OVERVIEW

In the Technology faculty we develop students into independent problem solvers, by teaching the students how to independently produce bespoke products in response to a given design brief. We base all our learning and assessment around our ethos of Design, Make, Evaluate and Knowledge. In Year 8 Students will be given the opportunity to learn how to use industry standard 3D Computer Aided Design software and 3D print a pizza cutter handle, they will then learn about electronic prototyping to develop a product to enhance a person's life.

Aut

Pizza Cutter
1. Brief, Specification and analysis.
2. Ergonomics and anthropometrics
3. Smart materials – polymorph, modelling
4. Modelling – Styrofoam
5. CAD - Fusion 360 introduction
6. CAD – making components – shelling
7. CAD – making components – shelling
8. Assemble, test, evaluate.

Assessment:
Design – modelling of ergonomic handle and CAD skills using Fusion 360.

Make – quality of prototypes and final product.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – of anthropometrics and ergonomics, use of Fusion 360 to model and render drawings.

Spr

Programming / prototyping
1. Intro to programming and prototyping.
2. Programming 1
3. Programming 2
4. Programming 3

Inclusive Design - Programming / prototyping
5. Brief, spec, analysis.
6. Initial ideas
7. Idea development

Assessment:
Design – quality of ideas and presentation of drawings for the inclusive design task.

Make – range of programmable boards, from set tasks to solving a problem for inclusive design.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – programming of Arduino boards, circuit construction, diagrams and design.

Sum

Inclusive Design - Programming / prototyping
1. Modelling/ programming
2. Modelling/ programming
3. Modelling/ programming
4. Test, evaluate, redesign

CAD Swing
5. Model – Fusion
6. Model – Fusion
7. Assemble
8. Test, evaluate, redesign.

Assessment:
Design – quality of ideas and presentation of drawings for the inclusive design task.

Make – range of programmable boards, from set tasks to solving a problem for inclusive design.

Evaluate – how well the student has evaluated their designs, practice and finished product.

Knowledge – programming of Arduino boards, circuit construction, diagrams and design.

Useful resources for supporting your child at home:

Excellent design sketching tutorials:

product designer maker - YouTube

Student access to Focus eLearning – direct link given to students - excellent Fusion 360 video tutorials

Homework:

There is no set schedule for KS3 homework, but occasionally there will be a research task, or design skills set by the class teacher.