

 Subject Vision — Why Product Design Matters

Our Vision

Year 13 is the year students cease being learners of design and become practitioners of it. They arrive with a grounding in all seven Eduqas theory topics and a Real NEA launched in May of Year 12 — a live, open-ended design-and-make commission carrying 50% of the A Level grade. NEA lessons are supervised independent studios in which the teacher questions, challenges and occasionally redirects — because the quality of a prototype is determined overwhelmingly by the depth of investigation, precision of specification and rigour of development that precede the making.

Our Three-Strand Purpose

- **Knowledge** — all seven theory topics revisited at greater depth than Year 12 first taught them — materials at molecular level, manufacturing economics, ergonomic and anthropometric data, and the role of design in shaping culture, economy and human wellbeing — with synoptic connections made explicit.
- **Disciplinary Thinking** — extended analytical writing with clear, substantiated conclusions; examiner-report and band-descriptor language; spaced retrieval with escalating challenge — rapid retrieval early in term, applied past-paper practice mid-term, extended-writing masterclasses late in term; revision prioritised by mock diagnostics.
- **Skill** — the Real NEA prototype manufactured to a professional standard — independent investigation, a precise specification, iterative development, CAD drawings, workshop manufacture to a tight checkpoint schedule, testing, and analytical evaluation of the entire process.

Curriculum Journey — Learning Sequence by Term		
AUTUMN TERM	SPRING TERM	SUMMER TERM
Real NEA Development + November Mock	Making Complete + NEA Marked	Examination Preparation + A Level
The design specification finalised in the first week; initial ideas, development pages and CAD drawings follow a tight checkpoint schedule; prototype making begins; theory revision runs in parallel — materials, processes, industrial practice and human responsibility aligned to the NEA stage each week; the full 3-hour November mock (Component 1 style, all seven topics, extended writing) provides the first full diagnostic.	All making completed by February half term; final NEA marks awarded by the third week of March — a deliberately compressed timeline that releases the final term for examination preparation; ongoing timed section practice (45–75 minutes, Sections A and B alternating) with PATHS after every session; a full 3-hour examination simulation under strict conditions after February half term.	Pure examination preparation from March: final target cards produced from the exam simulation; extended-writing masterclasses; command-word mastery and synoptic thinking across all seven topics; the Eduqas Component 1 written examination — 3 hours, 120 marks — sat in May/June completes the A Level alongside the externally moderated NEA.
A Spiral Curriculum Year 13 completes the seven-year spiral: the Year 7 torch’s guided design-and-make journey has become an authentic, self-directed commission; ACCESS FM checklists have become professional specifications and criterion-level evaluation; first laser cuts have become lathe turning, casting and additive manufacture integrated in one prototype. The revision programme is engineered around exam readiness, not content re-delivery — the weakest November mock topics receive the most time, and every assessment converts into an updated personal target card.		

 Assessment Information

How Pupils Are Assessed

- **NEA checkpoint schedule** — specification, development, CAD, making and evaluation each reviewed against a compressed, published timeline
- **PATHS after everything** — every mock paper, every extended-writing exercise and every NEA checkpoint returns PATHS feedback tied to band descriptors and examiner-report language
- **Timed section practice** — 45–75 minute Section A and B sessions through the spring, targets updated after every session
- **Retrieval and target cards** — spaced retrieval each lesson; a personal target card maintained and refined all year

Formal Assessment by Unit

- **Component 2 Real NEA** — 100 marks, 50% of the A Level: making complete by February half term, final marks awarded by the third week of March
- **November mock and exam simulation** — full 3-hour Component 1 style papers, each returning a complete PATHS report and revision priorities
- **Component 1 written examination** — 3 hours, 120 marks across all seven topics, sat in May/June

★ PATHS Marking Framework

Every formal assessment is followed by feedback using PATHS — the school's consistent feedback model. No PATHS cycle is complete until the pupil has responded.

	Element	What it means	Example in Year 13
P	Positive Comment	Specific, sincere and tied to band descriptor language.	“Your analysis of why CFRP is replacing aluminium in aerospace correctly identifies weight-to-strength ratio and fatigue resistance, and links these to manufacturing cost differentials — this is Band 4 synoptic analysis.”
A	Attainment Mark / Grade	AO3 or AO4 band awarded with marks, cross-referenced to examiner report language.	“AO3 — 8/12, Band 3. You are evaluating, not just describing; however, your conclusion is implicit rather than stated. Band 4 requires a clear, justified judgement.”
T	Target to Improve	A single, specific, examiner-language target tied to a band descriptor.	“Your response does not make an explicit final judgement. The Band 4 descriptor requires ‘a clear, substantiated conclusion’ — add one closing sentence that states and justifies your judgement.”
H	How-to Instructions	A specific, actionable instruction tied to mark-scheme structure.	“Rewrite your final paragraph: ‘Therefore, taking into account [material A’s] superior [property] against [material B’s] advantage in [other property], [material A] is the more appropriate choice because [specific justification].”
S	Student Response	Green pen response — same or next lesson.	“Therefore, CFRP is the more appropriate choice: its weight-to-strength advantage outweighs aluminium’s lower material cost, because fuel savings across an aircraft’s service life exceed the manufacturing premium.”