparation for synoptic assessment & as exam prep. Assessment: exam style questions and short tests Assessment: Assessment of SAT against published grade descriptors.	Topic: 1.Revision / exam preparation for Nov exam 2. Unit 2 - Synoptic Assessment Task Learning Aims: Learning Outcomes 1.1- 1.5 - All content. Unit 2 - Learning Outcome 2 (2.1, 2.2, 2.3) Outcomes 1:Structured Revision through exam style questions linked to practical and theory based tasks. Outcomes 2: Initial Analysis of task. Hand drawn solutions, CAD drawings, Production Planning. Assessment: Exam style questions and short tests Assessment: Assessment of SAT against published grade descriptors.	Topic: Synoptic Assessment Task Learning Aims: Learning Outcomes 2.3, 2.4 Outcomes: Manufacture and documentaion of practical task. Assessment: Assessment of SAT against published grade descriptors. OR If resit of examination is required: Topic: 1. Exam Preparation For March exam Learning Aims:Learning Outcomes 1.1 - 1.5 Outcomes: Structured Revision through exam style questions linked to practical and theory based tasks. Assessment: exam style questions and short tests	Spring 2   Topic: Synoptic Assessment Task   Learning Aims: Learning Outcomes 2.1   - 2.4   Outcomes: Manufacture and documentaion of practical task.   Evalation of product and approache adopted ensuring Assessment Objectives 1-5 met throughout and appropriately evidenced.   Assessment: Assessment of SAT against published grade descriptors.   OR   If resit of examination is required:   Topic: 1. Exam Preparation For March exam   Learning Aims:Learning Outcomes 1.1 - 1.5   Outcomes: Structured Revision through exam style questions linked to practical and theory based tasks.	Topic: Synoptic Assessment Task Learning Aims: Learning Outcomes 2.1 - 2.4 Outcomes: Manufacture and documentaion of practical task. Evalation of product and approache adopted ensuring Asseesment Objectives 1-5 met throughout and appropriately evidenced. Deadline end of May Assessment: Assessment of SAT against published grade descriptors.	Topic: Learning Aims: Outcomes: