OVERVIEW

In the Technology faculty we develop students into independent problem solvers. In Design and Technology students independently produce bespoke products in response to a given design brief. Students begin developing their knowledge and skills in designing, making, and evaluating through the Pioneer program the focus will be on CAD Computer Aided Design and CAM Computer Aided Manufacture. Students will be become competent, fluent CAD designers who are able to respond to a design brief and create a fully functioning, professional CAM manufactured product. Due to the practical nature of the subject, students will receive verbal feedback during each lesson, formal feedback will take place at the end of each project.

Autumn

CAD – handheld maze game
1. Generating design ideas.
2. Intro to CAD and creating designs.
3. Assembly and Evaluation.

Pioneer Jigsaw
1. Intro to 3D printing 3D CAD.
2. CAD Modelling 1
3. CAD modelling 2

3D Printed Swing
1. Intro to design problem and initial modelling and creating components 1

Assessment:
Assessment will take place at the end of each module; students will be assessed on the four key elements of design education:
DESIGN - Generating, developing, modelling and communicating ideas.
MAKE- Planning and sequencing, modelling, prototyping.
EVALUATE - Own ideas and products, other products, prolific designers.
TECHNICAL KNOWLEDGE - Making products work, crafting, creating, use of technology.

Spring

3D Printed Swing
1. Creating components 2
2. Assembly and Evaluation.

Controller
1. Intro to prototyping & user centred design.
2. Creating solutions 2
3. Creating solutions 3
4. Testing and evaluation.

Assessment:
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MAKE- Planning and sequencing, modelling, prototyping.
EVALUATE - Own ideas and products, other products, prolific designers.
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Summer

Moisture sensor
1. Intro to electronics / Solder components
2. Solder component
3. Test circuit and 3D model casing.
4. Assemble, test and evaluate.

Frisbee
1. Graphics and Inkscape
2. Frisbee & Packaging design.
5. Assemble, test and evaluate.

Assessment:
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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.