

OAW Design and Technology Curriculum

In Design and Technology our students develop the skills needed for designing and making through a range of inspiring, creative & practical activities.

We provide opportunities for students to work in a range of contexts that reflect the real world. This allows students to consider how Design & Technology might be used to create the sort of society that they wish to live in now and in the future.

Students will develop the ability to investigate, analyse and evaluate a range of products. They will apply their broad understanding and knowledge from a range of subjects to show how technology can be used to intervene in the made and natural worlds.

Students will develop their knowledge and understanding through:

- Making without designing
- Designing without making
- Making and designing

Key Stage 3

Year 7

Design and Technology is taught on a rotation that includes Computing.

Unit One – Materials 1

Students develop the skills required when working with sheet metal. They also look at using manufacturing aids.

Unit Two – Materials 2

Students develop the skills required when working with timbers. They also look at sequencing, manufacturing & quality control.

Unit Three – Computing

Students develop their understanding of e-safety. They will also create a multi-media product using PowerPoint.

Unit Four – Creative Cooking Skills 1

Students will be introduced to the basic equipment in the food room and develop the core hygiene, safety & skills in preparing food.

Unit Five – Technical Principles

Students will complete a series of lessons around the core knowledge and skills required in Design and Technology. They will also have opportunities to develop their iterative design skills.

Year 8

Design and Technology is taught on a rotation that includes Computing.

Unit One – Materials 1

Students develop a basic understanding of electronic components and their function in a circuit. They also use computer aided design to develop their prototype.

Unit Two – Materials 2

Students refine the skills required when working with a variety of sheet metals. They also demonstrate an understanding of designing for a client.

Unit Three - Computing

Students use excel to create, format and edit data. They will also use advanced features to investigate different problems.

Unit Four – Creative Cooking Skills 2

Students will develop an awareness of different equipment in the food room and develop the wider skills in preparing dishes.

Unit Five – Technical Principles

Students will complete a series of lessons around the core knowledge and skills required in Design and Technology. They will also have opportunities to use iterative design skills within the theme of designing with other cultures in mind.

Year 9

Design & Technology is taught on a rotation that includes Computing.

Unit One – Materials 1

Students will use their prior understanding of a range of materials and techniques to design within a given context. They will refine their understanding of the design process.

Unit Two – Materials 2

Students will refine their computer aided design & manufacturing skills. They will also develop an understanding of mechanisms and their working principles.

Unit Three – Computing

Students will develop an understanding of internet connections and web design. They will have the opportunity to write their own HTML coding.

WJEC Level 1/2 Award in Engineering

Unit One internally assessed portfolio – Engineering Design

Students will learn how to interpret a brief and conduct research leading to a Design Specification. They will offer a solution to a problem, evaluating at each stage of the development process. Students will demonstrate a range of engineering drawing techniques.

Unit Two internally assessed portfolio – Producing Engineering products

Students will demonstrate that they can interpret a range of technical engineering information to develop a detailed production plan for a given product. They will safely manufacture a given product using their detailed production plan.

Unit Three exam externally assessed – Solving Engineering problems

Students will complete a 90 minute exam that demonstrates their engineering problem solving skills. They will apply mathematical and drawing techniques to real world scenarios. Student will also show their understanding of mechanical, electronic and structural engineering problems.

19/20 LT plan	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 11 (2020)	Unit 1 Assessment	Unit 2	Unit 2 Assessment	Unit 3	Unit 3 Exam	
Year 10 (2021)	Unit 1/ Unit 2	Unit 1/ Unit 2	Unit 1/ Unit 2	Unit 3	Unit 3 Exam & Unit 1	Unit 1 Assessment