Curriculum Content Map — **Subject: Design & Technology Year 8**

			Half Term 4	Half Term 5	Half Term 6
Cultural Transmission	Units of Work		Drawing and Graphics - Technical drawing Subject Knowledge - Tecnical drawing, motion and movement, linkages, lazy tongs, cams, followers - Present work with annotation 2 weeks prior to assessment. - Gap filling after assessment will be based on students responding to feedback and returning to tasks to complete extended outcomes. **AP2 assessment** Based on an adapted GCSE AQA Design Technology paper combined with assessment of folder work against adapted NEA criteria.	Designing for Users - Specification and Users needs, food automators Subject Knowledge - Users needs, Specification writing, modelling, gears and mechanical movement **Formative Assessment** - Range of activities including peer and self reflection. - Using marking stickers and whole class feedback to reflect on progress.	Making - Motion, automators using modelling card Subject Knowledge - Forms of Mechanical Motion, Linkages in devices, CAMS and Automata. **AP3 assessment** 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 reflectice of the GCSE assessment model.
	Specification		National curriculum: - develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling	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	*The What!*	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	*The How!*	**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)	*Retrieval & Extension*	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 mechnical processes to create movement.
	Summative Assessment		AP2 assessment is based on an adapted GCSE AQA Design Technology paper combined with assessment of folder work against adapted NEA criteria.	Designing for Users - Specification and Users needs, food automators Subject Knowledge - Users needs, Specification writing, modelling, gears and mechanical movement Formative Assessment	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 reflectice of the GCSE assessment model.
Personal Empowerment	Virtue	**The opportunity to reflect, think deeply and critically about an issue.**	**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.	As students present their work and research **(Good Speech and Speaking)** there will be **team-work** to help review and reflect on each others work. Students will complete their NEA and this is fundamentally where they are **aiming high** towards their target grade.
	Link to Virtue				
Preparation for Work	Skill	*Transferable skills*	**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 *positivity* 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	*Developing opinions on curent issues*	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				