Year 10		Year 11
Units	**Assessments**	**Assessments**
Our world: Our world Automation Advantages and disadvantages of CAD/ CAM Just in time Researching the work of others Natural and synthetic polymers Sold as forms Thermoforming and thermosetting polymers Laminating, sizes, microns, aesthetics and recycled materials of papers and boards **Energy sources:** Energy sources Fossil Fuels Non renewable energy Energy storage **Pizza Wheel Prototype:** Carbon footprint Ecological footprint Legislation Market pull & Technology push 6Rs Fairtrade Responsible designers Ergonomics and Anthropometrics Design brief Specifications Iterations Prototyping New materials **Trinket Box:** Properties of timbers Natural timbers Defects Hard and soft woods Manufactured boards Sold as forms Finishes, sizes, costs Tools and equipment Joining, veneers, joints, fixing and finishing's **Mechanisms:** Rack and pinon, cams, motions, forces, stresses, speed and movements Calculations Pulleys, gears, levers, linkages **Mini NEA:** Exploring a context Research needs and wants of a user Write a design brief Specifications Design ideas Iterations Modelling Analysing Sketch up communications Evaluation's and modifications **Metals:** Alloys, ferrous and non ferrous metals Sold as forms Finishes Tools and processes **Systems:** Input, output and processes Flow and block diagrams **Textiles:** Natural, manufactured and blended fibres	Your understanding of the content is checked by: A series of knowledge checks throughout the project A end of unit test out of 25 marks Homework's The practical outcome from each unit of work **Mock Exam March** **2 hour exam** **50% of the course** **100 marks**	**NEA Non Examined Assessment** **50% of the course** **100 marks** Core knowledge and understanding that learners are required to develop and apply is presented in ten clear topic areas: • Understanding design and technology practice • Understanding user needs • Writing a design brief and specifications investigating challenges • Developing ideas • Investigating the work of others • Using design strategies • Communicating ideas • Developing a prototype • Making decisions In-depth knowledge and understanding is presented in five clear topic areas: • Selecting and working with materials and components • Marking out • Using tools and equipment • Using specialist techniques • Using surface treatments and finishes Revision for exam **Final Exam 2 hours** **50% of the course** **100 marks** Core knowledge and understanding is presented in five clear and distinct topic areas: • Design and technology and our world • Smart materials • Electronic systems and programmable components • Mechanical components and devices • Materials In-depth knowledge and understanding is presented in six clear and distinct topic areas: At SVC we focus on: **Natural & Manufactured Timber** • Ferrous & non-ferrous metals • Thermoforming & thermosetting polymers • Fibres & textiles • Electronic systems • Programmable components • Mechanical devices • Papers & boards