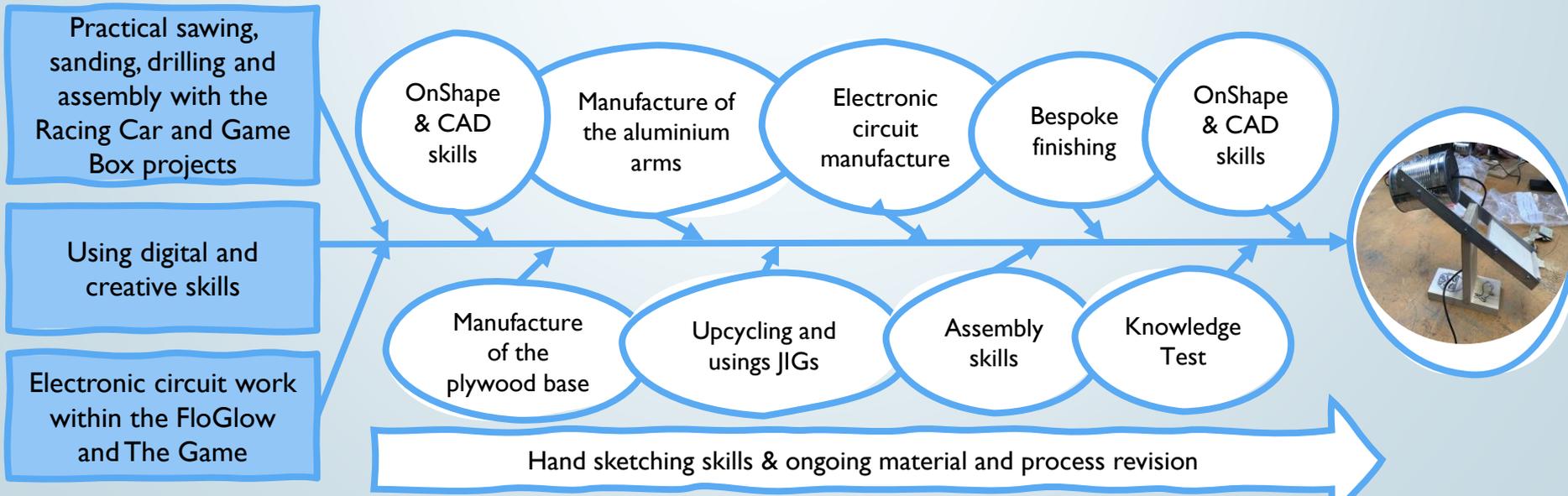


Yr 9 - Project I; Balance Lamp - Why do we study Resistant Materials?

By studying Design and Technology we allow opportunities to develop skills and knowledge across a wide range of disciplines using creative, practical and computer aided tools. Technology is all around us and is driven by market pull, social factors and clients' needs, which are reflected in the reactive design and manufacture of prototypes and end products. Students must understand the properties of materials across the breadth of subject areas to problem solve and make informed decisions that influence design performance, practicality, aesthetics, suitability and cost. Students will learn to communicate ideas through hand sketching in 2D and 3D, using CAD to develop designs and CAM outputs within their workshop manufactured prototypes.

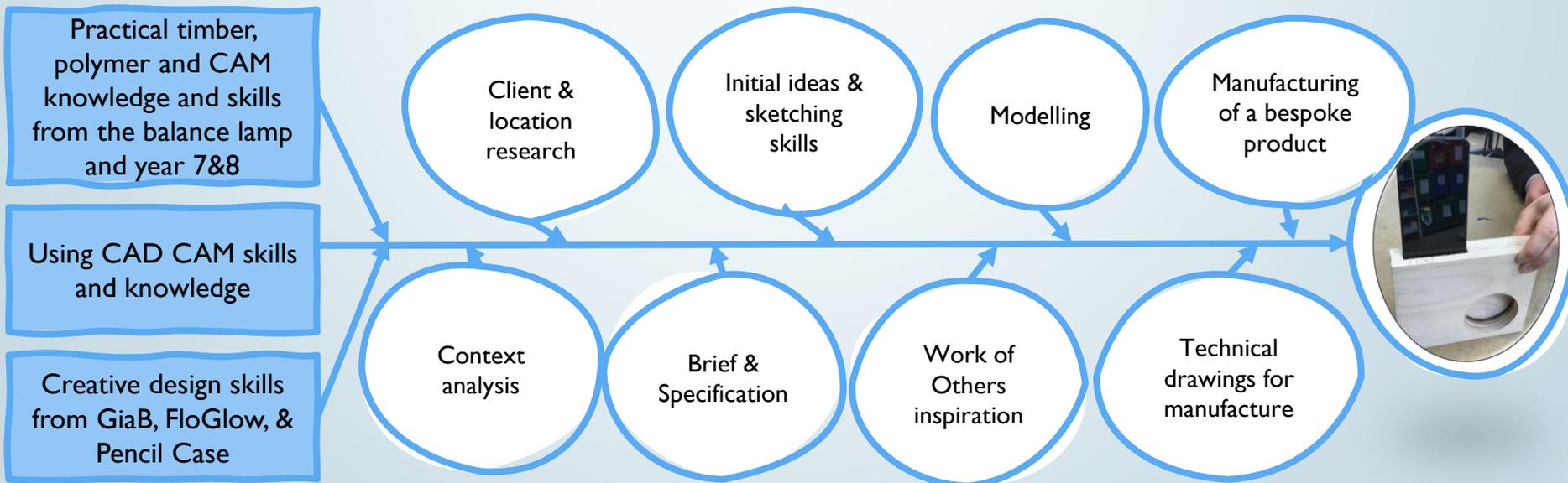
The balance lamp project focuses on expanding your practical skills developed in year 7&8 using more complex machinery and tools. This develops your material and process knowledge, supporting successful design decisions for your lamp and future projects.



Yr 9 - Project 2; Passive Amplifier - Why do we study Resistant Materials?

By studying Design and Technology we allow opportunities to develop skills and knowledge across a wide range of disciplines using creative, practical and computer aided tools. Technology is all around us and is driven by market pull, social factors and clients' needs, which are reflected in the reactive design and manufacture of prototypes and end products. Students must understand the properties of materials across the breadth of subject areas to problem solve and make informed decisions that influence design performance, practicality, aesthetics, suitability and cost. Students will learn to communicate ideas through hand sketching in 2D and 3D, using CAD to develop designs and CAM outputs within their workshop manufactured prototypes.

The passive amplifier project uses the pupils practical skills and knowledge built through the balance lamp and previous projects to give them freedom within the design of a bespoke passive amplifier. They can manufacture using timber, polymers or CAM, or a mixture, providing them with opportunities to take design risks throughout the iterative process of sketching, modelling, testing, prototyping and manufacture.



Year 10 & 11 DT Resistant Materials overview

1: Slider Box x 3 lessons/cycle until Christmas

2: Tiny Spaces x 3+ lessons/cycle until May

Throughout: Core knowledge x 3 lessons per cycle

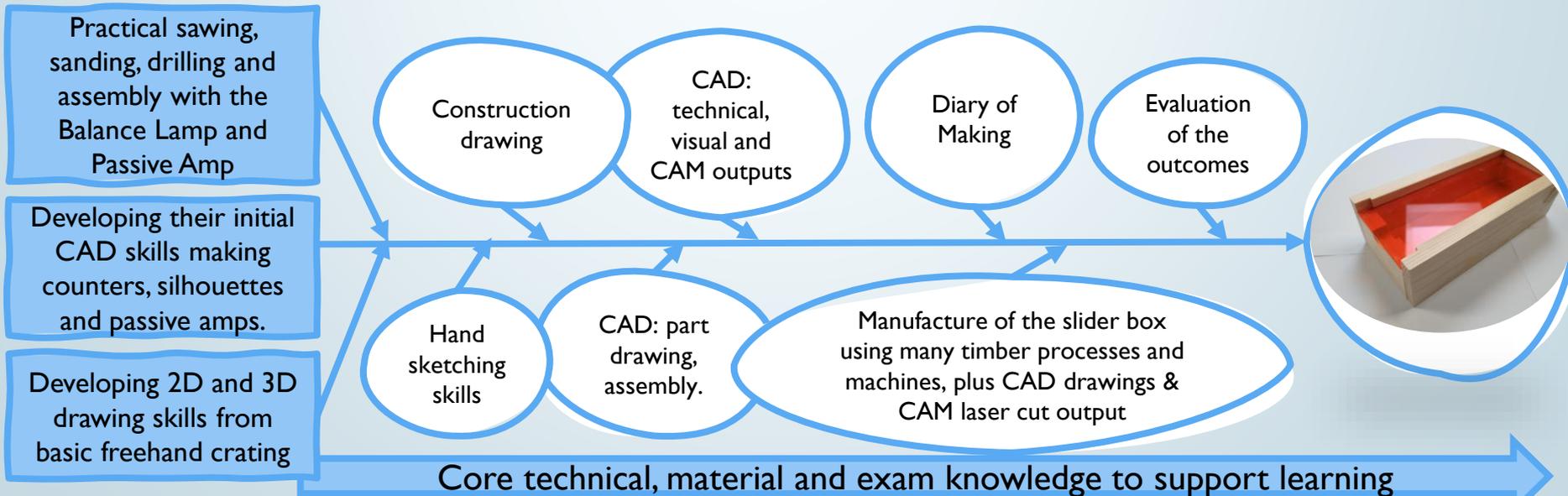
Embedded skills: practical, drawing, CAD, problem solving

- * NEA Coursework, June '26 until Feb '27 = 50% of grade.
- * Core knowledge & exam practice throughout
- * Exam at end 50% of grade.

Y10 - Project 1; Slider Box - Why do we study Resistant Materials?

By studying Design and Technology we allow opportunities to develop skills and knowledge across a wide range of disciplines using creative, practical and computer aided tools. Technology is all around us and is driven by market pull, social factors and clients' needs, which are reflected in the reactive design and manufacture of prototypes and end products. Students must understand the properties of materials across the breadth of subject areas to problem solve and make informed decisions that influence design performance, practicality, aesthetics, suitability and cost. Students will learn to communicate ideas through hand sketching in 2D and 3D, using CAD to develop designs and CAM outputs within their workshop manufactured prototypes.

The slider box project develops pupils' practical skills using new machinery and tools to create more complex construction techniques. Pupils will develop their CAD skills creating the Slider Box with a bespoke laser cut and etched lid. The technical drawings will be used to support the practical tasks and pupils will be expected to begin resolving practical queries independently, providing them with the resilience and knowledge for future bespoke projects; Tiny Spaces, GCSE NEA and beyond.



Yr10 - Project 2; Tiny Spaces - Why do we study Resistant Materials?

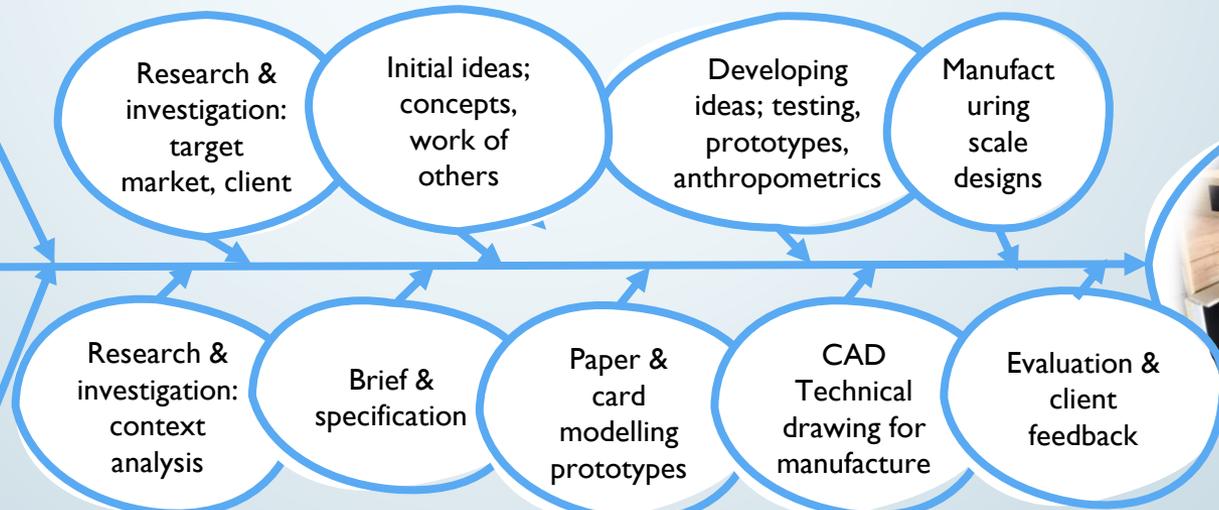
By studying Design and Technology we allow opportunities to develop skills and knowledge across a wide range of disciplines using creative, practical and computer aided tools. Technology is all around us and is driven by market pull, social factors and clients' needs, which are reflected in the reactive design and manufacture of prototypes and end products. Students must understand the properties of materials across the breadth of subject areas to problem solve and make informed decisions that influence design performance, practicality, aesthetics, suitability and cost. Students will learn to communicate ideas through hand sketching in 2D and 3D, using CAD to develop designs and CAM outputs within their workshop manufactured prototypes.

The Tiny Spaces project uses the pupils strong practical and construction knowledge to develop creative, but realistic ideas to design a client's space within a scaled down shipping container. The project intertwines research, investigation activities and client feedback into a series of design creations using various development techniques. Pupils will be expected to continue their initial year 9 modelling skills to explore and present their ideas to their client, with ongoing modifications, depending on the feedback. Pupils will finish by creating a scaled version of the Tiny Space design using any tools, equipment and materials available in the workshop.

Practical's skills across timbers, manufactured boards, polymers, metals and electronics from year 10 & 9.

Developing their modelling from FloGlow silhouettes and passive amps.

Developing 2D and 3D drawing skills from basic freehand crating

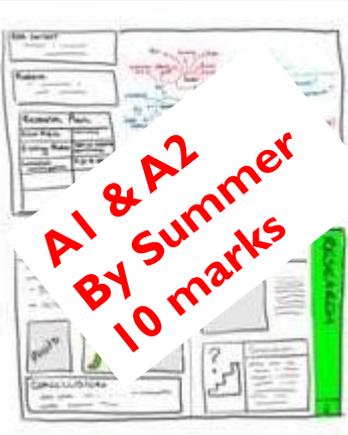


Core technical, material and exam knowledge to support learning

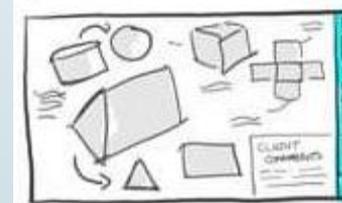
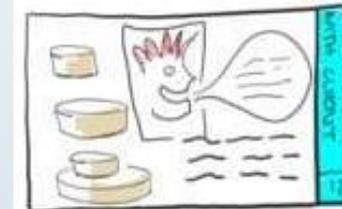
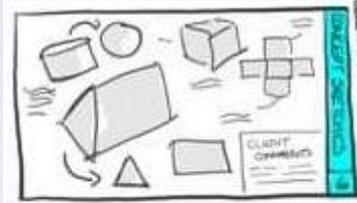
YR 11 - D&T NEA OVERVIEW (MINIMUM PAGES)

This is worth 100 marks, 50% of your GCSE grade.

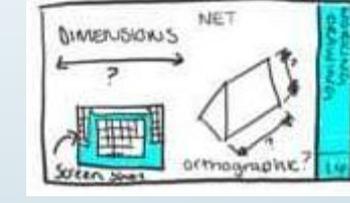
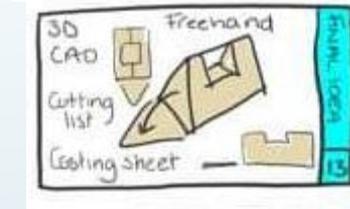
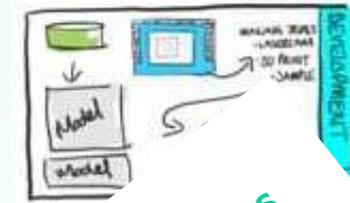
Section A



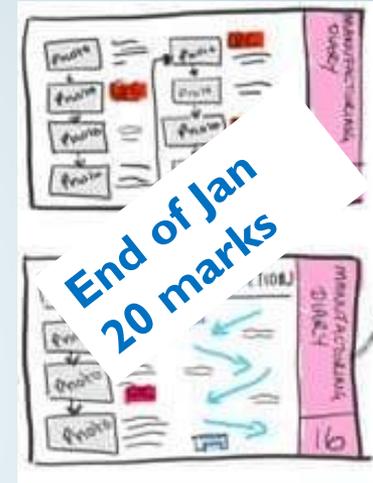
Section C



Section D



Section E



Section B



Section F

