

Curriculum Content Map			Subject: Design & Technology Year 9		
			Half Term 1	Half Term 2	Half Term 3
	Units of Work		Drawing and Graphics - Orthographic and Perspective Drawing Subject Knowledge - One point perspective, Tone, Two point perspective, orthographic drawing.	Designing for Users - Modelling and prototyping, Specification and Users needs. Subject Knowledge - Users needs, Specification writing, modelling.	Making - Motion, Linkages and Automata Subject Knowledge - Forms of Mechanical Motion, Linkages in devices, CAMS and Automata.
Cultural Transmission	Specification		National curriculum: - develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools	National Curriculum: - use research and exploration, such as the study of different cultures, to identify and understand user needs -identify and solve their own design problems and understand how to reformulate problems given to them	National Curriculum: - select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture - understand how more advanced mechanical systems used in their products enable changes in movement and force
	Substantive Knowledge	<i>The What!</i>	Students will work through the key areas of DT: DESIGN - Develop basic skills in using perspective drawing and isometric projection to communicate design ideas. Begin to use tone to communicate shape and textures. Focusing on basic forms and drawing skills to bring up skills and experience for all learners. SPECIFICATION AND EVALUATION - Focusing on user needs and modelling to test and evaluate designs students will use card to develop key materials knowledge to prototype a design. MAKE - Using knowledge of movement and linkages students will prototype cam based automata.		
	Disciplinary knowledge	<i>The How!</i>	DESIGN - Through a range of activities students gain confidence in basic perspective techniques. Through tests looking at one point perspective students look at showing shape through shading and use of tone. SPECIFICATION AND EVALUATION - Through a design challenge to make a structually sound chair students design the components needed and model using card. Skills in using knives, safety rules and cutting techniques to effectively model designs. MAKE - Develop knowledge of mechanical processes for movement and linking components. Students will work to design and make a simple automata with cam and follower.		
	Sequencing (Flow)	<i>Retrieval & Extension</i>	Building on KS2 knowledge of basic graphics skills and cross curriculum links to art around the use of tone to show shape and texture. In KS3 students have previously developed their skills in drawing and are refining them in year 9 with greater technical expertise towards the GCSE exam expectations.	Building on KS2 knowledge of modelling and use of paper and card to construct 3D shapes with. In KS3 students have previously developed their making skills through paper modelling and the use of card links to one of the key materials groups from GCSE specifications.	Building on KS2 knowledge of axles and gearing students are extending this knowledge into design tasks. In KS3 students have previously developed their making skills through understanding forces in science lessons and are now extending this understanding by making use of mechanical processes to create movement.
	Summative Assessment		AP1 assessment is based on an adapted GCSE AQA Design Technology paper combined with assessment of folder work against adapted NEA criteria.	AP2 Will extend the sections of the GCSE paper used to reflect the extended knowledge of users and the design process.	AP3 Will respresent and assessment of all NEA criteria as students have completed an outcome. Further sections of the written paper will be added to the assessment so that the mark is reflective of the GCSE assessment model.
	Personal Empowerment	Virtue	<i>The opportunity to reflect, think deeply and critically about an Issue.</i>	Listening – Listening to organisations and industries ideas on technology of the past, present a future. Problem-Solving with developing drawing techniques. The generosity of ideas that inventors give to organisations through the process of Intellectual Property.	Students will have the opportunity to practise good speech and speaking through talking about ideas and designs in this unit. We also look at how audiences and consumers show gratitude in the demand for the product and how product improvements show gratitude back to the audiences.
Link to Virtue					
Preparation for Work	Skill	<i>Transferable skills</i>	Creativity embedded throughout the designs. Looking at how we can be a friendly and civil society about the environment. Which companies have had the courage to change their approach despite cost and impact. What organisations and innovations lead the world of technology. Students having the courage to come up with new ideas in their own designs.	They will explain how innovators had to stay positive against costs, competition and environmental impacts. As students present their work and research (Good Speech and Speaking) there will be an opportunity to trial some of the machinery and a development of <i>positivity</i> and good humour as we know things do not always go to plan first time round.	There will be an opportunity to trial some of the machinery and a development of positivity and good humour as we know things do not always go to plan first time round. And they will be operating a high level of self-mastery over the term as they have to work independently to meet targets. Students will have compassion through evaluation of their own work and peer-assessment. Good Sense will be tested as they work towards the deadlines of the NEA.
	Link to Skill				
Preparation for Citizenship	SMSC & British Values	<i>Developing opinions on curent issues</i>	Social – viewing each other’s work and being inspired by others. Cultural –showing respect for equipment provided by the school Social – looking at the work of others Cultural – be tolerant of each other’s views and opinions	Social – understanding how to follow a process from start to finish Cultural – responsibility for quality of own work Social – viewing each other’s work and being inspired by each other. Cultural – responsibility for quality of own work	Social – viewing each other’s work and being inspired by each other and the work of others Cultural – responsibility for quality of own work and equipment provided by the school. Social – viewing and discussing the work of others Cultural – be tolerant of each other’s views and opinions and being respectful of their work.
	Link to SMSC & British Values				