

Stone Hill School

Curriculum Plan 2020/21

Design Technology Year 10

Intent:

All pupils will produce a design and manufacture an outcome.

Most pupils will successfully produce an outcome using a range skills and processes.

Some pupils will independently produce a well presented outcome which satisfies the brief.

Term	Week/s	Topic/Theme <i>Key vocabulary including Tier 3 subject specific words</i>	Learning Outcomes Knowledge and Skills To know, to use, to apply...	Links to: Literacy, Numeracy, SMSC, Gatsby Benchmarks
Half Term 1	1	Research Vocabulary: Evolution, history, miniaturisation, new technology, future.	Internet research into personal music devices. The evolution of personal music.	Literacy: Research / reading independently / comprehend
	2	Design – MP3 Amplifier Vocabulary: Retro, style, theme, development.	Design of own idea Materials selection	SMSC: Sustainability of materials
	3-4	Electronics introduction Vocabulary: Integrated circuit, capacitor, jack lead, speaker, snippers, strippers. STEAM: Science – storing and transfer of electrical energy.	Understanding; Ohms, watts, volts, farads, amps, decibels - units of measurement. Input and output. Amplification.	Numeracy: using units of measurement Numeracy: Logical reasoning / making connections and comparisons
	5-8	Project – MP3 Amplifier Circuit building Vocabulary: Polarity, joint, population, fault finding.	Populating the board, polarity, soldering, IC's Problem solving independently Using a flow chart to solve problems independently	STEAM: Industrial practices Literacy: Infer information
Half Term 2	9-15	Designing a housing / vac-formed casing Vocabulary: housing, draft angle, forming, trimming.	Accurate marking out using ruler Sketch modelling of casing Vacuum forming Independent production of outcome	Numeracy: Construct 3D shapes / Addition & subtraction using concrete resources Literacy: Listen to an opinion Gatsby Benchmark 4: Linking curriculum learning to careers
Half Term 3	16-18	Evaluation Vocabulary: testing, fault finding, performance, vibration.	Identify faults with own outcome Suggest how it could be improved	Literacy: Take part in discussion SMSC: Group discussions with peer group

Impact: In Year 10 students look into the history of music and will use this knowledge to predict what will happen in the future. They select and combine materials introduced in previous years, and build on this knowledge and these skills by fitting electronics and using CAD to incorporate Laser-cut parts into their designs. The focus this year will enable pupils to increasingly work independently.

Note: Each Year 10 class will get three half terms in Technology and three half terms in Food Technology. If they finish early, they design and make a clock.