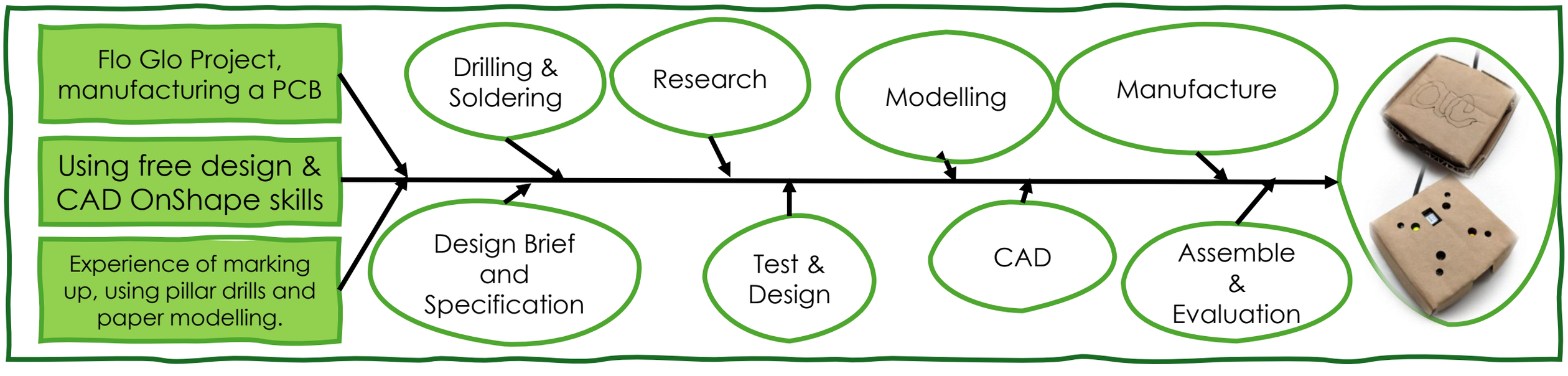
# Yr 9 Project 1; Game Project - Why do we study electronics within Design Materials?

**By studying Design and Technology we allow opportunities to develop skills and knowledge across a wide range of disciplines using traditional, practical and computer aided tools. Design and Technology covers Product Design, Resistant Materials, Electronics, Fashion and Textiles and Engineering, all problem-solving subjects building confidence and resilience in creative skills, testing, failing, improving and creating successful outcomes individually, or as part of a team.**

**We study electronics to gain a thorough understanding of the world around us. Through building circuits, coding microcontrollers, designing and making casings for our circuit boards, we develop key skills to be able to create solutions to everyday problems in innovative ways.**

**The electronic game project builds on what you learned in the Flo Glow project and introduces new components, such as microcontrollers, to build a complex product. As well as soldering, you'll expand your knowledge of CAD CAM, and develop your designing skills.**



# Yr 9 Project 2; Music Box - Why do we study Electronics?

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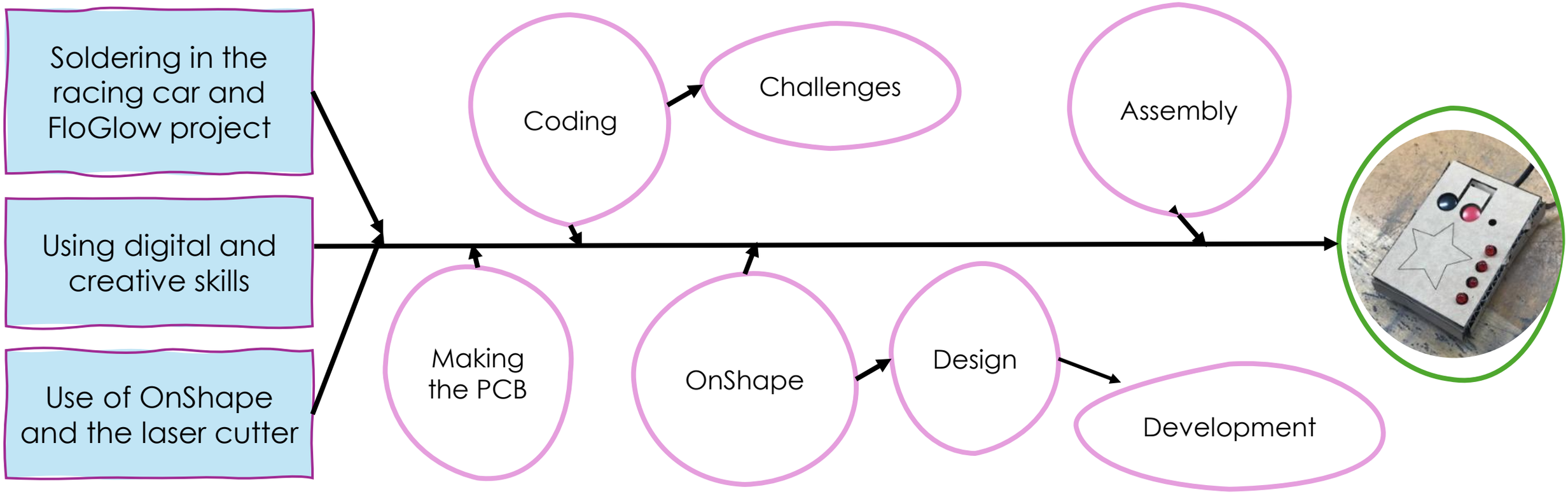
**We study electronics to gain a thorough understanding of the world around us. Through building circuits, coding microcontrollers, designing and making casings for our circuit boards, we develop key skills to be able to create solutions to everyday problems in innovative ways.**

**The Music Box project builds on what we've learnt from the racing car project and the FloGlow project, introducing us to coding microcontrollers. It develops our skills and understanding on how electronic products work. Students will solder their PCB, code it to play the tunes and lights that they want it to, using CADCAM to design and make a sustainable casing.**



# Year 10 & 11 DT Electronics overview

Ms Clifford

1: Modular circuit project x3 lessons/cycle

Mr Farmer

Throughout: Core knowledge x 3 lesson/ cycle

Embedded skills: practical, drawing, CAD, problem solving

* NEA – From June until Easter – 50% of grade.
* Core knowledge & exam practice throughout – Exam at end 50% of grade.

# Yr 10 Project 1; Modular Circuit Project- Why do we study Electronics?

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**We study electronics to gain a thorough understanding of the world around us. Through building circuits, coding microcontrollers, designing and making casings for our circuit boards, we develop key skills to be able to create solutions to everyday problems in innovative ways.**

**The Modular Circuit Project is an introduction to DT GCSE and builds on what we did in Year 7, 8 and 9 – recapping how to use microcontrollers and code them to do what we want. It also introduces breadboarding and modelling circuits, as well as designing using CAD and making the casing. By the end you'll have a project board that you can use for future projects, and a product that meets a specific need!**