

## **Year 7**

### **DESIGN & TECHNOLOGY DEPARTMENT**

#### **Curriculum Content**

The Year 7 Design & Technology course is split into the following units:

1. CORE SKILLS – Mainly Designing
2. JEWELLERY DESIGN – Design and Make
3. ECO DESIGN – Technology in Society
4. SIGNS – Mainly Making
5. MECHANISMS - Theory

#### **Knowledge, Skills and Understanding**

In the CORE SKILLS unit of work students will be learning how to develop and communicate design ideas using annotated sketches.

By the end of the students should be able to:

- communicate their design ideas by drawing them on paper
- annotate their drawings to help communicate their design ideas
- know how to use annotation to evaluate their ideas as they go along
- know which types of information are important when annotating ideas
- sketch a 3D model to communicate a design idea

Through the JEWELLERY DESIGN unit of work students will:

- research and develop a brief from a given scenario
- know and understand how to approach a design problem
- know how to develop a specification
- know how to and be able to generate ideas and communicate them
- know how to use 2D CAD software to make models and test out your design
- know how to make informed decisions about your design and its manufacture
- know how to produce a tool path and manufacture a mould using CAD/CAM
- know how to cast and finish your designed product

Through the ECO DESIGN unit of work students will:

- understand what eco design is and how it affects everyday product design
- know about ways to reduce the effect of design on the environment
- know how products can be developed considering the concept of 'cradle to grave'

Through the SIGNS unit of work students will:

- know how to use 2D design software to generate a design
- know how to make changes required on CAD software and generate models
- know what a specification is and be able to generate and use it in design and making

Through the MECHANISMS unit of work students will:

- know the different types of motion created by mechanisms and be able to identify them
- know the different classes of lever and identify the fulcrum, load and effort
- identify real-life examples of each class of lever
- know key terminology associated with gears, pulleys and cams
- identify real-life examples of gears, pulleys and cam applications
- know how mechanisms can be used to alter motion

### **Assessment Opportunities**

Work is continually assessed throughout each unit of work with teacher comments providing details on where the student has been successful and how they can improve in future. Grades are not given for each piece of work, instead we provide each student with a grade half way through their course and then a summative grade for attainment and effort is given at the end.